

ISEAS Working Paper: Economics & Finance Series No. 1(2005)

**Enhancing Bilateral Economic Linkages  
Through New Regionalism: The Case of the  
Agreement Between New Zealand and  
Singapore for a Closer Economic  
Partnership (ANZSCEP)**

Rahul Sen

The author would like to thank Sanchita Basu Das for research assistance. This is a work in progress and should not be cited without prior permission of the author. This paper was earlier presented at the Singapore Economic Review (SER) Annual Conference held in Singapore from 4-6 August 2005.

© 2005 Institute of Southeast Asian Studies  
ISSN 0218-8937

**ISEAS DOCUMENT DELIVERY SERVICE.** This version was obtained electronically direct from the publisher on condition that copyright is not infringed. No part of this publication may be reproduced without the prior permission of the Institute of Southeast Asian Studies, 30 Heng Mui Keng Terrace, SINGAPORE 119614. <<http://bookshop.iseas.edu.sg>>

**ENHANCING BILATERAL ECONOMIC LINKAGES THROUGH  
NEW REGIONALISM: THE CASE OF THE AGREEMENT  
BETWEEN NEW ZEALAND AND SINGAPORE FOR A CLOSER  
ECONOMIC PARTNERSHIP (ANZSCEP)**

**Abstract**

*With ASEAN economies recovering from the economic crisis of 1997-98, and largely unsuccessful efforts towards trade and investment liberalization in multilateral and regional fora, viz. the WTO and the APEC, Bilateralism has emerged as the most preferred option to advance free trade goals among major Asian economies. Singapore, being one of the most open economies has been the major proponent of this trend, pursuing bilateralism as a major instrument of its commercial trade strategy through its moves to engage in Free Trade Agreements (FTAs) with its major trading partners. In this context, the Agreement between New Zealand and Singapore for a Closer Economic Partnership (ANZSCEP) that came in force since January 2001 has been one of the first such comprehensive bilateral FTAs that was ever signed involving an ASEAN country. As is the case with any FTA, the primary aim of this agreement was to liberalize trade and investment flows between the two countries and strengthen bilateral economic linkages.*

*This paper aims to assess the early effects of the ANZSCEP on bilateral economic linkages between Singapore and New Zealand not only with respect to merchandise trade, but also in the area of trade in services and investments flows using both macro and micro data. This has hitherto not been attempted in previous studies that have largely restricted the analysis to merchandise trade flows. The paper employs traditional intensity indices to analyze these linkages. The study yields important policy implications for the ANZSCEP and other rapidly proliferating bilateral FTAs in the region.*

Keywords: Free Trade Agreements, ANZSCEP, Singapore, New Zealand, Trade Intensity, Services trade, Investment flows

## **1. Introduction**

In a short span of four decades, the Singapore economy has evolved into a modern city-state economy, and a being a manufacturing and trading hub for Southeast Asia, has been one of the most open economy in Asia with a trade to GDP ratio of 321% in the year 2004. Maintaining a policy of outward orientation and reduced barriers to international trade and investment has been the prime focus of its growth strategy over the past decades, which has led its economy to register one of the highest rates of growth in the world, and an average per capita income surpassing many of the developed economies (Rajan, 2003). Being a small open economy, Singapore has always been a leading advocate of global trade liberalization.

With ASEAN economies recovering from the economic crisis of 1997-98, and largely unsuccessful efforts towards trade and investment liberalization in multilateral and regional fora, viz. the WTO and the APEC, Bilateralism has emerged as one of the most preferred option to advance free trade goals among major Asian economies, since it allows them to explore alternative paths to trade and investment liberalization, while concomitantly pursuing multilateral trade liberalization through the WTO (Sen, 2005).

This trend has been initiated by Singapore, which begun to pursue bilateralism as a major instrument of its commercial trade strategy through its moves to engage in Free Trade Agreements (FTAs) with its major trading partners since the year 2000. Since then, not only has Singapore successfully negotiated several bilateral FTAs with its trading partners<sup>1</sup>, other ASEAN economies, viz. Thailand, Malaysia and Philippines have also been jumping onto this bandwagon, attempting to negotiate similar bilateral deals. This phenomenon of the rapid proliferation of bilateral and regional trading and economic cooperation agreements in the Asia-Pacific, especially in the aftermath of the regional financial crisis in 1997-98 has been often dubbed as “new regionalism”, since these agreements are emerging to be much more diverse in both scope and coverage than traditional FTAs (Rajan and Sen, 2004).

In this context, the Agreement between New Zealand and Singapore for a Closer Economic Partnership (ANZSCEP) that came in force since January 2001 assumes important significance as it has been the first comprehensive bilateral FTA

that was ever signed involving Singapore, and also the first bilateral FTA of an ASEAN member, initiating the process of “new regionalism” in Asia. As is the case with any FTA, the primary aim of this agreement was to liberalize trade and investment flows between the two countries, reduce business costs, and strengthen bilateral economic linkages. By pursuing the bilateral route, Singapore’s policymakers believed that suitably designed, Regional Trading Arrangements (RTAs) and bilateral Free Trade Agreements (FTAs) can complement the WTO by stimulating further global trade liberalization, and hence play a catalytic role in moving the WTO forward. This thinking is reflected in a recent study on Singapore’s trade policy by Liang (2005) who observes:

*“Singapore’s pursuit of FTAs/RTAs has been driven by perceived economic benefits of regional integration as by strategic and political considerations. Singapore believes that FTAs complement the multilateral trading system in several ways:*

*Firstly, FTAs can provide impetus to multilateral trade liberalization. FTAs allow countries to identify compatible partners with whom to pursue faster and broader liberalization, thus acting as catalyst for multilateral trade liberalization. Second, FTAs create positive competitive dynamics that spur further liberalization. FTAs put pressure on those that are slow to liberalize and in the process; help to push everyone towards liberalization at the regional and multilateral level....What is central is the need to ensure that FTAs/RTAs are WTO-consistent and WTO-plus whereby FTAs would contribute towards catalyzing the WTO liberalization process and regional integration” (pp. 13-14).*

The above indicates that Singapore has been engaged in negotiating bilateral Free Trade Agreements (FTAs) with its major trading partners who are “like minded” in terms of willingness to undertake comprehensive measures to liberalize trade and investment among themselves, and this strategy has also helped Singapore to solve the “convoy problem” whereby least willing members within ASEAN could slow the pace of trade liberalization (Rajan, et.al, 2001).

The principal objectives behind the pursual of Singapore’s RTA strategy have been two-fold. First, these agreements are aimed to enhance and deepen its economic and strategic links with its major trading partners in the global economy, viz. US and Japan. Second, the RTA strategy aims to forge new economic and strategic partnerships by seeking market access in the economies of its other trading partners

which have hitherto not been contributing substantially to Singapore's trade, and would thus help to diversify its external economic linkages beyond Southeast Asia. It is towards achieving this second objective that Singapore entered into negotiations with New Zealand to seal the ANZSCEP deal.

Although there have been a number of studies on the motivations and rationale behind these RTAs and the expected welfare gains in entering into such an agreement, most of them have been simulation exercises based on the pre-RTA situation. Not much research has been done on the changes in trade and investment patterns post-RTA, compared to a situation wherein the RTA did not exist. One of the attempts in this direction was by Krueger (1999) that analyzed the early effects of the NAFTA and in particular, on Mexico's entry into this RTA. The paper used the traditional theoretical arguments of trade creation and trade diversion to conclude that in the first three years of entry of force of NAFTA, the relative impact on trading patterns of its members in terms of trade creation or diversion was insignificant.

In the Singapore context, there have been no previous studies in this area. One of the primary reasons is the fact that most of Singapore's RTAs have come into force only after 2001, and have been in force only for about 2-3 years, which is a short time period to gauge its economic impact. Further, as acknowledged by Banda and Whalley (2005) in a recent paper, application of traditional modeling techniques to of trade creation and trade diversion to understand the phenomenon of the RTAs evolving out of the new regionalism in Asia and their welfare implications is challenging due to the complex nature and diverse coverage of these agreements, that covers not only liberalization of goods trade, but also that in services and investments, as well as negotiations on other issues viz. trade facilitation, government procurement, intellectual property protection, and competition policy. It is thus expected that any credible impact of such RTAs especially in terms of investment flows and trade in services, which have a long gestation period is unlikely to emerge too soon. Since the ANZSCEP agreement is the only one among Singapore's RTAs that is in force for close to 5 years now, the time is ripe to study some early effects of the ANZSCEP agreement on bilateral economic relations, if any.

This paper thus aims to assess the early effects of the ANZSCEP not only with respect to merchandise trade, but also in the area of trade in services and investments flows. This has hitherto not been attempted in previous studies that have largely restricted the analysis to merchandise trade flows.

The remainder of the paper is organized as follows. The first section analyzes the salient features of the ANZSCEP agreement and its expected impact on the Singapore economy. The next two sections analyze the extent of bilateral economic linkages between Singapore and New Zealand comparing the pre and the post-RTA period in terms of merchandise trade (Section 2) and trade in services and investment flows (Section 3). This analysis in this section is severely constrained by the unavailability of bilateral services trade data among both countries. This is followed by an analysis of the implications of this agreement and other emerging RTAs involving these two countries, for other Asia-Pacific economies in the region, and concludes the paper. Two technical annexes follow the main text of this paper.

## **2. The ANZSCEP agreement and its expected impact on the Singapore Economy<sup>2</sup>**

FTA efforts of Singapore were initiated with the launch of the negotiations on Agreement between New Zealand and Singapore on a Closer Economic Partnership (ANZSCEP), jointly announced by the Prime Ministers of New Zealand and Singapore during the APEC Leaders' Summit in Auckland on 11 September 1999. After 6 rounds of negotiations, the ANZSCEP was signed on 18 August 2000, and came into effect on 1 January 2001. This was Singapore's first bilateral and comprehensive FTA Agreement covering trade in goods and services, investment, government procurement, and intellectual property protection, amongst other areas. The agreement consists of broadly the following provisions:

### ***Trade in Goods and Rules of Origin***

Under the ANZSCEP, all bilateral tariffs have been eliminated with the agreement coming into force since 2001. Since Singapore already operates a close to zero tariff regime, tariff reductions have been more substantial on the New Zealand

side in manufacturing industries within the electric machinery, non-electric machinery and manufactured articles sectors. It is thus expected that in the post RTA period, Singapore's exports to New Zealand in these products would increase substantially, and it would gain preferential market access in exports of these products. This of course is subject to the exporter fulfilling the Rules of Origin (ROO) criteria under this agreement for non-originating goods which is a regional value content rule that a product qualifies for preferential treatment under ANZSCEP if at least 40% of the cost is of New Zealand or Singapore origin, and if the last place of manufacture is in New Zealand or in Singapore, with manufacturers being able to source inputs from overseas and including it in the New Zealand or Singapore component of these inputs towards the 40%.

Further, New Zealand and Singapore have agreed to abolish the use of emergency safeguard measures and export subsidies on goods, including export subsidies on agricultural products under the ANZSCEP. Both countries have agreed to bring greater discipline to anti-dumping investigations and to minimize the opportunities to use anti-dumping in an arbitrary or protectionist manner.

### ***Trade Facilitation***

Three main initiatives have been undertaken with respect to ANZSCEP. First, paperless trading is to be introduced. Second, risk management has been emphasized on high-risk goods and travelers, and allows legitimate low-risk goods and travelers to be cleared expeditiously at the Customs checkpoints. Third, there would be certification for Rules of Origin (ROO) with both New Zealand and Singapore assisting in the verification of claims for tariff preferences made by importers.

Further, New Zealand and Singapore have concluded a Mutual Recognition Agreement (MRA) on electrical and electronic equipment within the ANZSCEP. Under this agreement, electrical and electronic equipment tested in New Zealand or Singapore will no longer require a second round of testing when exported to the other country. They have also agreed to start on a work programme on the mutual or unilateral recognition of standards, regulations and test results, and the harmonization of standards. This work programme covers 6 sectors, including telecommunications

equipment, pharmaceuticals and chemicals. The above measures are expected to lower costs of exporting these products to New Zealand, and thus lead to an increase in their exports.

### *Trade in Services*

Under the ANZSCEP, New Zealand has committed to liberalize a range of engineering services, dental services, computer services, equipment repair services, info-communication technology (ICT) services, market research services, management consulting services, financial services, manufacturing services, land surveying services, printing services, courier services, environmental services and maritime, air and auxiliary transport services for Singapore service providers. It has agreed to further liberalization of its regime for intra-corporate transferees, doing away with the residency requirement for some professions and occupations, and binding the threshold for investments subject to the New Zealand Overseas Investment Commission (OIC). For investments above the threshold, New Zealand has assured that the approval by the OIC will be conducted in an open, transparent and predictable manner. Singapore has in turn committed to liberalize its architecture, financial and engineering services, and has committed to continue to maintain open regime in sectors such as nursing services, research and development services, rental services, management consulting services, courier services, telecommunications services, certain health services, distribution services and university and technical education services. Both countries have agreed to regularly review their service sector commitments and to progressively expand them. Both countries have also agreed to work on the mutual recognition of professional qualifications and registration, including the recognition of degrees from each other's universities.

If trade in certain services sectors is not fully liberalized by 2010, the parties to the agreement would meet by 1 January 2008 to identify a list of such services sectors and measures and to consult on a mutually acceptable solution.

The substantial commitment to liberalize a range of services trade including professional services, financial services and environmental services, is expected to



open up significant opportunities for Singapore service providers who wish to export these services to New Zealand.

### ***Investment***

Under the ANZSCEP agreement, New Zealand and Singapore have committed to a framework of investment rules to promote and protect bilateral investment. Besides granting national treatment and MFN treatment to investors from Singapore, New Zealand guarantees that Singapore investors are allowed to transfer and repatriate funds freely in any usable currency at the prevailing market exchange rates. It is also agreed that in the event of a dispute between a Singapore investor and the New Zealand government, the Singapore investor can raise the issue at the International Centre for Settlement of Investment Dispute, with New Zealand's consent.

These commitments to a framework of investment rules to promote and protect bilateral investments thus guarantees a minimum standard of access and protection of investments in the respective countries and is expected to boost Singapore investments in New Zealand and vice-versa.

### ***Government Procurement***

New Zealand and Singapore have also committed to establish a single government procurement market to maximize competitive opportunities and to reduce costs of doing business for both government and industry. Suppliers from the two countries will be given equal and non-discriminatory access to government tenders valued at above Special Drawing Rights worth about S\$110,000. Procurement will be conducted based on the principles of transparency, value for money, fair dealing, accountability, due process, non-discrimination and open and effective competition.

