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Working Paper

International trade in services: A scoping study of services trade and estimates of benefits from services trade liberalisation

NZ Trade Consortium Working Paper, No. 37

Provided in Cooperation with:

New Zealand Institute of Economic Research (NZIER), Wellington

Suggested Citation: Ballingall, John; Stephenson, John (2005) : International trade in services: A scoping study of services trade and estimates of benefits from services trade liberalisation, NZ Trade Consortium Working Paper, No. 37, New Zealand Institute of Economic Research (NZIER), Wellington

This Version is available at:

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International trade in services

**A scoping study of services trade and estimates
of benefits from services trade liberalisation**

NZ Trade Consortium working paper no 37

July 2005

The New Zealand Trade Consortium

in association with the

New Zealand Institute of Economic Research (Inc)



The original report was written for the Ministry of Foreign Affairs and Trade and has been modified slightly. The views expressed are those of the authors, and not necessarily those of MFAT.

Preface

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Executive Summary

The production and exports of services are likely to become increasingly important to New Zealand's overall economic development over coming decades. Services are a burgeoning part of the New Zealand economy, and a rapidly growing part of world trade. World services trade has more than quadrupled in the last twenty years. Given this, and on-going negotiations in the World Trade Organisation (WTO) to liberalise trade in services, there is a need for policymakers and businesses to develop a greater understanding of some key issues regarding domestic and global service markets.

This is a scoping study. It summarises the dynamics of services trade in the world economy and discusses some of the benefits of services trade liberalisation from a qualitative and quantitative view point. We place particular emphasis on the role and interests of developing and least developed countries in world services trade. The study also provides an overview of services trade in the New Zealand economy, and, in places, highlights aspects of services trade where New Zealand's interests might be pursued through further research.

In our study we found that although developed economies dominate world services trade, developing countries, including least developed economies, are rapidly expanding their share of world services trade. Moreover, on most measures developing countries stand to benefit the most from services trade liberalisation.

New Zealand is likely to benefit less from services trade liberalisation compared with other countries, on account of our domestic market already being relatively open to services trade. However, studies to date estimate New Zealand stands to benefit by between US\$257 million and US\$700 million per year from global services liberalisation.

In addition to gaining directly, New Zealand is also likely to benefit from the second-round effects of multilateral service trade liberalisation which are not measured in most studies. Although New Zealand is relatively open to services trade we would benefit from increased global economic growth arising from liberalisation of services markets in other, currently more protected, economies.

Yet, our understanding of New Zealand's services sector, exports, and major export markets is patchy. This is particularly so with respect to "other business related services" – relative to our understanding of New Zealand's main services exports of tourism and education.

The composition of services trade is shifting. Trade in transportation and travel services (which includes a large portion of education) is growing at a

slower rate than trade in other, primarily business related, services. This suggests additional effort directed towards understanding “other business related services” could yield a high return. This would require further research into, and quantification of, the performance of New Zealand’s domestic and export service industries in non-transport and travel related services.

More generally, there is a paucity of data on New Zealand services trade, particularly data which provides detailed information about export markets and specific services. In our view, this is precisely the sort of information that is valuable to negotiators in prioritising their negotiating effort. Consequently, our scoping study suggests that returns to investment in data collection would also be high.

Inadequacies of information on services trade are the norm for most countries. New Zealand cannot do a great deal to reduce the inadequacies of data collection in other countries, outside of continued support for initiatives in international organisations such as the OECD and UN. However, there is scope to explore ways in which New Zealand can act unilaterally to improve collection of data on services and services trade in the New Zealand economy.

We also suggest that New Zealand could do more to understand the nature of services trade in our region, particularly among Pacific island nations. This is important because services play a pivotal role in these economies and because there are good reasons to believe that services liberalisation can be a positive influence in meeting developmental objectives.

Finally, a better understanding of the nature of barriers to services trade in key markets and products of interest to New Zealand would help negotiators to direct their attention accordingly and hence to maximise the potential benefits to New Zealand of services trade liberalisation. Barriers to trade in services are many and complex. Understanding which barriers create the most distortion to New Zealand trade would assist in prioritising negotiating efforts. Of course, extending our understanding of the nature and impacts of barriers to trade first requires enhancing our understanding of the services sector and services exports in the New Zealand economy.

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1. Background

The production and exports of services are likely to become increasingly important to New Zealand's overall economic development over coming decades. Services are a burgeoning part of the New Zealand economy, and a rapidly growing part of world trade. Given this, and on-going negotiations in the World Trade Organisation (WTO) to liberalise trade in services, there is a need for policymakers and businesses to develop a greater understanding of some key issues regarding domestic and global service markets. The sorts of questions one might ask are:

- What are the drivers of demand and supply in the various service sectors, both domestically and internationally?
- What are the likely benefits to New Zealand and to the global economy from liberalising trade in services?
- In what services does New Zealand specialise?
- How well have New Zealand's service producers performed?

Unfortunately, robust and detailed answers to these sorts of questions are not readily available. Research into services trade is very much in its infancy, especially in New Zealand.

This report touches on some of the issues around services trade. The objective is to distil existing knowledge, data, and literature on services trade as a reference resource for services negotiators and a guide to areas of research that might prove most beneficial to New Zealand interests in the ongoing WTO negotiations on services trade.

Where possible quantitative measures of services trade have been provided. However, problems inherent in measuring services trade mean that these figures should be treated with caution. Also, coverage of services trade data is incomplete. Data on trade by sector and by least developed countries (LDCs) is particularly patchy. Our aim, therefore, is to supplement the quantitative aspects of services trade with qualitative observations from the services trade literature.

The report is set out as follows:

- Section 2 provides a background to some of the definitional and data collection issues related to services trade. This section might normally be appended to a study such as this. However, in our view, understanding the context behind and deficiencies in measuring services trade is important enough to put this section up front.
- Section 3 looks at global services trade: We outline which countries are the key players in world services trade and highlight growth trends and

drivers in various service sectors. Emphasis is placed on developing countries in world services trade.

- Section 4 looks at services in Least Developed Countries (LDCs) and Pacific island countries (PICs) and considers their respective positions and prospects in the global services market, and how they might benefit from services trade liberalisation.
- Section 5 discusses measurements of potential economic effects of multilateral and regional trade liberalisation in the services sector. The existing literature is summarised to determine the possible magnitude of the benefits that would result from services liberalisation, and to which countries these benefits would accrue.
- Section 6 considers the services sector in New Zealand. We profile the various sectors and discuss how New Zealand might share in the trade liberalisation benefits outlined in the previous section.
- Some summary statements, conclusions, and suggestions for prioritising future research are made in section 7.

2. Definitions and measurement issues

Tracking world services trade is more complex than for goods trade and significantly more difficult to measure. Services do not pass through customs in the way that goods do, so the value and timing of trade transactions are difficult to pin down. Also, unlike goods, services can be delivered to consumers by a number of different methods, called “modes”. Standard data collection techniques are not easily adapted to deal with these different methods of supply. Organisations such as the United Nations and the IMF continue to work toward solving the problems with services trade data, however it may be some time before sound data collection techniques are widely used.

Most of the available data on services trade is based on balance of payments (BoP) statistics. BoP statistics measure transactions between residents in different countries. They are the most reliable method available for measuring services trade, however, they tend to underestimate the value of services trade. This is because BoP statistics cannot account for transactions across the full range of ways that services are traded.

The WTO General Agreement on Trade in Services (GATS) divides trade in services into four categories based on the way a service is delivered:

- **Mode 1: Cross-border supply:** where the service itself crosses the border from one country to another, without the movement of persons. The service is usually transported either via electronic means (email, fax, etc), by infrastructure (such as transportation services) or by telecommunications (telephone, radio). Examples include making an overseas phone call or a lawyer providing a legal opinion, via post, to an off-shore client.

- **Mode 2: Consumption abroad:** where the provision of a service to nationals of another country requires them to travel to the seller's country. Examples are hotels providing accommodation services to tourists from other countries, or New Zealand universities providing education services to people who are normally residents of other countries.
- **Mode 3: Commercial presence:** where a company from one country sets up subsidiaries or branches to provide services in another country. The majority of trade in this mode is by multi-national corporations, such as Siemens or Microsoft (intra-company trade is a fast growing component of world trade).
- **Mode 4: Movement of natural persons:** where individuals travel from their own country to supply services in another. Examples include consultants travelling offshore to provide advice to a client, or employees of construction firms living temporarily¹ in another country.

Table 1 Coverage of BoP statistics by mode of supply

<i>Mode</i>	<i>Statistical coverage</i>	<i>Deficiencies</i>
Mode 1: Cross border supply	Near complete coverage of <i>transportation, communication services, insurance services, financial services, royalties and license fees, other business services, and personal cultural and recreational services.</i>	Overestimation through inclusion of mode 4 and exclusion of some services (e.g. repairs).
Mode 2: Consumption abroad	Complete coverage of <i>Travel services (including health, education, and business related travel), and services auxiliary to transportation.</i>	Generally sound. But inclusion of some goods trade leads to overestimation and categorisation by sector or type of service is imprecise.
Mode 3: Commercial presence	Elements of <i>construction services.</i>	Miniscule coverage of mode 3 in BoP.
Mode 4: Presence of natural persons	Partial coverage of mode 4 supply for <i>computer and information services, other business services, personal cultural and recreational services, and construction services.</i>	Significant underestimation. Most of mode 4 captured by mode 1 and compensation to non-resident employees not captured.

Source: UN Manual on statistics on international trade in services, 2002

BoP data cannot account for services delivered by a foreign firm which is resident in another country (commercial presence or mode 3) or services delivered by foreign employees or foreign workers (movement of natural persons or mode 4). This is primarily because “resident” is normally

¹ There is no internationally accepted length of time limiting the use of the term “temporary”. The UN Manual on Statistics of International Trade in Services notes that trade agreements include definitions of temporary of between two and five years.

defined as an individual or organisation physically located in a country. Table 1 summarises coverage of services trade in BoP statistics and the variable level of coverage available by sector and by mode.

