CHAPTER 4

BARRIERS TO INTERNATIONAL TRADE IN SERVICES IN SOUTH AFRICA AND THE US

It is incumbent on both trade theorists and trade policy practitioners to understand the nature of services, trade in services and services trade barriers. The aim should… be to identify negotiating priorities, so as to maximise net benefits and reduce unintended consequences…

Philippa Dee (2003:1)

4.1 INTRODUCTION

This chapter focuses on barriers to trade in services. This is predicated on the fact that given the nature of services, traditional instruments of trade policy such as tariffs applied by customs authorities at the border are not applicable. Instead, the barriers in international trade in services are typically behind-the border, direct controls on market access (MA) and discrimination of foreign providers (NT). Dee (2003) argues that one of the main reasons for the regulations in services is market failure. In South Africa, natural monopoly characterizes a range of network services e.g.Telkom, SAA and Sasol. Similarly, asymmetric information and adverse selection characterize professional, health and education services.

In view of the nature of trade in services and impediments to such trade, measuring the barriers to trade is a complicated task. Attempts to measure restrictions on MA have centred on descriptive statistics and construction of “indices” of restrictions of services for various sectors and countries.

The rest of the chapter is organised as follows. Section 4.2 presents some basic facts about the General Agreement on Trade in Services (GATS) to provide a basis for the subsequent sections. Section 4.3 surveys theoretical and empirical literature on the measurements of barriers to trade in services. Specifically, literature on frequency measures (Hoekman and Australian approaches), quantity-based measures and price-based measures are analysed. Trade restrictiveness indices and cost and price effect measures for many countries, including South Africa and the US, constructed by a group of researchers at Australia's productivity institute, are also presented. Section 4.4 deals with some fundamental issues on the computation of the Hoekman (1995) openness indices for South Africa and the US. Section 4.5 and 4.6 present the Hoekman (1995) frequency-based openness indices for South Africa and the US, respectively. The final section highlights the main insights and concluding remarks.

4.2 OVERVIEW OF SOME ISSUES UNDER THE GATS

The GATS came into force in January 1995 and is the first and the only set of multilateral rules covering international trade in services. It covers all internationally-traded services with two exceptions: services provided to the public in the exercise of governmental authority, and, in the air transport sector, traffic rights and all services directly related to the exercise of traffic rights.

Individual countries' commitments to open markets in specific sectors and how open the markets operate are determined by the outcome of negotiations. These commitments appear in "schedules" that list the sectors being opened, the extent of the MA and any limitations on national treatment (e.g. whether some rights granted to South African companies will be granted to foreign companies).

It is also important to take cognisance of the most-favoured-nation (MFN) principle. According to the World Trade Organisation (2002:287), MFN principle with regard to GATS means that, "each member shall accord immediately and unconditionally to services and service suppliers of any other member treatment no less favourable treatment than it accords to like services and service suppliers of any other country…"

The MFN principle applies to all services, but annex on Article II of GATS allows special temporary exemptions to some services. When GATS came into force in 1995, a number of countries already had preferential agreements in services that they had signed with trading partners, either bilaterally or in small groups. The WTO members maintained these preferences and this effectively gave countries the right to continue according more favourable treatment to particular countries in particular services activities by listing "MFN exemptions" alongside their first sets of commitments.

The limitations and commitments are described as follows;

Bound: Means can only be modified after negotiations with affected countries. Thus "unbinding" is difficult since they are virtually guaranteed conditions for foreign exporters and importers of services and investors in the sector to do business.

Unbound: Means that the country has not undertaken to provide MA or equal treatment to foreign suppliers.

None: Means that there are no MA and NT limitations in the sector.

The WTO has a trade policy review mechanism (TPR), which facilitates adherence by member states to rules, disciplines and commitments made under multilateral trading agreements (World Trade Organisation, 2002: 380). The results are reported in TPR for various years (World Trade Organisation, 1996b, 1998c, 1999, 2001b and 2003).

Negotiations to further liberalize trade in services were launched in 2000, but have been rolled into the current multilateral trade round, referred to as the Doha Development Agenda (DDA), and they form part of the so-called "single undertaking".

After the deadlock in Cancún Ministerial Conference in September 2003, various efforts were undertaken to put the negotiations and the rest of the work programme back on track. These efforts resulted in the conclusion of "July 2004 package" (World Trade

Organisation, 2004) and while this decision brought renewed momentum to the negotiations, services are still at risk of falling behind the other negotiating areas. Under the terms of the July package, revised offers were due to be tabled in May 2005.

4.3 THEORETICAL AND EMPIRICAL LITERATURE

Research in measurement of trade in services is quite recent. Chen and Schembri (2003) provide a detailed review of the literature on measurement of barriers to trade. They argue that the measurement of barriers to trade in services is quite close to those that were previously constructed to measure non-tariff barriers (NTBs) in goods trade: quantity-based measures and price-based measures.

There are four types of barriers. Firstly, quantitative restrictions (QRs) or prohibitions on the provisions of services by foreign residents and apply to all four modes of supply of services. Secondly, price-based measures may be applied through differential taxes on the transactions of foreign providers, or through additional charges on the regulatory process that they engage in. Thirdly, licensing or certification requirements for providers of business or professional services. Finally, discriminatory access to distribution (retail) and communication networks.

4.3.1 Frequency measures

There are two different approaches to calculating frequency indices: the Hoekman (1995) and the Australian approach.

4.3.1.1 The Hoekman (1995) approach

This is the easiest to construct and the most widely used frequency measure. The index uses the GATS commitment schedules of WTO member states. Hoekman classified the commitments into three groups and assigned a numerical score to each category. Firstly, a value 1 is assigned if no restrictions are applied for a given mode of supply in a given sector. This would apply for cells in the commitment schedule showing "none". Secondly, a value 0.5 is assigned if restrictions are listed for a given mode of supply in a given sector. Finally, a value of 0 is assigned if the country has not bound itself. This applies for a cell labelled "unbound".

These scores are the openness/binding factors. In view of the fact that there are 155 non-overlapping service categories in the GATS classification list and each category has four possible modes of supply, there are a total of 620 (155×4) openness/binding factors for each member country.

Hoekman then calculates a number of indices. Firstly, he calculates the number of commitments made by a country in its GATS schedule divided by 620. Secondly, he calculates an "average coverage ratio", which is equal to the sectors/modes listed as a share of maximum possible, weighted by the openness/binding factors. The third index is the share of "no restriction commitments" in either a member's total commitments or relative to the 155 possible sectors.

Hoekman (1995) argues that the GATS commitments provide information on the relative restrictiveness of the policy regimes pertaining to service industries since the coverage in each country's schedule is an indicator of its policy stance.

Hoekman used this methodology to construct frequency indices for high-income countries, middle-income countries and low-income countries. He finds that high-income countries made significantly more GATS commitments than did low and middle income countries.

4.3.1.2 The Australian approach

This approach uses information drawn from a variety of sources over and above the GATS commitment schedules to construct trade restrictiveness indices. A team of researchers from Australia's Productivity Commission, the University of Adelaide, and the Australian National University pioneered this approach.

These indices are constructed as follows. The actual restrictions on trade and investment in a given service industry are compiled from a number of sources. The restrictions are then assigned scores and grouped into categories, each of which is assigned a numeric weight. The scores and weights are based on subjective assessment of the costs of restrictions to economic efficiency. Indices are then computed using these weights and scores.

The Australian researchers constructed trade restrictiveness indices for a number of service industries: education (Kemp, 2001 and Kalijaran, 2000), telecommunications (Warren 2001), banking (McGuire and Shuele, 2001), maritime transport (McGuire, Shuele and Smith, 2001), and professional services (Nguyen-Hong 2000).

Tables 4.1 through 4.5 show the results for South Africa and the US. Domestic index represents restrictions that are applied to domestic firms and cover non-discriminatory restrictions only. Foreign index measures all the restrictions that hinder foreign firms from entering and operating in an economy. It covers both discriminatory and non-discriminatory restrictions. These are the restrictions that are relevant for IIT in services. The difference between the foreign and domestic index is a measure of discrimination against foreigners.