These provisions would allow private businesses in either country to sell goods and services to governments of the others, through bidding for contracts. In the Singapore context, these commitments would benefit their suppliers who would now enjoy equal and non-discriminatory access to all government tenders worth above S\$110,000 in New Zealand.

### ***Intellectual Property Protection (IPP)***

In the area of Intellectual Property Protection, both countries have agreed to abide by the WTO Agreement on Trade-Related Aspects of Intellectual Property (TRIPS), which is expected to govern all intellectual property issues arising under the ANZSCEP. As such Singapore investors are not provided any additional IP protection for knowledge-based investments, as in case of its other RTAs, viz. that involving the US.

### ***Competition Policy***

These provisions facilitate the maintenance of an environment supportive of competition. They encourage both Parties to implement the ANZSCEP in a pro-competitive manner. Both Parties are also encouraged to consult one another when developing new competition measures.

### ***Dispute Settlement***

The ANZSCEP has agreed to set up a robust process for consultation or settlement of disputes between the 2 countries.

### ***General Provisions***

To promote transparency, both countries have agreed to make public all laws, rules and regulations that affect trade in goods, services, and investment between the two countries, and provide the opportunity to comment on them, with appropriate exemptions allowed for either Party to adopt measures to protect public order or morality or to support creative arts of national value, amongst others, provided such measures are not used arbitrarily or discriminatorily or as a disguised restriction on trade.

### ***Accession to new members***

The ANZSCEP has been left open to accession or association by any Member of the WTO or by any other country, provided both countries agree, with the two trade Ministers agreeing to meet every two years to review and expand on the commitments

under the ANZSCEP. A general review of the ANZSCEP agreement is expected to be conducted in 2005.

Singapore and New Zealand, being both members of the Asia-Pacific Economic Cooperation (APEC) grouping, have thus initiated the ANZSCEP as a “building block” towards creation of an APEC wide FTA. In line with this objective, both countries have recently negotiated a similar but plurilateral agreement with Chile and Brunei called the Trans-Pacific Strategic Economic Partnership (SEP), which is also left open for accession to new members on same terms and conditions, in line with the principle of “open regionalism” followed by APEC members.

The above indicates that the ANZSCEP agreement has been intended to not only provide greater market access for Singapore’s trade and investment flows into New Zealand and vice-versa, but to also facilitate and enhance broader economic cooperation between the two countries. Being an agreement with simplified rules of origin, and covering substantially all bilateral trade between the two countries, and as well as being open to accession for new members, this is one of the few agreements which may be termed as being “WTO-consistent” in the closest sense.

### **3. Singapore’s Bilateral Trade Linkages with New Zealand**

#### **3.1 Trends in Merchandise Trade**

Singapore, being an entrepot trading city-state, is a major player in global trade. Thus, according to the World Trade Organization, in 2003, Singapore ranked number sixteen in terms of world merchandise exports and 15<sup>th</sup> in world merchandise imports, accounting for about 2% of global exports and 1.5% of global imports respectively<sup>3</sup>. However, if the entrepot component of re-exports is excluded, its ranking slipped to 24<sup>th</sup> in global merchandise exports in that same year. In contrast, New Zealand was the world’s 52nd largest trading nation in global merchandise exports, and 48<sup>th</sup> in terms of global merchandise imports accounting for about 0.2 percent of global exports and 0.2 percent of global imports respectively. Its total value of merchandise trade (US \$ 35.3 billion) was far lesser than that of Singapore (US \$ 272.0 billion) in 2003 (WTO, 2005).

Figure 1 displays the trends in Singapore's total merchandise trade with New Zealand over the past decade (1989-2004). The share of New Zealand in Singapore's overall merchandise trade during this period averaged 0.27 percent, which increased, post-FTA to about 0.29% and 0.35% respectively in 2003 and 2004. Most of this expansion was contributed by Singapore's exports to New Zealand, which more than doubled during this period, and also expanded in its share from 0.25 to 0.35% over the post-FTA period of 2002-04 (Figure 2). During the entire decade, Singapore registered a continuous bilateral trade surplus with New Zealand that registered a peak of US \$ 0.67 billion in 2004 (Figure 1). Notably, the rank of New Zealand in Singapore's total merchandise trade improved from 27<sup>th</sup> to 23<sup>rd</sup> over the 2001-04 periods (Department of Statistics, 2005).

It is important to note that a significant entrepot component of re-exports is constituted in Singapore-New Zealand merchandise trade. Thus, in 2004, nearly a third of Singapore's total exports constituted of re-exports, which constituted of goods that underwent some value-addition in Singapore, while being transshipped from other ASEAN countries. Figure 3 indicates that over the past decade, the share of re-exports in Singapore's total exports to New Zealand has declined, with the importance of Singapore's domestic exports (exports that originate from Singapore) having increased in recent years, especially since the ANZSCEP came into force. Indeed, if calculated as a share of Singapore's total exports, the share of domestic exports destined for New Zealand has increased from 60% to 66%, with an increase of 150% in volume over the 2002-2004 periods. This is a substantial increase compared to the previous years, and could perhaps be interpreted as an indication of the ANZSCEP agreement's success in expanding Singapore's exports to New Zealand, especially if its growth has been fuelled by exports of those products on which tariffs have been eliminated under the agreement, or of that by exports of new products, indicating greater market access for its exports.

In contrast, New Zealand's trade with Singapore has constituted an average of about 1.6% of New Zealand's global merchandise trade in the same period. Singapore was New Zealand's eighth largest trading partner, with its merchandise trade with Singapore valued at US \$ 0.54 billion in the year 2004. Its imports from Singapore

were valued at US \$ 0.3 billion during the same period, thus making Singapore the eighth largest source for New Zealand's imports (Statistics New Zealand, 2005). Figure 4 displays the trends in its total merchandise trade with Singapore, over the period 1989-2004. It is observed that although the volume of its bilateral merchandise trade with Singapore has been growing over the decade, there is no significant increase being observed after the ANZSCEP agreement came in force in 2001, except for a 34% growth in its exports to Singapore in 2004, compared to 2003, which is by far its highest export growth over the past 15 year period. This is to be expected as Singapore was already operating under a zero-tariff regime prior to the ANZSCEP. The trends in shares of Singapore in New Zealand's merchandise trade (Figure 5), confirms this fact, with post-FTA shares of Singapore being much lower in New Zealand's total exports, compared to the pre-FTA period.

Comparing Figures 1 and 4, it is observed that both Singapore and New Zealand have reported bilateral trade surpluses with each other in some years over the 1989-2004, which is statistically impossible. One of the reasons behind this discrepancy is likely due to the fact that New Zealand reports its imports from Singapore according to country of origin, and therefore does not include Singapore's reported re-exports in its import data. Indeed, studies by Sen (2000) on Singapore's entrepot trade role have concluded that trading partners of Singapore that have a high entrepot component of re-export do report such discrepancies<sup>4</sup>.

However, trade shares being an absolute measure, does not indicate the extent to which the ANZSCEP might have influenced bilateral trade linkages between Singapore and New Zealand relative to their trade with the rest of the world (ROW). This requires the estimation of bilateral trade intensities between the two countries.

### **3.2 Trade Intensity Indices**

Trade intensity indices are often considered as a useful tool for analyzing bilateral trade linkages, since it is relative measure of bilateral trade shares of two countries with respect to their trade with the rest of the world. In the context of this paper, the indices are designed to capture the extent to which the home country (Singapore) regards its trading partners (New Zealand) as being important in relation to the

former's trade with the rest of the world (ROW), and vice versa. An index value above unity indicates a relative "over-representation" of the trading partner in the home country's trade<sup>5</sup>.

Singapore's trade (exports plus imports) intensity indices with New Zealand as well as the same of New Zealand with Singapore over the period 1989-2004 are highlighted in Figure 6. It is evident that Singapore's trade intensity with New Zealand which has registered a generally downward trend from 1992, has particularly increased since the year 2000, with a rapid increase observed after 2001. In particular, the index values for trade intensities of Singapore's merchandise trade with New Zealand has been continuously above unity since the post-FTA period, indicating an "over-representation" of New Zealand as a trading partner for Singapore vis-à-vis ROW, and an increase in Singapore's bilateral trade linkages with New Zealand relative to its other trading partners. It is however, noted that this increase cannot be necessarily attributed to the FTA itself, as bilateral trade intensity had reached a peak between the two countries during 1992, when no bilateral RTA had existed.

In contrast, New Zealand's trade intensity with Singapore has continued to maintain a lower profile vis-à-vis ROW, as indicated by average trade intensity with Singapore less than unity over the 1989-2004 period (Figure 6), with 1999 being the only year when its bilateral intensity was higher compared to that of Singapore's. It is observed that in the post ANZSCEP period, although trade intensity has increased from above unity in 2001-03, it has declined significantly in 2004, suggesting that even after the FTA, Singapore continues to be "under-represented" as New Zealand's trading partner, relative to the ROW.

It is further observed that while Singapore's export intensity with New Zealand has been estimated to be over unity during the 1989-2004 period, indicating an "over-representation" for New Zealand as one of the export destinations for Singapore's exports, reverse is the case for New Zealand, with its export intensities not only being less than 1 over the period, but showing a continuous decline during the post FTA period of 2002-2004, indicating that in spite of the FTA providing for preferential market access, Singapore continues to be more and more under-

represented as an export destination for New Zealand's exports compared to exports to the ROW (Figure 7).

In case of imports, the bilateral import intensities suggest that compared to the ROW, both Singapore and New Zealand under represent each other as an import source in their respective imports, even after the ANSZCSEP has come into force (Figure 8). This indicates that Singapore regards New Zealand as a more important export destination than an import source, relative to its trade with ROW. On a comparative basis, it may be also observed from Figures 7 and 8 that New Zealand's import intensity with Singapore has been generally higher than that of its export intensity with Singapore except for a few years, indicating that New Zealand, regards Singapore as a more important import source than an export destination, relative to its trade with the ROW.

The above indicates that in a relative sense, the ANZSCEP has had a limited impact on expansion of bilateral merchandise trade among the two countries. The only discernible trend is that of increase in Singapore's bilateral exports and intensity with New Zealand, due to the significant expansion of Singapore's domestic exports to New Zealand after the ANZSCEP came into force. This is also indicated if the bilateral export intensity is separately computed using Singapore's domestic exports (Figure 9). From New Zealand's perspective, there are no significant trends to support that ANSZCEP agreement had a positive impact in expanding its bilateral merchandise exports to Singapore.

### **3.3 Commodity Composition of Merchandise Trade**

The preceding section has so far focused only on broad trends in aggregate trade linkages. However, it is necessary to examine the commodity composition or growth of merchandise trade between Singapore and New Zealand to understand as to how the ANZSCEP agreement on goods might have affected the commodity composition of merchandise trade between the two countries, especially from the Singapore side since it has been observed in the previous section that Singapore's exports have expanded into New Zealand after the ANZSCEP agreement was signed.

Table 1 compares the composition of Singapore's overall merchandise exports and exports to New Zealand by commodity groups at the SITC 3-digit level in 2000 (pre-FTA) and 2004 (post-FTA), in order to analyze any possible changes in merchandise export or import composition that might have possibly resulted from the FTA. It is observed that for both the periods, Singapore's global merchandise exports were concentrated in five major product categories of electronic and petroleum products i.e. SITC 776, 334, 752, 759 and 764. However, during this period, the share of these goods went down from 61% to 56% of Singapore's total world merchandise exports.

In case of its exports to New Zealand, during 2000 as well as in 2004, most of the top 10 products constituted of electronic and petroleum products i.e. SITC 334, 752, 759, 776, 764, 778. Besides these products, Musical Instruments (SITC 898), Polymers of Ethylene (SITC 571) and Motor Cars (SITC 781) also figured in the list of top ten products for both years, although their ranking in the export basket changed significantly. Over this period the share of these products in total exports destined for New Zealand went up drastically from 57% to 70.5%, which could be a possible impact of entering into the ANZSCEP agreement.

Comparing across 2000 and 2004, two products seem to have significantly gained their shares in Singapore's major exports to New Zealand, and have thus improved their rankings significantly in the post-FTA period. These include Refined Petroleum (SITC 334) that expanded nearly six-fold in its share, from 6.6% in 2000 (ranking 2<sup>nd</sup>) to about 38.2% in 2004, ranking as the top most product of merchandise exports, as well as Passenger Motor Vehicles and Automobiles, n.e.s. (SITC 781), whose share more than doubled from 1.9% to 4.1% over the same period, and improved its ranking in the export basket from 10<sup>th</sup> to 5<sup>th</sup> position after the FTA came into force. Another product that exhibited a discernible increase in export share to New Zealand during this period was that of Electronic Valves (SITC 776) from 3.7% to 4.3% (improving its ranking from 6<sup>th</sup> to 4<sup>th</sup> position over 2000-04) and Electrical Machinery and Apparatus (SITC 778), although there wasn't much improvement in the ranking. All the other electronic products, viz. SITC 752, 759, and 764, experienced a decline in their shares in total exports to New Zealand after the FTA.



Since most of the above products were provided preferential tariff reduction after the ANZSCEP came into force in 2001, the changes in composition as indicated above are likely to be a result of the agreement, more so since similar changes are not observed in Singapore's total exports to the world. Indeed, the tariff data from UNCTAD-TRAINS suggests that over 2000-02, preferential tariffs facing exports of SITC 334 and SITC 781 from Singapore into New Zealand were brought down from 1.03% and 10% in 2000 to zero in 2002 for both products respectively, which might explain the surge in their bilateral exports to New Zealand.

Table 3 documents the same for composition of Singapore's imports from the world and New Zealand in the 2000-04 periods. It is noted that for both this period, Singapore's global imports are concentrated in six product categories, viz. electronics and petroleum products (SITC 776, 333, 334, 759, 764 and 752), which constituted nearly 50-52% of Singapore's total world imports. Both crude and refined petroleum (SITC 333 and 334) together constituted around 12-13% of Singapore's global imports. Electronic Valves (SITC 776) has been the top ranked product in Singapore's overall imports, constituting more than one fifth of the total.

Analyzing Singapore's import basket of goods from New Zealand, it is observed that Milk and Cream (SITC 022) has been the top ranked product in Singapore's imports from New Zealand for both in 2000 and 2004, with its share more than doubling from 11% to about 24% in Singapore's total imports from New Zealand after the FTA came into force. Butter and other Fat of Milk (SITC 023) was among the other product that also increased its share in Singapore's imports from New Zealand and its ranking in the import basket (from 7<sup>th</sup> to 2<sup>nd</sup>) during this period. Among the top ten products, only five of them (all food products) were common for both these years viz, SITC 022, 023, 037, 011, and 057, although the share of many of these products (SITC 037, 011 and 057) declined during the post-FTA period.