BoP statistics can be supplemented by indicators of commercial presence, such as foreign direct investment statistics, and indicators of mode 4 service delivery (movement of natural persons), such as data on remittances and employee compensation. However most of the studies on services trade, to date, focus on BoP statistics.

Thus, measurement of services trade is currently not as precise as for goods trade. This should be borne in mind when assessing existing data on trade in services and estimates of benefits from liberalising trade in services.

3. International trade in services

3.1 Introduction

In this section we provide an overview of global services trade. This information provides some context for the discussion of the benefits of service trade liberalisation in sections 4 and 5. We provide information on key services sectors, key participants in international trade, and growth trends in recent years. We place particular emphasis on the status of developing countries in world services trade.

3.2 A précis of world services trade

World services trade has more than quadrupled in the last twenty years, compared with growth in merchandise trade of less than 300%. Over this time services have become an increasingly important component of economies throughout the world and particularly in developed countries as their economies de-industrialise. Yet while the variety and volume of services trade we observe today is a relatively recent phenomenon, many of its characteristics and patterns of growth are surprisingly similar to those of traditional merchandise trade.

Services and goods are fundamentally different, but the underlying factors driving patterns of international trade are essentially the same for services as for goods. These factors are:

- **Comparative advantage** in trade stemming from resource endowments, such as abundant supplies of capital or labour.
- **Competitive advantage** arising from, amongst other things, well-established industries, or large home markets.
- **Barriers to trade**, which reduce countries' ability to exercise comparative and competitive advantages.

- **Distance between markets**, which increases transportation and information costs.
- **Relative incomes**, which influence relative demand for high priced versus low priced and essential versus non-essential products.

Relative comparative and competitive advantages explain many of the differences between developed and developing countries. Developed countries typically have larger stocks of intellectual property, financial capital and intellectual capital, while developing countries typically have a comparative advantage in service sectors which are labour intensive – due to a relative abundance of inexpensive labour.

Table 2: World services exports by development status
Billions of US dollars ⁽¹⁾

	1980	1990	1995	2000	2001	2002	2003
Developed countries	310	668	930	1143	1147	1228	1409
Developing countries	74	154	289	358	360	371	407
LDCs	3	4	6	7	7	8	8
World	391	830	1240	1528	1538	1635	1860.4

Notes: (1) Based on IMF balance of payments data

Source: UNCTAD Handbook of Statistics, 2003

The predominance of developed countries in services trade reflects the fact that many services are knowledge based and require high levels of human capital – such as professional services, telecommunications services, and computer and related services. It also reflects the fact that developing country service providers are not as internationally competitive as developed country exporters. This is due to a number of factors such as relatively limited access to capital, undeveloped domestic services markets, and the fact that developing countries generally have higher barriers to trade than developed countries (Nielson and Taglioni, 2004).

Developed countries produced more than 73% of world services exports in 2001. This share is less than developed countries' share of global economic activity – developed countries are estimated to produce 76% of world GDP in 2001 – but is considerably more than the 63.5% of world merchandise trade conducted by developed countries (UNCTAD, 2004).

Despite the predominance of developed countries in world services trade, developing countries are catching up. Developing countries nearly tripled their services exports between 1990 and 2003. Even least developed countries enjoyed substantial growth in services exports, keeping pace with developed countries over the 1990 to 2003 period (see Table 2).

The growth of developing country shares in the exports of services in the 1990s is consistent with overall faster rates of GDP growth and faster rates of export growth in developing countries compared with developed countries over this period. This begs the question: Is growth in services exports from developing countries a *result* of economic growth or a *driver* of economic growth? Most likely it is both. As noted earlier, considerable stocks of financial and human capital are necessary for the production of certain kinds of services. Increased economic activity which facilitates growth of financial and human capital would certainly assist in growing services exports. At the same time, services export industries provide jobs and a source of foreign exchange, which enhances overall growth in an economy.

The abundance of inexpensive, particularly unskilled, labour in developing countries has seen developing countries grow their shares of services exports primarily in “traditional” (labour intensive) services such as shipping and port related services. Developed countries, on the other hand, tend to dominate in high skill or high technology services.

There are some notable exceptions to the high skill/ low skill split between developed and developing countries. Some developing countries are emerging as important players in “new” service sectors such as data processing and other computer related services – India being the case in point. India grew its software exporting trade from US\$225 million in 1992/93 to US\$1.75 billion in 1997/98. The Indian software industry also has a considerable amount of room to grow, as it currently commands only half a percent of the world software market (World Bank, 2002)

The growth of developing country exports in high or medium skill services is, nonetheless, still linked to the abundance of labour in their economies. The relative abundance of educated workers in countries like India has led to significantly lower costs for some services requiring skilled or semi-skilled labour. In the case of software development in India, the cost per line of code (the most significant labour cost component of software development) is less than a third that of the cost per line in the United States (World Bank, 2002). However, the cost advantages of producing or outsourcing skilled and semi-skilled services to an economy like India, are by no means limitless. In 2003, the cost of outsourcing work to India grew by 10%.²

The high proportion of labour used in the production of many services means that a number of developing countries, including some small least developed island states, are heavily reliant on services exports. Countries such as Kiribati, Nepal, Egypt, the Philippines, and Samoa all have exports comprising a far greater percentage of services than is typically the case

² See <http://www.eastonbh.ac.nz/article561.html>

worldwide (Hoekman and Kostecki, 2001). For small island states this typically reflects a paucity of other resources on which to trade.

As mentioned, distance between markets also impacts on patterns of world services trade. This is a reflection of higher costs of trading over long distances. Although the advent of the internet and other communications technologies has lowered the cost of trading in a great number of services, many services still require transportation of either the consumer or the producer to where the service is to be consumed and the associated costs typically increase with distances between markets. The effect of distance between markets is also likely to reflect demand being influenced by cultural and social preferences which are locally or regionally determined.

Evidence of the effect of distance on services trade is borne out by OECD data on services trade. The concentration of intra-OECD services trade amongst OECD members diminishes the further a member is from the majority of OECD member states in Europe and North America. For example, while the OECD average of intra-OECD trade is 80%, Australia's services exports in 2002 were split roughly 60-40 between OECD and non-OECD countries (for a breakdown of New Zealand's key export markets see section 6.3).

Of course, the fact that developed countries tend to trade most with each other, or with high income developing countries, is also a reflection of similar demand profiles, lower levels of barriers to trade, and hence more integrated economies. In the case of OECD members, 80% of services exports, on average, go to other OECD countries and 79.5% of OECD services imports come from other OECD countries.³

3.3 Sectoral composition of world services trade

In many respects, services trade is tracking the path already paved by international merchandise trade. Trade in goods began (thousands of years ago) mainly with trade in products that were luxury items at the time, such as spices. As supply chains became more efficient trade expanded into commodities. By the latter half of the twentieth century, transportation technologies such as refrigerated containers and air freight meant that goods of every kind were able to be traded the world over. Like early goods trade, services trade has traditionally been dominated by luxury goods such as travel and tourism.⁴

However, in recent times technological advances have facilitated trade in an increasing range of services. Advances in information and communications

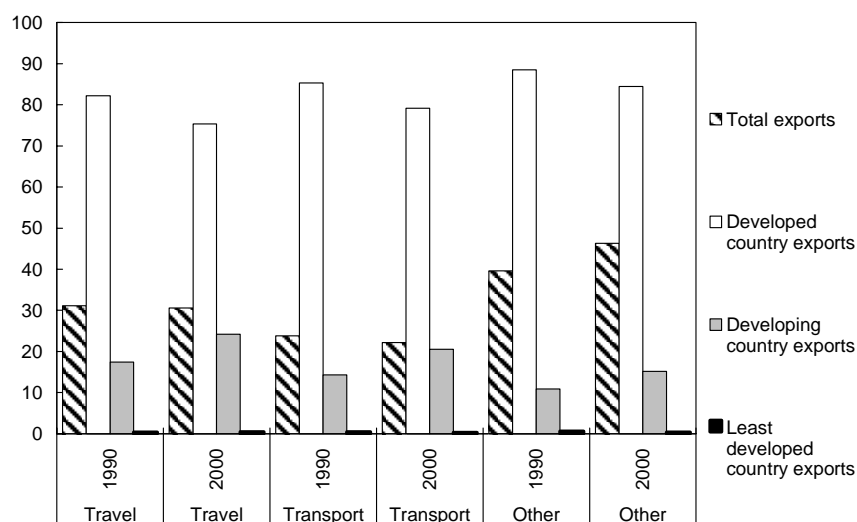
³ This is an estimate based on available data for OECD services trade by partner country in the *OECD Statistics on International Trade in Services Volume II, CD-ROM, 2004*.

⁴ The exception to this has, to some extent, been services provided to transport goods.

technologies have facilitated cross-border trade in services which was not previously possible. Efficiency gains in transportation have lead to greater movement of people across borders to consume and provide services. Thus there has been a substantial increase in the range and volume of services which are traded internationally.

Figure 1 Composition of trade by sector

Percent of exports by sector and of exports in each sector by development status



Source: IMF, UNCTAD

The sectoral composition of trade in services has shifted in the last decade. Exports of transportation services, which make-up the bulk of world services trade, have been declining as a percentage of world trade, while shares in world exports of “other” services has been growing.⁵ At the same time, developing countries have been growing their share of world exports across most service sectors (depending on how they are defined).

3.3.1 Transportation services

Trade in transportation services grew 76% between 1990 and 2000, but it has been outpaced by growth in other service sectors. This is partly due to the fact that transportation is a more mature market, having grown alongside growth in merchandise trade in the last two centuries (and hence this growth is from a higher base, relative to other less developed service sectors).