The index methodology also distinguishes between restrictions applied to establishments and ongoing operations. Establishment refers to the ability of service suppliers to establish a physical outlet in a territory and supply a service through those outlets (mode 3 supply under GATS).

Restrictions on establishments differ from service to service but often include requirements for new firms, restrictions for permanent movement of people, restrictions on direct investment in existing firms. Restrictions on ongoing operations may include restrictions on firms conducting their core business, the pricing of services and temporary movement of people.

Table 4.1 shows restrictiveness index scores for the telecommunications sector reported by Warren (2000). The results show that South Africa has a higher domestic and foreign restrictiveness index than the US. Moreover, the foreign restrictiveness index is higher than the domestic index. This implies that South Africa discriminates against foreign suppliers of telecommunication services. Warren argues that this is typical of a number of low and middle-income economies.

Table 4.2 shows trade restrictiveness indices for banking services reported in McGuire and Shuele (2000). The results show that South Africa and the US have no restrictions applied to domestic firms but there are more restrictions that hinder foreign firms in the former than the latter.

Restrictiveness indices for architectural services, constructed by Nguyen-Hong (2000), are reported in Table 4.3. Unlike the other services, the US has more restrictions than South Africa. The same applies to engineering services in Table 4.4 and distribution services in Table 4.5. South Africa should therefore focus on those sectors during services trade negotiations with the US.

Table 4.1: Restrictiveness index scores for telecommunications service sector

	Domestic index						Foreign index				
	Restrictions on establishment			Restrictions on ongoing operations			Restrictions on establishment		Restrictions on ongoing operations		
Economy	Restrictions on direct investment in fixed network services	Restrictions on direct investment in cellular mobile phone services	Restrictions on establishment total	Restrictions on cross-border trade	Restrictions on ongoing operations total	**Domestic index total**	Restrictions on direct investment in fixed and mobile network services	Restrictions on establishment total	Restrictions on cross-border trade	Restrictions on ongoing operation total	**Foreign index total**
South Africa	0.1300	0.0567	0.1867	0.2000	0.2000	**0.3867**	0.1867	0.1867	0.4000	0.4000	**0.5867**
United States	0.0000	0.0000	0.0000	0.0333	0.0333	**0.0333**	0.0000	0.0000	0.0333	0.0333	**0.0333**

Source: Warren, T.2000. The identification of impediments to trade and investment in telecommunications services. In: Findlay, C. and Warren, T. (eds) *Impediments to trade in services: Measurement and policy implications*. London and New York: Routledge: 71-84.

Notes: The domestic and foreign restrictiveness index scores range from 0 to 1. The higher the score, the greater the restrictiveness of an economy

Table 4.2: Restrictiveness index scores for banking services

	Restrictions on establishment					Restrictions on ongoing operations							
Economy	Licensing of banks	Direct investment	Joint venture arrangements	Permanent movement of people	**Restrictions on establishment total**	Raising funds by banks	Lending funds by banks	Other business of banks - insurance and securities services	Expanding the number of banking outlets	Composition of the board of directors	Temporary movement of people	**Restrictions on ongoing operations total**	**Total restrictions on establishments and ongoing operations**
	Domestic Index												
South Africa	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	**0.0000**
United States	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	**0.0000**
	Foreign Index												
South Africa	0.0100	0.0100	0.0050	0.0086	0.0336	0.1144	0.0075	0.0050	0.0144	0.0120	0.0029	0.1561	**0.1897**
United States	0.0100	0.0100	0.0050	0.0010	0.0260	0.0075	0.0075	0.0050	0.0025	0.0120	0.0029	0.0374	**0.0634**

Source: McGuire. and Shuele, M.2001. Restrictiveness of international trade in banking services. In: Findlay, C. and Warren, T. (eds) *Impediments to trade in services: Measurement and policy implications*. London and New York: Routledge: 201-214.

Notes: The domestic and foreign restrictiveness index scores range from 0 to 1. The higher the score, the greater the restrictiveness of an economy

Table 4.3: Restrictiveness index scores for architectural services

Economy	Form of establishment	Investment and ownership by non-professional investors	Licensing and accreditation of local professionals	Foreign partnership or joint venture	Investment and ownership by foreign professionals	Nationality or citizenship requirements	Residency and local presence	Quotas or economic needs tests on the number of foreign professionals and firms	Licensing and accreditation of foreign professionals	Investment and ownership by non-professional investors	Licensing and accreditation of local professionals	Permanent movement of people	**Restrictions on establishment total**
	Restrictions on establishment												
	Domestic index												
South Africa	0.000	0.000	0.000							0.000	0.000		**0.000**
United States	0.040	0.050	0.000							0.050	0.000		**0.140**
	Foreign index												
South Africa	0.000	0.000		0.000	0.017	0.000	0.000	0.000	0.000			0.020	**0.037**
United States	0.040	0.050		0.000	0.000	0.000	0.000	0.050	0.000			0.020	**0.070**

Economy	**Activities reserved by law to the profession**	**Multi-disciplinary practices**	**Advertising, marketing and solicitation**	**Fee setting**	**Licensing requirements on management**	**Other restrictions**	**Temporary movement of people**	**Restrictions on ongoing operations total**	**Total restrictions on establishments and ongoing operations**
	Restrictions on ongoing operations								
	Domestic index								
South Africa	0.000	0.000	0.000	0.000				0.000	**0.000**
United States	0.038	0.000	0.000	0.000				0.038	**0.178**
	Foreign index								
South Africa	0.013	0.017	0.025	0.013	0.005	0.000	0.003	0.074	**0.111**
United States	0.038	0.000	0.000	0.013	0.015	0.007	0.003	0.074	**0.144**

Source: Nguyen-Hong, D. 2000. Restrictions on trade in professional services. [Online] Available from: http://www.pc.gov.au/research/staffres/rotips/rotips.pdf [Downloaded: 2004-10-02].

Notes: The domestic and foreign restrictiveness index scores range from 0 to 1. The higher the score, the greater the restrictiveness of an economy

Table 4.4: Restrictiveness index scores for engineering services

	Restrictions on establishment											Restrictions on ongoing operations								
Economy	Form of establishment	Foreign partnership or joint venture	Investment and ownership by non-professional investors	Investment and ownership by foreign professionals	Licensing and accreditation of local professionals	Nationality or citizenship requirements	Residency and local presence	Quotas or economic needs tests on the number of foreign professionals and firms	Licensing and accreditation of foreign professionals	Permanent movement of people	**Restrictions on establishment total**	Activities reserved by law to the profession	Multi-disciplinary practices	Advertising, marketing and solicitation	Fee setting	Licensing requirements on management	Other restrictions	Temporary movement of people	**Restrictions on ongoing operations total**	**Total restricitons on establishments and ongoing operations**
	Domestic index																			
South Africa	0.0000		0.0000		0.0125						0.0125	0.0000	0.0000	0.0000	0.0000				0.0000	**0.0125**
United States	0.0000		0.0500		0.0125						0.0625	0.0500	0.0000	0.0000	0.0029				0.0529	**0.1154**
	Foreign index																			
South Africa	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0800	0.0080	0.0880	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0075	0.0075	**0.0955**
United States	0.0000	0.0000	0.0500	0.0000		0.0000	0.0312	0.0000	0.0400	0.0000	0.1212	0.0500	0.0000	0.0000	0.0029	0.0100	0.0000	0.0075	0.0704	**0.1915**

Source: Nguyen-Hong, D. 2000. Restrictions on trade in professional services. [Online] Available from: http://www.pc.gov.au/research/staffres/rotips/rotips.pdf [Downloaded: 2004-10-02].