Comparing the export and import basket of Singapore-New Zealand merchandise trade, there are no significant overlap of products, indicating that possibilities of intra-industry trade between the two countries have been limited, even after the entry into force of the agreement.

#### **4. Trade in Services and Direct Investment**

##### **4.1 Services Trade in New Zealand and Singapore and possible impact of the ANZSCEP**

With increasing globalization of the world economy, various activities in the services sector are now being opened up for commercial trading purposes among international service providers, and the services sector has been rapidly expanding and increasing its prominence in production and employment structures of developed as well as developing countries in the world. It is notable that in the case of both the economies of New Zealand and Singapore, the services sector is the largest contributor to GDP (about 65 % in 2003) (The World Bank, 2005).

According to the WTO rankings of commercial services trade in 2003, New Zealand ranked 41st in global exports of commercial services and 44th in global imports of commercial services, accounting for 0.4 percent of world service exports and 0.3 percent of world service imports, respectively. In contrast, Singapore ranked 18th in the global export of commercial service and 17th in the case of imports, accounting for about 1.7 percent of world service exports and 1.5 percent of world service imports, respectively (WTO, 2005). Therefore, while Singapore's ranking is more or less similar in both world merchandise trade and in world trade in commercial services, New Zealand's ranking is much higher in commercial services compared to that of merchandise trade.

Analyzing the composition of commercial services trade of Singapore and New Zealand in 2003, it is observed that while Other Commercial services (comprising of ICT and professional business services, and all other services except travel and transportation) consisted nearly a half of Singapore's commercial services exports, about 62% of New Zealand's service exports are observed to be dominated by Travel services, indicating Tourism sector to be the single largest export earner among its commercial services (Figures 10a and 11a). On the import side, it is observed that while Transportation services (45.7%) and Other Commercial Services (35.7%) constituted the bulk of Singapore's service imports, establishing its importance as a logistics hub, New Zealand's services imports have also been significantly constituted

by these two categories, with Travel services imports accounting for only 32% of the total (Figures 10b and 11b).

As noted earlier, the ANZSCEP agreement has pursued bilateral services trade liberalization as a stated objective, and several of New Zealand's services (that falls in the category of Other Commercial services) has been liberalized for Singapore's service providers, while similar commitments have also been announced from the Singapore side, granting preferential access to New Zealand's service providers in their market. While these measures were expected to significantly improve market access for both countries in services trade for both countries, quantifying these benefits in terms of actual market access gained is rendered impossible in the post-ANZSCEP period unlike the case of merchandise trade. This is because bilateral services trade (with the possible exception of visitor arrivals) remains unavailable for Singapore, as well as for New Zealand even on an aggregate basis, in spite of the latter being an OECD member<sup>6</sup>. This is part of the general problem with services trade analysis since in most cases, available data on services trade are not comprehensive, detailed, timely or internationally comparable, largely due to the distinct nature of services trade that it is non-storable, and involves a simultaneous producer consumer interaction.

Further, even if bilateral data were to exist, it would be difficult to argue that an increase in volume of bilateral services trade may have necessarily been a result of the ANZSCEP, since literature argues that in many cases, it is the market forces that drive growth in services trade, with liberalization playing only a facilitating role. However, since FDI or Commercial Presence that constitutes Mode 3 of service supply provision is a major driver of cross-border services trade, especially in the services liberalized by the ANZSCEP, one might assert that a discernible increase in bilateral FDI flows between New Zealand and Singapore may be taken as a signal of an expansion of bilateral services trade in the post-ANZSCEP period.

## **4.2 Direct investment flows**

Bilateral flows of FDI have been a major instrument in the development of economic linkages between Singapore and New Zealand in recent years. These have been

facilitated by a largely open and transparent economy, a business friendly environment for foreign investors, and similarities in the legal system. As indicated earlier, the ANZSCEP has provided measures to liberalize, facilitate and protect bilateral investments between the two countries.

Figure 12 provides the trends in the stock of bilateral investment flows between the two countries over 1997-2003. It is observed that while Singapore's stock of direct investments in New Zealand amounted to about S \$ 1.4 billion at the end of 1997, it registered a significant decline thereafter. However, direct investment flows in to New Zealand more than doubled from S \$ 0.5 billion in 2001 to S \$ 1.1 in 2003, when the ANZSCEP agreement came into force. In terms of shares, that of New Zealand in Singapore's total direct investments abroad increased from 0.4% to 0.7% over this period. This indicates that perhaps the ANZSCEP agreement has had some limited degree of success in expanding bilateral investments from Singapore, although the levels remain lower than those already achieved in 1997.

In contrast, New Zealand's FDI stock in Singapore is observed to be virtually stagnant over the same period, with a decline in FDI stock from S \$ 0.20 billion to S \$ 0.16 billion over the post ANZSCEP period of 2001-2003. Indeed, compared to US, EU, and Japan, that are the major investors in Singapore, New Zealand's investments in Singapore have been rather negligible in magnitude, with New Zealand's average share in Singapore's total FDI stock being to the tune of 0.1% over the 1997-2003 period.

The above indicates that on a comparative basis, New Zealand investors may not have fully have utilized the investment potential of Singapore as a regional investment hub in Asia even after the ANZSCEP, while Singapore investors have ventured into New Zealand more aggressively for investment opportunities after this agreement provided more greater certainty in business environment for their investments.

However, as in case of trade shares, increase in investment shares also does not reflect the extent of changes in the bilateral linkages between these two countries relative to the ROW. Thus, there is a need to estimate a relative measure of bilateral FDI intensity to understand the extent to which both Singapore and New Zealand

regard each other as bilateral investment destinations, relative to the ROW. Bilateral FDI intensity index for both Singapore and New Zealand vis-à-vis ROW are computed for this purpose over the 1999-2003 to track any possible changes due to the FTA. The estimation of this index is described in Annex 2.

Figure 13 presents the results of these estimates. It is again corroborated that FDI intensities were stronger from the Singapore side vis-à-vis New Zealand, although their levels appear to be much lesser than that of trade intensities. However, except for Singapore's case in the year 2000, the estimates of bilateral FDI intensity were observed to less than 1, indicating that even after the FTA, bilateral investment linkages haven't strengthened significantly between the two countries relative to the ROW. Post-FTA, although Singapore's bilateral FDI intensities have increased over 2001-03, there remains much scope for further expansion.

In order to analyze changes in composition of bilateral investments of Singapore into and from New Zealand after the FTA, Figure 14a and b provides snapshot of the composition of the stock of Singapore's direct equity investments in New Zealand in the year 2000 and 2002 respectively. It is observed that within a span of two years, during which the ANZSCEP agreement came into force, the share of financial services activities doubled, while that of commerce almost tripled in Singapore's outward direct equity investments in New Zealand, providing an indirect evidence that trade in financial services from Singapore into New Zealand is likely to have significantly expanded due to its liberalization under the ANZSCEP. Investments in manufacturing also expanded in share during this period, albeit by a smaller margin.

Figures 15a and b analyze these trends from the New Zealand perspective by analyzing the composition of stock of Singapore's inward direct investments from New Zealand. It is observed that as in case of outward investments, financial services have dominated the bulk of Singapore's inward investments from New Zealand over the 2000-02 periods, expanding in share from 41.6% to 77.4%, followed by investments in Commerce activities that also expanded in share from 10.4% to 17.7% over the same period. This indicates that the ANZSCEP agreement is likely to have influenced the composition of bilateral investment flows from New Zealand, with an

expansion towards financial services and commerce, matched by a significant decline in investments in transport, storage and communication activities.

As observed, the investment linkages between Singapore and New Zealand are predicted to grow more significantly in the future with the liberalization of investment norms under the ANZSCEP agreement. The agreement, which has focused to a large extent to liberalization of investment rules as well as on protection of intellectual property rights, is expected to provide a strong impetus for knowledge-based investments to flow among the two countries. In this context, it is noted that in 2002, New Zealand set up its first overseas technology center in Singapore to support New Zealand companies in commercializing technologies and internationalizing business. Further, since 2001, the Singapore Economic Development Board has mounted eight investment promotion missions to New Zealand. As observed by MTI (2005), the number of New Zealand companies incorporated in Singapore has risen from 97 in 2001 to 135 in 2003, and these involve large companies providing engineering consultancy services; travel and technology services; and IT services. The recent New Zealand-Singapore Film Co-production agreement is another example of the way in which the ANZSCEP agreement has facilitated creative and innovative cooperation between Singapore and New Zealand. Similarly the MOU signed between NZTE and International Enterprise (IE) Singapore is expected to facilitate cooperation between the two agencies in efforts to develop commercial opportunities in third countries (MTI, 2005).

The above indicates that although in its initial years, the ANZSCEP agreement has succeeded to a limited extent in enhancing investment flows and bilateral economic cooperation between the two countries. It is expected that ongoing initiatives for economic cooperation would pave the way for an increase in potential bilateral investment flows.

## **5. Concluding Remarks**

The ANZSCEP agreement between Singapore and New Zealand, in force since January 2001, being the first bilateral FTA of Singapore has assumed significance in the context of being one of the initial attempts of Singapore to expand its economic

linkages beyond Southeast Asia. This agreement was also one of the first comprehensive bilateral agreements initiating the process of new regionalism in Asia. Although in force into its 5<sup>th</sup> year, available data indicates that the ANZSCEP agreement is likely to have positive influenced expansion of Singapore's merchandise exports to New Zealand, particularly in petrochemical products and in passenger cars on which there has been immediate tariff elimination under the agreement. There is an indirect evidence to suggest that the agreement has also facilitated expansion of bilateral services trade, especially in financial services, and has also changed the composition of bilateral investments flows between the two countries. Overall, the ANZSCEP seems to have made a limited impact on New Zealand's trade and investment flows with Singapore, although several new economic cooperation initiatives have been launched which might foster its growth in the near future. Nevertheless, its early days for the ANZSCEP, and a more significant expansion in economic linkages may prosper in the near future.

However, apart from the ANZSCEP, both countries are actively seeking bilateral deals with its major trading partners, and have also entered into new agreements that overlap both trading partners. These include the recently concluded Trans-Pacific Strategic Economic Partnership agreement involving Singapore, New Zealand, Chile and Brunei, and the impending negotiations for an ASEAN FTA with the Closer Economic Relations (CER) grouping that involves Australia and New Zealand. Emergence of such overlapping agreements involving both countries might reduce the effectiveness of the ANZSCEP in the future, especially if such deals are to subsume the existing bilateral agreements (Rajan and Sen, 2004; Sen, 2005).

In conclusion, it is argued that although the ANZSCEP agreement may have partially succeeded in expanding economic linkages of Singapore, it is too early to expect that other bilateral agreements that are proliferating or are already in force in Asia would meet with a similar degree of success. This is particularly so as unlike the ANZSCEP, many of the evolving RTAs are not necessarily evolving to be WTO-consistent since many of them involve complex rules of origin, excludes a significant proportion of their trade, as well as do not open their agreement for accession to new members (Sen, 2005). Therefore, even if the ANZSCEP may be evolving as a building

block towards free trade, some of the other bilaterals may end up being a stumbling block. Thus, it would be extremely important for both New Zealand and Singapore to strive for a positive outcome at the multilateral level under the WTO, while concomitantly pursuing bilateralism, since theoretically, multilateralism remains the first best solution towards achieving global free trade.

## NOTES

1. Till date, Singapore has a working FTA with US, Australia, Japan, India, New Zealand, Hashemite Kingdom of Jordan and the EFTA countries, and a recently concluded a bilateral FTA with Korea and Qatar and a plurilateral FTA with Brunei, New Zealand and Chile (called the Trans Pacific Strategic Economic Partnership). It is continuing to negotiate FTA pacts with Canada, Mexico, Sri Lanka, Panama, Egypt and Kuwait among others (Sen, 2005).
2. This section draws on Sen (2004).
3. It is important to note here that this ranking excludes Singapore's trade with Indonesia since the Singapore authorities do not publish the same.
4. This is due to the fact that Singapore uses the GTS system under which, all goods imported into or exported from Singapore are included in its external trade statistics, barring a few exceptions (Sen, 2000).
5. See Annex 1, Rajan (1996), Sen (2002) for details on the formulation of these indices.
6. While OECD publishes detailed data on aggregate bilateral services trade by trading partners in its publication *OECD Statistics on International Trade in Services*, such a data is unavailable for New Zealand, wherein only the total services trade data is reported.

## REFERENCES

Banda, O.G.D and J. Whalley, (2005), "beyond Goods and Services: Competition Policy, Investment, Mutual Recognition, Movement of natural Persons and Broader Cooperation Provisions of Recent FTAs involving ASEAN countries", *NBER Working Paper* no. 11232, Cambridge, MA.

Department of Statistics, Singapore (2005), "*Yearbook of Statistics 2005*", Republic of Singapore.



- Krueger, A.O (1999) "Trade Creation and Trade Diversion under NAFTA", *NBER Working Paper no. 7429*, Cambridge MA.
- Liang, M. (2005), "Singapore's Trade Policies: Priorities and Options", *ASEAN Economic Bulletin*, 22, 1, pp.49-59.
- Ministry of Trade and Industry (MTI) (2005), "Agreement Between New Zealand and Singapore for a Closer Economic Partnership (ANZSCEP)", legal text and review available electronically at [www.fta.gov.sg](http://www.fta.gov.sg) [Accessed Jul 31 2005].
- Rajan R.S (ed.) (2003). *Sustaining Competitiveness in the New Global Economy: The Experience of Singapore*, Cheltenham, UK: Edward Elgar.
- Rajan, R.S. (1996), "Singapore's Bilateral Merchandise Trade Linkages with Japan and the United States: Trends, Patterns and Comparisons", *Asian Economic Journal*, 10 (2). Pp. 133-163.
- Rajan, R., R. Sen and R. Siregar (2001). *Singapore's Attraction to Free Trade Areas: Bilateral Trade Relations with Japan and the US*, Institute of Southeast Asian Studies: Singapore.
- Sally, R. and R. Sen, (2005) "Whither Trade Policies in Southeast Asia: The Wider Asian and Global Context", *ASEAN Economic Bulletin*, 22, 1, pp.92-115.
- Sen, R. (2005) "New Regionalism" in Asia: A Comparative Analysis of Emerging Regional Trading Agreements (RTAs) in ASEAN, China and India", paper presented at the CESifo Venice Summer Institute 2005 Workshop on Global Economic Negotiations, San Servolo, Venice, July 20-21, 2005.
- Sen, R. (2004) "Free Trade Agreements in Southeast Asia", Southeast Asia Background Series no. 1, forthcoming, Institute of Southeast Asian Studies (ISEAS), Singapore.
- Sen, R. (2002), "Singapore-India Economic Relations in the context of their Globalization Strategies", unpublished PhD Thesis, National University of Singapore, Singapore.
- Sen, R. (2000). "Analyzing Entrepot trade in a Small Open Economy: The Case of Singapore", *ASEAN Economic Bulletin*, 17(1), pp.23-35.
- Statistics New Zealand, (2005), [www.stats.govt.nz](http://www.stats.govt.nz), [Accessed July 31 2005]
- The World Bank, (2005), *World Development Indicators, 2005*
- United Nations (2005), *UN-Comtrade Database*

World Trade Organization (WTO), (2005), *International Trade Statistics, 2004*,  
WTO: Geneva.