Over the past decade, developing countries have been gaining a larger share of the world market in transportation services. World trade in transportation services declined from 34% to 22% of world services trade between 1990 and 2000. During this time developing countries’ share of transportation

⁵ The category “other” services is a melange of services exports, traded through the full range of modes of delivery, including: communication services (postal and telecommunications), financial services, insurance services, construction services, computer and related services, merchanting, and professional services.

services trade grew from 14% to 21%, while amongst the G7 group of countries transportation services declined at an average annual rate of 0.1% between 1997 and 2002.⁶

The decline in transportation services in the export profile of the G7 between 1997 and 2002 was primarily in sea transport (declining 1.5% on an average annual basis), precisely the sector where developing countries have a comparative advantage through labour costs. Developing countries are particularly prevalent in shipping services and port services. Furthermore, developing countries supply most of labour to the world's merchant fleet, with the Philippines alone supplying 20% of the merchant seafarers (Nielson and Taglioni, 2004).

Table 3 Newly industrialised countries and developing country exporters of transport services

Country or area	1990		2000		1990 - 2000 Average annual growth rate
	US\$ (Millions)	% of country's total services exports	US\$ (Millions)	% of country's total services exports	
Korea, Republic of	3 179	33	13 687	44.8	15.4
China, Hong Kong SAR	..	..	12 772	31.3	..
Singapore	2 225	17.4	5 336	19.9	8.9
China, Taiwan Province of	2 323	33.1	4 063	20.4	5.1
China	2 706	46.2	3 671	12.1	3.2
Thailand	1 327	20.7	3 250	23.4	9.3
Turkey	920	11.5	2 955	14.5	13.8
Malaysia	1 198	31	2 802	20.1	8.7
Egypt	2 410	40.4	2 645	27	-0.3
Chile	714	38.6	2 188	53.6	12.9

Source: UNCTAD, 2004

The Newly Industrialised Countries (NICs) and developing country exporters of transport services – with the exception of Egypt – have experienced high annual rates of growth in their exports between 1990 and 2000. Indeed, export growth has outpaced that of growth in overall world trade in transportation services by a substantial margin (see Table 3).

⁶ G7 comprises: US, UK, Japan, Canada, France, Germany, Italy.

3.3.2 Travel services

Travel services on the other hand (i.e. tourism), have remained fairly static in terms of percentage of world exports. Both developed and developing economies have experienced growth in exports of travel services over recent years, however, the growth in developing countries has outpaced growth in developed economies in this sector. Developing countries increased their share of world exports in the travel sector from 17% to 24% between 1990 and 2000. This occurred despite travel services declining from 40% to 37% of developing country exports. Conversely, the share of travel services in LDCs service exports has grown between 1990 and 2000, from 26% to 36%, reflecting an increasing reliance of many LDCs on tourism exports.

Table 4 Top 10 developing country exporters of travel services

Country or area	1990		2000		1990 - 2000 Average annual growth rate
	US\$ (Millions)	% of country's total	US\$ (Millions)	% of country's total	
China	1 738	29.7	16 231	53.3	24.8
Mexico	5 527	68.3	8 294	60.3	3.6
China, Hong Kong SAR	..	..	7 930	19.5	..
Turkey	3 225	40.2	7 636	37.4	10
Thailand	4 325	67.4	7 483	54	5.7
Korea, Republic of	3 161	32.8	6 834	22.4	11
Singapore	4 650	36.3	5 394	20.2	0.6
Malaysia	1 684	43.6	5 011	35.9	9.6
Indonesia	2 153	86.5	4 974	95.4	8.4
Egypt	1 100	18.4	4 345	44.3	12.9

Source: UNCTAD, 2004

3.3.3 Other services

Amongst OECD countries exports of other commercial services have been growing at more than double the rate of transport and travel services exports over the last five years. The fastest growing service export sectors in this category have been those sectors which require highly skilled labour or are capital intensive, such as computer and information services, insurance services, and personal, cultural, and recreational services.

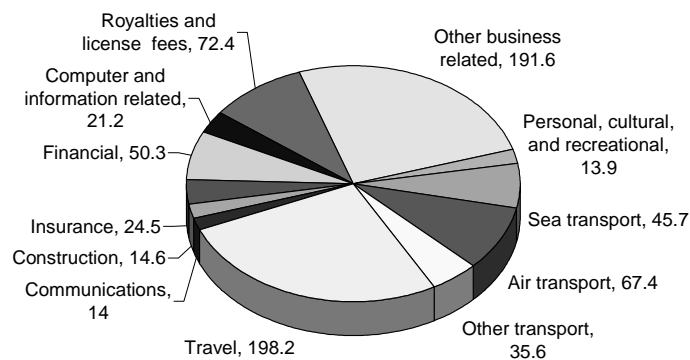
The majority of growth in other services in the OECD has come from the large developed economies of the G7. These economies have expanded their

exports of services by 2.2% per year, on average, between 1997 and 2002. Similar to the rest of the OECD, the fastest growing services exports from the G7 between 1997 and 2002 were insurance services (12.5% average annual growth), computer and information services (10.9% average annual growth), and personal, cultural and recreational services (10.7% average annual growth).

The poorest performing sector in the G7 and the OECD as a whole (in terms of exports), has been the more labour intensive construction services sector. Amongst the G7, exports of construction services declined at an average annual rate of 9.7% during the period 1997 to 2002.

Despite strong growth in developed country exports in the category of other commercial services, developing nations have also increased their share of world service exports in this category – from 10% to 14% in the decade between 1990 and 2000.

Figure 2 G7 services exports by sector
Billions of US dollars, 2002



Source: OECD

Developing countries export across a range of services under the banner of other commercial services, from professional services to management consultancy and construction. However individual developing countries tend to be highly specialised rather than export across a range of sectors and there are some sectors where very few developing countries export. Areas of specialty include (Nielson and Taglioni, 2004; Whalley, 2003):

- Health services in Cuba and Costa Rica.
- Data and information processing in the Philippines, Barbados, and Jamaica.
- Construction, engineering, and related design services in China and Malaysia.

- Insurance services in Mexico.
- Audiovisual services in Thailand.

Construction is a sector in which the low cost of labour from developing countries yields them particular comparative advantage. A third of the world's top 150 construction firms are from developing countries. However, barriers to the movement of natural persons and distance from major importing markets means that this sector is still relatively untapped by developing countries.

Table 5 Top 10 developing country exporters of construction services

Country or area	1990		2000		1990 - 2000 Average annual growth rate
	US\$ (Millions)	% of country's total	US\$ (Millions)	% of country's total	
Turkey	741	9.2	1 033	5.1	8.1
China	..	..	602	2	..
China, Hong Kong SAR	..	..	338	0.8	..
Malaysia	..	..	314	2.3	..
Thailand	..	..	230	1.7	..
Brazil	..	..	228	2.4	..
China, Taiwan Province of	31	0.4	119	0.6	11.2
Philippines	3	0.1	97	2.4	44.7
Egypt	..	..	93	0.9	..
Tunisia	..	..	50	1.8	..

Source: UNCTAD, 2004

India is a notable exception to the generalisation that developing countries specialise in particular service exports. India has experienced strong export growth in a variety of sectors including: IT outsourcing, professional services outsourcing, software services, and audio-visual services.

Table 6 Top 10 developing country exporters of insurance services

Country or area	1990		2000		1990 - 2000 Average annual growth rate
	US\$ (Millions)	% of country's total	US\$ (Millions)	% of country's total	
Mexico	335	4.1	1 799	13.1	11.5
Singapore	88	0.7	957	3.6	23.6
China, Taiwan Province of	146	2.1	607	3	11.7
South Africa	355	10.4	451	9.2	9.5
China, Hong Kong SAR	..	..	443	1.1	..
Brazil	115	3.1	312	3.3	17.1
India	123	2.7	249	1.4	8.9
Malaysia	3	0.1	156	1.1	500
Iran, Islamic Republic of	..	..	118	8.5	..
Peru	80	10	112	7	7.4

Source: UNCTAD, 2004

Developing countries are not well represented in service sectors that require strong domestic institutions and regulatory frameworks. For instance, few developing countries are significant exporters of insurance services and financial services. For those developing countries that are involved in exporting these services, it is usually through joint ventures with firms in OECD countries and export markets are usually sourced regionally (Nielson and Taglioni, 2004).

Those sectors in which developing countries export very little are equally those where the fixed costs of entering the sectors are high and the global market is dominated by very large firms. Developing countries struggle to export in these markets because of difficulties in accessing sufficient finance for export development, difficulties in establishing credibility in international markets, and insufficient access to reliable of inexpensive infrastructure (Nielson and Taglioni, 2004).

3.4 Service delivery by modes 3 and 4

Another area of services trade where developing countries are underrepresented is in the delivery of services via commercial presence. OECD estimates suggest that commercial presence has been the fastest growing means of service delivery in recent times, largely because

investment flows have been liberalised at a faster rate than cross border supply and movement of natural persons. However, data on foreign direct investment (FDI) suggests that developing countries are presently less likely to supply services via commercial presence in an offshore market. They are also less likely to be recipients of FDI, with the majority of FDI in the world flowing to and from OECD countries (World Bank, 2002).

On the other hand, exports of services by the movement of natural persons is an area in which developing countries are highly represented, though it presently comprises a small portion of world trade. Developing country service exports in mode 4, measured through workers' remittances, were 1.3% of developing countries' combined GDP in 2002 (World Bank, 2004). In terms of world trade, estimates suggest mode 4 supply of services is only between 1% and 4% of world services trade (Cattaneo and Nielson, 2003). However, the OECD is presently US\$2.7 billion in deficit to the rest of the world in mode 4 measured by compensation to temporary foreign employees. If one includes workers' remittances (reflecting longer term migrant workers) as a measure of mode 4 service delivery, this deficit swells to an estimated US\$17.2 billion (OECD, 2004).

Indicators suggest that the proportion of services trade conducted through the movement of natural persons will grow in the future. Indeed, movement of natural persons into many developed countries has been growing strongly in recent years with entries of foreign temporary workers into the United States, for example, growing by more than 350% between 1992 and 2000 (World Bank, 2004).

4. Services trade liberalisation and LDCs

4.1 Introduction

In this section we present some broad comments on Least Developed Countries' (LDCs') services sectors. We do not delve deeply into specific countries or sectors, as the scope of countries examined is quite wide. Rather we provide a commentary on the general shape of the service sectors in LDCs, and suggest how their participation in global service markets might impact on their development in light of services trade liberalisation.