Notes: The domestic and foreign restrictiveness index scores range from 0 to 1. The higher the score, the greater the restrictiveness of an economy

Table 4.5: Restrictiveness index scores for distribution services

Economy	Restrictions on establishment							Restrictions on ongoing operations							
	Restrictions on commercial land	Direct investment in distribution firms	Restrictions on large-scale stores	Factors affecting investment	Local government requirements	Permanent movement of people	**Restrictions on establishment total**	Wholesale import licensing	Limits on promotion of retail products	Statutory government monopolies	Protection of intellectual property rights	Licensing requirements on management	Temporary movement of people	**Restrictions on ongoing operations total**	**Total restrictions on establishments and ongoing operations**
	Domestic index														
South Africa	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0250			0.0250	**0.0250**
United States	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	**0.0000**
	Foreign index														
South Africa	0.0000	0.0000	0.0000	0.0000	0.0000	0.0215	0.0215	0.0000	0.0000	0.0000	0.0250	0.0143	0.0072	0.0465	**0.0680**
United States	0.1000	0.0000	0.0000	0.0000	0.0000	0.0025	0.1025	0.0000	0.0000	0.0000	0.0000	0.0499	0.0072	0.0571	**0.1596**

Source: Kalijaran, K.2000. Restrictions on trade in distribution services. [Online] Available from: http://www.pc.gov.au/research/staffres/rotids/rotids.pdf [Downloaded: 2004:09:02].

Notes: The domestic and foreign restrictiveness index scores range from 0 to 1. The higher the score, the greater the restrictiveness of an economy

4.3.2 Quantity-based measures

These are derived using econometric models. They are based on the standard models of trade e.g. HOS, where trade is motivated by comparative advantage/factor endowment, new trade theories (differentiation, economies of scale etc) and gravity models where an important part of trade is determined by the relative size and proximity of trading partners (in terms of distance, language, culture etc.).

The size of non-trade barriers are measured either by residuals from the estimated regression (difference between the level of actual trade and the level of predicted trade) or by using various dummy variables.

Fancois and Hoekman (1999) fit a gravity model of bilateral trade in services between the US and her major trading partners. The independent variables are per-capita income, gross domestic product, and Western Hemisphere dummy variable. The difference between actual and predicted imports (residuals) is taken as the size of the barriers to trade.

4.3.3 Price-based measures

Price-based measures derive estimates of barriers to trade from differences in domestic and foreign prices ("price wedges"). Deardorff and Stern (1998) show that measures can be constructed directly by comparing the domestic price of the imported service with reference to foreign price. In this approach, the difference between the domestic price and foreign price is analogous to a tariff, provided the price differentials are not due to factors such as sunk costs and entry deterrence strategies by incumbent service suppliers.

Most price-based measures for services have been constructed by the Australian team at the productivity commission using econometric models. These include Kalijaran *et al.,* (2001) for banking, Kang (2001) for maritime transport, Trevin (2001) for telecommunications, Kalijaran (2000) for food distribution and Nguyen-Hong (2000) for engineering services.

The studies use the following procedure. Firstly, a proxy of the domestic price is identified for the industry in question. Secondly, a model is formulated, with trade barriers (using trade restrictiveness indices) being one explanatory variable and a number of other control factors. Thirdly, the model is estimated using regression analysis. Fourthly, the estimated coefficients and trade restrictiveness index is used to determine the size of price wedges for individual economies, including South Africa and the US.

In measuring trade impediments, Trevin (2001) used the indices developed by Marko (1998) and Warren (2001). Kalijaran *et al.,* (2001) estimated price wedges caused by restrictions on banking services. The study focuses on banks' core business of financial intermediation services between depositors and lenders. Bank's interest margin is used to measure the price of intermediation. Kalijaran *et al.,* (2001) argue that bank's interest margin depends on prudential regulations such as capital and liquidity requirements, net non-interest expenses, market structure, interest rate volatility, and non-prudential restrictions. Domestic and foreign restrictiveness indices developed by McGuire and Schuele (2001) are used as proxies for non-prudential restrictions. The estimated coefficients are then used to construct price wedges for individual countries.

Kang (2001) estimated the price impact of barriers to trade in maritime transport services. The model used in the study assumes that the price of shipping is a function of barriers to trade in maritime services, distance between trading partners, scale of bilateral trade and stage of economic development of trading partners. Shipping margin (shipping expenses) is used as the price of maritime services. Kang used the indices developed by McGuire, Shuele and Smith (2001). Although she estimated her model, no price wedges were calculated from the results.

The impact of barriers to trade in food distribution is estimated by Kalijaran (2000). Price-cost margin is used as a proxy for price wedge. He postulated that the price cost margin of a food distribution firm depends on firm-specific variables such as location, the assortment of goods available, the ability to deliver goods in the desired form on time, the level of information provided, the ambience of the establishment, as well as the economy-wide variables such as industry concentration and barriers to entry. The estimation results are then used to compute the impact on individual economies.

Nguyen-Hong (2000) computed trade restrictiveness indices for four types of professional services but estimates price wedges for engineering services only. The model used assumes that firm profitability is a function of its market share, market concentration, the extent of product differentiation and other factors.

The results for the South Africa and the US are reported in Tables 4.6 to 4.9. Kalijaran (2000) estimates "cost impact indicators" in the food-distribution service sector and finds that restrictions on establishments of foreign firms raised the costs of distribution in the US by 2.3 per cent compared to 0.5 per cent in South Africa (Table 4.6).

In banking services, the results from Kalijaran *et al.*, (2000) shows that restrictions are estimated to have raised prices by about 6 per cent in South Africa and 4 per cent in the US (Table 4.7). Such price increases inhibit IIT in banking services.

Estimates of price wedges for engineering services from Nguyen-Hong (2000) are presented in Table 4.8. The results show that discriminatory barriers to foreign entry could create economic rents for local firms thus raising the prices of engineering services (e.g. price wedge of 5.3 per cent for South Africa and 7.4 per cent for the US).

Estimates of price effect for telecommunications from Warren (2000) are presented in Table 4.9. The results show that the restrictions on foreign firms in South Africa create economic rent for Telkom and thus raise prices by 20.9 per cent compared to 0.2 per cent in the US. This means that substantial benefits can accrue from liberalisation of the sector in terms of lower prices, increased variety and thus high intra-industry trade.

Table 4.6: Cost effect measures for distribution services

Economy	Restrictions on establishment: Restrictions on commercial land	Direct investment in distribution firms	Restrictions on large scale stores	Factors affecting investment	Local government requirements	Permanent movement of people	**Restrictions on establishment total**	**Domestic cost effect total**
	Domestic cost effect							
South Africa	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%		0.0000%	**0.0000%**
United States	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%		0.0000%	**0.0000%**
	Foreign cost effect							
South Africa	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.4712%	0.4712%	**0.4712%**
United States	2.2069%	0.0000%	0.0000%	0.0000%	0.0000%	0.0551%	2.2619%	**2.2619%**

Source: Kalijaran, K.2000. Restrictions on trade in distribution services. [Online] Available from: http://www.pc.gov.au/research/staffres/rotids/rotids.pdf [Downloaded: 2004:09:02].

Table 4.7: Price effect measures for banking services

	Restrictions on establishment					**Restrictions on ongoing operations**							
Economy	Licensing of banks	Direct investment	Joint venture arrangements	Permanent movement of people	**Restrictions on establishment total**	Raising funds by banks	Lending funds by banks	Other business of banks - insurance and securities services	Expanding the number of banking outlets	Compositition of the board of directors	Temporary movement of people	**Restrictions on ongoing operations total**	**Total effect of restrictions on establishments and ongoing operations**
	Domestic price effect												
South Africa	0.0000%	0.0000%			0.0000%	0.0000%	0.0000%	0.0000%	0.0000%			0.0000%	**0.0000%**
United States	0.0000%	0.0000%			0.0000%	0.0000%	0.0000%	0.0000%	0.0000%			0.0000%	**0.0000%**
	Foreign price effect												
South Africa	0.7855%	0.7855%	0.3927%	0.6755%	2.6392%	8.9840%	0.5891%	0.3927%	1.1291%	0.9442%	0.2258%	3.2810%	**5.9202%**
United States	0.7495%	0.7495%	0.3747%	0.0749%	1.9486%	0.5621%	0.5621%	0.3747%	0.1874%	0.9009%	0.2155%	2.2405%	**4.1891%**

Source: Kalijaran, K. Kaleeswaran, McGuire, G., Nguyen-Hong, D, and Schuele, M.2001.The price impact of restrictions on banking services. In: Findlay, C. and Warren, T. (eds.) *Impediments to trade in services: Measurement and policy implications.* New York: Routledge: 215-230.