About the Author:

**DR RAHUL SEN** is a Fellow of Regional Economic Studies (RES) at ISEAS.

Table 1

Top 10 products of Singapore's Total Exports to the World and New Zealand, 2000 and 2004

Top 10 products exported from Singapore to the World and New Zealand, 2000				Top 10 products exported from Singapore to the World and New Zealand, 2004			
Product Code	Product Description	Value (USD million)	Share in total	Product Code	Product Description	Value (USD million)	Share in total
<b>World</b>				<b>World</b>			
776	Transistors, valves, etc Automatic Data Proc Equip	34436.3	25.0	776	Transistors, valves, etc	46932.6	26.3
752		19424.0	14.1	334	Petroleum Products Automatic Data Proc Equip	16089.9	9.0
334	Petroleum Products	12877.3	9.3	752	Equip	15859.2	8.9
759	Parts for office machines	11258.6	8.2	759	Parts for office machines	11635.5	6.5
764	Telecom Equip parts nes	5860.7	4.3	764	Telecom Equip parts nes Organo-Inorganic Compounds	9299.4	5.2
778	Electric Mach. Appart nes	3387.5	2.5	515	Spec Transaction not classified	6013.5	3.4
772	Elec Switch Relay Circuit	3261.8	2.4	931		5808.5	3.3
898	Musical Instruments etc Oth Mach, Pts, Spcl Industry	2469.8	1.8	772	Elec Switch Relay Circuit	3746.6	2.1
728		1763.2	1.3	778	Electric Mach. Appart nes	3123.9	1.8
515	Organo-Inorganic Compounds	1294.8	0.9	898	Musical Instruments etc	2605.8	1.5
<b>New Zealand</b>				<b>New Zealand</b>			
752	Automatic Data Proc Equip	72.7	19.7	334	Petroleum Products Automatic Data Proc Equip	358.3	38.2
334	Petroleum Products	24.4	6.6	752	Equip	52.6	5.6
759	Parts for office machines	22.9	6.2	759	Parts for office machines	49.8	5.3
764	Telecom Equip parts nes	19.8	5.4	776	Transistors, valves, etc Pass. Motor Vehicles elc bus	40.7	4.3
898	Musical Instruments etc	19.3	5.2	781		38.5	4.1
776	Transistors, valves, etc Photo Cinematograph suppl	13.8	3.7	764	Telecom Equip parts nes	34.6	3.7
882		11.6	3.1	778	Electric Mach. Appart nes	30.9	3.3
778	Electric Mach. Appart nes	10.4	2.8	898	Musical Instruments etc	22.6	2.4
571	Polymers of Ethylene Pass. Motor Vehicles elc bus	8.5	2.3	571	Polymers of Ethylene Aircraft, Associated Equipnt	18.9	2.0
781		7.1	1.9	792		14.4	1.5

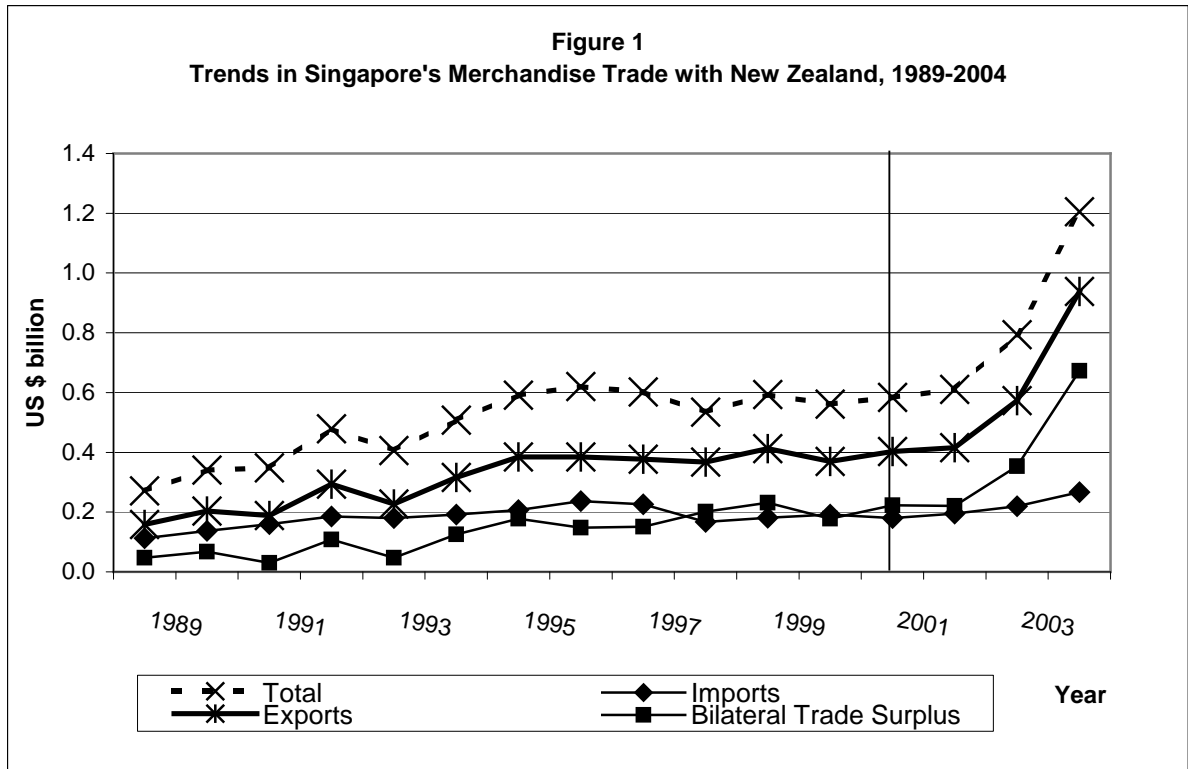
Note: Commodity composition at SITC 3-digit level  
Source: Computed from UN-Comtrade database

Table 2

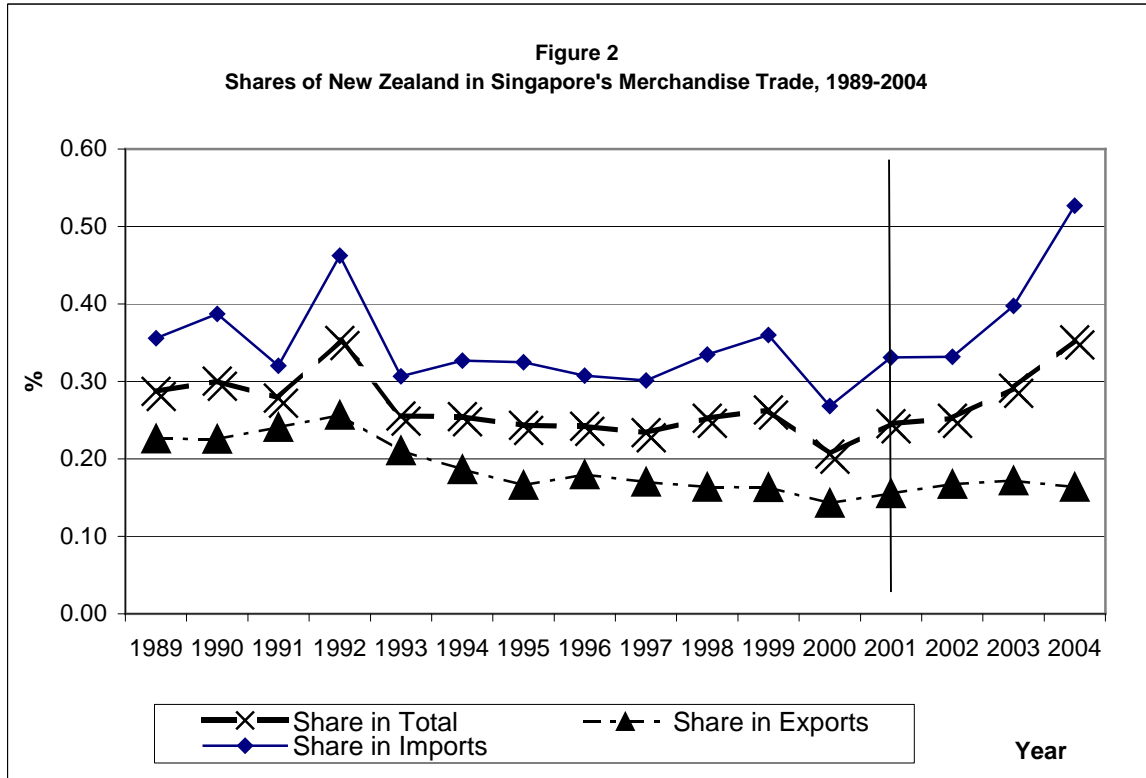
Top 10 products of Singapore's Total Imports from the World and from New Zealand, 2000 and 2004

Top 10 products imported to Singapore from the World and New Zealand, 2000				Top 10 products imported to Singapore from the World and New Zealand, 2004			
Product Code	Product Description	Value (USD million)	Share in total	Product Code	Product Description	Value (USD million)	Share in total
<b>World</b>				<b>World</b>			
776	Transistors, valves, etc	30556.3	22.7	776	Transistors, valves, etc	36226.6	22.3
759	Parts for office machines	9869.1	7.3	333	Petroleum Oils, Crude	12122.8	7.5
333	Petroleum Oils, Crude	8737.6	6.5	334	Petroleum Products	12109.7	7.4
334	Petroleum Products	7452.2	5.5	759	Parts for office machines	10343.0	6.4
752	Automatic Data Proc Equip	6363.4	4.7	764	Telecom Equip parts nes	8694.3	5.3
764	Telecom Equip parts nes	4832.4	3.6	752	Automatic Data Proc Equip	4984.2	3.1
778	Electric Mach. Appart nes	3748.4	2.8	792	Aircraft, Associated Equipnt	3955.9	2.4
772	Elec Switch Relay Circuit	3675.6	2.7	772	Elec Switch Relay Circuit	3622.8	2.2
728	Oth Mach, Pts, Spcl Industry	3546.3	2.6	778	Electric Mach. Appart nes	3347.0	2.1
874	Measure, Control Instrument	2684.3	2.0	728	Oth Mach, Pts, Spcl Industry	3301.4	2.0
<b>New Zealand</b>				<b>New Zealand</b>			
022	Milk and Cream	21.9	11.4	022	Milk and Cream	63.8	24.0
037	Fish etc prepared, preserved nes	14.0	7.3	023	Butter, Other Fat of Milk	18.4	6.9
542	Medicaments	13.8	7.2	037	Fish etc prepared, preserved nes	14.2	5.3
057	Fruits, Nuts Excl. Oil Nuts	11.3	5.9	011	Bovine Meat	11.8	4.4
011	Bovine Meat	11.1	5.8	792	Aircraft, Associated Equipnt	10.5	3.9
641	Paper and Paperboard	10.4	5.4	759	Parts for office machines	10.1	3.8
023	Butter, Other Fat of Milk	7.9	4.1	776	Transistors, valves, etc	9.9	3.7
512	Alcohol, Phenol, etc. deriv	6.3	3.3	057	Fruits, Nuts Excl. Oil Nuts	7.8	2.9
054	Vegetables	5.0	2.6	713	Internal Combustion Pstn Engine	7.3	2.7
764	Telecom Equip parts nes	4.6	2.4	012	Other Meat, Meat Offal	6.2	2.3

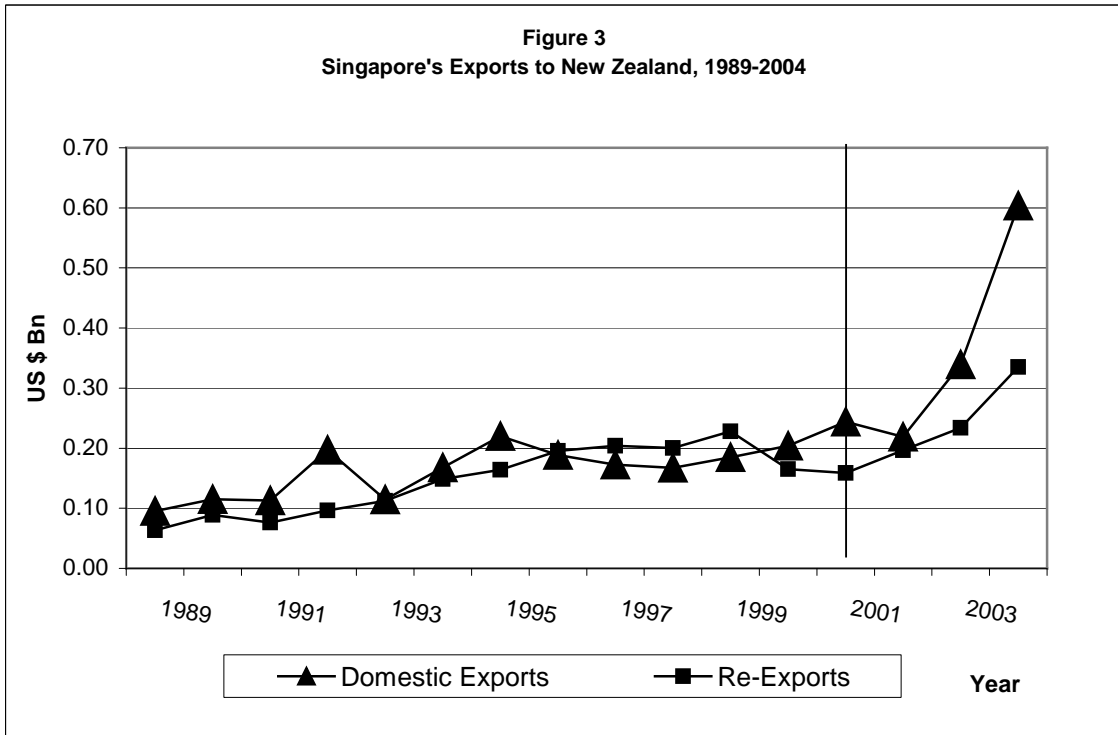
Note: Commodity composition at SITC 3-digit level  
Source: Computed from UN-Comtrade database