4.2 Least developed countries and services

By international standards, the economies of LDCs are very open, with 51% of LDC GDP, on average, coming from the trade in goods and services (UNCTAD, 2004a). Thus, external trade is an important component of least developed countries' economies and an integral part of development strategies aimed at enhancing the welfare of these countries.

According to IMF BoP statistics, in the year 2000 LDCs exported in excess of US\$6 billion worth of services – a little over 3% of combined LDC GDP – up on US\$3.9 billion in 1990. However, as in merchandise trade, LDCs typically have trade deficits in services trade (if one does not consider aid funding a service), and in 2000 imports of services for LDCs as a whole was nearly double exports at US\$11.7 billion.

LDCs have seen their share of world exports in services decline during the 1990s, from 0.48% of world exports in 1990 to 0.40% of world exports in 2000. This decline appears to have taken place across all sectors, although somewhat unevenly. Trade in transport services and other commercial services have declined as a proportion of LDC services exports, while trade in travel services grew from 26% of LDC services exports in 1990 to 36% in 2000.

Viewing exports of services by sector at an aggregate level can be somewhat misleading. As mentioned above, most LDCs are highly specialised exporters of services, usually with a revealed comparative advantage in one of the three broad sectoral groupings discussed above.

A number of LDCs have a significant interest in transportation services, primarily in sea transport services and rail transport services. This is particularly so for African LDCs. For example, in 1998 59% of Zambia's services exports were in transport services (UNCTAD, 1998). Also, in 2002 the African merchant fleet was 9.8% of the world's merchant fleet, while African merchandise exports comprise only 2.4% of world merchandise trade (UNCTAD, 2003).

For other LDCs, exports of travel services are vital. This is particularly so for many of the smaller LDCs, which rely heavily on tourism. While LDCs' services export receipts average around 20% of total exports, for some LDCs whose main source of export income is tourism, this figure can be considerably larger. In Comoros, Djibouti, Maldives, and Samoa, services exports comprise more than 75% of total export earnings. In Nepal, Haiti, Kiribati, and Vanuatu the share of services in total exports is above 50% (UNCTAD, 1998). This, in part, reflects these countries' lack of natural resources, which yields a natural dependency on exports of travel and tourism services, in the absence of other products with which to trade.

Outside of travel and tourism, detailed information on services exports from LDCs is very limited. We do know, however, that labour is another important export of least developed countries. Indeed, a significant amount of services exports from LDCs is made up of income returned to the home country by nationals who are working offshore (mode 4 supply of services) or have migrated and return a portion of their income via remittances.

In 2001, low income developing countries received US\$19.2 billion in remittances, which equates to 120% of official development funding in that year. (World Bank, 2004). While remittances comprise around 0.8% of GDP in upper and middle income developing countries, they comprise 1.9% of GDP in low income countries and the contribution of remittances to GDP in some LDCs is even higher. For example, in 2001 remittances contributed over 25% of GDP in Lesotho and around 8% of GDP in Vanuatu (World Bank, 2004).

4.3 Benefits to LDCs from services trade liberalisation

LDCs stand to benefit from managed liberalisation of services trade which leads, amongst other things, to:

- Reduced barriers to trade in travel and transportation services.
- Increased FDI and infrastructural investment.
- Reduced barriers to movement of natural persons.
- Strengthened domestic institutions.

Liberalisation of transport services is an important element in the development of LDCs for a number of reasons. It can assist LDCs in attracting foreign investment and foreign expertise to develop existing infrastructure or create new infrastructure.

Liberalisation in export markets facilitates the development of infrastructure in LDCs by freeing up resources globally (see section 5.2.1). Furthermore, multilateral commitments to liberal service sectors can also give some certainty to foreign investors, allowing them to plan for long term returns in LDC markets. This makes investing in LDCs more viable for foreign firms and even enhances the possibility that foreign firms will choose to export from LDCs.

Some anti-globalisation advocates argue that foreign investment is detrimental to developing countries. However, according to the UNCTAD (2003) review of maritime transport, transport services in Africa have benefited significantly from foreign firm participation and investment. Port efficiency in Sub-Saharan Africa has improved considerably from the involvement of foreign firms and foreign expertise. Also a second port in Benin, at a cost of US\$160 million dollars, has been constructed by a French firm and created new jobs and a new source of export revenue from transportation services for the Benin economy.

Efficiency gains in transport services have many spin-off effects for LDCs. These include lowering the cost of merchandise exporting, which makes LDC exporters more competitive internationally and increases export

revenue. It also lowers the cost of imports (which include important development related inputs such as fertilisers and steel), lowering input prices and passing gains from trade onto consumers. These gains are also likely to be largest in poor regions such as Africa where the average cost of freight as a percentage of import values is 12.65%, well above the developing country average of 8.70% (UNCTAD, 2003).

Liberalising transport services will assist LDCs to expand their trade in transport services, where protection presently excludes competition. Indeed, barriers to trade in transport services can be high and particularly costly. A study by Francois, Acre, Reinert and Flynn in 1996 (cited in Whalley (2003)) suggests legislation in the US (the “Jones Act”) which restricts coastal US shipping to US firms makes shipping around the US coast 300% more costly than if low cost foreign suppliers were able to enter the market. LDCs, particularly African LDCs, would likely benefit from the removal of these kinds of barriers.

Reductions in transportation prices would also likely result in an increase in visitor numbers into LDCs as the cost of tourism-related travel becomes less expensive. This is the corollary of the upsurge that took place in tourism services in recent decades as the cost of international travel (particularly air services) declined (McGuire, 2002). Recalling that a number of LDCs are highly specialised in tourism services and that tourism services are the fastest growing component of LDC services exports, this would certainly be an important benefit of services trade liberalisation to LDCs.

While liberalisation of transport and travel services may be beneficial for LDCs, factor market liberalisation is where LDCs will make the biggest gain. That is, they will benefit substantially from the liberalisation of rules governing the movement of natural persons and commercial presence. Liberalisation in these modes would likely lead to a reapportioning of capital flows and the cost of labour across broad blocs of countries (Whalley, 2003). On the one hand, this would give LDCs greater access to much needed finance and expertise, and on the other hand it would give LDC nationals greater access to foreign markets to gain work and experience while helping to equilibrate wages across the developing world.

The gains from liberalisation in mode 4 could be substantial. One study estimates a US\$150 billion gain from a 3% increase in the temporary movement of natural persons from developing to developed countries (Winters, 2003). Given the existing reliance of many LDCs on remittances, liberalisation of mode 4 presents an important development opportunity for LDCs.

Any increased movement of natural persons has the potential to enhance linkages between countries. This increases investment flows and skill transfers between countries, which in turn impact on a country’s wealth,

creating jobs and helping to regulate migration flows (Cattaneo and Nielson, 2003).

Services liberalisation is also an important tool for development in that it can confer long run growth benefits that do not come from increased merchandise trade. Part of the problem with development initiatives based on merchandise export growth, is that for countries dependent on agrarian production trade does not always result in the development of new capabilities, services and institutions, which are necessary for growth. However, trade in services, particularly imports of services, can enhance physical, social, human, and institutional capital (UNCTAD, 2004).

The fact that services are an essential input into economic activity makes the import of services all the more important for LDCs who wish to enhance their exports of services. For example, developing a robust tourism industry requires reliable transport services to run tours, reliable telecommunications to organise events, and sound financial services for foreign exchange. The quality of these services is generally enhanced through the acquisition of foreign capital and foreign expertise (McGuire, 2002).

The many spin-off effects of services liberalisation on infrastructure and firm efficiency, amongst other things, is one of the key reasons why the modelling studies surveyed in section 5 show LDCs benefiting considerably from liberalisation in services trade.

Other elements of services trade liberalisation will also benefit LDCs. Services trade liberalisation is not just about letting foreign firms operate in a market or enhancing infrastructure; it is also about transparency, accountability, and non-discrimination. These are important elements in the development of strong domestic institutions (rule of law and regulatory bodies etc) and there is a growing literature which shows a strong relationship between the quality of a country's institutions and its record of economic growth. Indeed, some studies suggest that institutions have a greater impact on growth than does trade (Rodrik et al., 2002). So while econometric studies suggest that open service sectors have a positive impact on growth (see section 5.2.3), this may have as much to do with the fact that countries with open service sectors have strong institutions governing these sectors. In any event, services liberalisation that focuses on how services are regulated and best practice for services regulation, will ultimately enhance institutions in LDCs and provide a solid platform for economic growth.

Policy may benefit from further research into the role of services liberalisation on the quality of a country's institutions. This may prove particularly informative in the case of small LDCs, such as small island states (eg. Samoa and Vanuatu), where small populations and low incomes are a constraint on strong domestic institutions.

Policy may also benefit from research into services trade in Pacific island countries (PICs). While we have found some information on PICs and trade in services, and have referred to a number of PICs earlier in this study, we have not found any information from which to elaborate specifically about Pacific island trade in services. We would expect many of our comments in this section to apply to PICs, however, in our opinion, the lack of robust research on services trade by PICs is a particular impediment to New Zealand's understanding of services trade liberalisation and its impacts in our region.⁷

5. Measuring impacts of services trade liberalisation

5.1 Trade barriers in services – what and why?

To evaluate potential impacts of services trade liberalisation, one needs first to understand where distortions, or barriers, are present and the extent of their impact. A wide range of barriers to services trade exist in global markets. Such barriers include:⁸

- Bans on foreign investment in certain sectors.
- Ownership restrictions (e.g. limit of 25% foreign ownership in a sector).
- Screening and approval (sometimes involving national interest or net economic benefits tests).
- Restrictions on the legal form of the foreign entity.
- Minimum capital requirements.
- Conditions on subsequent investment.
- Conditions on location.
- Admission taxes.
- Compulsory joint ventures with domestic investors.
- Limits on the number of foreign board members.
- Government appointed board members.
- Government approval required for certain decisions.
- Restrictions on foreign shareholders' rights.
- Mandatory transfer of some ownership to locals within a specified time (e.g. 15 years).
- Performance requirements (e.g. export requirements).

