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Closer Economic Relation (CER), Intra-Industry Trade and Inter-Industry Trade Intensities: Evidence For New Zealand

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Abstract

This study analyses intra-industry and inter industry trade between New Zealand, Australia and selected Asia-Pacific nations during the period 1990 to 2009, a period of trade liberalization. The Grubel-Lloyd and Aquino indices are used to calculate the intensity of intra-industry trade (IIT) at the 3-digit SITC level. IIT has been estimated across industries and trading partners. An intensity of trade index has been estimated to show the strength of trade relations between New Zealand and the other countries. The results suggest that removal of trade barriers through bilateral and multilateral negotiations has enhanced intra-industry trade and the intensity of trade.

***Key Words**: Intra-Industry International Trade.*
New Zealand-Australia Bilateral Trade Relations.
Economic integration.
***JEL**: F10, F02, F13, F14, F15.*

Intra-Industry Trade and Trade Intensities: Evidence from New Zealand

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Introduction

This paper provides an analysis of New Zealand's trading relations with Australia, selected trading partners and with the world. The plan of the paper is as follows: First, an historical aspect of New Zealand's trade development is presented. Second, outlines the methodology and hypotheses of the study. Third, intra-industry trade is explained and IIT results and analysis are presented. Fourth, the statistical analysis of trade intensity which has been applied to understand the strength and nature of bilateral trading relationships between countries is examined. Finally, some concluding remarks are presented and some questions for future research are put forward.

Australia – New Zealand Trade: An Historical Perspective

New Zealand historically was dependent on the British market which accounted for about 60 percent of New Zealand's exports and about 50 percent of its imports in the early 1960s. This trade dependency on United Kingdom has changed since the early 1970s when Britain joined the EEC. Currently New Zealand's international trade is diversified with new trading partners including Australia, Japan, U.S., South Korea, China, India and others. In 1989 New Zealand became a founding member of the Asia-Pacific Economic Cooperation (APEC) forum whose membership account for about 70 percent of New Zealand Trade.

Until 1840, New Zealand was part of the New South Wales Colony, administered from Sydney. Throughout the 19th century, New Zealand was closely associated with Australia. The migrants to both colonies came almost exclusively from Britain. Both economies were based on pastoral activities - especially sheep, with gold and whaling as shared activities.

After the independence of Dominion status, the similarities continued. They both adopted the Westminster style political system. Culturally, both followed the English tradition in language, arts, sport, and currency. There was little trade between New Zealand and Australia, because both supplied Britain with meat and dairy products in exchange for industrial and financial goods and

services. Both were heavily dependent on British investment. They fought as one unit - the ANZAC brigade - in the 1914-18 war and fought together in the 1939-45 campaigns, especially in the Middle East. Both suffered from the depression.

In the post-war period, Australia became more industrialised than New Zealand and supplied New Zealand with an increasing amount of consumer durables - automobiles (Holden), electrical goods, tools etc. By 1966 the trade balance was heavily in Australia's favour at 4:1 (NAFTA). Travel, movement of labour and, to a lesser degree movement of capital, was always free. There has always been a significant New Zealand community in Australia especially in the major cities. Australia became more cosmopolitan as migration became more disparate - from Italy, Greece, Yugoslavia, Hungary, China and India while New Zealand mainly continued with British immigrants.

The Closer Economic Relations (CER) Agreement was established between these two nations in 1983. It was agreed that all tariff and non-tariff barriers be progressively liberalised and eliminated. In 1988, the CER was renegotiated with the provision to accelerate the time frame for trade liberalisation, including trade in services and investment.

Following CER the economies came closer together. Both adopted free trade policies with each other and enjoyed relatively free trade with the rest of the world. Capital and labour move freely between the two countries so that many companies (e.g. ANZ, BNZ, Goodman/Fielder/Watties) are joint Trans-Tasman ventures.

Changes in the international economic and trading environments have had a significant impact on New Zealand trade patterns. It is argued that the loss of the traditional British markets, the relative decline in foreign demand for and prices of New Zealand traditional exports, the removal of trade barriers and growing need for competitive industrial development have brought about the need to a new look at the New Zealand trading patterns.

The world trade patterns have changed very markedly in the past few decades. International trade is no longer dominated by the simple nineteenth century Ricardian model of exchange of British cloth for Portugese wine or the Heckscher Ohlin explanation of inter-industry trade patterns. One of the most important trends in the world trade has been the emergence and growth of intra-industry trade, particularly between developed countries. Intra-industry trade (IIT) is defined as the simultaneous import and export of goods within the same industry.

The growth of intra-industry trade has attracted increased attention in the economic literature. A number of studies have discussed the conceptual and statistical problems involved in trying to measure IIT. Some of the notable works are those of Balassa (1963), Grubel and Lloyd (1975) and Aquino (1978). Economists have also addressed questions which have important implications for economic policy. These issues revolve around the impact of trade liberalisation on the levels of intra-industry trade and the cost of adjustments following removal of trade barriers between trading partners.

The concept of intra-industry trade and the economic integration have been closely associated since the formation of the EEC in 1950s. Balassa (1966) provided evidence of intra-industry trade patterns following European integration. The major issues are: First, does trade liberalisation foster intra-industry trade? Second, are adjustment costs to trade liberalisation lower in industries characterised by high levels of IIT? Third, what are the determinants affecting the high degree of IIT? Fourth, what are the policy implications for resource reallocation and income distribution? From policy perspective, it is often argued that adjustment costs are lower when new trade is of intra-industry type because disruption is minimised when adjustment takes place within an industry. It is easier to transfer and adapt resources within industries than to switch them from one industry to another. Marvel and Ray (1987) argued on the basis of political economy that high levels of intra-industry trade needs less resistance to liberalising policies.

The experience of a free trade agreement between New Zealand and Australia provides an opportunity to examine whether trade liberalisation has promoted more intra-industry trade between these developed Pacific-rim countries. In this study the first issue will be examined and some discussions will be made on the second on the basis of the results. In order to discuss the first issue, one needs to compute the levels of IIT for a particular country. This, in turn, requires that one has to find an acceptable method of measurement, and also define what we mean by 'substitutes' and 'industry'. German and Danish lager beer are very close substitutes, but consumers identify them separately; automobiles have varying qualities of size, comfort, performance, economy, some being close substitutes, some widely differentiated. The problem is best illustrated by following the United Nations Standard Trade Classification (SITC) through a disaggregating process from 1-digit to 5-digit levels. It is generally recognized that the 3-digit level (in some cases 2-digit) is the most convenient one consistent with the traditional concept of industry (Grubel and Lloyd, 1975).

In this study IIT has been computed at the SITC 3-digit levels for individual industries for the years 2000 and 2009. A summary of values has also been computed for the years 1964 to 2009 between New Zealand and Australia. In addition, 3-digit summary values are also estimated in relation to selected trading partners and the world.

Methodology and Hypotheses

Determinants of Intra-Industry International Trade: The intensity of IIT is likely to be determined by a host of causative factors such as: A. Country specific determinants (i) average levels of development of trading partners (ii development differential and income distribution of trading Partners (iii) relative market size and market size differential (iv) and geographical proximity. B. Industry Specific factors such as: (a) the Prevalence of Economies of scale (b) the degree of aggregation (c) the degree of product differentiation (d) human capital intensity (e) the technological innovation/factor intensity and (f) the dominance of multinationals. C. Policy specific factors: (i) Levels of protection, nominal and effective tariffs (ii) Export incentives, exports, imports subsidy and (iii) Commonwealth / other trade arrangements, FTAs. D. Institutional-specific determinants such as: (a) Communication, transports and trade links (b) Language, cultural and religious ties. These causative factors seem to determine the intensity of modern trade flows between nations. Some testable hypotheses can be drawn.

Determinants of Intra-Industry International Trade (IIT): Selected Hypothesis

(a) **Country Specific**: derived from Linder's (1961) demand similarity thesis.

Hypothesis 1: IIT is an increasing function of the average level of development (ALDjk) of the trading partners, measured as the average per capita income of the two countries, i, home / reporting country and j, trading partner.

$$\Delta IIT_{jk} / \Delta ALD_{jk} > 0$$

Hypothesis 2: IIT is an increasing function of the average market size (AMS) of the partners, measured by average GDP.

$$\Delta ITT_{ik} / \Delta AMS > 0$$

Hypothesis 3: ITT is greater between countries whose tastes and demand patterns are similar.