Table 4.8: Price effect measures for engineering services

Economy	Restrictions on establishment: Form of establishment	Foreign partnership or joint venture	Investment and ownership by non-professional investors	Licensing and accreditation of local professionals	Investment and ownership by foreign professionals	Investment and ownership by non-professional investors	Nationality or citizenship requirements	Residency and local presence	Quotas or economic needs tests on the number of foreign professionals and firms	Licensing and accreditation of foreign professionals	Permanent movement of people	**Restrictions on establishment total**
	Domestic price effect											
South Africa	0.0000%		0.0000%	0.6902%								0.6902%
United States	0.0000%		3.0290%	0.7572%								3.7862%
	Foreign price effect											
South Africa	0.0000%	0.0000%			0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	3.1906%	0.3191%	3.5097%
United States	0.0000%	0.0000%			0.0000%	2.1225%	0.0000%	1.3225%	0.0000%	1.6980%	0.0000%	5.1430%

Economy	Restrictions on ongoing operations: Activities reserved by law to the profession	Multi-disciplinary practices	Advertising, marketing and solicitation	Fee setting	Licensing requirements on management	Other restrictions	Temporary movement of people	**Foreign price effects of restrictions on ongoing operations**	**Effects of foreign restrictions on prices**
Foreign price effect									
South Africa	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.2243%	0.2243%	3.7340%
United States	1.5919%	0.0000%	0.0000%	0.0918%	0.3184%	0.0000%	0.2388%	2.2409%	7.3839%

Source: Nguyen-Hong, D. 2000. Restrictions on trade in professional services. [Online] Available from: http://www.pc.gov.au/research/staffres/rotips/rotips.pdf [Downloaded: 2004-10-02].

Table 4.9: Price effect measures for telecommunication services

	Domestic price effect						Foreign price effect				
	Restrictions on establishment			Restrictions on ongoing operations			Restrictions on establishment		Restrictions on ongoing operations		
Economy	Restrictions on direct investment in fixed network services	Restrictions on direct investment in cellular mobile phone services	Restrictions on establishment total	Restrictions on cross-border trade	Restrictions on ongoing operations total	**Domestic price total**	Restrictions on direct investment in fixed and mobile network services	Restrictions on establishment total	Restrictions on cross-border trade	Restrictions on ongoing operations total	**Foreign price total**
South Africa	4.6294%	2.0179%	6.6473%	7.1221%	7.1221%	**13.7694%**	6.6473%	6.6473%	14.2442%	14.2442%	**20.8915%**
United States	0.0000%	0.0000%	0.0000%	0.2001%	0.2001%	**0.2001%**	0.0000%	0.0000%	0.2001%	0.2001%	**0.2001%**

Source: Warren, T.2000. The identification of impediments to trade and investment in telecommunications services. In: Findlay, C. and Warren, T. (eds) Impediments to trade in services: Measurement and policy implications. London and New York: Routledge: 71-84.

4.4 FUNDAMENTAL ISSUES IN COMPUTATION OF HOEKMAN (1995) FREQUENCY RESTRICTIVENESS INDICES FOR SOUTH AFRICA AND THE US

As pointed out by Schembri and Chen (2003) and Walley (2004), there is no perfect method to measure barriers to trade in services. The choice of the method depends on limitations imposed by state of knowledge on how the service sectors operate as well as availability of data. Each method has its own strengths and weaknesses and trade offs have to be made in selection.

The thesis uses the Hoekman (1995) approach for two reasons. Firstly, the Hoekman's list of barriers is drawn from an international agreement (GATS commitment schedules) and there is limited room for subjective selection. Secondly, given the limitation in data, it uses same scoring system for all sectors and countries. Thus it has a higher degree of comparability across sectors and countries than the Australian approach. However, since GATS commitment schedules for South Africa and the US are only available for the period 1994-1998, the indices can only be calculated for that period. It is, however, hoped that the current round of service trade negotiations, which commenced in 2000, will yield more GATS commitments to facilitate updating of the indices.

4.4.1 Sectoral weights

The Hoekman (1995) scoring system highlighted in Section 4.3.1.1 is used but the sectoral weights in Table 4.10 are inferred from WTO trade policy reviews (TPR) for South Africa and the US (World Trade Organisation, 1996b, 1998b, 1999, 2001b and 2003). These weights reflect the most important mode of supply in that sector. For instance the World Trade Organisation (1999: 197), while discussing telecommunication services, states "…the dominant mode of trade is cross-border transactions, which involve the placement of a call in the home market and the termination of the call in a foreign market (and vice versa)". Consequently, model 1 is given a weight of 0.85 while the other modes are each given a weight of 0.05.

Table 4.10: Sectoral weights for the services trade in South Africa and the US

Service sector	Mode 1	Mode 2	Mode 3	Mode 4
Business services	0.50	0.05	0.40	0.05
Communication services	0.85	0.05	0.05	0.05
Construction and related engineering services	0.05	0.05	0.50	0.40
Distribution services	0.05	0.05	0.50	0.40
Environmental services	0.05	0.05	0.50	0.40
Financial services	0.5	0.05	0.40	0.05
Tourism and travel related services	0.05	0.85	0.05	0.05
Educational services	0.05	0.85	0.05	0.05
Transport sectors	0.05	0.05	0.85	0.05
Other services not included elsewhere	0.05	0.05	0.85	0.05

Source: Subjective weights from various TPR for South Africa and the US (World Trade Organisation, 1996b, 1998c, 1999, 2001b and 2003).

4.4.2 Uniqueness of mode 2 (consumption abroad) of supply

Walley (2004:1239) points out that one limitation with measurement of service trade barriers is the assumption of homogeneity in their quantitative significance. The frequency measures aggregate the restrictions as if all have equi-proportional impact on trade.

A case in point is the supply of services through mode 2, which is quite different from the other modes. The restrictions in South Africa on mode 2 hamper her own exports of services to the US. Thus in education services, restrictions in South Africa on US students applying for study permits will simply reduce the exports of education services from the former to the latter. The same applies to all other services commonly supplied through mode 2 such as tourism, medical services, etc. This is not the case with modes 1, 3 and 4 where restrictions in South Africa reduce imports from the US.

Figure 4.1 demonstrates this fact. The top panel shows the restrictions in South Africa on modes 1, 2, 3 and 4 while the bottom panel shows the same restrictions in the US. Restrictions on mode 2 in South Africa discourage South Africa's exports of services (US imports) through consumption abroad. Since the restrictions on modes 1, 3 and 4 discourage South Africa's imports; restrictions on mode 2 supply have the opposite effects. The same arguments can be made for restrictions on mode 2 in the US.

There are two issues that emerge from the uniqueness of mode 2. Firstly, any trade analysis using weighted indices but does not take the uniqueness of mode 2 into account is flawed. The appropriate approach is to switch the indices as shown with the arrows in Figure 4.1. Thus mode 2 in South Africa is replaced with mode 2 for the US and vice versa as shown by the arrows. This adjustment would ensure that the restrictions on all modes of supply in South Africa convey the same message (restrict South Africa's imports from the US). Similarly, the restrictions on all modes of supply in the US restrict US imports from South Africa. This adjustment is not done in this study due to inconsistency in services that South Africa and US scheduled commitments.

Figure 4.1: The effects of mode-based restrictions on exports and imports of services

Restrictions in South Africa (SA)

Mode 1	Restrict **SA's imports** from the US through cross border supply
Mode 2	Restrict **SA's exports (US imports)** to the US through consumption abroad
Mode 3	Restrict **SA's imports** from the US through commercial presence (FDI)
Mode 4	Restrict **SA's imports** from the US through presence of natural persons

Restrictions in the United States (US)

Mode 1	Restrict **US's imports** from South Africa through cross border supply
Mode 2	Restrict **US's exports (SA's imports)** to the US through consumption abroad
Mode 3	Restrict **US's imports** from South Africa through commercial presence (FDI)
Mode 4	Restrict **US's imports** from South Africa through presence of natural persons

Source: Author's own illustration

Secondly, a country's trade restrictions on mode 2 only serve to restrict her exports of the service in question to other countries. Consequently, to promote exports, South Africa should try to harmonise her migration and trade policies with a view to substantially reducing barriers to services supplied through mode 2. In terms of trade negotiations, South Africa (and other SACU members) should focus on barriers in the US on modes 1, 3 and 4 during the SACU-US FTA.