⁷ We understand that a paper on PIC services trade was written for the Forum Secretariat by R. Scollay and S. Stephenson in 2001. However, we have not been able to obtain a copy.

⁸ Source: UNCTAD (1996); Australian Productivity Commission, (1997).

- Local content restrictions.
- Restrictions on imports of labour (e.g. visa restrictions), capital and raw materials.
- Operational permits or licences.
- Ceilings on royalties.
- Restrictions on repatriation of capital and profits.

While these barriers often serve similar purposes to those that are thought of as ‘traditional’ trade barriers to the free flow of goods (tariffs, quotas, etc), the nature of services barriers are quite different. Consequently, the benefits from removing these services barriers are somewhat different in scope to the gains from goods trade liberalisation.

Barriers to free trade in services are conceptually and theoretically more complex than the barriers present in than in goods trade. This is primarily because services have a number of characteristics that are different to goods, for example:

- Services are intangible.
- Many services must be regulated if their markets are to operate in a manner that beneficial.
- Services are more likely to serve non-economic or social objectives than goods.
- Producers and consumers of services usually need to be in close proximity (except in Mode 1).

Services barriers are nearly always non-tariff barriers, and are put in place because governments wish to protect their economies from outside competition or to maintain domestic ownership of firms in key sectors. Governments also put service barriers in place to establish workforce standards or to achieve other consumer protection or regulatory goals.

The presence of services trade barriers distorts services trade in much the same way as do agricultural and manufacturing barriers to trade. Services restrictions impose costs on firms and consumers, limit domestic and international competition, prevent efficiency gains from resource reallocation and allow protected services providers to price at levels that are above where they would be in a fully competitive market. However, there is one key difference between goods and services barriers. Services barriers not only limit market access to *foreign* providers, they often prevent *domestic* firms entering the market. The result is that domestic services markets can become dominated by potentially inefficient firms which do not need to adjust their rent-seeking behaviour due to competitive pressures.

As noted above, some services need to be regulated to ensure efficient and welfare enhancing market outcomes, such as preventing firms from

exercising monopoly power. But, barriers to market access, for either domestic or foreign firms are a very blunt regulatory instrument. They are unlikely to have positive effects and typically preserve the rent-seeking behaviour or inefficient processes of incumbent firms (be they private or public).

The removal of services barriers is desirable for the same reasons that goods liberalisation has been rigorously pursued for many decades: to allow countries to fully exploit their comparative and competitive advantages and to reallocate global resources in the most efficient manner possible. In addition to these ‘traditional arguments’ for trade liberalisation, services liberalisation also delivers important welfare gains that result from increased domestic competition.

Not everyone would gain from further services trade liberalisation. As in goods trade, the chief beneficiaries are likely to be users – consumers and firms – who will benefit from cheaper and more efficient services and a more effective allocation of resources across the economy. Some service producers, who are protected by barriers, will lose the rents they have been extracting from the economy and therefore may not benefit directly from services trade liberalisation. The key thing is that, in net, the result of services trade liberalisation will be beneficial, for the same reasons as for goods trade.

There is a growing global push towards freeing up world services markets, via unilateral, bilateral/regional and multilateral liberalisation. For trade negotiators and other stakeholders to make informed decisions about services trade liberalisation, they must be aware of the potential gains that such liberalisation could bring about. The remainder of this section illustrates the benefits that could be gained by liberalising services trade, according to economic modelling of various liberalisation scenarios.

It should be noted that quantitative research into services liberalisation remains a fairly undeveloped area of work. Due to conceptual difficulties and data shortcomings related to measuring services trade and quantifying services barriers, the literature has yet to agree on the best way to approach the modelling of services liberalisation.

5.2 Results of studies

We look primarily at those studies which split their results by developed and developing countries. We also focus on studies that look at multi-sector, multi-country liberalisation, rather than sector-specific studies. We did not consider studies conducted prior to 1999.⁹

⁹ At least two studies considering the gains from services liberalisation were produced prior to 1999, but the estimates of services barriers in these studies (McKibbin and Wilcoxon, 1996; Brown, Deardorff and Stein, 1996) were very much ‘guesstimates’, and as such their results are at best

5.2.1 Results from CGE modelling

The various studies considered a wide range of liberalisation scenarios and used a number of different CGE models and databases (Appendix A provides an overview of the modelling techniques used in the studies). These parameters are outlined in Table 7. It is important to consider the differences between the various models, databases, services barriers estimates and liberalisation scenarios when comparing the results (shown in Table 8).

Some general comments about the results are as follows:

- Global gains from services liberalisation are often as large or larger than any further gains from manufacturing liberalisation. One study suggest that the gains from services liberalisation are five times those that might stem from the removal of manufacturing barriers.
- New Zealand gains in all but one study, although for the sake of modelling purposes, New Zealand is often aggregated with Australia. When aggregated with Australia, the welfare gains from services liberalisation for the region are around 3% of GDP (per annum), although it is not clear how these gains are apportioned between the two countries.
- New Zealand's economic welfare increases between US\$257 million and US\$700 million per year from full services liberalisation.¹⁰
- The largest welfare gains (in terms of a % of GDP) go to those countries with largest initial barriers, Hence China, SE Asia nations and LDCs usually gain more proportionally than do other less protected developed nations.
- A large proportion of each country's total welfare gains are from the effects of liberalisation on *domestic* competition. That is, as the services barriers are lifted, other domestic firms can enter the domestic market, creating significant efficiency gains.

Despite these broad conclusions, there is little consensus yet about the exact magnitude or distribution of gains from services liberalisation. The differences in results from these models generally do not stem from researchers considering vastly different liberalisation scenarios. Rather, the differences are primarily a result of the manner in which each research team has modelled the services barriers that form their baselines scenario. As discussed above, this research is relatively new, and modelling techniques/inputs are still being developed.

uncertain. Most studies completed after 1996 tend to consider liberalisation from a post-Uruguay Round baseline, which is a more realistic starting point for shocking the model.

¹⁰ The welfare measure used is Equivalent Variation. One study (Brown and Stern, 2001) suggests welfare gains of up to US\$17 billion, which seems unlikely, given that New Zealand's GDP is currently around US\$66 billion (year ended December 2003).

Table 7 Summary of services liberalisation studies – models and methodology

Study authors	Model and data used	Base year	Barrier estimation technique	Scenarios modelled ⁽¹⁾	Comments
Chadha (2000)	NCAER-University of Michigan CGE Model of World Production and Trade, plus GTAP-4 database.	1995 – projected to 2005.	Ad valorem equivalents of barriers adapted from the 'guesstimates' in Hoekman (1995).	25% reduction in tariff equivalents in services sectors.	Aggregated regions, focus on India. No updating of Hoekman estimates.
Chadha et al (2001)	NCAER-University of Michigan CGE Model of World Production and Trade, plus GTAP-4 database.	1995 – projected to 2005.	Ad valorem equivalents of barriers adapted from the 'guesstimates' in Hoekman (1995)	33% tariff reduction	20 countries, 15 developed, 5 developing. Focus on India. No updating of Hoekman estimates.
Benjamin and Diao (2000)	GTAP, monopolistic competition setting			Removal of market segmentation, 10% fall in fixed costs, 11 service sectors	
Australian Department of Foreign Affairs (1999)	GTAP-4, plus APG-cubed for dynamics	1995	Based on Hoekman's estimates, but scaled back.	50% and 100% removal of services barriers	GTAP database not updated. But dynamic modelling is useful to show effects over time.
Robinson et al (1999)	Global CGE model, Uses GTAP-4 database to derive multiregional SAM., then uses GAMS to solve.	1995	Ad valorem equivalents of barriers adapted from the 'guesstimates' in Hoekman (1995)	50% services liberalisation; 50% cut in transport costs.	10 regions, 11 sectors. Services aggregated into 3 broad sectors. No updating of Hoekman estimates.
Francois et al (2002)	Model not identified by name. Monopolistic competition setting. GTAP database 5.2.	1997, updated to make it post-UR, ATC implemented, China in WTO, EU enlarged.	Tariff equivalents based on gravity models.	Mix of 50%/full services liberalisation; swiss formula; full liberalisation	17 sectors, 16 regions.
World Bank (2002)	Comparative statics 'model'.	1997 data.	1. Cost penalty/monopoly inefficiency measure. 2. Price mark-up.	Each type of barrier removed individually; joint removal.	6 services sectors only. Developing countries only. No interaction with ROW or other sectors. Services barriers set arbitrarily.

3. Barriers to cross-border trade.

Set at conservative levels (all 10%).

Dee and Hanslow (2000)	FTAP (GTAP disaggregated by ownership of activity, not location). Updated GTAP database.	Post-UR database, plus data on bilateral FDI stocks.	GTAP	Assume all traded services have tax equivalent barriers that are average of banking services and telecoms services barriers (Kaleeswaran et al, 2000, Warren, 2000). Some services deemed to be non-traded. Barriers modelled as rents, not higher costs.	Partial and full liberalisation	Little sectoral detail. Half of education sector assumed to be non-traded. Assumption re model barriers may underestimate liberalisation gains.
Verikios and Zhang (2001)	FTAP-2 – amended from Dee and Hanslow (2000), different financial market assumptions.	As in Dee and Hanslow (2000), but with greater sectoral detail		As in Dee and Hanslow (2000). Barriers either on output (barriers to ongoing operations) or on capital (barriers to establishment).	Removal of market access barriers; removing national treatment barriers; both.	More sectoral coverage. Decomposes liberalisation gains into market access and national treatment effects. Study focuses on telecoms and financial services.
Brown and Strern (2001)	Michigan CGE model , GTAP 4.1 database	1997		Based on Hoekman estimates of barriers to FDI.	Full liberalisation; fully and partially mobile capital;	Only 3 sectors, 18 countries. Focuses on effects of capital accumulation from liberalising FDI.