Hypothesis 4: IIT is a decreasing function of the level of development differential (LDDjk) and market size differences (MSD)- i.e. absolute difference of per capita incomes and GDP of the trading partners

$$\Delta IIT_{jk} / \Delta LDD_{jk} < 0$$

(b) **Industry Specific** derived from Technological Gap Theory (Kravis, Hufbauer, Posner); Product Life Cycle (Vernon); Human Capital (Bhagwati, Keesing, Leontief); Economies of Scale (Grubel, Caves, Krugman)

Hypothesis 5: IIT is a decreasing function of the level of disaggregation i.e. the greater the number of four and five digit SITC groups found in a given three digit group, the lower will be the IIT value.

$$\dot{I}IT_i / \dot{L}DAG_i < 0$$

Hypothesis 6: IIT is an increasing function of product differentiation. Proxy variables are -
coefficient of variation in unit values of exports (PD_i) and
advertising/sales ratios (SR_i)

Hypothesis 7: IIT is an increasing function of technological innovation, measured by R and D expenditure (IRD_i) and investment/GDP ratio (RDN_i).

Hypothesis 8: IIT is an increasing function of economies of scale, measured as value added per employee (ESC_i).

Hypothesis 9: IIT is an increasing function of human capital intensity, measured as the ratio Wage Bill/Numbers Employed (WE_i).

Hypothesis 10: IIT is an increasing function of the presence of Multinational Corporation in the industry, measured by Foreign Investment / Total Investment

C. **Policy Specific** derived from Trade Barriers (Balassa, Grubel-Lloyd, Wannacott).

Hypothesis 11: IIT is a decreasing function of nominal and effective tariffs measured as -

(a) computed nominal tariff at three digit SITC (TNP_i)
(b) effective tariff at three digit SITC (ETW_i)
(c) tariff revenue/value of industry imports (TNW_i)

D. Institutional Specific are derived from historical, geographical and cultural ties which have created a market.

Hypothesis 12: IIT is an increasing function of similar culture and language.

LNG_{jk} has a value of 1 or 0

CUC_{jk} has a value of 1 or 0

Hypothesis 13: IIT is a decreasing function of distance.

$$\dot{I}IT / \dot{D}IST_{jk} < 0$$

Measuring Intra-industry trade (IIT): the choice of technique

Intra-industry trade is defined as the simultaneous export and import of goods within the same industry. Inter-industry trade is the exchange of goods which belong to different industries. For example, New Zealand and Australia simultaneously export and import Steinlager and Fosters beer to each other. Japan and the United States exports and imports automobiles. This is different from inter-industry trade, which involves countries exchanging the products for different industries. For example, Japan may export automobiles to India, and India may export Basmati rice to Japan. The standard Heckcsher-Ohlin trade theory explains inter-industry trade but cannot explain intra-industry trade (unless some of the underlying assumptions are relaxed).

A number of attempts have been made to find a suitable method of measuring intra-industry trade and these have been discussed at length in the literature. Grubel and Lloyd (1975) were the first economists to seek to measure the significance of intra-industry trade. They measured IIT as the proportion (percent) of a country's total trade (exports plus imports) in the products of a given industry which was matched or balanced, that is exports equal imports. In this study four measures have been selected and used. They are: (i) the Grubel and Lloyd measure at industry level (IITBi), (ii) the Grubel-Lloyd Weighted (IITB) Index, (iii) the Grubel-Lloyd adjusted (IITC) Index and (iv) the Aquino adjusted index. The summaries of the methodologies used are presented in Appendix 1.

In this study IIT has been computed at the SITC 3-digit levels for all industries from SITC 0 to SITC 9 categories, for the years 2000 and 2009. 3-digit summary values have also been computed for the years 2000 and 2009 between New Zealand and Australia and selected countries and the world. The trade data used in the analysis come from United Nations Statistical Department, Head Office - New York. This paper updates previous work on New Zealand-Australia intra-industry (Bano & Lane 1987 and 1995).

Whilst high levels of IIT have been evident in OECD countries, New Zealand did not share this experience until the 1970's. A number of possible explanations can be identified as being pertinent with regard to New Zealand. These are: (a) New Zealand specialized in Agricultural products and developed a wide small scale industrial base; (b) Protected industry allowed growth of small, relatively efficient firms which supplied the domestic market; (c) New Zealand's long association with the 'safe' British market and the production of traditional commodities were not conducive to

change; and (d) The implementation of government farm support policies tended to assist established, declining products rather than encourage new ventures.

Intra-Industry and Intra-Industry Trade: Evidence from New Zealand

Table 3a shows different measures of intra-industry trade through time between New Zealand-Australia for the years 1964 to 2000. The results show that in the past three decades intra-industry trade as a proportion of New Zealand trade with Australia has increased. From 1964 to 1984, it varies between 11.23 percent to about 30 percent. From, 1981 to 1991, New Zealand IIT with Australia increased from 31 to 47.41 percent (different indices vary within the range 36 percent to 50 percent). During 1991 to 2000 IIT seems to be steady except in the years 1997 and 1998 when there has been some decline. This may be due to the effects of Asian economic crisis. In 2000 NZ IIT reached 48.34 percent, (50 percent Aquino adjusted and 52 percent GL adjusted). Some observed facts concerning these three IIT indices are: (a) they move in the same direction, (b) the differences in their values in different years vary, they are substantial in some years, (c) the Grubel-Lloyd adjusted measure is higher than Aquino measure in most of the cases for both countries. However, the Grubel-Lloyd adjusted index (IITC) has fluctuated widely between 1964-2000, perhaps due to changing business environment and CER between these countries. This needs further explanation.

Intra-industry trade at 1- digit SITC summaries for NZ-Australia IIT by industry 1990, 2000, and 2009 are presented in Tables 1a, 1b, and 1c respectively. Intra industry trade has strengthened in SITC 0 and 7, while it has reduced or stayed constant at the other 1 digit aggregations.

Table 3b continues the above analysis and shows different measures of intra-industry trade through time between New Zealand-Australia for the years 2000 to 2009. The general upwards trend intra-industry trade as a proportion of New Zealand trade with Australia continue, with all three IIT measures exceeding 51% in 2009. This can be seen in Figure 2 below. Figure 1 shows that the value of intra industry continues to rise steeply over the 1990-2009 period, although the value fell in 2009 as the economic recession deepened.