4.5 SERVICES TRADE BARRIERS IN SOUTH AFRICA

South Africa scheduled commitments in several service categories but her list of Article II (MFN) exemptions to the WTO in 1994 (World Trade Organisation, 1994a) does not affect the US. The analysis in this section uses both TPR and GATS commitments for South Africa and weights discussed in Section 4.4.1.

4.5.1 Coverage and restrictiveness indices for South Africa

Using the Hoekman (1995) methodology, two indices are computed; coverage index and Hoekman restrictiveness index. The coverage index is calculated as follows;

$$CI_{SA} = \frac{N_{SA}}{M} \times 100 \tag{4.1}$$

Where CI_{SA} is the coverage index, N_{SA} is the number of commitments made by South Africa and M is the maximum number possible (620)[14]. Since South Africa made commitments in 62 sectors out of 155 possible, the coverage index is;

$$100 \times \left(\frac{248}{620}\right) = 40\%$$

This index summarises the policy stance of South Africa with regard to opening service sectors/modes. It shows that South Africa was willing to negotiate on 40 per cent of her service sectors/modes with other WTO member states.

Another important index is Hoekman restrictiveness index, which is a complement of the coverage index and shows the proportion of service sectors/modes that South Africa did not table any commitments/exemption to the WTO in 1994. It is computed as;

$$RI_{SA} = 100 - CI_{SA} \tag{4.2}$$

Using the coverage index of 40 per cent, the restrictiveness index is 60 per cent. This means that 60 percent of South Africa's sector/modes are closed. This is however, an overstatement since this methodology assumes that all the sectors/modes where South Africa has not made commitments are closed.

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[14] There are 155 sectors each with 4 modes of supply. This implies that the maximum possible negotiating modes are $155 \times 4 = 620$

4.5.2 Horizontal commitments in South Africa: Limitations on market access (MA)

These are commitments on MA that affect all services. According to the schedule of commitments submitted by South Africa in 1994 (World Trade Organisation, 1994b), there are no horizontal limitations on MA for modes 1, 2 and 4. However, mode 4 is "unbound" except for temporary presence of up to three years in South Africa, without requiring compliance with economic needs. This applies to certain categories of natural persons providing services. Firstly, for salespersons, temporary presence in South Africa is limited to a ninety-day period. Secondly, there are limitations, which affect intra-corporate transferees (executives, managers and specialists) and professionals. For the executives, managers and specialists, they should have been in employment of the juridical person for a period of not less than one year immediately preceding the date of application for admission. In case of professionals the person must possess the necessary academic credentials and professional qualifications, which have been duly recognized, where appropriate, by the professional association in South Africa. Thirdly, personnel engaged in an establishment are required to have been employed by a juridical person for a period of longer than one year immediately preceding the date of application for admission.

4.5.3 Horizontal commitments in South Africa: Limitations on national treatment (NT)

These are commitments on NT that affect all services in South Africa. According to the schedule of commitments submitted by South Africa in 1994 (World Trade Organisation, 1994b), there are no horizontal limitations on NT for modes 1 and 2. However, in mode 3, local borrowing by South African registered companies with a non-resident shareholding of 25 per cent or more is limited. Additionally, mode 4 is "unbound", except for measures concerning categories of natural persons referred to in the MA in Section 4.5.2.

Having discussed the economy-wide coverage index as well as horizontal commitments, the subsequent sections present descriptions and Hoekman (1995) frequency measures of restrictions in various service sectors. Specifically, Tables A.1 to A.4 show the Hoekman frequency indices for the various service sectors in South Africa. The columns 1994, 1995, 1997 and 1998 correspond to the years when South Africa submitted GATS commitments or amendments to WTO. The columns labelled "average" refer to weighted average of the indices. The weighted average figures suffer from the aggregation bias shown in Figure 4.1 emanating from mode 2 effects. It was not possible to do the adjustment due to an inconsistency in services that South Africa and US scheduled commitments.

4.5.4 Professional services

South Africa's GATS commitments in professional services cover the services listed in Table A.1 (appendix). South Africa did not make commitments in accounting and bookkeeping services in her 1994 GATS schedule. Mode 4 is "unbound" for all professional categories except as indicated in the horizontal section of the schedule.

In legal services, modes 1 and 2 are generally "unbound". In advisory services in foreign and international law, there are no MA and NT limitations on mode 3. In domestic law, there are NT limitations on mode 3 supply but in terms of MA an advocate is not allowed to form a partnership or company. The "unbound" nature of mode 2 for both MA and NT effectively means that South Africa's trade restrictions are inimical to her exports of legal services to the US.

4.5.5 Telecommunications services

Historically, telecommunications services were provided by the South African Posts & Telecommunication (SAPT), which was a post, telephone and telegraph monopoly. In 1991, the posts and telecommunications functions of SAPT were transferred to a new entity Telkom SA limited, with the state as the sole shareholder. On 29 October 1993, the government granted two mobile cellular licences, operating on GSM standard to Vodacom (in which Telkom had 50 per cent state) and to MTN (a consortium made of M-Net Cable and Wireless, Trantel and a group of black business people. In the same year an Independent Broadcasting Authority (IBA) was formed and became part of the new constitution. The IBA Act introduced a number of changes including community broadcasting, a competitive private broadcasting sector, prohibitions on party political control of broadcasters, various categories of signal distribution licences, local content quotas for radio and television.

These developments are reflected in South Africa's 1994 GATS schedule (World Trade Organisation, 1994b). South Africa did not make commitments in voice telephone services; packed-switched data transmission services; circuit-switched data transmission services; telex services; telegraph services; facsimile services and private leased circuit services.

In the 1994 schedule, MA for modes 1 to 3 in electronic mail (email); voice mail; on-line information and database retrieval; electronic data interchange; enhanced/value-added facsimile including store and forward, store and retrieve; code and protocol conversion; on-line information and/or data processing (including transaction processing) have limitations on the bypass of South African facilities for routing of domestic and international traffic. Telkom is a de facto regulator by means of agreements entered with value-added network services (VAN) suppliers in South Africa. VANS providers can only provide international services with the consent of Telkom.

In 1996, the Telecommunications Act was passed. This Act introduced far-reaching changes, notably the establishment of the South African Telecommunications Regulatory Authority (SATRA), an independent body to regulate telecommunications in the public interest.

In the 1997 GATS schedules (World Trade organisation, 1997a), additional limitations were included. In NT, the only limitation was in mode 4, which was "unbound" except as indicated in the horizontal section. However, MA through mode 1 for facilities-based and Public Switched Telecommunications Services (PSTS) can only be provided through the network of Telkom monopoly or subsequent duopoly (once second network operator is licensed) on international traffic. The schedule also stipulated that Telkom monopoly was to end not later than 31.12.2003. There were no limitations on mode 2 but in mode 3, foreign ownership is permitted up to a cumulative maximum of 30 per cent. During the transition period, Telkom was to hold exclusive rights over basic PSTS. However, various telecommunication market segments would progressively be open to competition.[15]

In 2000, the IBA and SATRA were merged to form the Independent Communications Authority of South Africa (ICASA). ICASA's mandate is to regulate broadcasting and telecommunications. On 25 June 2001, a third national cellular operator (Cell-C) was licensed. In the same year the Telecommunications Act was amended, which provided for the licensing of a Second Network Operator (SNO) by 2002 to compete in the provision of PSTS with Telkom.

In July 31 2002, South Africa passed an electronic commerce bill designed to encourage use of the Internet in business transactions. However, this law, designed to facilitate electronic commerce may increase regulatory burdens and introduce uncertainty in electronic commerce in South Africa. For instance, the law requires government accreditation for certain electronic signatures, takes government control of the ".za domain name, and requires government access to private databases.