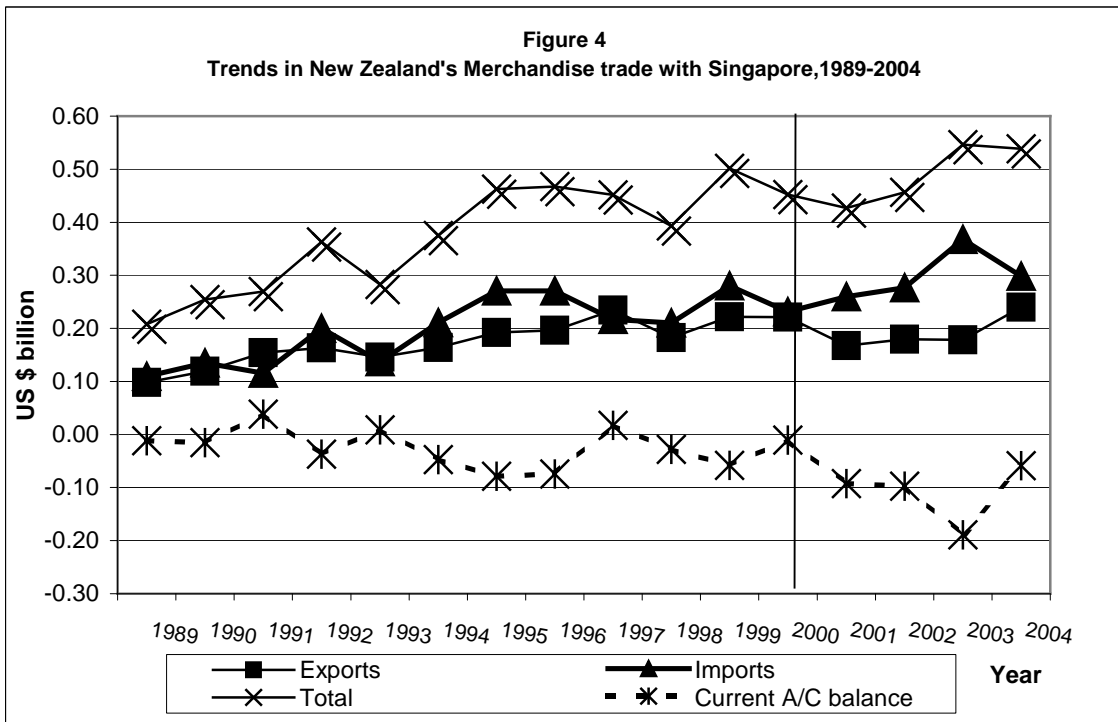
Source: Computed from UN-Comtrade Database



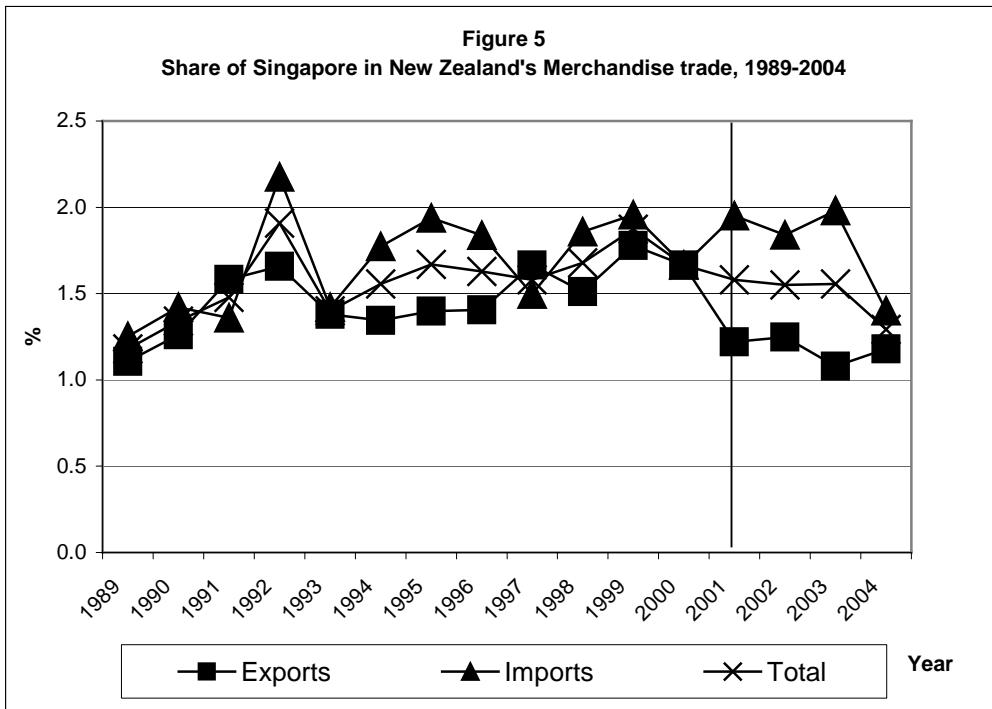
Source: Computed from UN-Comtrade Database



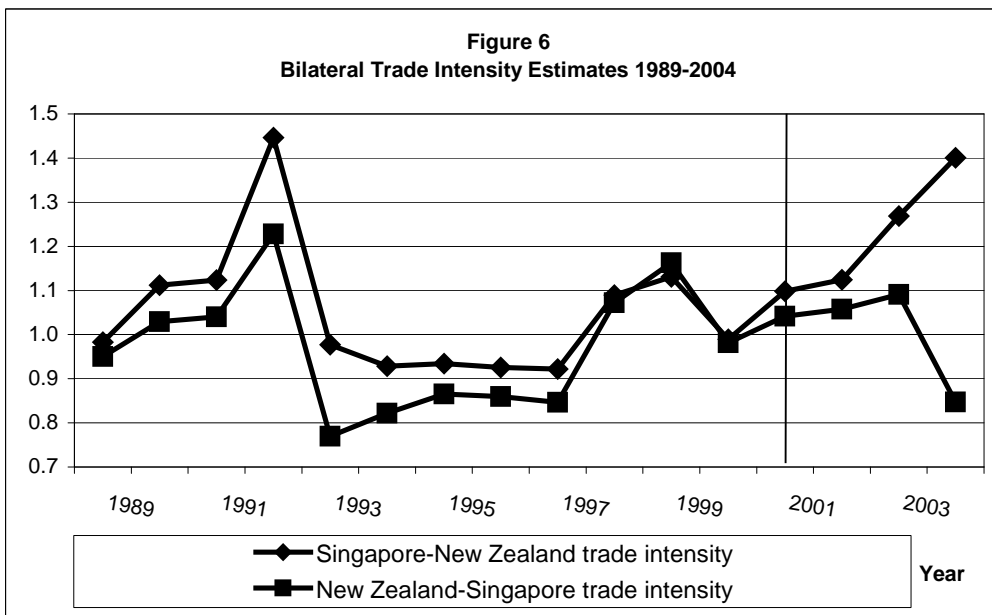
Source: Computed from Department of Statistics, Singapore (2005)



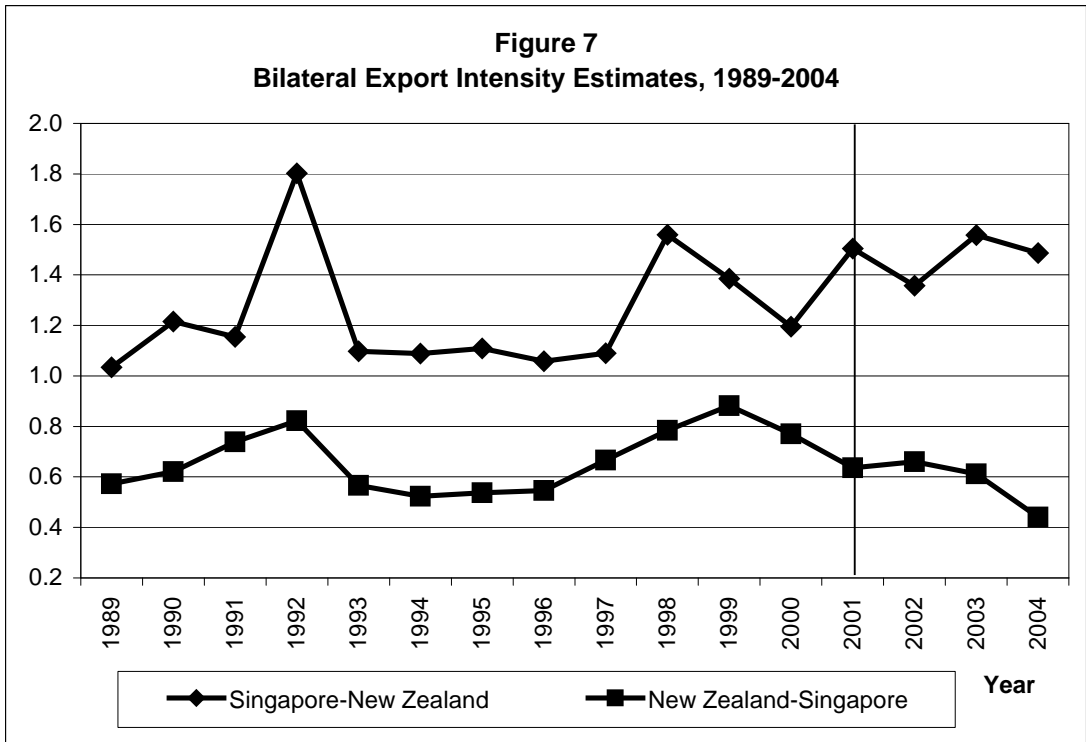
Source: Computed from UN-Comtrade Database



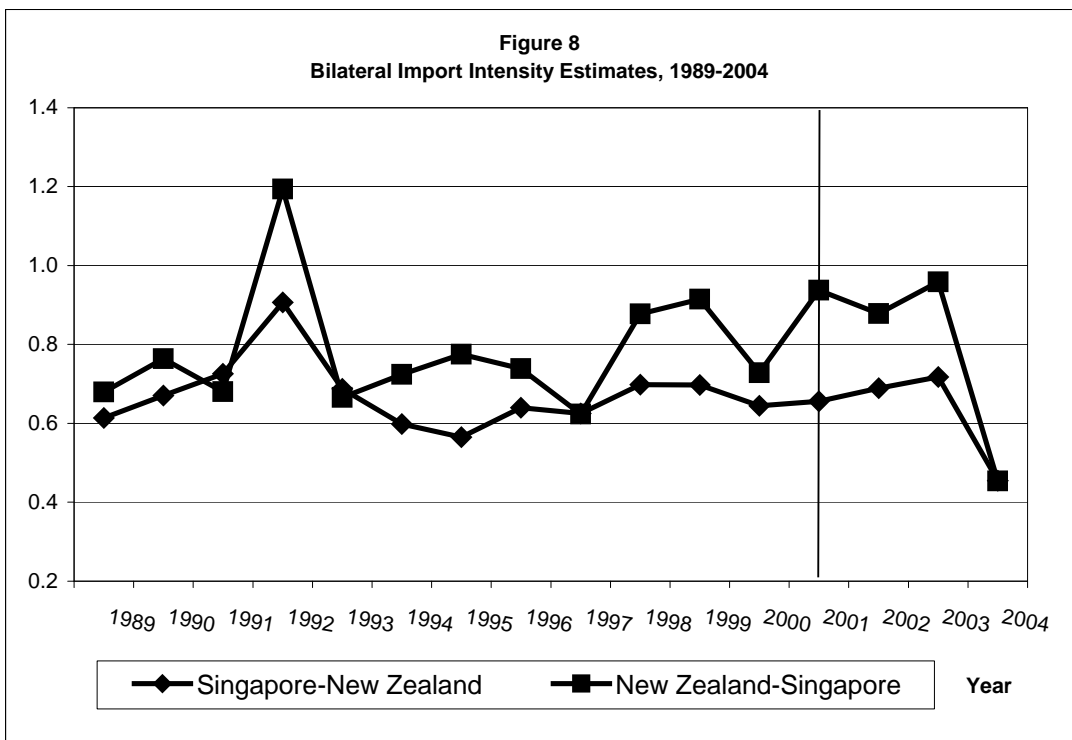
Source: Computed from UN-Comtrade Database