Figure 1

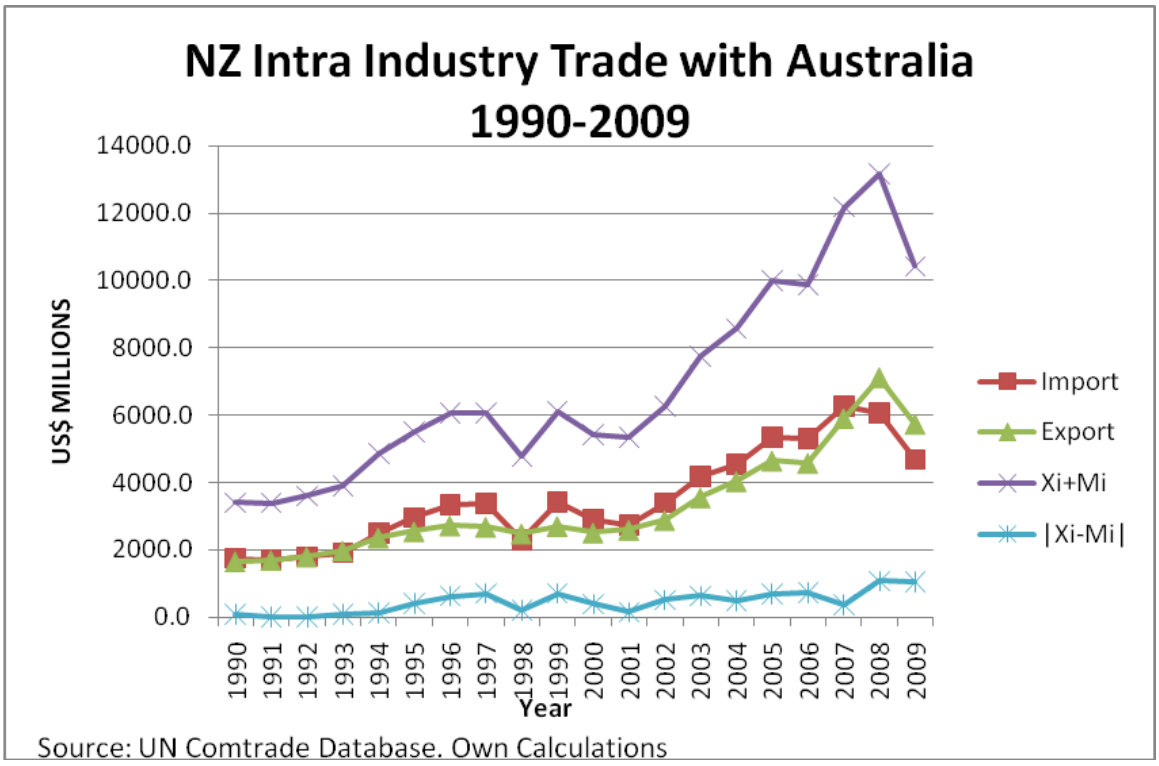

Figure 2

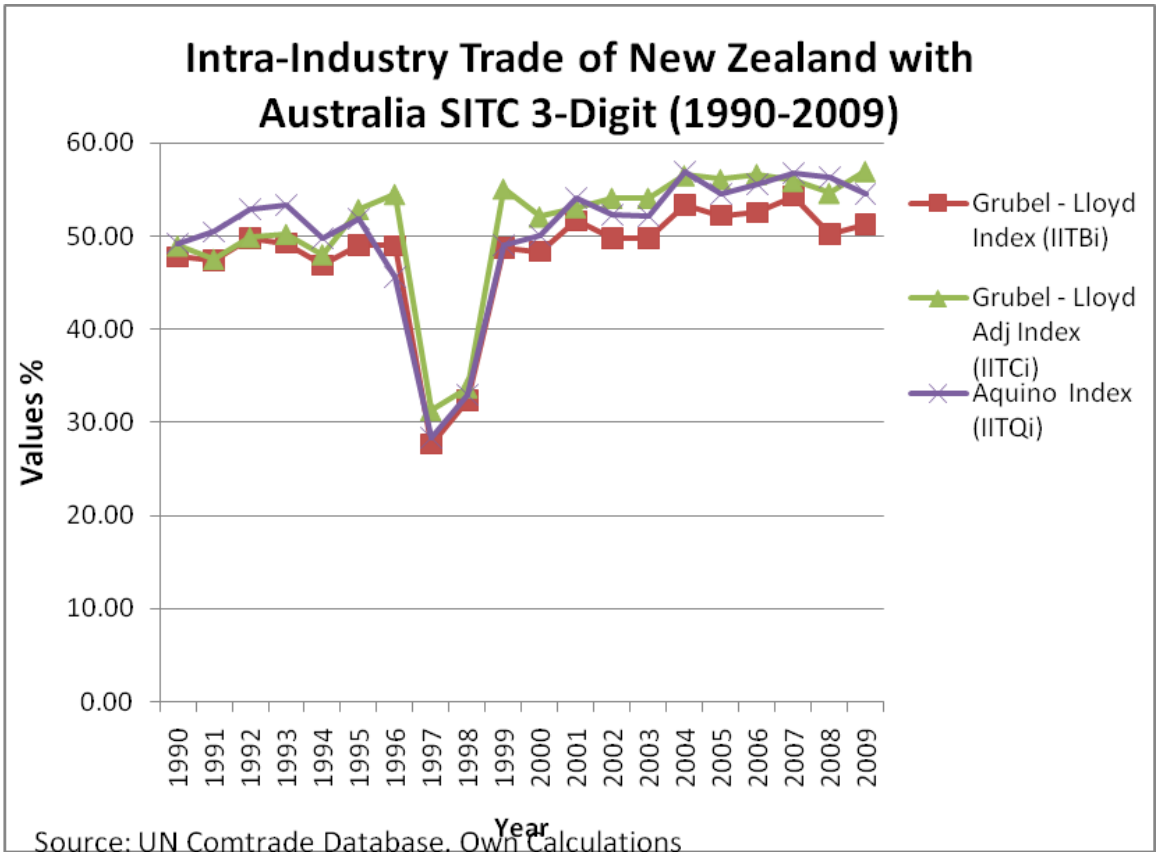

Table 4a presents New Zealand's exports, imports, total trade and measured intra-industry trade at the 3-digit level across all industries (SITC 0-9) for the year 2000. IIT has also been calculated for 1990 but the results are not included here due to space constraints. (Tables are available on request from the author). The results show that a high magnitude of IIT exists in SITC 0-Food and Live Animals, Out of 32, industries 11 industries show high levels of IIT ranging from 47 percent to 93 percent in this category (average being 45 percent). SITC 1, Beverages and Tobacco, have only three industries, showing above 50 percent IIT (average IIT in this category is 65 percent). Low levels of IIT are observed for SITC 2. SITC 3 and 4 have a few industries showing high and low values of IIT. SITC 525, 531, 532, 542, 513 579 show low levels of IIT and high inter-industry trade. A number of industries show high degree of IIT in this category, for example, Chemicals and related products show high intensity of IIT, particularly in SITC 554, 575, 581 and 582 and 592 (average IIT across these industries is about 46 percent). SITC 6, Manufactured Goods Classified by Material show high levels of IIT in many industries, value ranges from 50 percent to 96 percent (SITC 684 Aluminum). The average in this category is about 65 percent.

SITC 7 covers Machinery and Transport Equipment. A number of industries have high levels of IIT in this category as well. Telecommunication equipment and parts (SITC 764) Electrical Switches,

fuses (772) show high IIT. High values range from 51 percent SITC 727 to above 90 percent in SITC 784, 786 and 792. On the industry side, New Zealand differs somewhat from other OECD nations. These two nations exchange different types of paper, carpets, screws, magazines, whiteware and tools; for example, within 3-digit SITC 729 (electrical apparatus), New Zealand tends to produce small electrical motors and switch gear, while Australia produces heavier dynamos and auto electrical equipment.

SITC 8 covers miscellaneous manufactured articles. There is also wide variation in IIT share across industries. For example, high IIT share in SITC 851 – 'Footwear products' and 'Medical instruments' SITC 872. Above 90 percent IIT are in SITC 844, 843 and 846 and 895. Textile and Apparel, men's and women's clothing and office equipment, stationary supplies and medical instruments seem to have further potential for growth in these industries. Telecommunication equipment and parts (SITC 764) Electrical Switches, fuses etc. (SITC 772) also have very high intra-industry trade.

New Zealand appears to have developed some unusual IIT relationships. Perhaps the most significant is the high level of IIT in SITC 0. In a sense, this indicates a marriage of the 'old' and 'new' trade. New Zealand continues to concentrate on her area of comparative advantage in food and food preparations, but has developed specific differentiation in a few products, processing them further. For example, 93 per cent of the trade with Australia in cereal products is IIT; the two countries exchange significant quantities of fruit and vegetables. A more familiar worldwide phenomenon of IIT is the exchange of alcoholic beverages. New Zealand and Australia consume almost equal quantities of each other's beer and wine. In the era of protectionism, this would be regarded as a betrayal of loyalty to the domestic producer. Free traders regard it as a sign of increased consumer sovereignty (Bano and Lane 1995).

The New Zealand pattern of IIT is rather different from most of those hitherto examined for developed countries. It seems that, attempts to free up trade between the two nations, through NAFTA and CER, generated many conditions which are causative factors of intra-industry trade. The results support the propositions that IIT is likely to be more dominant in industries which have: a high degree of product differentiation, high capital intensity, rapid innovation, specific technology and economies of scale.

There are many other signs that Closer Economic Relations have begun to transform Trans-Tasman nations into a single 'domestic market' with regional specialisation. These two nations exchange different types of paper, carpets, screws, magazines, whiteware and tools; for example, within 3-digit SITC 729 (electrical apparatus), New Zealand tends to produce small electrical motors and switch gear, while Australia produces heavier dynamos and auto electrical equipment. Both countries are able to produce all types and in protected environment can do so. But the natural factors, coupled with the tariff free CER, has fostered trade generally, and IIT in particular, between the two countries.

Table 4b shows intra-industry trade at the 3-digit level across all industries (SITC 0-9) for the year 2009 as a comparison.

Table 1a

1990 NZ-Australia IIT by Industry 1-digit summary values				
Industry	**Description**	**Av-IITBi**	**Av-IITCi**	**Av-IITQi**
0	Food & Live Animals	37.71	46.05	35.79
1	Beverage & Tobacco	53.02	100.00	81.28
2	Crude materials inedible except fuels	9.03	30.72	15.63
4	Animal & Vegetable Oils and fats	50.74	89.41	43.76
3	Mineral Fuels Lubricants & related materials	34.03	73.46	56.52
5	Chemicals	46.06	83.83	56.28
6	Manufactured Goods Classified chiefly by materials	54.44	55.56	54.23
7	Machinery & Transport equipment	50.18	74.60	48.88
8	Miscellaneous Manufactured Articles	60.10	72.10	62.47
9	Commodities & Transactions not classified	21.25	91.82	80.87

Table 1b

2000 NZ-Australia IIT by Industry 1-digit summary values				
Industry	**Description**	**Av-IITBi**	**Av-IITCi**	**Av-IITQi**
0	Food & Live Animals	45.19	47.62	44.79
1	Beverage & Tobacco	65.22	67.84	66.59
2	Crude materials inedible except fuels	12.17	36.04	16.42
4	Animal & Vegetable Oils and fats	34.13	50.05	28.27
3	Mineral Fuels Lubricants & related materials	17.22	92.40	29.22
5	Chemicals	45.70	68.90	49.23
6	Manufactured Goods Classified chiefly by materials	64.94	71.95	67.49
7	Machinery & Transport equipment	54.39	67.19	52.45
8	Miscellaneous Manufactured Articles	60.24	73.99	58.20
9	Commodities & Transactions not classified	6.65	99.99	56.06