Notes: (1) Only services liberalisation scenarios are reported in this table. Many studies also consider agricultural and manufacturing liberalisation in conjunction with services liberalisation

Source: NZIER, Nielson and Taglioni (2004)

Table 8 CGE model results from services liberalisation

Study	Results of modelling (1)
Chadha (2000)	Developing countries gain more relative to developed countries. Changes in GDP: India 0.7%, rest of SE Asia 0.9%, Indonesia, Malaysia, P'pines and Thailand 1.8%, HK, Singapore, Korea, Taipei 1.7%. Developed countries: US 1.0%, Japan 0.8%.
Chadha et al (2001)	Developing countries gain more relative to developed countries (2.5% of GDP cf. 2%). Largest gains to HK (8.3%), Thailand (4.2%), Singapore, P'pines, Mexico, Turkey (all 3-4%). Rest of Asia 1-2% gains. Australian and New Zealand gain 2.9% of GDP, Japan and EU 1.9%.
Benjamin and Diao (2000)	Welfare gains of 5-15% for Asian developing countries. Lower gains for developed countries – highest gain is 3% for Australia/New Zealand. 0.9% gain for US, minimal gains for EU.
ADFAT (1999)	US\$250 billion annual global welfare gain. US\$73bn to EU, US\$63bn to North America, US\$44bn to Japan. Africa and ASEAN around US\$4.7bn. China \$10bn. Australia gains US\$3.5 bn and New Zealand gains US\$700 million.
Robinson et al (1999)	Welfare gains are 5 times larger than for manufacturing liberalisation. If tech transfer included, total world welfare improves by 3.7% of GDP. Asian NICs gain 7.8%, EU 4.7%, Japan 3.9%, ASEAN 3.0%, US 2.5%, China 3.1%.
Francois et al (2002)	Welfare gain of US\$53 billion, US\$38bn to developed countries, US\$17bn to LDCs. Total gain as large as for manufacturing liberalisation. Largest gains to North America, India, Germany. Australia and New Zealand gain US\$1.6bn.
World Bank (2002)	Developing countries gain up to US\$900bn by 2015 from 1997 base (9.7% of base year GDP).
Dee and Hanslow (2000)	World welfare rises US\$134 billion. Largest gains (% of GDP) to countries with highest initial barriers: China (14.6%), Indonesia (5.1%), HK (1.0%). Rest of gains very small in % terms. Some countries' GDP drops, including New Zealand (-0.1%). China accounts for US\$91bn of world welfare gain. New Zealand welfare increases US\$257 million. Most benefits from commercial presence liberalisation.
Verikios and Zhang (2001)	Telecomms liberalisation: World GNP increases 0.1% or US\$24 billion. Mostly to due to removal of market access barriers. Largest gains (% of GNP) to China, Indonesia, P'pines. Minor gains to most other countries except Malaysia, Thailand and Mexico whose GNP drops. New Zealand's GNP rises 0.06%. 85% of total world gains due to allocative efficiency improvements. Financial services liberalisation: World GNP rises by US\$23 billion, mainly due to removal of national treatment barriers. Largest gains (% of GNP) to Thailand, P'pines, Mexico and Indonesia. New Zealand GNP rises 0.4%.
Brown and Stern (2001)	Assuming perfect international capital mobility and a fixed world capital stock, largest welfare gains (as % of GDP) accrue to New Zealand, HK, Japan and China. Mexico, most of SE Asia, Canada and the US all see welfare drop. In \$\$ terms, Japan's welfare rises US\$363 billion, while the US becomes worse off by US\$220bn. New Zealand's welfare improves by US\$17bn. Under an alternative set of assumptions regarding risk premiums and a different demand structure, New Zealand gains US\$8.7bn, or 15.2% of GDP.

Notes: (1) Refer to Table 7 for a description of the models, databases and scenarios modelled.

Source: NZIER, Nielson and Taglioni (2004)

5.2.2 Results from new growth theory studies

Some studies look at mode 4 liberalisation only, using new growth theory rather than CGE modelling. Examples include Markusen and Rutherford (2002), Eschenbach and Francois (2002) and Winters, Walmsley, Wang and Grynberg (2002). These studies look at the effects on domestic entrepreneurship and growth of imported expertise via the movement of natural persons. They find that the use of foreign consultants can have a significant impact on domestic growth and welfare. Winters et al (2002) suggest that an increase in developed countries' quotas on the inward movements of workers from developing countries equivalent to 3% of the developed countries' total labour force would generate an aggregate gain of US\$150 billion per year. This is equivalent to 0.6% of the model's initial world income, with the gains for both developed and developing countries coming principally from the movement of low-skilled workers.

5.2.3 Results from econometric studies

Those studies of services liberalisation that use econometric techniques are often sector-specific. However, some general comments on these studies' findings can be made:

- Countries that have more open services sectors tend to have higher long-run potential growth rates. This is particularly true of those countries with liberalised financial service sectors. According to Mattoo et al (2001), countries with some degree of financial liberalisation are found to grow up to 0.25% faster than countries with a closed financial sector. Countries with full financial liberalisation are found to grow up to 1.2% faster than other countries. These results are magnified for the developing countries in the sample, with developing countries with full financial liberalisation tending to grow up to 2.3% faster than other developing countries.
- The advantages of liberalising in this mode come via increased technology transfers, improved X-efficiency and a greater range and quality of services offered.
- If a 'typical' low income country liberalises its financial services sector to similar levels of openness to that of a typical high income country, the per capita growth rate of the developing country would lift by between 0.4 and 0.6% (Eschenbach and Francois, 2002).

Liberalising the telecommunications sector tends to lift economic growth rates. Mattoo et al (2001) suggest that countries with full telecom liberalisation tend to grow up to 1% faster than others. They also conclude that developing countries with some degree of telecom liberalisation tend to grow up to 0.32% faster than developing countries with highly restricted telecom sectors. Developing countries with full telecom liberalisation tend to grow almost 2% faster than other developing countries.

6. New Zealand services profile

6.1 Introduction

Having outlined what stands to be gained, in an aggregate sense, from further services liberalisation, it is now useful to understand where New Zealand fits into the picture. In this section we profile the various sectors in which New Zealand providers produce and export services. We examine some key data sets to obtain quantitative evidence of sectoral growth and discuss various growth drivers in services.

6.2 Services in the New Zealand economy

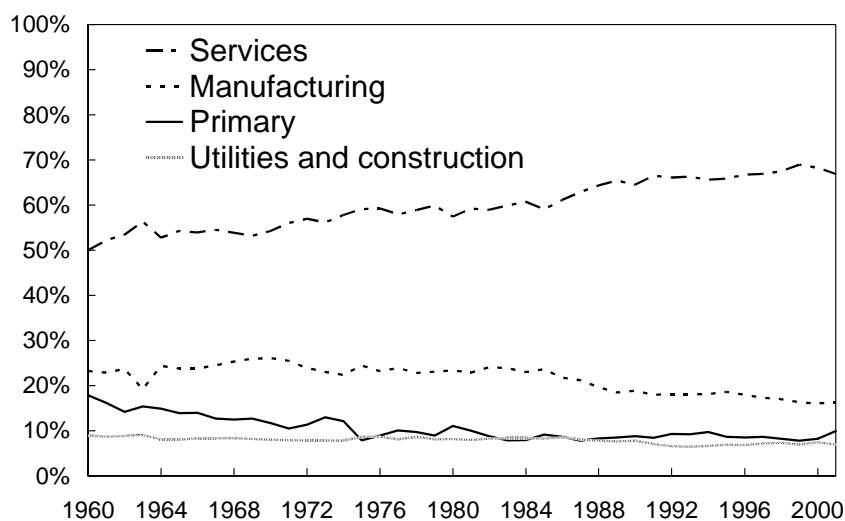
For most of its economic history New Zealand has been a producer and exporter of primary commodities. However, in recent decades, the New Zealand domestic economy has become more reliant on producing and exporting services.

The importance of these non-extractive, knowledge-based industries is borne by the following points:

1. The services sector now accounts for around 67% of New Zealand's economic output, compared to just 50% in 1960, as shown in Figure 3.
2. The services sector generates substantial foreign exchange receipts – around \$11 billion in 2003 (over a quarter of New Zealand's export earnings).
3. Around 83% of the female labour force and 58% of the male labour force are employed in the services sector. Service producers were responsible for over 1.3 million jobs in New Zealand.
4. Services industries have grown more rapidly than the primary, manufacturing and construction/utilities sectors. Between 1991 and 2003, services sector GDP averaged growth of 3.3% per annum. This compares favourably to the primary sector (2.9%), the manufacturing sector (1.9%) and the construction and utilities sector (2.0%).
5. New Zealand's service providers are becoming more globally interconnected. Since 1991, the value of New Zealand's services exports has grown by an average of 8.1% per year. Goods exports have grown on average at 5.5% over the same period.

Figure 3 Services' growing importance

Share of nominal GDP



Source: Statistics New Zealand, NZIER

The stronger growth of services exports in part reflects the fact that, relative to New Zealand's exports of traditional primary products, demand for services in the global economy is growing rapidly. Ballingall and Lattimore (2004) note that 'a large proportion of New Zealand's traditional exports of agricultural products are sold in relatively slow growing markets (Ballingall and Briggs 2002; Ballingall 2004). This means that future demand growth is likely to be limited. Any significant growth is likely to stem from either new markets for existing products, or from the introduction of new products into existing markets'. Services exports fall into both categories – established services providers are entering new markets and relatively new service providers are selling to existing markets with new or differentiated services.

With respect to the benefits of liberalising services trade, it is important to note that New Zealand will be less likely to benefit than many other economies, particularly developing economies, because our domestic market is already relatively barrier free. As noted in section 3.3.1, the largest gains from services liberalisation will go to countries with the highest initial barriers to trade because these economies will benefit from additional competition in their domestic markets. The absence of significant domestic efficiency gains is the most likely reason for one of the modelling studies we surveyed yielding a small negative result for New Zealand from services liberalisation.

Most of the gains to New Zealand, from services liberalisation, will likely come from an expansion in export earnings as barriers to services trade in destination countries are removed.

6.3 New Zealand's services export profile

New Zealand's services export profile is generally similar to other developed countries – dominated by trade in transport and tourism services, with a shifting weight towards “other” business services. However, some of the issues facing New Zealand services exporters are more closely related to those facing developing countries than developed countries.