Source: Computed from UN-Comtrade Database

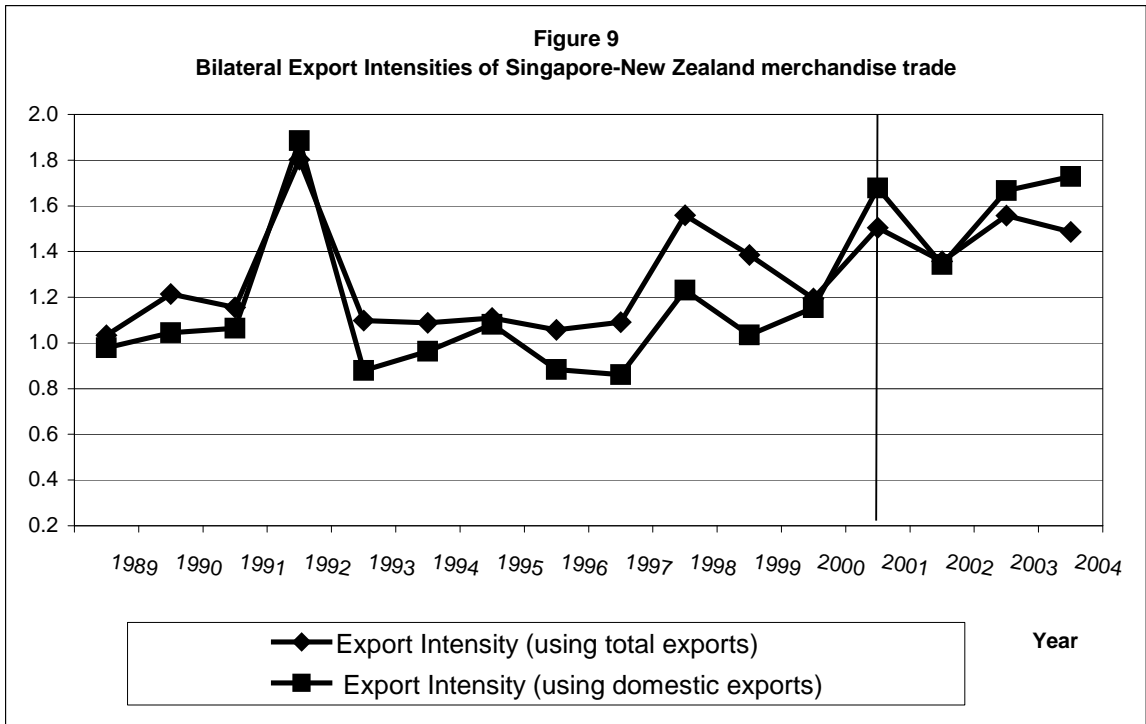


Source: Computed from UN-Comtrade Database

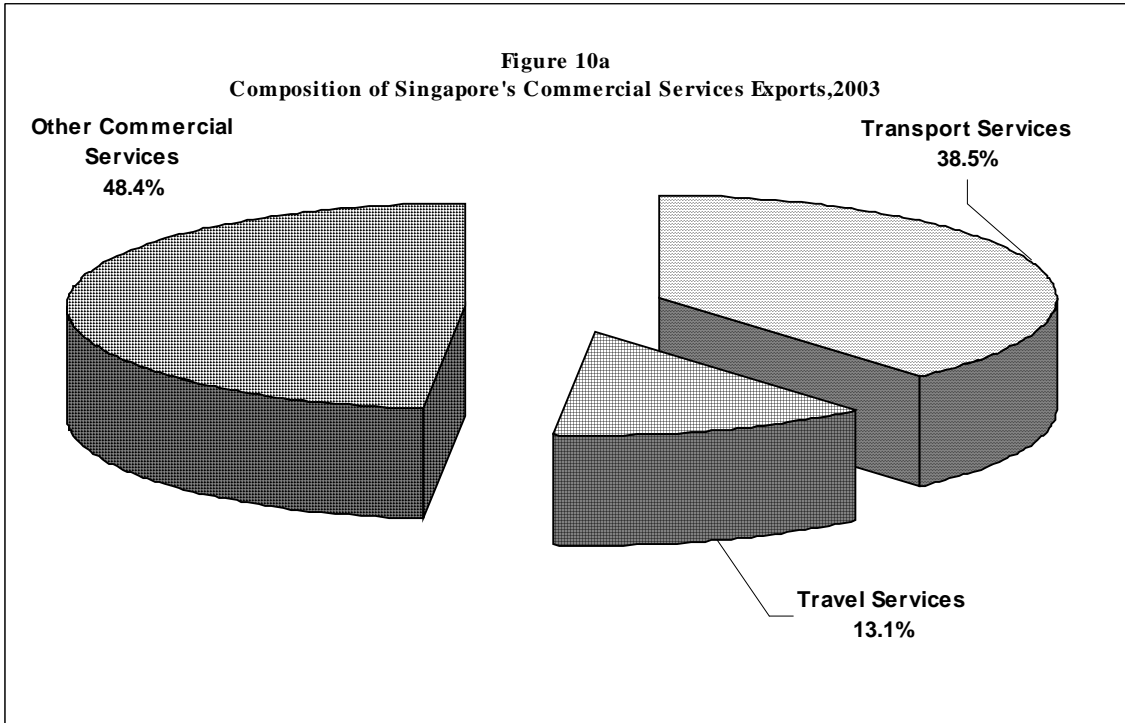


Source: Computed from UN-Comtrade Database

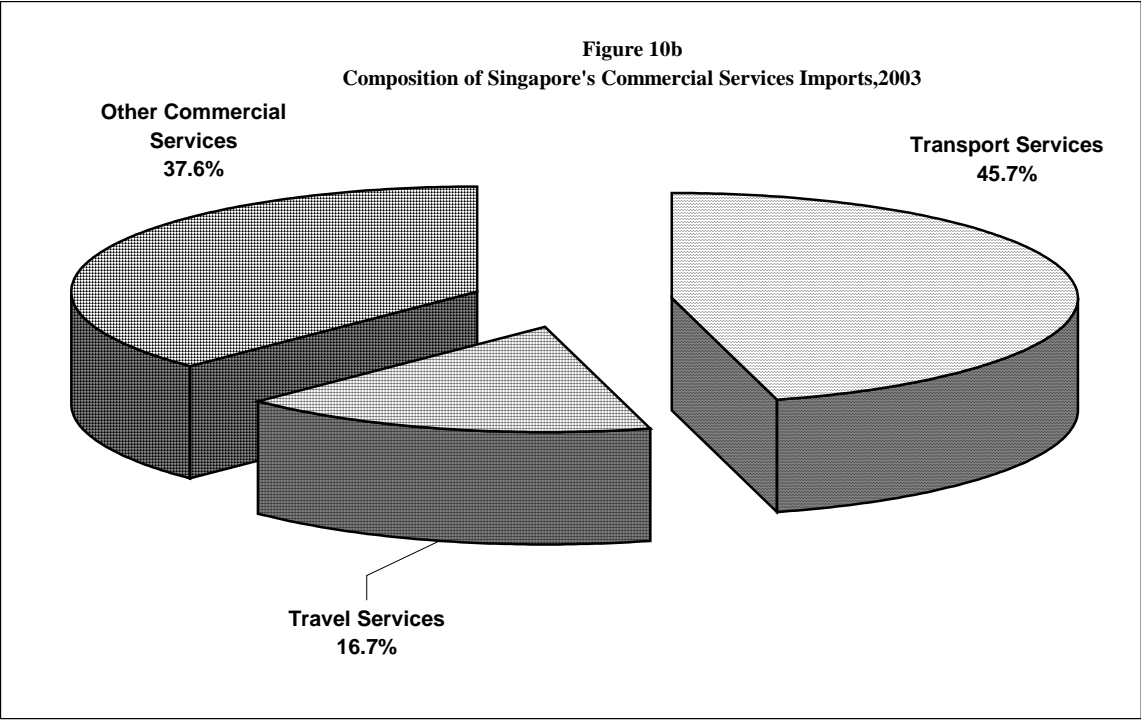




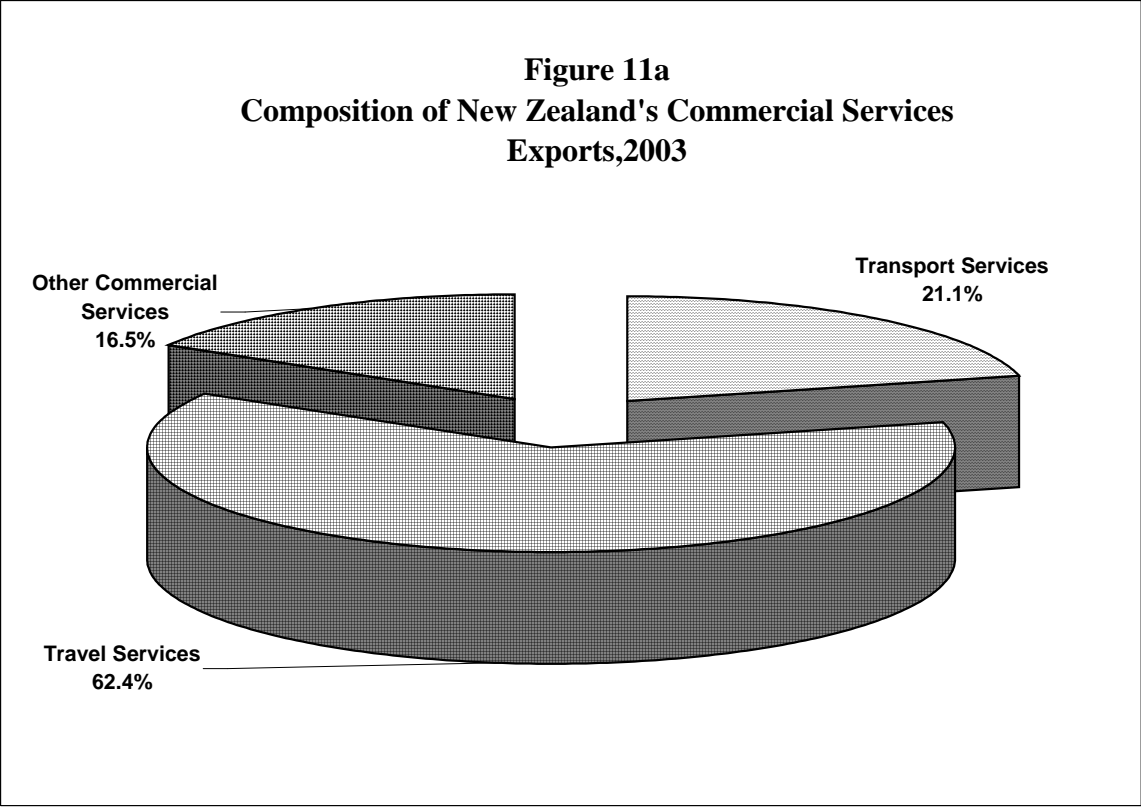
Source: Computed from UN-Comtrade Database and Department of Statistics, Singapore (2005)



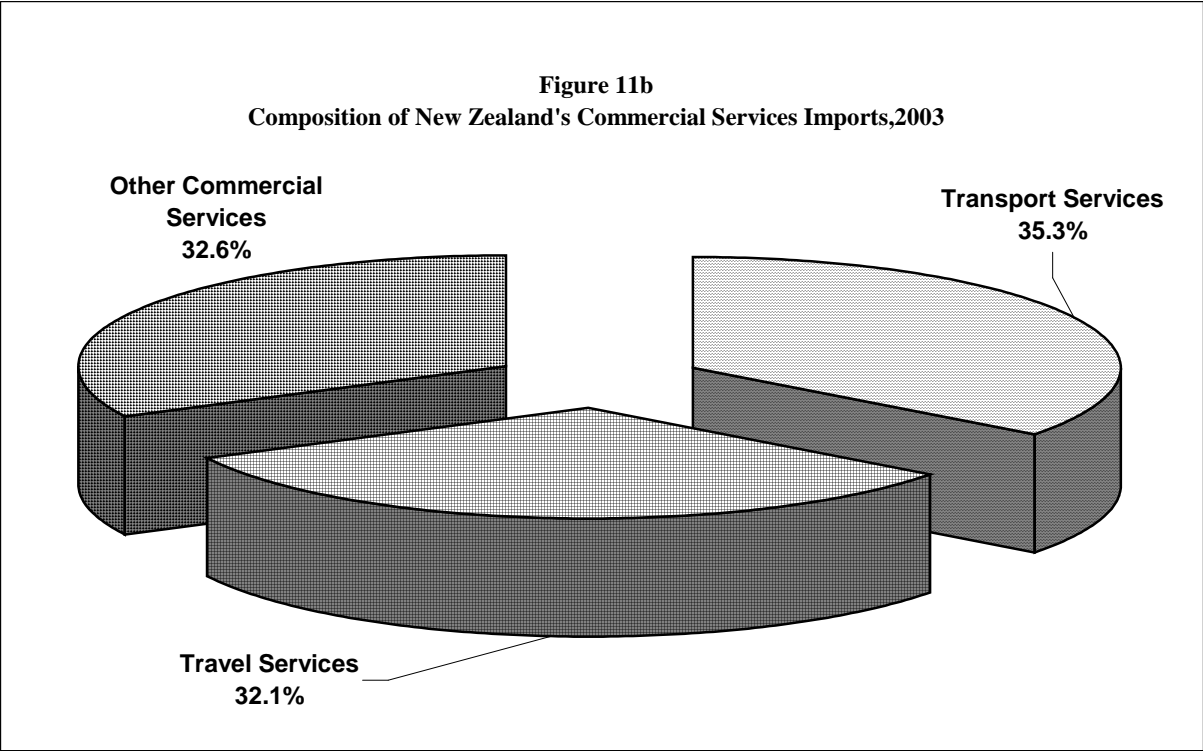
Source: WTO (2005)



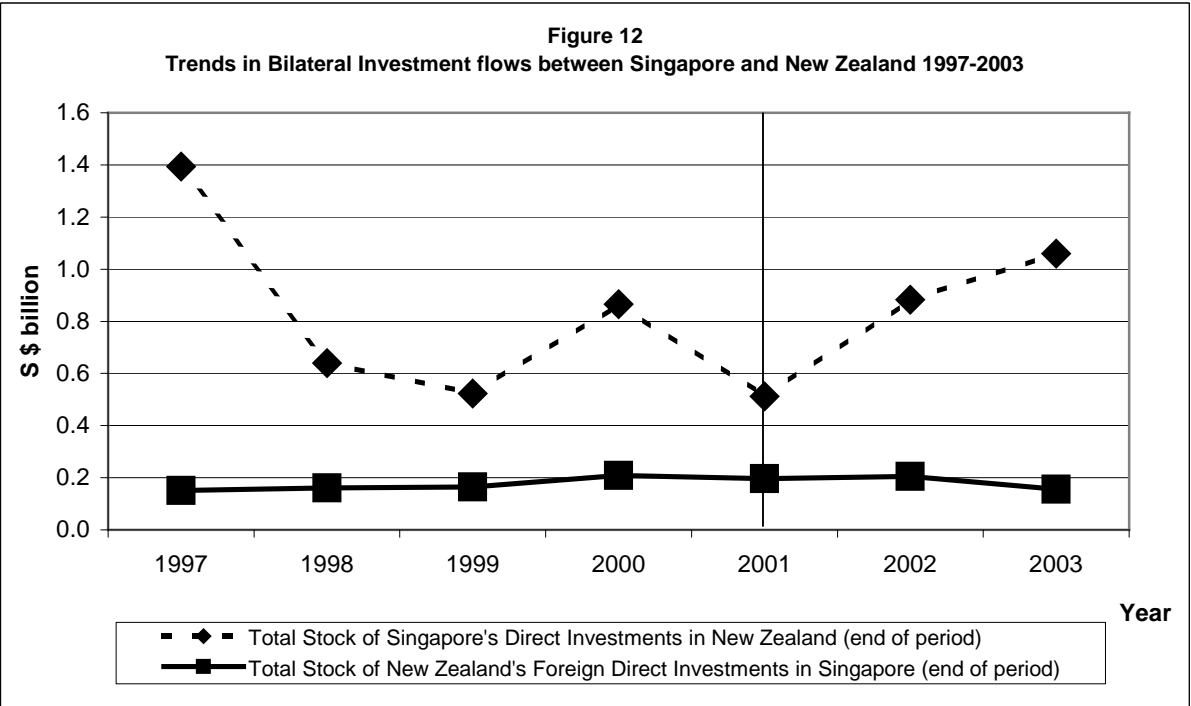
Source: WTO (2005)