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NEW ZEALAND'S IIT

Four indices are used: Where-

IIT_{Bi} - Grubel-Lloyd for each industry
IIT_B - Grubel-Lloyd weighted average measure
IIT_C - Grubel-Lloyd adjusted measure
IITQ - Aquino adjusted measure

Table 1c

2009 NZ-Australia IIT by Industry 1-digit summary values				
Industry	**Description**	**Av-IITBi**	**Av-IITCi**	**Av-IITQi**
0	Food & Live Animals	55.55	60.43	56.52
1	Beverage & Tobacco	58.90	84.52	74.80
2	Crude materials inedible except fuels	11.98	14.28	13.17
4	Animal & Vegetable Oils and fats	27.57	44.20	35.66
3	Mineral Fuels Lubricants & related materials	15.78	73.93	26.65
5	Chemicals	58.71	96.06	69.87
6	Manufactured Goods Classified chiefly by materials	63.36	64.59	48.92
7	Machinery & Transport equipment	59.91	69.93	62.70
8	Miscellaneous Manufactured Articles	57.83	61.37	57.11
9	Commodities & Transactions not classified	24.22	99.36	61.59

Average IIT indices across all industries for trade between New Zealand and Australia in 2000 and 2009 are presented in Tables 2a and 2b below. IIT averages by all measures are higher in 2009 than 2000. These higher IIT index values are driven by the strong growth in intra-industry trade identified above in the Food and Live Animals industries (SITC 0).

Table 2a

IIT Indices Across All Industries, 2000 Summary Values at 3-Digit SITC	
IITB = G-L index (Average)	48.34
IITQ = Aquino adjusted index	50.08
IITC= G-L adjusted index	52.10
Source: UN ComTrade Database. Author's Calculations.	

Table 2b

IIT Indices Across All Industries, 2009	
IITB = G-L index (Average)	51.22
IITQ = Aquino adjusted index	54.51
IITC= G-L adjusted index	56.99
Source: UN ComTrade Database. Author's Calculations.	

Table 5 presents the 3-digit summary values of intra-industry trade, New Zealand with selected trading partners and the world for the years 2000. Column 1 shows the basic Grubel-Lloyd index, followed by the adjustments devised by Aquino and Grubel and Lloyd. Column 6 and 7 show

imports and percentage change. Column 8 and 9show exports and percentage change. The last two columns show total trade and percentage change respectively.

Table 5 shows IIT is the highest with Australia. In 2000, 48.34 percent of total trade with Australia (52% GL adjusted and 50% Aquino adjusted). The high level of IIT with Australia can be attributed to a number of country-specific factors including, its close geographical proximity, similar level of per capita income, similar level of development, similar consumer tastes, language, culture, institutional and political and transport links. (The theoretical arguments have been developed in the literature by Linder (1961), Grubel and Lloyd (1975), Gray (1973), Lancaster (1980), Krugman (1980), Balassa (1986), Marvel and Ray (1987), Bano (1991) and others). These results almost perfectly fit the theoretical profile outlined above.

The two economies have high degree of integration due to a number of bilateral trade agreements, such as The New Zealand – Australia Free Trade Agreements (1965), and the CER (1983). Appendix 2 and Appendix 3 show that the significance of New Zealand IIT with Australia has increased in post CER period. The pattern of NZ IIT is consistent with theoretical profile outlined above.

New Zealand's trade with Japan, India, China and South Korea show low levels of IIT. The lowest IIT is with Japan. Trade with the USA and Japan is predominantly inter-industry trade, reflecting the significant difference in the structure of their economies compared to New Zealand. The overall trading pattern shown in the Appendix 5 reveals the importance of a bilateral trading system.

Observed characteristics of intra-industry trade indicators/indices

Intra-industry Trade (IIT) results show that three IIT indices used in this study move in the same direction. Grubel and Lloyd (GL) basic indictor show a relatively lower levels of IIT as compared with Aquino adjusted IIT indicator. GL adjusted measures in some cases demonstrate a higher levels of IIT than Aquino adjusted index and GL unadjusted measures. It is noticeable that the Aquino adjusted IIT index show a higher intensity of IIT when compared with the GL adjusted and unadjusted IIT indictors in some cases such as Japan and China Intra-industry (see Table 5 results and Diagrams). The diagrams of New Zealand 1990 and 2000 index characteristics with some selected countries at 3-digit SITC level are shown in Figure 3 below. Aquino Index seems to perform better in case of NZ-Japan and China. These results seem to suggest that trade imbalance

adjustments do matter particularly when trade takes place between a small and a large trading partners with diverse country-specific and industry-specific characteristics. These results seem to be interesting which may stimulate further IIT case study research.

Trade Intensity Between New Zealand and Selected East Asian Nations: Analysis

This section presents the statistical analyses, which have been applied to understand the strength and nature of bilateral trading relationship between countries or between regions. The trade intensity index is used to measure variations and relative resistance in bilateral trade flows. The value of the trade intensity index greater than one indicates that a country is exporting more to its partner compared to its share in world trade. A value of trade intensity less than one indicates the opposite.

Several studies have employed intensity indices as indicators of relative strength or resistances to bilateral trade flows, and have analysed the nature and importance of various factors by explaining variations in the index over time.

A simple index of trade intensity has been estimated for trade between New Zealand and selected partners for the years 1990 to 2000. This is to examine whether or not the bilateral trading relationship of New Zealand is strengthening (or weakening), with Australia and selected trading partners. . In a rather crude fashion, this shows whether New Zealand's trade with these countries is greater or less than what might be expected given the importance of the trading partner's share in total world trade.

Here, New Zealand is reported as home country 'a' and each trading partner as country b, then the intensity of trade index (TIIab) is calculated using the formula:

$$TII_{ab} = \frac{Xab}{Xa} \Big/ \frac{Mb}{(Mw - Ma)}$$

Where;

TII_{ab} = Intensity of Trade Index for trade flow from Japan (country a) to country b,

Xab = the exports of country a (New Zealand) to country b, (Australia)

Xa = the total exports of country a, (NZ)

Ma = the total imports of country a, (NZ)

Mb = the total imports of country b, (trading partner, AUS)

Mw = total world imports.

Xab/Xa is the proportion of exports that are sent to the foreign country as a percentage of total domestic exports. This indicates how significant the trading partner is to the home country.

Mb/ (MW-Ma) are the foreign country's total imports as a proportion of total world imports less the import of the domestic economy. Countries who import at proportionally high levels from the same country to which they send most of their exports will have a high IIT. Conversely, a country with diverse markets that is not reliant on any one country for their imports will have low TII. Tables 6 and 7 show the summary values of estimated trade intensities between New Zealand and its trading partners. High values of the trade intensity index during the sample period reveal that the trading relations between New Zealand and Australia have strengthened. Table 7 indicates that Australia's export intensity was well above unity, indicating that New Zealand has become a relatively more important trading partner to Australia.

The trade intensity index has been estimated from the trading partners perspective as well (Tables 6 and 7 show the results).

The strength of New Zealand trade intensity with Japan has increased during 1990-2000, as new markets, such as Kiwifruit developed. Japan remains an important market for New Zealand primary produce. The trade intensity index is well above one with South Korea, Indonesia, UK and Philippines. However, the degree of intensity between each of the countries has varied over time, in some cases fallen, perhaps due to the adoption of inward looking policies and the Asian crisis. This seems to suggest that liberalisation of trade has some impact on the strength of trading relation between these countries but other factors may also influence such trade ties.

The growth in bilateral trade with Asian economies through the 1990s was affected by the economic crisis of 1997-98. New Zealand took part to respond to international efforts to the crisis, including a loan offer to Korea and technical assistance to Thailand. A fall in New Zealand exports, particularly to Japan, Korea, Indonesia, Malaysia and Thailand, was offset by an increase in sales to North America and Europe. In the year to June 1999, Asian markets accounted for 33 percent of exports and 31 percent of imports. Asian economies rank in the top twenty of New Zealand export destinations, with Japan in the third place, Korea fourth and China sixth. Asia remains an important

source of tourists, migrants and investments (New Zealand Official Yearbook 2000). New Zealand's international trade is currently geographically diversified with new trading partners.

Trade intensity indices have limited application for measuring bilateral potential trade between nations. For example, they do not tell us about the amount of bilateral trade flows taking place due to 'natural factors' such as GDP, population or geographical distances or locations and other such barriers.

Conclusions

The results of this study show that New Zealand's trade pattern has been changing over time. Both inter-industry and intra-industry trade co-exist, but intra-industry trade as a proportion of total trade has been growing over the sample years. The results show that intra-industry trade has increased. IIT is highest with Australia, at around 50 percent in 2000. Intra-industry trade with other trading partners ranges between 6 percent (Japan), 27 percent (UK), 26 percent (Fiji), 21 percent (U.S.A) and around 29 percent with the rest of the world.