[15]During the period, Telkom has the "primary" role in universal access/service provision. National long-distance services, local access telecommunications services and public pay-telephone services, international services, as well as switching networks are exclusively be provided by Telkom.

The Hoekman openness indices for telecommunication services are presented in Table A.3 and shows that the 1997 and 1998 commitment schedules were quite restrictive, especially on mode 1. However, these indices do not take cognisance of the post 1998 developments in the telecommunications sector because South Africa has not made new GATS commitments containing them.

4.5.6 Insurance services

South Africa scheduled GATS commitments in 1994 in most insurance categories except services auxiliary to insurance (including broking and agency services). The main limitation in insurance applies to MA through commercial presence (mode 3). To transact business in South Africa, insurers (foreign and domestically controlled) must be incorporated as public company in terms of the companies Act. Any person, whether South African or foreign, may control an insurance company in South Africa. However, for transfer of shareholdings exceeding 25 per cent of the capital of the company, approval by the Financial Services Board is needed and shareholders must be "fit and proper". South African government provides reinsurance facilities and is the reinsurer of the last resort.

In terms of mode 4, MA is “unbound” except as indicated in the horizontal section and the chairman, public officer and majority of directors must be resident in South Africa. Since July 1995, insurance companies were allowed to invest a portion of their assets abroad through swap arrangements with foreign investors.

South Africa’s 1998 GATS schedule (World Trade Organisation, 1998a) added commitments in services auxiliary to insurance services. The MA limitations in mode 3 were amended. All insurers/reinsurers (and insurers on whose behalf policies are sold) need to be incorporated as public company in South Africa and registered with the supervisory authority to carry on business in South Africa. Additionally, life insurance actuaries must be resident in South Africa. The Hoekman openness indices for insurance services are presented in Table A.4.

4.5.7 Banking services

In the 1994 GATS schedules, South Africa made commitments in many banking service categories. The main limitation applies to mode 3. In terms of MA, the following limitations apply.

Firstly, corporate membership of financial exchange is unrestricted except in the case of Johannesburg Securities Exchange (JSE). Secondly, no bank, or controlling company (domestically or foreign controlled) may allot or issue its shares to a person to the extent that the total nominal value of such shares exceeds in total 49 per cent of the total nominal value of all the issued vote-bearing shares in the bank or the controlling company. The Minister of Finance has the powers to grant permission to a bank of controlling company to issue more than 49 per cent of its shares to such a person provided that competition is not impaired. This restriction does not apply to allotment or issuing of shares in a bank or controlling company registered in respect of that bank or an institution which the Registrar has approved and which conducts business of a bank in a country other than South Africa.

Thirdly, foreign banks wishing to obtain controlling interest in a local bank are required to establish a domestic public company. In the same vein, no person (domestic or foreign) can conduct the business of a bank unless such a person is a public company and is registered in terms of the Banks Act.

The GATS schedule in 1998 (World Trade Organisation, 1998a) added some services to the list submitted in 1994. These are asset management; settlement and clearing services for financial assets; advisory and other auxiliary services. The following limitations apply to mode 3. Firstly, authorized dealers by the South African Reserve Bank (SARB) are the only ones allowed to carry out the business of foreign exchange in South Africa. Banks registered to operate in South Africa with the required minimum capital base are eligible to seek authorization as foreign exchange dealers.

Secondly, companies involved in asset management, collective investment schemes and custodial services for securities and financial instruments (including equities and bonds) need to be incorporated as public companies in South Africa and registered with supervisory authority to carry on business in South Africa.

Thirdly, trading for the account of customers on a licensed exchange requires a separately capitalized incorporation in South Africa as public or private company and registration with relevant supervisory authority.

In terms of NT, there are limitations in mode 3. Foreign banks applying for authorization to open a branch in South Africa must have certified net assets in excess of US$1 billion, and an investment-grade debt rating. A representative office is not allowed to conduct the business of a bank. Table A.4 presents Hoekman openness indices for the banking services.

4.5.8 Maritime transport services

South Africa did not make commitments in maritime transport and consequently, no Hoekman frequency openness indices are computed. However, according to the TPR

(World Trade Organisation, 1998c), both local and foreign owned vessels on the international trade-routes to and from South Africa may carry South African coastal cargoes and purchase fuel free of duties or other charges.

4.5.9 Air transport services

This sector was negotiated under the Uruguay Round, but WTO members agreed to exclude most air transport services except aircraft repair and maintenance services, computer reservation services, selling and marketing of air transport services. South Africa did not make commitments in 1994. However, according to the TPR (World Trade Organisation, 1998c), a number of regulatory issues exist. The Civil Aviation Authority (CAA) negotiates bilateral air transport agreements, controls and manages South Africa's obligations in terms of ratified aviation conventions with international organizations.

The South Africa's air transport market was deregulated in 1991 and South African Airways (SAA) has since then operated in competition with private airlines such as Airlink, Comair and Sun Air. In April 1997, the government started the phased privatisation of SAA.

SAA has a code-sharing agreement with Delta Airlines and Atlantic Southeast Airlines and Comair international signed in 2001.

4.6 SERVICES TRADE BARRIERS IN THE US

The US scheduled commitments in several service categories in 1994, 1995, 1997 and 1998 (World Trade Organisation, 1994d, 1995c, 1997c and 1998d). The extent to which the US committed to negotiate in services can be seen in her coverage and restrictiveness indices.

4.6.1 Coverage and restrictiveness indices for the US

The coverage and restrictiveness indices are computed using Equations 4.1 and 4.2. The coverage index shows that the US negotiated with other WTO members on 50.3 per cent of her service sectors/modes, which is greater than South Africa's 40 per cent. Similarly, The Hoekman restrictiveness index shows that 49.3 percent of the US's service sector/modes are closed compared to South Africa's 60 per cent. This implies that US is more open than South Africa in service sectors/modes.

4.6.2 Article II (MFN) exemptions for the US

The US submitted an extensive list of Article II (MFN) exemptions in 1994, 1995, 1997 and 1998 (World Trade Organisation, 1994c, 1995b, 1997b and 1998c), many of which affect South Africa.

The list of Article II (MFN) exemptions in 1994 (World Trade Organisation, 1994c) scheduled a number of measures that affect all countries including South Africa. These measures relate to differential treatment in taxation, acquisition of land in the US, banking and other financial services, air transport services, pipeline transport, and space transportation. Most of these exemptions require reciprocity of other countries.

In 1995 the US submitted an amendment to Article II (MFN) exemptions of 1994 (World Trade Organisation, 1995b). The 1995 amendments affect financial services sector. The amendments were necessitated by the need to protect existing activities of US service suppliers abroad and ensure substantial full MA and NT in international financial markets.

The US submitted an amendment to Article II (MFN) exemptions of 1994 in 1997 (World Trade Organisation, 1997b), which affects telecommunication services sector. In this amendment, differential treatment would be applied to countries on account of reciprocity on telecommunication services. This measure was necessitated by the need to ensure substantial full MA and NT in international telecommunications markets.

In 1998 the US submitted a further amendments to those submitted in 1995 on financial services. The 1998 amendments (World Trade Organisation, 1998c) deal with differential measures on insurance services, permission to establish state-licensed branches of banking and other financial institutions, authority to act as a sole trustee of an indenture for a bond offering in the US, and designation as a primary dealer in US government debt securities.

4.6.3 Horizontal market access and national treatment commitments in the US

The US horizontal commitments on both MA and NT apply to mode 4 of supply. The commitments include the provision that intra-corporate transferees, such as managers, executives, and specialists (including licensed professionals), may provide services through a branch, subsidiary or affiliated established in the US for a period of three years, with the possibility of an extension for a maximum of two additional years.

4.6.4 Professional services

The US GATS commitments in professional services cover the following areas: legal; accounting, auditing and bookkeeping; taxation; architectural; engineering; integrated engineering; urban planning and landscape architectural services. Generally, the US commitments contain only a limited number of MA or NT restrictions for modes 1, 2 and 3, except in legal services.