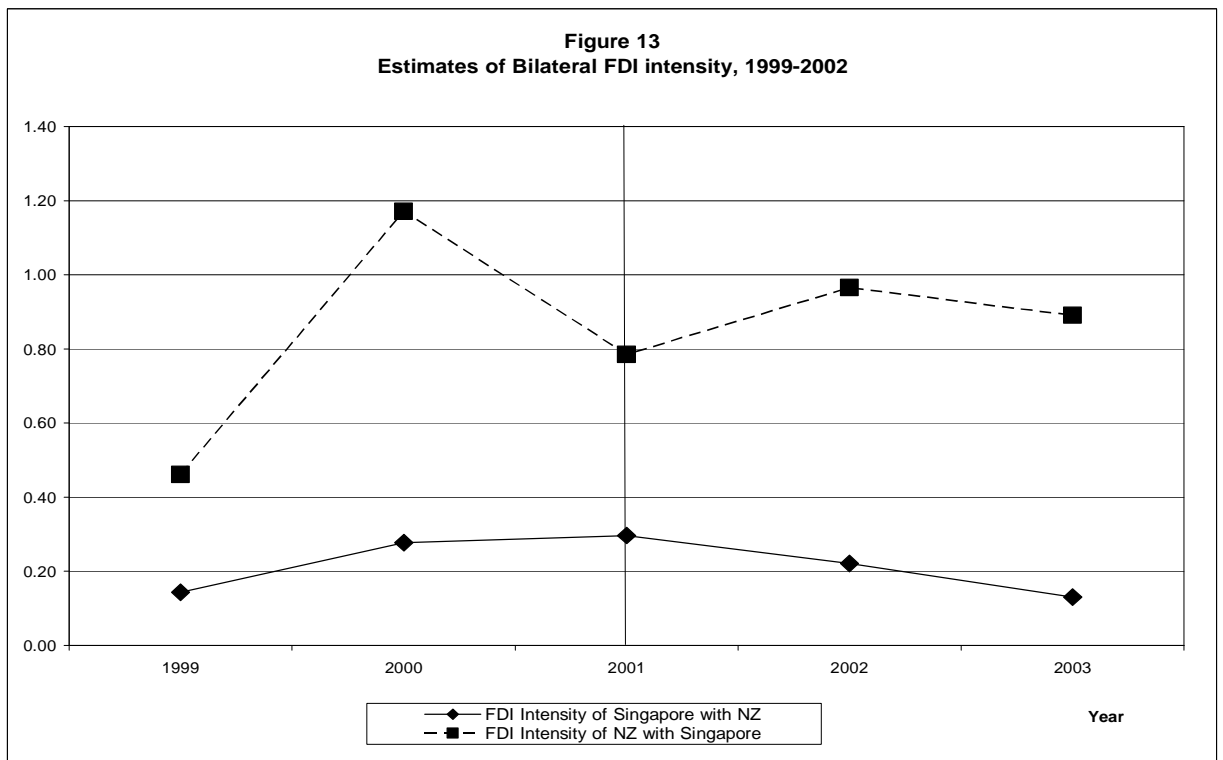
Source: WTO (2005)



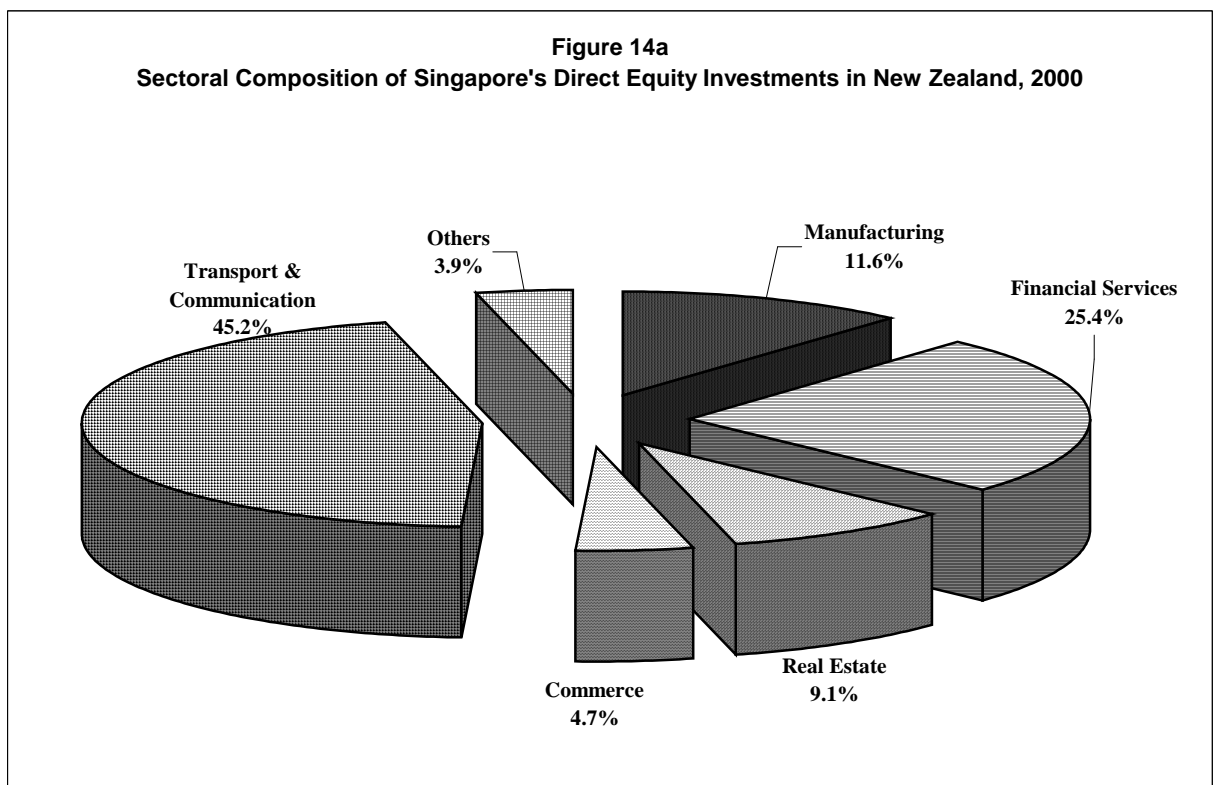
Source: WTO (2005)



Source: Department of Statistics, Singapore (2005)

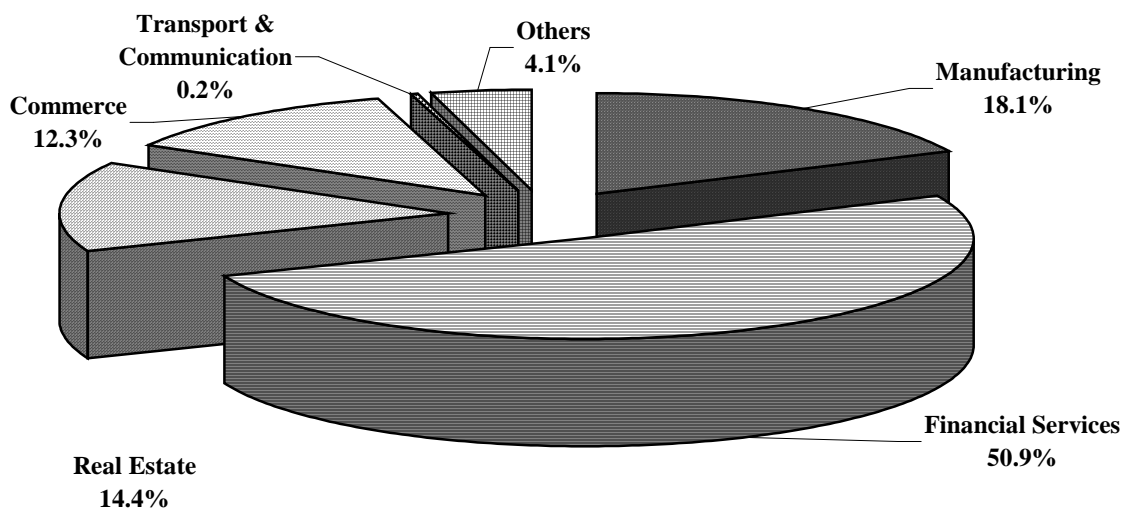


Source: Computed from Department of Statistics, Singapore (2005) and UNCTAD FDI-online database



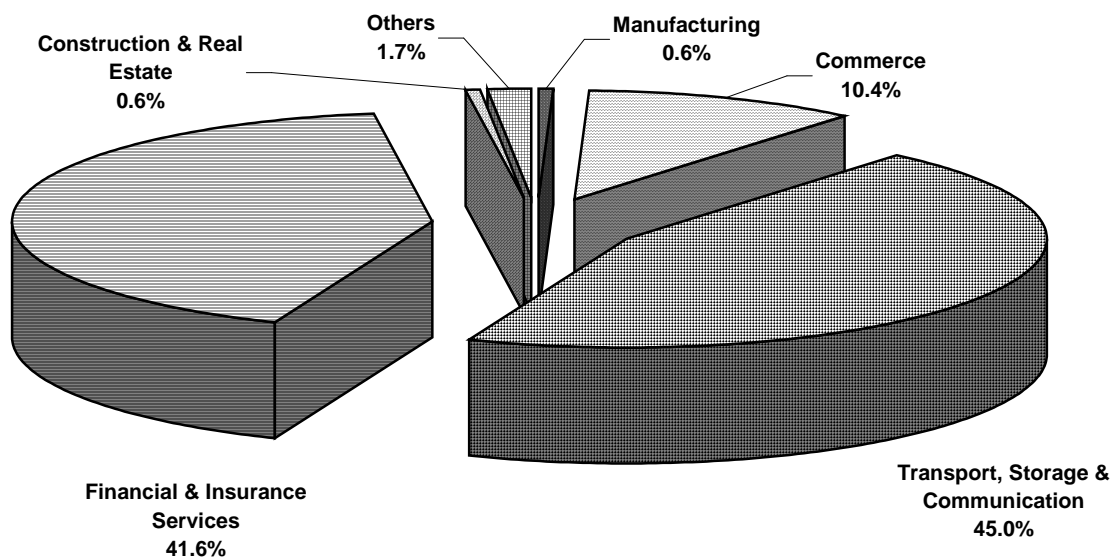
Source: Department of Statistics, Singapore (2005)

**Figure 14b**  
**Sectoral Composition of Singapore's Direct Equity Investments in New Zealand, 2002**



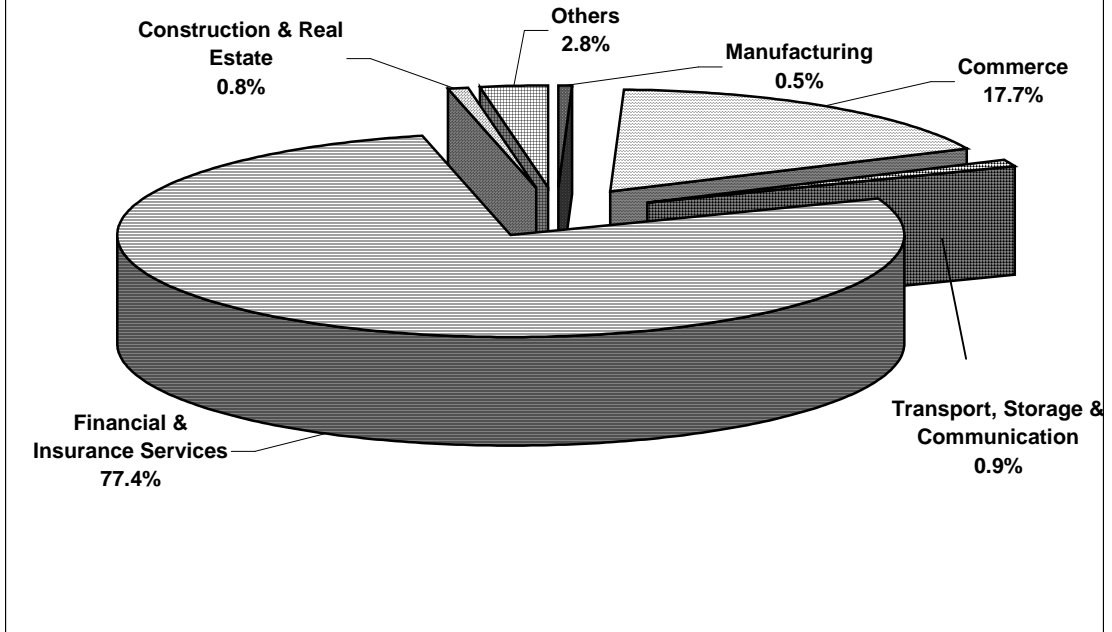
Source: Department of Statistics, Singapore (2005)

**Figure 15a**  
**Sectoral Composition of Stock of New Zealand's Direct Equity Investments in Singapore, 2000**



Source: Department of Statistics, Singapore (2005)

**Figure 15b**  
**Sectoral Composition of Stock of New Zealand's Direct Equity Investments in Singapore, 2002**



Source: Department of Statistics, Singapore (2005)

## Annex 1

### Trade Intensity Indices

#### a) *Total Trade Intensity*

The bilateral trade intensity index for total trade is as follows:

$$T_{ij} = [(X_{ij}+M_{ij})/(X_i+M_i)] / \{ [X_{wj}+M_{wj})-(X_{ij}+M_{ij})] / [(X_w+M_w)-(X_i+M_i)] \}$$

where:  $T_{ij}$  = Total trade intensity index of country i with country j;  $X_{ij}$  = Exports of country i to j ;  $M_{ij}$  = Imports of country i from j;  $X_i$  = Total exports of country i;  $M_i$  = Total imports of country i;  $X_{wj}$  = Total world exports to country j ;  $M_{wj}$  = Total world imports from country j; and  $X_w$  = Total world exports;  $M_w$  = Total world imports.

This index is interpreted as a relative measure of two ratios. The numerator represents the share of bilateral trade between country i and j as a percentage of total trade of country i. This forms the numerator of the total trade intensity index. The second ratio in the denominator represents the total trade of country j with the world excluding country i as a share of total world trade excluding country i. This forms the denominator of the total trade intensity index.

If the numerator exceeds the denominator, i.e. if the value of  $T_{ij} > 1$ , It implies that the bilateral trade intensity for country i with country j is greater than in comparison to country i's trade with the rest of the world (ROW). For instance, if Singapore is regarded as country i and country j is represented by its trading partners, viz. New Zealand, then a value of  $T_{ij} > 1$  implies that Singapore prefers to trade more intensely with New Zealand than trading with the rest of the world.

#### b) *Export Intensity Index*

The bilateral export intensity index among country i and country j may be stated as follows:

$$X_{ij}^a = [X_{ij}/X_i] / [(M_j - M_{ji}) / (M_w - M_i)]$$

where: in addition to the notations in the bilateral trade intensity index,  $M_j$  = Total imports of country j and  $M_{ji}$  = Imports of country j from country i. A value of

this index above unity implies that country i's relative share of exports to country j exceeds country j's share of imports from the ROW. This implies an over-representation of country j in country i's export market. From country i's point of view, the value of greater than one indicates that country i has relatively more intense preference for exporting to country j as compared to country j's imports from the ROW.

c) ***Import Intensity Index***

The import intensity index may be stated as follows:

$$M_{ij}^a = [M_{ij}/M_i]/[(X_j - X_{ji})/(X_w - X_i)]$$

where: in addition to the notations in the bilateral trade intensity index,  $X_j$  = Total exports of country j; and  $X_{ji}$  = Exports of country j to country i. A value of this index above unity implies that country i's relative share of imports to country j exceeds country j's share of exports to the ROW. This implies an over-representation of country j in country i's import market. From country i's point of view, the value of greater than one indicates that country i has relatively more intense preference for importing from country j as compared to country j's exports to the ROW.