The results also suggest that bilateral trade flows between New Zealand, Australia and a few countries have become more intense indicating trading relations are strengthening. In some cases bilateral trade flows has decreased. The results also suggest that the removal of trade barriers through bilateral and multilateral negotiations has positive impacts on intra-industry trade and the intensity of trade of these economies.

These results are suggestive. They may help to outline the effects of likely economic developments both in and between New Zealand, Australia and other trading partners. The trade liberalization initiatives under APEC may be beneficial to New Zealand as it will directly affect countries with which New Zealand and Australia conduct an above average proportion of trade.

New Zealand and Australia seem to be 'mutually dependent' upon one another as a destination of their exports. The evidence seem to suggest that bilateral trade agreements (CER) and multilateral trade relations (APEC) have fostered trade generally, and IIT in particular. New Zealand Trade has also fostered with Asia–Pacific nations. Japan is the second most important trading partner. India, China and other emerging economies of Asia are likely to become New Zealand important trading partner. The economies of Asia contain over half the world's population and their increasing incomes are already beginning to generate the world's largest growing market for income elastic

goods; they are also increasing their supply of such products. As the Asia-Pacific and transition economies become integrated into the world economy, the boundaries of international trade will extend even further.

In the light of current role of WTO, the strengthening of such trading agreements as North American Free Trade Area, APEC and the enlarged European Union (EU), the South Asian Association of Regional Economic Co-operation (SAARC), ASEAN and the growth of multi-national corporations, the policy implications of IIT are considerable. If, as is suggested, closer ties between 'developed' nations alter the composition of trade significantly, nations may need to adjust their policies towards closer economic relations. The readjustments taking place in Asia and the transition economies, will require further changes in world trading patterns and policy makers may consider the increasing part intra-industry trade is likely to play in the realignment of the world trading system.

Further questions to be addressed are:

1. What will be the future patterns of trade? Will intra-industry trade dominate inter-industry trade?
2. East Asia does not have formal customs union arrangements that are found in Europe and other regions. Does it matter?
3. APEC and East Asia do not have a collective trade policy whereas Europe has one. Does it matter?
4. Is comparative advantage shifting from traditional/natural sources?
5. Is the Flying Geese Model more applicable to explain the dynamic comparative advantage? Can we apply this model in the case of Asia-Pacific nations?
6. Is creation of comparative advantage in knowledge based industries the answer for future trading relations and increased prosperity for all nations?

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Table 3a: New Zealand – Australia IIT through Time: 1964-2000

(SITC 3-digit Summary Values %)

Year	IITB-Grubel Lloyd	IITC-Grubel Lloyd Adj	IITQ-Aquino Adj
1964	11.23	28.61	13.53
1965	11.81	31.03	15.08
1966	12.11	32.36	15.46
1967	13.29	29.5	17.21
1968	16.8	27.09	20.68
1969	17.6	28.5	20.28
1970	18.45	32.41	22.99
1971	18.78	32.45	23.37
1972	20.14	34.37	25.23
1973	19.84	36.72	24.73
1974	17.26	36.23	23.8
1975	17.84	32.17	22.51
1976	19.15	28.69	21.61
1977	20.44	28.16	22.76
1978	26.1	35.74	29.34
1979	28.93	39.17	31.91
1980	29.55	36.07	30.83
1981	30.81	36.4	32.25
1982	31.13	38.92	32.99
1983	31.94	40.25	33.72
1984	32.99	41.67	35.11
1985	37.52	40.79	37.28
1986	44.35	47.09	44.71
1987	43.67	51.7	45.18
1988	45.07	53.52	47.23
1989	47.54	52.12	48.69
1990	47.78	48.97	49.24
1991	47.41	47.52	50.44
1992	49.73	49.88	52.88
1993	49.22	50.21	53.34
1994	46.88	48.03	49.74
1995	48.99	52.9	51.87
1996	48.97	54.52	45.58
1997	27.66	31.26	28.38
1998	32.37	33.72	32.93
1999	48.76	55.09	49.06
2000	48.34	52.1	50.08

Source: Data from United Nations Trade Statistics Head Office New York.

Author's own calculations

Table 3b: New Zealand – Australia IIT through Time: 1990-2009

(SITC 3-digit Summary Values %)

Year	IITB-Grubel Lloyd	IITC-Grubel Lloyd Adj	IITQ-Aquino Adj
1990	47.78	48.97	49.24
1991	47.41	47.52	50.44
1992	49.73	49.88	52.88
1993	49.22	50.21	53.34
1994	46.88	48.03	49.74
1995	48.99	52.9	51.87
1996	48.97	54.52	45.58
1997	27.66	31.26	28.38
1998	32.37	33.72	32.93
1999	48.76	55.09	49.06
2000	48.34	52.1	50.08
2001	51.64	53.09	54.03
2002	49.74	54.11	52.27
2003	49.74	54.11	52.18
2004	53.29	56.53	56.87
2005	52.21	56.11	54.50
2006	52.52	56.67	55.61
2007	54.30	55.95	56.75
2008	50.20	54.64	56.27
2009	51.22	56.99	54.51

Source: Data from United Nations Trade Statistics Head Office New York.

Author's own calculations

Table 4a: New Zealand Intra-Industry Trade with the Australia at the 3-digit, SITC 2000.

			Export (X)	Import (M)		Trade balance
SITC	**Description**	**IITBi**	(000) US$	(000) US$	(Xi+Mi)	(Xi-Mi)
001	Live animals	28.68	56989	9540	66529	47449
011	Bovine meat	47.21	2586	8370	10956	-5784
012	Other meat, meat offal	23.66	1248	9301	10549	-8053
016	Meat,ed.offl,dry,slt,smk	20.83	5	43	48	-38
017	Meat,offl.prpd,prsvd,nes	31.21	2077	11234	13311	-9157
022	Milk and cream	55.95	36309	14103	50412	22206
023	Butter,other fat of milk	11.93	12877	817	13694	12060
024	Cheese and curd	12.69	57117	3868	60985	53249
025	Eggs,birds,yolks,albumin	90.14	39	32	71	7
034	Fish,fresh,chilled,frozn	1.47	53392	394	53786	52998
036	Crustaceans,molluscs etc	22.58	13666	1739	15405	11927
037	Fish etc.prepd,prsvd.nes	28.90	11752	1985	13737	9767
044	Maize unmilled	3.85	21	1071	1092	-1050
045	Other cereals, unmilled	3.04	8	518	526	-510
046	Meal,flour of wheat,msln	8.66	47	1039	1086	-992
047	Other cereal meal,flours	93.59	1519	1336	2855	183
048	Cereal preparations	45.00	17006	58580	75586	-41574
054	Vegetables	58.34	26183	10782	36965	15401
056	Vegtables,prpd,prsvd,nes	76.58	16806	10427	27233	6379
057	Fruit,nuts excl.oil nuts	82.02	21171	14719	35890	6452
058	Fruit,preserved,prepared	80.42	11672	17355	29027	-5683
059	Fruit, vegetable juices	61.08	2359	5365	7724	-3006
061	Sugars,molasses,honey	9.13	2295	47997	50292	-45702
062	Sugar confectionery	58.97	4626	11064	15690	-6438
071	Coffee,coffee substitute	1.70	136	15865	16001	-15729
072	Cocoa	18.18	2	20	22	-18
073	Chocolate,oth.cocoa prep	68.49	8235	15812	24047	-7577
074	Tea and mate	5.32	75	2747	2822	-2672
075	Spices	8.83	45	974	1019	-929
081	Animal feed stuff	45.14	7665	26298	33963	-18633
091	Margarine and shortening	18.00	700	7077	7777	-6377
098	Edible prod.preprtns,nes	84.80	49028	66598	115626	-17570
	Av IITB and Totals	**45.19**	**360667**	**367530**	**728197**	**-6863**
111	Non-alcohol.beverage,nes	51.03	30986	10613	41599	20373