New Zealand's services export profile has diversified in recent years (see Table 9). Transport, travel, and education, have declined in terms of their relative contribution to services exports. This is not to say that export growth in these sectors has been easing. On the contrary, it has been growing strongly over the last 8 years and is expected to continue to grow strongly. However, other components of services exports have been growing at an even faster rate, increasing their share of overall services exports. In particular, miscellaneous and other business services have more than doubled their share of export income in less than 10 years.

The rapid growth of business services and other miscellaneous services in New Zealand's export profile may simply be due to exports of services (outside of transport and tourism) being a relatively new phenomenon.¹¹ That is, rapid growth may simply be indicative of growth from a low base. Though, the same may be said of growth in global services trade and consequently New Zealand is no different from other developed countries in this respect.

New Zealand's services export profile is dominated by tourism. In the 2003 calendar year, international travellers contributed \$6.4 billion to the New Zealand economy (Tourism Research Council, 2004). The contribution of tourism to New Zealand's economy has been growing in recent years and is forecast to continue to grow strongly, however growth in tourism exports from trade liberalisation can be expected to be small.

Tourism services exported by New Zealand are consumed in New Zealand and, consequently, the majority of barriers to trade are onshore and in New Zealand's case they are fairly low. However, multilateral liberalisation in services trade which lowered the cost of transportation services (particularly air transport services¹²) would likely result in a one-off level increase in tourism exports, though it is difficult to say what the magnitude of such an

¹¹ Infometrics' report on services exports in 1996 reported that firms it spoke to had only started to export services in the 1990's

¹² Air transportation itself (e.g. airlines and landing rights) is not yet included in the GATS or in most regional trade agreements. However, a wide variety of services auxiliary to air transportation are included, such as engineering or ground services, training, or air traffic control services. Liberalisation of these services would most likely reduce the cost of air transport services themselves – assuming that air transport providers are regulated in such a way that they cannot capture all of the benefits from these cost reductions.

increase might be and one could expect little in the way of long run benefits from productivity gains arising from resource reallocation.

Education, New Zealand's second largest service export, is like tourism in so far as the bulk of the barriers to trade are onshore. A study by Ballingall, Cox, Duncan, and Smith (2004) on barriers facing New Zealand's education exporters found that the majority of barriers facing exporters were related to domestic bureaucratic processes such as immigration regulations. That is not to say that there are no significant offshore barriers. However, the majority of trade in education services is supplied via mode 2 (services provided to foreign students while they are in New Zealand) and consequently offshore barriers prove to be of less importance in the case of education exports.

Onshore barriers to trade in education services do not generally have trade restrictive objectives and so are not likely to be removed through trade liberalisation. As a result, exports in this sector may not benefit directly from growth as a result of multilateral liberalisation – that is, with the exception of one off gains arising from efficiency gains in other sectors.

It should be noted that education is a rapidly growing sector in services trade worldwide (in the global data it is normally categorised as a travel service) and consequently marginal gains to trade in education from services liberalisation may well be magnified by concomitant growth in volume of exports in this sector. Trade in education is already contributing a significant amount to the New Zealand economy, with non-residents in New Zealand consuming a little over 1.5 billion dollars of education services in the year to September 2004.

Table 9 Shares of services export trade by sectorMarch 1995 & Sept 2004 year, Percent of total services exports ⁽¹⁾

	1995	2004
Transport ⁽²⁾	85.4	19.37
Travel		50.8
Education		18.8
Finance and Insurance	0.4	0.7
Computer and Information	0.8	1.5
Personal, cultural, and recreational	0.7	1.1
Royalties & licence fees		1.3
Communication ⁽³⁾		2.6
Construction ⁽³⁾		0.4
Total miscellaneous and other business services	7.7	7.3
<i>Merchant services and other trade related services</i>	<i>0.7</i>	<i>0.2</i>
<i>Legal, accounting, management consultancy and PR</i>	<i>1.0</i>	<i>0.7</i>
<i>Advertising, market research</i>	<i>0.4</i>	<i>1.0</i>
<i>Research and Development</i>	<i>0.4</i>	<i>0.4</i>
<i>Architectural, engineering & other tech. services</i>	<i>1.2</i>	<i>0.4</i>
<i>Agricultural, mining and on-site processing services</i>	<i>< 0.1</i>	<i>< 0.1</i>
Government & other miscellaneous services ⁽³⁾	4.3	1.5

Notes: (1) Data available by sector for earlier years is not comparable with recent data.

(2) For 1995 this contains transport, travel and education.

(3) In 1995 miscellaneous included communications & construction.

(4) Numbers in bold do not exactly sum to 100 because of rounding errors.

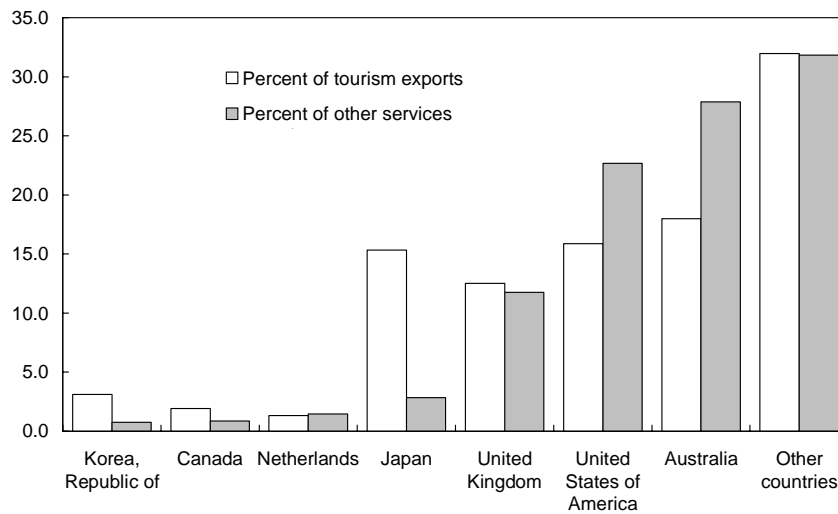
(5) Numbers in italics are the main components of total miscellaneous and other business services.

Source: Statistics New Zealand, Infometrics

Major markets for New Zealand services exports vary by sector. In education Asia is the major market, while in tourism Australia is the largest. For other services, Australia is slightly behind the US and the EU and Asia seems to be a small part of the market.

Figure 4 Major New Zealand services export markets

Tourism exports year end December 2000. Exports less tourism, year end June 1999¹³



Source: Statistics New Zealand

Overall New Zealand’s services export profile is similar to that of its goods exports in terms of key export markets, though trade with Asia comprises a smaller component of services trade compared to trade in goods. In 1999 (the most recent year for which partner country services trade information is available), services trade with APEC comprised 63% of services trade, compared to 72% of merchandise exports, and services exports to ASEAN countries were 5% of services exports compared with 7.5% of merchandise exports.

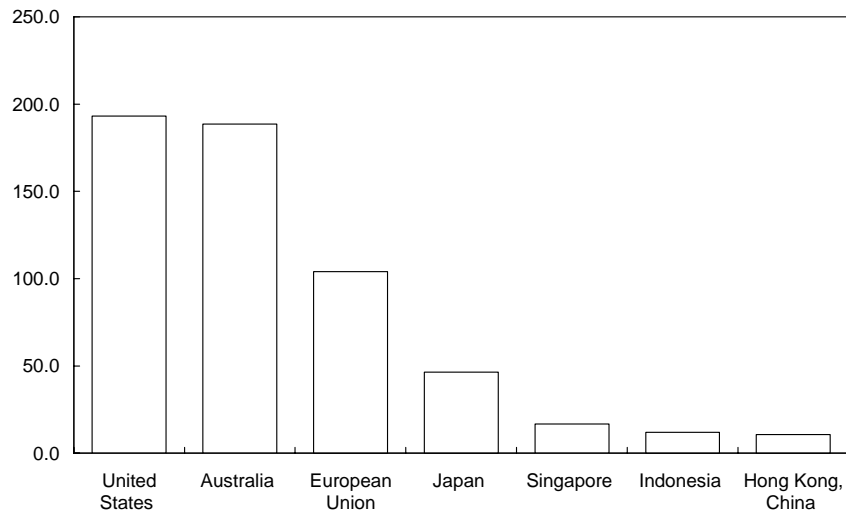
If the impact of tourism services is removed from New Zealand’s trade profile, the importance of Asia diminishes further. For example, Figure 4 shows that Japan and Korea’s shares of exports in other services is a lot smaller than their share of New Zealand’s tourism exports. For New Zealand’s principal non-Asian services export markets, Australia and the United States’, their shares of New Zealand’s exports of other services are considerably larger than their shares of New Zealand’s tourism exports.

Of course, linguistic and cultural differences are likely to have an important impact on services trade. Naturally New Zealand providers find the US and Australia easier to access in this regard. It also reflects the more established trade linkages that New Zealand has with those countries and the fact that trade in services is a recent phenomenon relative to goods trade.

¹³ Other services excludes transport, travel, government, and insurance services. Transport and travel include tourism and education exports.

Figure 5 Markets for NZ exports of “other” services

Excludes tourism and education and transportation, Millions of US dollars, 2002



Source: OECD estimates

As a developed country, with fairly well cemented linkages with other developed countries, New Zealand has important comparative advantages in services exporting. New Zealand firms can offer services at relatively low prices compared with many other providers of services in developed countries. In this respect, New Zealand’s service exporters are like developing country exporters, with the exception that the low cost of our services extends primarily to higher skill services. Our education system is of a high quality – at least relative to the cost – and costs of living and the cost of labour are relatively low compared to other developed countries.

According to Infometrics (1996) New Zealand firms also typically have a comparative advantage in some sectors – presumably in terms of efficiency – arising from having to compete in a deregulated environment that has been relatively more liberal compared to elsewhere in the world and for longer than competitors in other markets. One example of such a sector is telecommunications services.