## Annex 2

### FDI-intensity Index

The FDI intensity index, derived from the trade intensity concept, is used to determine whether the value of bilateral FDI inward stock between two countries is greater or smaller than would be expected on the basis of their importance in attracting world FDI stock. It is defined as the share of one country's FDI stock going to a partner divided by the share of world FDI stock of the partner. It is generally calculated as:

$$FDI_i = (FDI_{ij}/FDI_{iw}) / (FDI_{jw}/FDI_w - FDI_{iw})$$

Where  $FDI_{ij}$  and  $FDI_{wj}$  denote the values of country i's inward FDI stock from country j and of FDI inward stock of world in country j and  $FDI_{iw}$  and  $FDI_w$  denote country i's total FDI inward stock and total world FDI inward stock respectively. Thus the index is a ratio of two components, i) the numerator which is the share of country j in country i's total FDI inward stock, and ii) the denominator which is the share of country j in rest of the world's total inward FDI stock (except from country i).

An index of more (less) than one indicates a bilateral FDI stock that is larger (smaller) than expected, given the partner country's importance in world's total inward FDI stock. It also indicates that bilateral investment linkages between the two countries are stronger than that compared to FDI from the rest of the ROW.

## ISEAS WORKING PAPERS

### **I. ISEAS Working Papers on Economics and Finance** (ISSN 0218-8937)

1(96): Nick J. Freeman, *Portfolio Investment in Vietnam: Coping Without a Bourse*, February 1996.

2(96): Reza Y. Siregar, *Inflows of Portfolio Investment to Indonesia: Anticipating the Challenges Facing the Management of Macroeconomy*, March 1996.

3(96): Helen Hughes, *Perspectives for an Integrating World Economy: Implications for Reform and Development*, May 1996.

4(96): Carolyn L. Gates, *Enterprise Adjustment and Economic Transformation: Industrial Enterprise Behaviour and Performance in Vietnam during Stabilization and Liberalization*, June 1996.

5(96): Mya Than, *The Golden Quadrangle of Mainland Southeast Asia: A Myanmar Perspective*, July 1996.

1(99): Myat Thein, *Improving Resource Mobilization in Myanmar*, January 1999.

2(99): Anita G. Doraisami, *The Malaysian Currency Crisis: Causes, Policy Response and Future Implications*, February 1999.

3(99): George Abonyi, *Thailand: From Financial Crisis to Economic Renewal*, March 1999.

4(99): Carolyn L. Gates, *The East Asian Crisis and Global Integration: Mismanagement and Panic Revisited or a New Beast?*, March 1999.

5(99): Tin Maung Maung Than, *The Political Economy of Burma's (Myanmar's) Development Failure 1948-1988*, March 1999.

6(99): Kim Ong-Giger, *Southeast Asian Economies in Crisis: The Emergence of Pax Capitalia*, April 1999.

7(99): Carolyn L. Gates, *ASEAN's Foreign Economic Relations: An Evolutionary and Neo-Institutional Analysis*, May 1999.

8(99): Kim Ong-Giger, *Japanese IT Development: Implications for FDI in Southeast Asia*, September 1999.

9(99): Frank L. Bartels and Nick J. Freeman, *Multinational Firms and FDI in Southeast Asia: Post-Crisis Perception Changes in the Retail-Oriented Manufacturing Sector*, December 1999.

1(2000): Nick J. Freeman, *Constraints on Thailand's Equity Market as an Allocator of Foreign Investment Capital: Some Implications for Post-Crisis Southeast Asia*, January 2000.

2(2000): Nick J. Freeman, *Foreign Portfolio Investors' Approaches to Thailand's Equity Market: Survey Findings and Preliminary Analysis*, March 2000.

3(2000): Nick J. Freeman and Frank L. Bartels, *Portfolio Investment in Southeast Asia's Stock Markets: A Survey of Institutional Investors' Current Perceptions and Practices*, April 2000.

4(2000): Nick J. Freeman, *A Regional Platform for Trading Southeast Asian Equities: Viable Option or Lofty 'Red Herring'?*, July 2000.

5(2000): Sakulrat Montreevat, *Impact of Foreign Entry on the Thai Banking Sector: Initial Stage of Bank Restructuring*, August 2000.

6(2000): Ramkishan S. Rajan and Tracy Yang, *Devaluation of the Baht and Economic Contraction in Thailand*, December 2000.

7(2000): Tracy Yang and Paul Vandenberg, *Selected East Asian Stock Markets in the Context of Financial Liberalization: Prior to the Crisis*, December 2000.

1(2001): Tracy Yang and Reza Siregar, *An Empirical Examination of the Stock Market Returns in Selected Asia-Pacific Economies in the Pre- and Post-Financial Reform Period*, February 2001.

1(2002): Tracy Yang, *Crisis, Contagion, and East Asian Stock Markets*, February 2002.

2(2002): Ngiam Kee Jin and Lixia Loh, *Developing a Viable Corporate Bond Market: The Singapore Experience*, June 2002.

3(2002): Ramkishan S. Rajan and Rahul Sen, *International Trade in Services in Selected ASEAN Countries: Telecommunications and Finance*, August 2002.

4(2002): Arumugam Rajenthiran, *Indonesia: An Overview of the Legal Framework for Foreign Direct Investment*, October 2002.

5(2002): Arumugam Rajenthiran, *Malaysia: An Overview of the Legal Framework for Foreign Direct Investment*, October 2002.

1(2003): Lee Poh Onn, *The Water Issue Between Singapore and Malaysia: No Solution In Sight?*, January 2003.

1(2004): Denis Hew and Rahul Sen, *Towards an ASEAN Economics Community: Challenges and Prospects*, November 2004.

2(2004): Linda Low, *Policy Lessons In Development: Small, Open Economics of Singapore and Abu Dhabi in the United Arab Emirates*, December 2004.

1(2005): Rahul Sen, *Enhancing Bilateral Economic Linkages Through New Regionalism: The Case of the Agreement Between New Zealand and Singapore for a Closer Economic Partnership (ANZSCEP)*, September 2005.

## **II. ISEAS Working Papers on International Politics and Security Issues** (ISSN 0218-8953)

1(96): Derek da Cunha, *The Need for Weapons Upgrading in Southeast Asia: Present and Future*, March 1996.

1(97): Simon J. Hay, *ASEAN's Regional Security Dialogue Process: From Expectation to Reality?*, March 1997.

1(99): Sorpong Peou, *The ASEAN Regional Forum and Post-Cold War IR Theories: A Case for Constructive Realism?*, January 1999.

2(99): Sheng Li Jun, *China and the United States as Strategic Partners into the Next Century*, February 1999.

3(99): Jürgen Haacke, *'Flexible Engagement': On the Significance, Origins and Prospects of a Spurned Policy Proposal*, February 1999.

4(99): Derek da Cunha, *Southeast Asia's Security Dynamics: A Multiplicity of Approaches Amidst Changing Geopolitical Circumstances*, July 1999.

1(2001): Anthony L. Smith, *Indonesia: One State, Many States, Chaotic State?*, September 2001.

2(2001): Sheng Lijun, *One Year of the Chen Shui-Bian Government: Ice Across the Taiwan Strait*, September 2001.

3(2001): Derek da Cunha, *Renewed Military Buildups Post-Asian Crisis: The Effect on Two Key Southeast Asian Bilateral Military Balances*, December 2001.

1(2003): Sheng Lijun, *China-ASEAN Free Trade Area: Origins, Developments and Strategic Motivations*, July 2003.

1(2004): Graham Gerard Ong, *'Ships Can Be Dangerous Too': Coupling Piracy and Maritime Terrorism in Southeast Asia's Maritime Security Framework*, January 2004.

### **III. ISEAS Working Papers on Social and Cultural Issues**

(ISSN 0218-8961)

1(96): Federico V. Magdalena, *Ethnicity, Identity and Conflict: The Case of the Philippine Moros*, April 1996.

1(98): Patricia Lim, *Myth and Reality: Researching the Huang Genealogies*, June 1998.

2(98): M. Thien Do, *Charity and Charisma: The Dual Path of the Tinh Dô Cu Si, a Popular Buddhist Group in Southern Vietnam*, September 1998.

1(99): JoAnn Aviel, *Social and Environmental NGOs in ASEAN*, August 1999.

1(2000): Lee Hock Guan, *Ethnic Relations in Peninsular Malaysia: The Cultural and Economic Dimensions*, August 2000.

1(2001): Aris Ananta, *The Impact of Migration Status on Household Financial Resilience During the Indonesian Crisis: A Case Study*, May 2001.

2(2001): Lee Hock Guan, *Political Parties and the Politics of Citizenship and Ethnicity in Peninsular Malay(si)a, 1957-1968*, September 2001.

1(2005): Terence Chong, *Civil Society in Singapore: Reviewing Concepts in the Literature*, July 2005.

### **IV. ISEAS Working Papers by Visiting Researchers**

(ISSN 0219-3582)

1(2000): Ramkishan S Rajan, *Examining the Case for Currency Basket Regimes for Southeast Asia*, January 2000.

2(2000): P Lim Pui Huen, *Continuity and Connectedness: The Ngee Heng Kongsi of Johor, 1844-1916*, January 2000.

3(2000): Ramkishan S Rajan, *Examining the Case for an Asian Monetary Fund*, February 2000.

4(2000): Thawatchai Jittrapanun, *The SIMEX Experience: Implications for Thailand's Futures Exchange*, February 2000.

[Also published as EADN Working Paper, No 1, November 2001.]

5(2000): Le Minh Tam, *Reforming Vietnam's Banking System: Learning from Singapore's Model*, February 2000.

[Also published as EADN Working Paper, No 2, November 2001.]

6(2000): Gao Haihong, *Liberalising China's Capital Account: Lessons Drawn From Thailand's Experience*, February 2000.

[Also published as EADN Working Paper, No 3, November 2001.]

7(2000): Liliana Halim, *Reviving the Indonesian Banking Sector? Indonesia's Economic Crisis: Impact on Financial and Corporate Sectors 1997-1999*, February 2000.

[Also published as EADN Working Paper, No 4, November 2001.]

8(2000): Ngiam Kee Jin, *Coping with the Asian Financial Crisis: The Singapore Experience*, March 2000.

9(2000): Ramkishen S. Rajan and Iman Sugema, *Capital Flows, Credit Transmission and the Currency Crisis in Southeast Asia*, March 2000.

10(2000): Wang Xiaomin, *Zhongguancun Science Park: A SWOT Analysis*, May 2000.

[Also published as EADN Working Paper, No 5, November 2001.]

11(2000): Doan Phuong Lan, *The Asian Financial Crisis and its Implication for Vietnam's Financial System*, May 2000.

[Also published as EADN Working Paper, No 6, November 2001.]

12(2000): Tracy Yang Su-Chin, *Regulatory Reforms in the Asia-Pacific Region: A Preliminary Study*, May 2000.

[Also published as EADN Working Paper, No 7, November 2001.]

13(2000): Akhmad Bayhaqi, *Education and Macroeconomic Performance in Indonesia: A Comparison with Other ASEAN Economies*, May 2000.

[Also published as EADN Working Paper, No 8, November 2001.]

14(2000): Ai-Gek Beh and George Abonyi, *Structure of the Asset Management Industry: Organizational Factors in Portfolio Investment Decisions*, June 2000.

15(2000): Paul Vandenberg, *The Evolution of SMI Policy in Malaysia*, December 2000.

1(2001): Anis Chowdhury and Iyanatul Islam, *The East Asian Crisis — A Political Economy Explanation*, March 2001.

2(2001): Irman G. Lanti, *Back to the (Slightly Different) Future: Continuity and Change in Indonesian Politics*, April 2001.

3(2001): Bruce Matthews, *Ethnic and Religious Diversity: Myanmar's Unfolding Nemesis*, May 2001.

4(2001): Poramettee Vimolsiri, *Role of Foreign Investors in the Thai Currency Crisis of 1997*, October 2001.

5(2001): Ramkishen S. Rajan and Chung-Hua Shen, *Are Crisis-Induced Devaluations Contractionary?* November 2001.

6(2001): Graham Bird and Ramkishen S. Rajan, *Financial Crises and the Composition of International Capital Flows: Does FDI Guarantee Stability?*, November 2001.

1(2002): Ramkishen S. Rajan and Rahul Sen, *Trade Reforms In India Ten Years On: How Has It Fared Compared To Its East Asian Neighbours?*, March 2002.

2(2002): Muhammad Chatib Basri, *Why Trends of Protection Changed Over Time in Indonesia?*, March 2002.

3(2002): P.J. Lloyd, *New Regionalism and New Bilateralism in the Asia-Pacific*, May 2002.

4(2002): Vu Quoc Ngu, *The State-Owned Enterprise Reform in Vietnam: Process and Achievements*, October 2002.

5(2002): Graham Bird and Ramkishen S. Rajan, *The Political Economy of a Trade-First Approach to Regionalism*, November 2002.

1(2003): Yupana Wiwattanakantang, Raja Kali, Chutatong Chrumilind, *Crony Capital? Corporate Debt Maturity in Thailand Before the Financial Crisis*, February 2003.

2(2003): Martin P. H. Panggabean, *Integration of Indonesian Provinces: Alienated Neighbours?*, August 2003.

3(2003): George Abonyi, *Challenges of Industrial Restructuring in a Globalizing World: Implications for Small- and Medium-scale Enterprises (SMEs) in Asia*, November 2003.

1(2004): Martin P.H. Panggabean, *Regional Growth: Economically Important Sectors*, January 2004.

2(2004): Nico J. G. Kaptein, *The Voice of the 'Ulamâ': Fatwas and Religious Authority in Indonesia*, January 2004.

**Editor**

Tin Maung Maung Than

**Editorial Committee**

Derek da Cunha

Lee Hock Guan

Lee Poh Onn

Sakulrat Montreevat

Papers in this series are preliminary in nature and are intended to stimulate discussion and critical comment. The Editorial Committee accepts no responsibility for facts presented and views expressed, which rests exclusively with the individual author. No part of this publication may be produced in any form without permission. Comments are welcomed and may be sent to the author.