SITC	Description	IITBi	Export (X)	Import (M)	(Xi+Mi)	Trade balance
112	Alcoholic beverages	71.41	31433	56602	88035	-25169
122	Tobacco, manufactured	86.35	930	1224	2154	-294
	Av IITB and Totals	**65.22**	**63349**	**68439**	**131788**	**-5090**
211	Hides,skins(ex.furs),raw	5.44	336	12018	12354	-11682
222	Oilseed(sft.fix veg.oil)	7.21	70	1873	1943	-1803
223	Oilseed(oth.fix.veg.oil)	66.56	208	417	625	-209
232	Synthetic rubber, etc.	1.95	23	2335	2358	-2312
247	Wood rough,rough squared	23.36	162	1225	1387	-1063
248	Wood, simply worked	4.77	146857	3587	150444	143270
251	Pulp and waste paper	0.72	79170	287	79457	78883
266	Synthetic fibres	49.11	69	212	281	-143
267	Other man-made fibres	23.26	5	38	43	-33
268	Wool, other animal hair	12.15	24360	1576	25936	22784
269	Worn clothing,textl.artl	42.11	8	30	38	-22
272	Fertilizers, crude	60.41	264	610	874	-346
273	Stone, sand and gravel	8.87	241	5196	5437	-4955
277	Natural abrasives, nes	23.86	34	251	285	-217
278	Other crude minerals	24.90	1261	8867	10128	-7606
282	Ferrous waste and scrap	9.30	718	35	753	683
287	Ore,concentr.base metals	18.30	14	139	153	-125
288	Non-ferrous waste,scrap	71.90	4215	7509	11724	-3294
289	Prec.metal ores,conctrts	84.65	102	139	241	-37
291	Crude animal materls.nes	89.79	4315	5296	9611	-981
292	Crude veg.materials, nes	66.25	5677	2812	8489	2865
	Av IITB and Totals	**12.17**	**268109**	**54452**	**322561**	**213657**
322	Briquettes,lignite,peat	63.78	173	81	254	92
333	Petroleum oils, crude	64.37	207911	98678	306589	109233
334	Petroleum products	6.48	10684	318961	329645	-308277
335	Residual petrol.products	3.18	86	5331	5417	-5245
	Av IITB (G-L) and Totals	**34.13**	**218854**	**423051**	**641905**	**-204197**
411	Animal oils and fats	35.82	406	1861	2267	-1455
421	Fixed veg.fat,oils, soft	0.75	27	7151	7178	-7124
422	Fixed veg.fat,oils,other	89.53	401	325	726	76
431	Animal,veg.fats,oils,nes	59.18	166	395	561	-229
	Av IITB(G-L) and Totals	**17.22**	**1000**	**9732**	**10732**	**-8732**
511	Hydrocarbons,nes,derivts	0.86	19	4377	4396	-4358
512	Alcohol,phenol,etc.deriv	40.91	1047	4072	5119	-3025

SITC	Description	IITBi	Export (X)	Import (M)	(Xi+Mi)	Trade balance
513	Carboxylic acids,derivts	3.75	44	2301	2345	-2257
514	Nitrogen-funct.compounds	33.47	80	398	478	-318
515	Organo-inorganic compnds	35.04	288	1356	1644	-1068
516	Other organic chemicals	54.88	781	2065	2846	-1284
522	Inorganic chem.elements	5.87	349	11550	11899	-11201
523	Metal.salts,inorgan.acid	2.03	115	11206	11321	-11091
524	Other chemical compounds	92.60	486	419	905	67
525	Radio-active materials	38.69	53	221	274	-168
531	Synth.colours,lakes,etc	11.36	108	1794	1902	-1686
532	Dyeing,tanning materials	3.66	14	751	765	-737
533	Pigments, paints, etc.	29.22	6311	36887	43198	-30576
541	Medicines,etc.exc.grp542	62.24	4789	10599	15388	-5810
542	Medicaments	16.28	8813	99459	108272	-90646
551	Essntl.oil,perfume,flavr	16.86	1119	12158	13277	-11039
553	Perfumery,cosmetics,etc.	41.60	11513	43833	55346	-32320
554	Soap,cleaners,polish,etc	84.49	36261	26521	62782	9740
562	Fertilizer,except grp272	69.54	1801	3379	5180	-1578
571	Polymers of ethylene	21.87	706	5750	6456	-5044
572	Polymers of styrene	15.80	1251	14580	15831	-13329
573	Polymers,vinyl chloride	11.10	288	4902	5190	-4614
574	Polyacetal,polycarbonate	56.75	3019	7620	10639	-4601
575	Oth.plastic,primary form	66.61	8098	16216	24314	-8118
579	Plastic waste, scrap etc	5.87	430	13	443	417
581	Plastic tube,pipe,hose	55.48	5247	13669	18916	-8422
582	Plastic plate,sheets,etc	94.59	29083	26099	55182	2984
583	Monofilament of plastics	32.94	1334	263	1597	1071
591	Insecticides, etc.	49.59	52183	17203	69386	34980
592	Starches,inulin,etc	54.59	22114	8302	30416	13812
593	Explosives,pyrotechnics	49.28	392	1199	1591	-807
597	Preprd additives,liquids	26.29	788	5207	5995	-4419
598	Misc.chemical prodts.nes	42.40	3865	14366	18231	-10501
	Av IITB-(G-L) and Total trade	**45.70**	**202789**	**408735**	**611524**	**-205946**
611	Leather	53.94	9303	3436	12739	5867
612	Manufact.leather etc.nes	89.30	313	388	701	-75
613	Furskins,tanned,dressed	63.09	1760	811	2571	949
621	Materials of rubber	86.46	3122	4100	7222	-978
625	Rubber tyres,tubes,etc.	57.26	22109	8868	30977	13241

SITC	Description	IITBi	Export (X)	Import (M)	(Xi+Mi)	Trade balance
629	Articles of rubber, nes	75.82	4102	6718	10820	-2616
633	Cork manufactures	71.45	896	498	1394	398
634	Veneers, plywood, etc.	23.30	46229	6096	52325	40133
635	Wood manufactures, nes	60.68	7343	3198	10541	4145
641	Paper and paperboard	78.44	66462	102996	169458	-36534
642	Paper,paperboard,cut etc	61.81	35097	78462	113559	-43365
651	Textile yarn	41.11	30125	7795	37920	22330
652	Cotton fabrics, woven	52.34	1000	2821	3821	-1821
653	Fabrics,man-made fibres	30.70	1061	5851	6912	-4790
654	Oth.textile fabric,woven	65.30	3639	1764	5403	1875
655	Knit.crochet.fabric nes	44.63	8919	2562	11481	6357
656	Tulle,lace,embroidry.etc	64.78	2670	1279	3949	1391
657	Special yarn,txtl.fabric	49.86	4633	13950	18583	-9317
658	Textile articles nes	72.04	6211	11033	17244	-4822
659	Floor coverings, etc.	61.01	39359	17275	56634	22084
661	Lime,cement,constr.matrl	10.55	145	2604	2749	-2459
662	Clay,refrct.constr.matrl	7.50	379	9725	10104	-9346
663	Mineral manufactures,nes	57.52	2926	7248	10174	-4322
664	Glass	12.72	1231	18126	19357	-16895
665	Glassware	64.59	1254	2629	3883	-1375
666	Pottery	62.87	309	674	983	-365
667	Pearls,precious stones	3.15	76	4750	4826	-4674
672	Ingots etc.iron or steel	8.70	47	1033	1080	-986
673	Flat-rolled iron etc.	82.13	15261	10633	25894	4628
674	Flat-rolled plated iron	81.96	20180	29063	49243	-8883
675	Flat-rolled, alloy steel	14.94	236	2923	3159	-2687
676	Iron,stl.bar,shapes etc.	6.89	917	25705	26622	-24788
677	Railway track iron,steel	1.62	9	1100	1109	-1091
678	Wire of iron or steel	14.02	811	10755	11566	-9944
679	Tubes,pipes,etc.iron,stl	54.56	7818	20840	28658	-13022
681	Silver,platinum,etc.	15.89	122	1414	1536	-1292
682	Copper	78.08	24111	37645	61756	-13534
684	Aluminium	96.71	42197	45072	87269	-2875
685	Lead	39.85	2837	706	3543	2131
686	Zinc	12.36	594	9015	9609	-8421
687	Tin	0.61	2	658	660	-656
689	Misc.non-ferr.base metal	7.09	9	245	254	-236