The most common limitations are the requirement that partnerships are limited to licensed persons (legal services; accounting, auditing and bookkeeping services); in-state office requirements (legal services; accounting, auditing and bookkeeping services); residency requirements (legal services; accounting, auditing and bookkeeping services; engineering and integrated engineering services); citizenship requirements in some cases (legal services with respect to practice before the US Patents and Trademarks Office; accounting, auditing and bookkeeping services in North Carolina; engineering and integrated engineering services in the District of Columbia); and the requirement in Michigan that two thirds of the officers, partners, and/or directors in an architectural firm be licensed professionals. Mode 4 is unbound for all professional categories except as indicated in the horizontal section of the schedule.

4.6.5 Education services

Under both NT and MA, modes 1 to 4 have the following limitation. Scholarship or grants may be limited to US citizens and /or residents of particular states and may in some cases, only be used at certain state institutions or within certain US jurisdictions.

4.6.6 Telecommunications services

According to the US TPR of 1996 (World Trade Organisation, 1996b: 170), the US government regulates inter-State and foreign communications and provision of all radio-based services. The US TPR of 1996 states that the Federal Communications Commission (FCC) administers the Communications Act of 1934, as amended by the Telecommunications Act of 1996. The Acts regulates all domestic and international electronic communications provided by wire or radio.

According to US commitments to WTO of 1997 (World Trade Organisation, 1997c), foreign firms are granted access to local, long-distance, and international services, using any means of technology, including wire line, terrestrial wireless (i.e. cellular) and satellite facilities, on either a facilities-based or resale basis. However, the US maintains some restrictions on foreign ownership. Specifically, direct ownership of a common carrier radio licence may not be granted to or held by a foreign government or its representative; a non-US citizen or the representative of any non-US citizen; any corporation not organized under the laws of the US or any US corporation of which more than 20 per cent of the capital stock is owned or voted by a foreign government or its representative, non-US citizens, or their representatives, or a corporation not organized under the laws of the US. However, there are no restrictions on indirect ownership of a common carrier radio licence, nor on direct ownership of firms holding non-radio FCC licences, as reflected in the US GATS commitments.

The US inscribed MA restrictions on satellite-based services in her GATS Schedule of 1997. These restrictions involve the exclusive right of the Communications Satellite Corporation (Comsat) to provide link-ups with the International Telecommunications Satellite Organisation (Intelsat) and the International Maritime Satellite System (Inmarsat). Comsat's exclusive access to Inmarsat ended when Inmarsat, was privatised in April 1999. The computed Hoekman openness indices for telecommunications are presented in Tables A.7 and A.8 in the appendix and show that the US is more open than South Africa.

4.6.7 Banking services

According to US TPR of 1996 (World Trade Organisation, 1996b: 178), the "dual" US banking system allows banks to operate under either a federal or State licence. This means that foreign banks could enter the US market either by establishing federal or State-licensed branches or agencies/representative offices, or by acquiring a national or State subsidiary bank. Although establishment of branches or agencies of foreign banks is prohibited by law in some States, there are other States with major financial centres such as New York, California, Illinois, Texas, Florida, and Georgia, which permit foreign bank branches or agencies.

The US TPR of 1996 states that foreign banks with US branches or agencies became subject to federal regulation under the International Banking Act (IBA) of 1978, which applied same restrictions on foreign bank federally-licensed branches and agencies as well as a national bank operating at the same location. According to IBA, foreign banks with operating offices in the US were required to maintain reserves against deposit liabilities and their activities and geographic expansion in the US were limited in accordance with the comparable limitations applicable to US banking organizations in foreign countries. This was an application of NT. However, the enactment of the Riegle-Niel Interstate Banking and Branching Act, removed restrictions on inter-State banking activities of foreign banks.

According to the World Trade Organisation (1996b: 180), a new act was enacted in 1991 called the Foreign Bank Supervision Enhancement Act (FBSEA). This act made foreign banks maintaining a branch, agency or commercial lending company in the US subject to a new requirement that a bank holding company obtain the prior approval of the Federal Reserve Board (FRB) when acquiring more than 5 per cent of the voting shares of a US bank or bank holding company. The FBSEA also permits the FRB to order a foreign bank that operates a State-licensed branch or agency, or a commercial lending company subsidiary in the US, to terminate its activities if the FRB believes that the foreign bank has committed a violation of law or engaged in an unsafe or unsound banking practice in the US.

According to US TPR of 1999 (World Trade Organisation, 1999), the Economic Growth and Regulatory Paperwork Reduction Act (EGRPRA) of 1996 relaxed the requirement contained in the IBA that foreign banks be subject to Consolidated Comprehensive Supervision (CCS) by home country supervisory authorities in order for the FRB to approve the establishment of a branch or agency in the US.

Additionally, in the 1997 GATS schedules (World Trade Organisation, 1997b), the US "bound" the provision of NT with regard to the fees for FRB's examinations of foreign banks. She also made commitments to provide MA and NT to foreign banks with respect to interstate branching by merger in all US jurisdictions except in Montana and Texas. US residents were also allowed to deposit funds with foreign institutions that do not maintain a commercial presence in the US. Cross-border supply of banking services is generally not prohibited by federal regulations, and foreign banks without commercial presence may solicit and transact business with customers in the US. The computed Hoekman openness indices are presented in Table A.10.

4.6.8 Financial securities services

According to US TPR of 1996 (World Trade Organisation, 1996b: 181), NT is granted to foreign brokers and dealers regarding registration with the Securities and Exchange Commission (SEC). The US federal securities laws generally require broker-dealers, whether foreign or domestic, to register with the SEC if they seek to do business with (i.e., solicit) US persons. Foreign and US broker-dealers are subject to the same requirements. US law exempts foreign broker-dealers from the registration requirements under limited circumstances. Most States require broker-dealers to register with the State regulatory authorities for business conducted within the particular state.

Foreign-owned dealers are accorded essentially the same treatment as domestically owned dealers, as long as US firms operating in the government debt markets of the foreign country are accorded "the same competitive opportunities" as domestic companies operating in those markets.

4.6.9 Insurance services

According to US TPR of 1996 (World Trade Organisation, 1996b: 181), majority of directors and/or incorporators of an insurer should be US citizens. However, some States do not have a mechanism for initial entry by non-US insurers as branches and/or subsidiaries, due to a perceived lack of resources necessary to effectively supervise non-US insurers, especially branches.

According to US TPR of 2003 (World Trade Organisation, 2003), a special federal excise tax of 1 per cent on life and 4 per cent on non-life insurance premiums is imposed for US risks paid to companies not incorporated under US law. A large number of States prohibit the conduct of business by government-owned or government-controlled insurance companies, based on concerns about unfair competition by subsidized insurers from abroad. The computed Hoekman openness indices for insurance services are presented in Table A.10.

4.6.10 Futures and option services

According to US TPR of 2003 (World Trade Organisation, 2003), the Commodity Exchange Act (CEA) grants the Commodity Futures Trading Commission (CFTC) regulatory authority over futures and options trading in the US. Persons who transact business on designated domestic contract markets for either US or foreign customers must register with the CFTC as Futures Commission Merchants (FCMs) and must comply with all of the CFTC's regulatory requirements applicable to registrants, or must obtain appropriate exemptive relief.[16]

Foreign FCMs are treated no less advantageously than domestic firms. Persons located either within or outside the US who transact business for US customers on foreign markets either must register with the CFTC as FCMs or must obtain appropriate exemptions.

In general, properly registered or exempt persons may offer or sell most foreign exchange-traded futures and option products to US persons without additional approvals.

4.6.10 Air transport services

According to US TPR of 1996 (World Trade Organisation, 1996b: 185), the Federal Aviation Administration (FAA), is responsible for approval of new air carriers as well as conducting supervision and inspection of existing carriers. On the basis of safety standards, the FAA can prohibit a foreign carrier from flying to the US.

The US has signed a number of "open skies" agreements with other countries.[17] These agreements allow free access for airlines of both parties to the agreement from any point in

[16] An FCM is defined as any person who solicits or accepts orders to buy or sell futures or option contracts and who, in connection with an order, accepts any money or other property (or extends credit) to margin, guarantee, or secure the contracts resulting from the order.