Certainly New Zealand services exports have grown in recent years as a result of reforms and various privatisations in public services. Statutory monopoly in a number of service sectors created entities that were very large by private sector standards. After deregulation and privatisation these firms found themselves with little room to expand in the New Zealand market and began to look offshore. Consequently a number of New Zealand’s services exporters are state owned enterprises or former state owned entities. Examples of firms like this are Airways NZ (an SOE), and Opus consulting (an engineering firm; previously part of the Ministry of Works and now privately owned and publicly traded on the Malaysian stock exchange).

While New Zealand does have some large scale service exporters, on the whole New Zealand services exporters are at a competitive disadvantage because of the relatively small size of the New Zealand economy. Firms have difficulty obtaining sufficient financing or credibility to establish export markets particularly in supplying services via commercial presence. In this regard New Zealand services exporters face some of the same difficulties facing developing country exporters. (Infometrics, 1996; OECD, 2003).

Difficulty establishing commercial presence in a market is problematic not just because it restricts exports of services via mode 3, but because commercial presence has important flow on effects for services trade more generally. Establishing commercial presence in an export market enhances credibility and brand recognition of firms in that market, assisting firms in exporting via other modes by what is known as stair-casing. Consequently, liberalisation of mode 3, commercial presence, would most likely be an important element of multilateral services trade liberalisation.

Difficulties around establishing commercial presence can be ameliorated through liberalisation in the movement of natural persons. Movement of natural persons can be an important interim measure for firms that are not yet of sufficient size to establish a commercial presence. Consequently, one might expect New Zealand to benefit from multilateral liberalisation in mode 4 – though to a lesser extent than developing countries.

When it comes to establishing commercial presence, it is reasonable to presume that New Zealand exporters are well served by our close economic and trading relationship with Australia. Australia is a convenient, relatively barrier free and inexpensive staging post for New Zealand service exporters to develop and grow in before moving on to markets outside of Australasia. It would be informative to ascertain whether or not New Zealand service exporters use Australia as a staging post to exporting with the rest of the world. However, we have not found any studies which can confirm this.

Indeed, we have found very little in the way of information on New Zealand service producers, export sectors, key markets, and major barriers – at least not at a level of detail we consider necessary to be able to shed any real light on the benefits and pitfalls of services liberalisation for New Zealand.

We are aware of detailed information on education and tourism exports. In our view, summarising these studies in a scoping study would yield little in the way of useful information without complimentary information on other service sectors. Information on a range of service sectors is needed so that we can ascertain the relative weaknesses and strengths of particular sectors

and the relative benefits that might accrue to specific sectors from services liberalisation.¹⁴

7. Summary and conclusions

Our survey of existing literature and data on services trade and the benefits of services liberalisation has led us to a number of key conclusions:

1. The importance of services in the world economy is increasing. Services trade is growing rapidly, with particularly strong growth in business services and “newer” services outside of the more traditional travel and transportation services trade.
2. While services account for a significant proportion of economic activity and exports in developed countries, developing countries are growing their exports of services at a far more rapid rate. Comparative advantages in developing countries around labour cost, mean that they are poised to garner a significant proportion of the benefits from services liberalisation.
3. Formal economic modelling of services liberalisation remains at a formative stage. Not only are basic data lacking, but services barriers are difficult to identify and accurately quantify. Consequently, modelling results at this stage are generally indicative only in terms of the magnitude of the benefits from liberalisation.
4. Common findings across modelling studies of services liberalisation suggest the benefits of multilateral services liberalisation will most likely accrue to those countries with the highest initial barriers to trade – because of within market gains rather than gains to trade directly. This suggests developing countries will be the biggest beneficiaries of services liberalisation.
5. CGE modelling suggests that New Zealand stands to benefit by between US\$257 million and US\$700 million per year from global services liberalisation.
6. A large portion of the gains from services trade liberalisation will come from within-market efficiency gains. This means New Zealand is likely to experience relatively small gains, compared to other countries, because of the relative openness of our economy to services trade.
7. Second round effects of multilateral services trade liberalisation are a potentially significant source of benefit to New Zealand, which are

¹⁴ We note that the Infometrics study in 1996 made a useful contribution to understanding services exports from New Zealand. Unfortunately, the study is now somewhat out of date.

not usually modelled in quantitative studies. The one study we reviewed which modelled these effects, such as increased demand for exports arising from increased world income, was the one which showed New Zealand benefiting by US\$700 million per year.

8. It is very difficult to assess which service sectors in the New Zealand economy will benefit most from services liberalisation. Primary research needs to be conducted into New Zealand exports, by sector, and the various barriers facing New Zealand services exporters in the relevant export markets so that we can better understand what New Zealand has to gain from services liberalisation.
9. The impact of services liberalisation on LDCs has not been an area of substantial research, primarily because the paucity of services data for these individual countries has led to their omission from most global economic models. However, it is clear that managed liberalisation of services in these countries can be an important element of development strategies.
10. Trade in services is central to the economies of a number of PICs. Yet we do not have a firm grasp on the shape of PIC services trade. The lack of robust research on services trade by PICs is a particular impediment to New Zealand's understanding of services trade liberalisation and its impacts in our region.

This strongly suggests that, in the context of pursuing New Zealand's interests in multilateral services trade liberalisation negotiations, returns to better data collection would be high. Furthermore, future investment in understanding New Zealand's services trade priorities would allow negotiators to focus their efforts on areas of particular benefit to New Zealand. This will be important given the breadth and variety of interests in services trade amongst other participants in the global trading system.

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Appendix A Methodological comments

A.1 Techniques used to measure benefits of services trade liberalisation

The economic effects of trade liberalisation are usually estimated using computable general equilibrium (CGE) models.¹⁵ Such models have been used for many years in the study of goods trade liberalisation. International CGE models represent the world economy in its entirety, albeit at a high level of abstraction and aggregation, as composed of a set of inter-related countries/regions and markets. These models embody the assumption that each market clears, through the movement of prices that equate supply and demand. Such models are usually ‘shocked’ from a baseline, and the effects measured in terms of changes to certain countries’/regions’ GDP, employment, welfare, exports, imports and a host of other variables. In the research discussed in this section, the shocks modelled involve various types of services trade liberalisation. Many CGE models are ‘static’ in nature – they provide a momentary ‘snapshot’ of how global markets change in response to a shock, without incorporating any analysis of the dynamic effects over time of these shocks.¹⁶

Econometric techniques have also been used to model the effects of services liberalisation. These models typically study the impacts of services liberalisation on economic growth and productivity. Whilst econometric models are useful due to their dynamic nature (i.e. ability to consider the effects of liberalisation over time), they are often sector-specific rather than covering all services sectors. A further issue with these econometric models is that ‘cross-country regressions are unable to control for many of the factors that should be controlled for when trying to isolate the effects of trade policies, most importantly rate of investment and rate of saving’ (Nielson and Taglioni, 2004, p. 96).

At this stage of the research process, a detailed investigation into the relative merits of each type of modelling is not warranted, although this could be a topic for further work.

A.2 Measuring services trade barriers

In order to model the ‘shock’ of removing trade barriers in services sectors, CGE modellers must first have some estimate of the existing level of barriers in each sector and country. Determining these initial barriers is critical to assessing the impacts of services liberalisation. As noted by

¹⁵ Nielson and Taglioni (2004, p. 90) note that only one partial equilibrium model has been used for estimating the gains from services liberalisation. See Johnson, Gregan, Gentle, and Belin (2000).

¹⁶ There are of course a number of dynamic CGE models that are commonly used. However, their use in the modelling of services liberalisation has to date been limited.

McGuire (2002), accurately estimating the severity of existing services trade barriers ‘crystallises the costs of protection for governments, the benefits that will accrue from their removal and is impetus for reform’.

Determining initial levels of services barriers is a difficult task, both theoretically and practically. A detailed examination of the key issues surrounding this key element of CGE studies of services liberalisation can be found in Findlay and Warren (2000). Some of the main issues to consider are briefly discussed in Nielson and Taglioni (2004, pp. 83-90), from which the following can be drawn:

- The tools used to assess the types and severity of services barriers are based on techniques used to estimate non-tariff barriers for manufactured goods. These tools are still being developed. Until this research area deepens, the results of services liberalisation from CGE models using estimates of barriers must be used with caution.
- Contradictory modelling results often stem from the level of initial barriers. Comparing across CGE studies is therefore fraught with danger. This problem will remain until a common methodology for measuring barriers in services trade is developed.
- Services trade barriers are generally measured by compiling restrictiveness indices, based on a system of scores and weights that convert qualitative information (from surveys or GATS commitments) into numerical measures. This technique is known as compiling ‘frequency measures’ of services barriers.¹⁷ Many of the CGE studies to date have based their services barriers on those developed by Hoekman (1995). The Hoekman estimates used revealed tariff equivalents derived from the GATS scheduled commitments of WTO members. They were obtained by multiplying a ratio of trade restrictions derived from GATS commitments by a benchmark tariff equivalent to providing no market access. For example, if an economy has 70% of the services sector bound with no restrictions in GATS and all other sectors are unbound, a factor of 0.3 is used to determine the sector’s tariff equivalent.¹⁸ Restrictiveness indices are best thought of as indicators, rather than measures, of barriers to services trade. As such, they are not well related to the actual economic effects of barriers to services trade.

Due to the developing nature of the ‘science’ of identifying and measuring services trade barriers, the level of initial restrictions in the various CGE models differ considerably. This in part explains why the models’ results vary considerably, even when modelling similar liberalisation scenarios.

¹⁷ Other techniques are used to measure barriers, including using econometric gravity models to estimate the difference between actual and potential services trade, with the residual being the size of the trade barrier (‘quantity-based measures’ of trade barriers). However, this process is made difficult by a lack of detailed bilateral services trade data. Recent developments have seen ‘price-based measures’ used to estimate the effects of service restrictions on price or cost variables.

¹⁸ Whilst Hoekman’s baseline estimates enabled more quantitative work to be done in this area of research, it has been suggested that ‘the Hoekman estimates... in their crude form imply unrealistically large estimates of the gains from service sector reforms’ (ADFAT, 2000, p. 48).