SITC	Description	IITBi	Export (X)	Import (M)	(Xi+Mi)	Trade balance
691	Metallic structures nes	95.96	9201	8486	17687	715
692	Containers,storage,trnsp	71.67	16011	8942	24953	7069
693	Wire products excl.elect	87.31	1359	1754	3113	-395
694	Nails,screws,nuts,etc.	15.23	537	6516	7053	-5979
695	Tools	90.79	8336	6930	15266	1406
696	Cutlery	94.14	643	723	1366	-80
697	Household equipment,nes	73.38	10396	6025	16421	4371
699	Manufacts.base metal,nes	89.99	33470	40919	74389	-7449
	AvIITB(G-L) and Totals	**64.94**	**495777**	**602759**	**1098536**	**-106982**
711	Steam gener.boilers,etc.	69.63	1011	540	1551	471
712	Steam turbines	2.76	286	4	290	282
713	Intrnl combus pstn engin	40.51	1042	4102	5144	-3060
714	Engines,motors non-elect	49.76	209	631	840	-422
716	Rotating electric plant	26.23	776	5140	5916	-4364
718	Oth.powr.genrtng.machnry	95.33	1032	1133	2165	-101
721	Agric.machines,ex.tractr	45.79	20689	6143	26832	14546
723	Civil engineering equipt	98.40	3849	3728	7577	121
724	Textile,leather machines	43.81	3986	1118	5104	2868
725	Paper,pulp mill machines	63.36	1195	2577	3772	-1382
726	Printng,bookbindng machs	73.66	1032	1770	2802	-738
727	Food-process.mch.non dom	51.08	7062	2422	9484	4640
728	Oth.mach,pts,spcl indust	95.71	12221	13316	25537	-1095
731	Metal removal work tools	29.37	251	1458	1709	-1207
733	Mach-tools,metal-working	49.80	2473	820	3293	1653
735	Parts,nes,for mach-tools	76.05	1426	875	2301	551
737	Metalworking machnry nes	32.41	451	2332	2783	-1881
741	Heatng,coolng equip,part	50.55	41247	13950	55197	27297
742	Pumps for liquids,parts	62.43	3207	7067	10274	-3860
743	Pumps nes,centrifugs etc	60.34	21946	9481	31427	12465
744	Mechanical handlng equip	92.25	10258	8782	19040	1476
745	Oth.nonelec mch,tool,nes	86.79	12783	9799	22582	2984
746	Ball or roller bearings	21.26	116	975	1091	-859
747	Taps,cocks,valves,etc.	96.94	8041	7563	15604	478
748	Transmissions shafts etc	86.35	1891	2489	4380	-598
749	Non-elect mach.parts,etc	89.39	2221	2748	4969	-527
751	Office machines	28.21	429	2612	3041	-2183
752	Automatc.data proc.equip	21.47	3031	25201	28232	-22170

SITC	Description	IITBi	Export (X)	Import (M)	(Xi+Mi)	Trade balance
759	Parts,for office machins	66.28	6957	14037	20994	-7080
762	Radio-broadcast receiver	11.47	30	493	523	-463
763	Sound recorder,phonogrph	35.62	169	780	949	-611
764	Telecomm.equip.parts nes	79.34	20518	31203	51721	-10685
771	Elect power machny.parts	79.14	14767	9670	24437	5097
772	Elec.switch.relay.circut	89.87	30998	25295	56293	5703
773	Electr distribt.eqpt nes	86.50	14099	18499	32598	-4400
774	Electro-medcl,xray equip	44.58	259	903	1162	-644
775	Dom.elec,non-elec.equipt	55.54	76510	29416	105926	47094
776	Transistors,valves,etc.	27.38	1206	7602	8808	-6396
778	Electric.mach.appart.nes	89.16	25007	20114	45121	4893
781	Pass.motor vehcls.ex.bus	0.14	131	185189	185320	-185058
782	Goods,spcl transport veh	23.76	3310	24555	27865	-21245
783	Road motor vehicles nes	38.11	412	1750	2162	-1338
784	Parts,tractors,motor veh	97.36	15561	16406	31967	-845
785	Cycles,motorcycles etc.	89.27	840	1042	1882	-202
786	Trailers,semi-trailr,etc	96.77	3261	3479	6740	-218
791	Railway vehicles.equipnt	2.70	21	1537	1558	-1516
792	Aircraft,assoctd.equipnt	99.14	2371	2412	4783	-41
793	Ship,boat,float.structrs	55.60	23601	61290	84891	-37689
	AvIITB (G-L) and Totals	**54.39**	**404189**	**594448**	**998637**	**-190259**
811	Prefabricated buildings	61.93	1437	3204	4641	-1767
812	Plumbng,sanitry,eqpt.etc	8.61	203	4511	4714	-4308
813	Lightng fixtures etc.nes	76.13	4778	7775	12553	-2997
821	Furniture,cushions,etc.	76.27	35968	22170	58138	13798
831	Trunk,suit-cases,bag,etc	69.60	2589	1382	3971	1207
841	Mens,boys clothng,x-knit	61.63	16032	7140	23172	8892
842	Women,girl clothng,xknit	78.51	14453	22363	36816	-7910
843	Mens,boys clothing,knit	82.58	3080	2166	5246	914
844	Women,girls clothng.knit	95.28	5999	5458	11457	541
845	Othr.textile apparel,nes	99.27	15854	16088	31942	-234
846	Clothing accessrs,fabric	96.53	4174	3894	8068	280
848	Clothng,nontxtl;headgear	74.13	5254	3094	8348	2160
851	Footwear	69.92	16037	8620	24657	7417
871	Optical instruments,nes	17.02	64	688	752	-624
872	Medical instruments nes	85.44	5541	7430	12971	-1889
873	Meters,counters,nes	28.81	245	1456	1701	-1211

SITC	Description	IITBi	Export (X)	Import (M)	(Xi+Mi)	Trade balance
874	Measure,control instrmnt	89.70	10153	12484	22637	-2331
881	Photograph appar.etc.nes	5.65	52	1789	1841	-1737
882	Photo.cinematogrph.suppl	3.73	165	8688	8853	-8523
883	Cine.film exposd.develpd	6.41	151	5	156	146
884	Optical goods nes	0.65	43	13210	13253	-13167
885	Watches and clocks	4.13	31	1471	1502	-1440
891	Arms and ammunition	49.32	378	1155	1533	-777
892	Printed matter	31.47	15606	83580	99186	-67974
893	Articles,nes,of plastics	76.67	60461	37584	98045	22877
894	Baby carriage,toys,games	37.65	6646	28655	35301	-22009
895	Office,stationery suppls	94.69	1823	1639	3462	184
896	Works of art,antique etc	50.30	2509	843	3352	1666
897	Gold,silverware,jewl nes	80.61	13286	8971	22257	4315
898	Musical instruments,etc.	7.81	1471	36219	37690	-34748
899	Misc manufctrd goods nes	62.10	3135	6961	10096	-3826
	Av IITB (G-L) and Totals	**60.24**	**247618**	**360693**	**608311**	**-113075**
931	Spec.transact.not classd	0.61	94653	288	94941	94365
961	Coin nongold noncurrent	66.67	1	2	3	-1
971	Gold,nonmontry excl ores	11.96	101700	6468	108168	95232
	AvIITB (G-L) & Totals	**6.65**	**196354**	**6758**	**203112**	**189596**

Table 4b: New Zealand Intra-Industry Trade with the Australia at the 3-digit, SITC 2009.

SITC	Description	Grubel - Lloyd Index (IITBi)	Export (X) (000)US$	Import (M) (000)US$	Total Trade (Xi+Mi)	Trade Balance (Xi-Mi)
001	LIVE ANIMALS	53.74	51499.42	18921.33	70420.74	32578.09
011	BOVINE MEAT	54.88	4227.94	11180.40	15408.34	-6952.46
012	OTHER MEAT, MEAT OFFAL	42.58	8653.21	31994.67	40647.88	-23341.46
016	MEAT,ED.OFFL,DRY,SLT,SMK	5.61	73.43	2546.50	2619.93	-2473.06
017	MEAT,OFFL.PRPD,PRSVD,NES	89.38	20824.28	16824.41	37648.68	3999.87
022	MILK AND CREAM	86.09	52797.55	39903.37	92700.92	12894.18
023	BUTTER,OTHER FAT OF MILK	8.94	37096.89	1735.89	38832.78	35361.00
024	CHEESE AND CURD	18.98	148005.49	15522.72	163528.21	132482.77
025	EGGS,BIRDS,YOLKS,ALBUMIN	21.73	438.57	53.47	492.03	385.10
034	FISH,FRESH,CHILLED,FROZN	7.05	108486.01	3963.13	112449.14	104522.89
035	FISH,DRIED,SALTED,SMOKED	1.93	2539.64	24.70	2564.34	2514.94
036	CRUSTACEANS,MOLLUSCS ETC	11.57	25744.82	1580.45	27325.27	24164.37
037	FISH ETC.PREPD,PRSVD.NES	11.00	34810.56	2026.33	36836.89	32784.22
041	WHEAT, MESLIN, UNMILLED	0.00	0.75	83181.53	83182.28	-83180.78
042	RICE	0.28	15.74	11164.62	11180.36	-11148.88
044	MAIZE UNMILLED	76.83	596.51	956.39	1552.90	-359.88
045	OTHER CEREALS, UNMILLED	0.49	27.12	10937.52	10964.63	-10910.40
047	OTHER CEREAL MEAL,FLOURS	78.87	3485.78	2269.55	5755.33	1216.24
048	CEREAL PREPARATIONS	81.04	92430.65	135678.07	228108.71	-43247.42
054	VEGETABLES	52.19	56410.21	19920.32	76330.53	36489.89
056	VEGTABLES,PRPD,PRSVD,NES	69.07	56885.38	30010.99	86896.37	26874.39
057	FRUIT,NUTS EXCL.OIL NUTS	71.49	61289.40	34097.42	95386.83	27191.98
058	FRUIT,PRESERVED,PREPARED	94.31	27165.09	30444.38	57609.48	-3279.29
059	FRUIT, VEGETABLE JUICES	95.57	14538.00	15884.84	30422.83	-1346.84
061	SUGARS,MOLASSES,HONEY	29.36	14600.63	84875.26	99475.88	-70274.63
062	SUGAR CONFECTIONERY	95.52	32890.08	30069.91	62959.98	2820.17
071	COFFEE,COFFEE SUBSTITUTE	46.90	6428.31	20983.44	27411.74	-14555.13
072	COCOA	10.04	41.37	782.83	824.20	-741.46
073	CHOCOLATE,OTH.COCOA PREP	57.43	36431.15	90432.41	126863.56	-54001.26
074	TEA AND MATE	76.84	388.99	623.45	1012.44	-234.46
075	SPICES	25.17	208.91	1451.39	1660.29	-1242.48
081	ANIMAL FEED STUFF	59.03	34085.60	81407.90	115493.50	-47322.29
091	MARGARINE AND SHORTENING	32.28	3246.67	16871.91	20118.58	-13625.24
098	EDIBLE PROD.PREPRTNS,NES	75.95	216909.16	132789.52	349698.67	84119.64
	Av IITB and Totals	**55.55**	**1153273.30**	**981110.97**	**2134384.27**	**172162.33**
111	NON-ALCOHOL.BEVERAGE,NES	82.64	48532.27	34173.05	82705.32	14359.22
112	ALCOHOLIC BEVERAGES	53.24	232249.44	84259.73	316509.17	147989.70
122	TOBACCO, MANUFACTURED	55.74	15437.23	39948.04	55385.27	-24510.81
	Av IITB and Totals	**58.90**	**296218.94**	**158380.82**	**454599.76**	**137838.11**
211	HIDES,SKINS(EX.FURS),RAW	18.50	201.26	1974.81	2176.07	-1773.55
222	OILSEED(SFT.FIX VEG.OIL)	47.97	628.51	1991.99	2620.50	-1363.48
223	OILSEED(OTH.FIX.VEG.OIL)	35.57	240.51	1111.63	1352.14	-871.12
231	NATURAL RUBBER, ETC.	95.39	462.78	421.97	884.75	40.81
232	SYNTHETIC RUBBER, ETC.	91.88	845.20	994.55	1839.74	-149.35
245	FUEL WOOD, WOOD CHARCOAL	21.35	4.53	37.95	42.48	-33.41
246	WOOD IN CHIPS, PARTICLES	5.04	65.99	1.71	67.70	64.28
247	WOOD ROUGH,ROUGH SQUARED	10.07	47.31	892.34	939.65	-845.03