[17]Such bilateral "open-skies" agreements typically provide open entry into each other's markets, allow unrestricted capacity and frequency on all routes and freedom in setting fares.

one country to any point in another country through any point in either country. The only remaining restriction is on cabotage (air transport within a country) and on the so-called "seventh freedom"; i.e. routes without any link to the airline's homeland. The US signed a bilateral agreement for open skies with South Africa in March 1996 (World Trade Organisation, 1999).

The Fly America Act requires US government-financed transportation of passengers and cargo to be carried on US-flag air carriers. There are some exceptions to the requirements, such as when service by a US-flag carrier is not available, or when an agreement between the US and a foreign partner provides for carriage of such traffic by airlines of that partner.

According to US TPR of 2003 (World Trade Organisation, 2003), all code-sharing relationships between foreign air carriers and US require Department of Transport regulatory approval.

4.6.11 Airport services

The US made full commitments for aircraft repair and maintenance services in mode 2 and mode 3; mode 1 is “unbound” for reasons of technical feasibility and the horizontal provisions of her GATS Schedule bind mode 4 (World Trade organisation, 1994d).

The US maintains MFN exemptions with regard to the selling and marketing of air transport services and the operation and regulation of computer reservation systems (CRS) services, as these services are covered by bilateral or other air services agreements to which the United States is a party.

Aircraft repair and maintenance services are subject to FAA safety requirements. An amendment to the Federal Aviation Regulations in 1988 permits the FAA to certify foreign repair stations as long as they meet all certification and personnel requirements of domestic repair stations. Before this amendment, foreign repairs of US aircraft had been permitted only in emergencies.

Different standards are still applied for the certification of domestic and foreign stations; for instance, while certificates for foreign repair stations (which are under continued FAA scrutiny) are subject to annual and biennial renewals, domestic stations' certificates are valid until surrendered, suspended, or revoked. According to US TPR of 2001 (World Trade Organisation, 2001b), the US does not support subscribing to a GATS ground-handling provision. However, foreign firms can provide ground-handling services at US airports that are covered by bilateral air services agreements. The computed Hoekman openness indices for air transport are presented in Table A.12 and shows that the US is closed for mode 1.

4.6.12 Maritime transport services

The Federal Maritime Commission (FMC), an independent regulatory agency, regulates ocean-borne transport, including actions to correct or counterbalance unfair or discriminatory foreign practices that adversely affect US shipping in international commerce.

The US did not table any offer in the WTO negotiations on maritime transport services in 1994 on account that offers tabled by other members did not constitute sufficient liberalization in the sector.

The US international maritime transport market is generally open to foreign competition (World Trade Organisation, 2001b: 183). However, the Merchant Marine Act of 1920 (Jones Act) requires that all goods transported by water between US ports be carried in US-flag ships, constructed in the US, owned by US citizens and crewed wholly by US citizens (World Trade Organisation, 2001b: 185). The Jones Act further limits the delegation of vessel inspection and plan-review functions by the Coast Guard to the American Bureau of Shipping (ABS) or a similar US classification society.

Under "cargo preference" measures, certain types of government-owned or -financed cargoes must be carried on US flag commercial vessels. Specifically, only vessels of US registry or vessels belonging to the US may be used in the transportation by sea of supplies bought for US military agencies. Fifty per cent of non-military government cargoes (75 per cent in the case of certain agricultural commodities) are reserved for privately owned US registered ships. Cargoes generated in connection with loans made by instrumentalities of the US Government in connection with the export of US products (such as project cargoes resulting from loans made by the Export-Import Bank of the US) are to be carried in US vessels, although the Secretary of Transportation may permit up to 50 per cent of such cargoes to be carried in vessels of the recipient country if that country does not discriminate against US vessels.

Vessels operating under foreign flags are exempted from corporate income tax on revenues in foreign commerce and the crews do not pay income tax to any country. According to US TPR of 2003 (World Trade Organisation, 2003), under the Foreign Shipping Practices Act of 1988 (FSPA), the Federal Maritime Commission may investigate and address conditions adversely affecting US carriers in foreign trade, when such conditions do not exist for foreign carriers in the US.

4.6.13 Ocean port services

There are no measures limiting the provision of maritime transport auxiliary services except for the provision of customs brokerage services, which is listed in the GATS schedule (World Trade Organisation, 1994d) as a service auxiliary to all modes of transportation. A corporation, association or partnership can supply customs brokerage services, and one person in the business entity must hold a customs broker's licence, which is issued by the US Customs Service only to US citizens.

According to US TPR of 2003 (World Trade Organisation, 2003), the US does not grant preferential treatment to any country with respect to the use of port and harbour facilities.

However, vessels of from Cambodia, Cuba, Iran, Iraq, Libya, North Korea, and Syria are prohibited from entering US ports on national security grounds.

The US maintains an MFN exemption covering restrictions on performance of long-shore work when making US port calls by crews of foreign vessels owned and flagged in countries that similarly restrict US crews on US-flag vessels from long-shore work.

4.7 MAIN INSIGHTS AND CONCLUDING REMARKS

The chapter focused on barriers to international trade in services for South Africa and the US. Barriers to trade in services are significant and differ substantially from traditional tariffs and quotas. Since the Uruguay round in 1994, these barriers are subject to negotiations under GATS. In this regard services are part of the Doha round of negotiations and form an integral part of the DDA. It is against this background that the chapter deals with the state of play of barriers to services trade in the two economies. A number of insights do emerge from the analysis.

Firstly, research in the area of barriers to trade in services began with Hoekman's (1995) pioneering work on frequency-based measures. Since then researchers at Australia's productivity institute have done substantial research to come up with restrictiveness indices. Thus, the use of existing work from the Australian researchers and construction of frequency-based measures using Hoekman (1995) methodology in this study should be viewed as preliminary attempt to measure barriers to trade with a view to informing South Africa-US IIT in services.

Secondly, each service has a predominant mode of supply and any analysis or trade negotiations should take this aspect into account. For instance, education and tourism services are predominantly supplied through mode 2 (consumption abroad) while telecommunications are mainly supplied through mode 1 (cross-border). In this regard, supply of services through mode 2 is quite unique since it involves the consumer crossing the border to consume a service abroad. This has two implications for trade modelling as well as policy. From a trade modelling point of view, the uniqueness of mode 2 supply implies that analyses using weighted indices without taking into account this characteristic, are flawed. The appropriate approach is to switch the indices by replacing mode 2 in one country with mode 2 index for the trading partner and vice versa. This would ensure that the restrictions on all modes of supply in each country convey the same message (e.g. all restrict imports of services).

From a policy perspective, a country's trade restrictions on mode 2 only serve to restrict its own exports of the service in question to other countries. Consequently, to promote exports, South Africa should try to harmonise her migration and trade policies with a view to substantially reducing barriers to services supplied through mode 2. In terms of trade negotiations, South Africa (and other SACU members) should focus on barriers in the US on modes 1, 3 and 4 during the SACU-US FTA.

Thirdly, South Africa's policy stance on services is less open than the US. This can be seen in the fact that she submitted GATS commitments in 1994 on 40 per cent of the service modes/sectors compared to 50 per cent for the US. Similarly, South Africa has more trade barriers in most services (telecommunications, banking) than the US, which is typical of a number of low and middle-income economies. There are however, some services where the US has more restrictions such as engineering services, distribution services, and architectural services.

Fourthly, results from the Australian research group show that restrictions have substantially increased prices or costs of many services e.g. banking (price increase of 6 per cent in South Africa and 4 per cent in the US), food-distribution (0.5 per cent in South Africa and 2.3 per cent in the US), telecommunication (20.9 per cent in South Africa and 0.2 per cent in the US). This means that there are potential benefits from reform in terms of high IIT and lower prices.

The nonparametric measures of barriers to trade in services in this chapter are useful as a starting point in trade negotiations and trade modelling. The next chapter, which deals with the determinants of South Africa-US IIT in services, uses, among others, the constructed Hoekman indices as explanatory variables.