SITC	Description	Grubel - Lloyd Index (IITBi)	Export (X) (000)US$	Import (M) (000)US$	Total Trade (Xi+Mi)	Trade Balance (Xi-Mi)
248	WOOD, SIMPLY WORKED	8.60	134761.64	6052.63	140814.28	128709.01
251	PULP AND WASTE PAPER	1.95	51636.61	509.51	52146.12	51127.10
263	COTTON	67.37	0.32	0.63	0.95	-0.31
266	SYNTHETIC FIBRES	4.49	7.62	331.45	339.07	-323.84
268	WOOL, OTHER ANIMAL HAIR	8.22	12829.19	549.61	13378.81	12279.58
269	WORN CLOTHING,TEXTL.ARTL	63.22	88.31	191.04	279.36	-102.73
272	FERTILIZERS, CRUDE	62.63	200.53	439.83	640.37	-239.30
273	STONE, SAND AND GRAVEL	7.33	480.28	12617.74	13098.01	-12137.46
274	SULPHUR,UNRSTD.IRON PYRS	69.69	21.29	11.39	32.68	9.91
277	NATURAL ABRASIVES, NES	22.63	73.52	576.35	649.86	-502.83
278	OTHER CRUDE MINERALS	46.83	3665.55	11988.03	15653.57	-8322.48
281	IRON ORE, CONCENTRATES	84.54	74.55	101.80	176.35	-27.26
282	FERROUS WASTE AND SCRAP	42.99	1640.30	449.18	2089.48	1191.12
285	ALUMINIUM ORE,CONCTR.ETC	0.03	20.38	121703.49	121723.87	-121683.11
287	ORE,CONCENTR.BASE METALS	91.88	143.84	122.23	266.07	21.61
288	NON-FERROUS WASTE,SCRAP	31.56	7094.25	1329.29	8423.54	5764.96
289	PREC.METAL ORES,CONCTRTS	12.38	30.85	467.42	498.26	-436.57
291	CRUDE ANIMAL MATERLS.NES	63.92	8857.36	4160.58	13017.93	4696.78
292	CRUDE VEG.MATERIALS, NES	43.88	16300.21	4581.83	20882.04	11718.39
	Av IITB and Totals	**11.98**	**240422.69**	**173610.96**	**414033.65**	**66811.73**
322	BRIQUETTES,LIGNITE,PEAT	34.96	264.10	55.95	320.05	208.16
333	PETROLEUM OILS, CRUDE	24.11	791132.32	108461.33	899593.65	682670.98
334	PETROLEUM PRODUCTS	36.48	60626.58	271794.96	332421.54	-211168.38
335	RESIDUAL PETROL.PRODUCTS	58.02	6771.87	2767.37	9539.25	4004.50
342	LIQUEFIED PROPANE,BUTANE	3.36	105.86	6188.09	6293.96	-6082.23
344	PETROLEUM GASES, NES	85.81	75.90	101.00	176.89	-25.10
	Av IITB and Totals	**27.57**	**858976.63**	**389368.71**	**1248345.34**	**469607.93**
411	ANIMAL OILS AND FATS	61.74	1920.39	857.46	2777.85	1062.93
421	FIXED VEG.FAT,OILS, SOFT	3.49	522.55	29415.75	29938.30	-28893.19
422	FIXED VEG.FAT,OILS,OTHER	86.51	1176.92	1543.83	2720.75	-366.91
431	ANIMAL,VEG.FATS,OILS,NES	32.94	457.74	2321.42	2779.16	-1863.68
	Av IITB and Totals	**15.78**	**4077.60**	**34138.46**	**38216.06**	**-30060.85**
511	HYDROCARBONS,NES,DERIVTS	58.67	812.89	1958.07	2770.96	-1145.18
512	ALCOHOL,PHENOL,ETC.DERIV	2.27	50.08	4352.95	4403.03	-4302.86
513	CARBOXYLIC ACIDS,DERIVTS	47.62	349.38	1117.90	1467.27	-768.52
514	NITROGEN-FUNCT.COMPOUNDS	87.20	1163.31	1504.88	2668.18	-341.57
515	ORGANO-INORGANIC COMPNDS	29.45	172.52	999.17	1171.70	-826.65
516	OTHER ORGANIC CHEMICALS	59.57	871.74	2055.01	2926.75	-1183.27
522	INORGANIC CHEM.ELEMENTS	24.03	1926.94	14110.65	16037.59	-12183.72
523	METAL.SALTS,INORGAN.ACID	27.87	2640.17	16309.14	18949.31	-13668.98
524	OTHER CHEMICAL COMPOUNDS	27.70	361.77	2250.11	2611.88	-1888.33
525	RADIO-ACTIVE MATERIALS	0.04	0.20	910.51	910.71	-910.31
531	SYNTH.COLOURS,LAKES,ETC.	18.97	345.72	3298.81	3644.53	-2953.09
532	DYEING,TANNING MATERIALS	91.83	1773.80	2089.49	3863.28	-315.69
533	PIGMENTS, PAINTS, ETC.	43.30	18445.51	66747.03	85192.54	-48301.52
541	MEDICINES,ETC.EXC.GRP542	68.99	17388.89	33024.60	50413.49	-15635.72
542	MEDICAMENTS	29.93	28819.24	163742.23	192561.47	-134922.98
551	ESSNTL.OIL,PERFUME,FLAVR	11.82	825.98	13154.91	13980.88	-12328.93
553	PERFUMERY,COSMETICS,ETC.	59.53	28851.17	68075.46	96926.63	-39224.29

SITC	Description	Grubel - Lloyd Index (IITBi)	Export (X) (000)US$	Import (M) (000)US$	Total Trade (Xi+Mi)	Trade Balance (Xi-Mi)
554	SOAP,CLEANERS,POLISH,ETC	86.96	54619.46	70995.79	125615.25	-16376.33
562	FERTILIZER,EXCEPT GRP272	70.05	17870.51	33150.22	51020.74	-15279.71
571	POLYMERS OF ETHYLENE	20.04	1668.55	14984.84	16653.39	-13316.29
572	POLYMERS OF STYRENE	16.13	366.47	4177.53	4544.00	-3811.05
573	POLYMERS,VINYL CHLORIDE	42.42	180.63	670.96	851.59	-490.32
574	POLYACETAL,POLYCARBONATE	30.95	2059.75	11251.40	13311.14	-9191.65
575	OTH.PLASTIC,PRIMARY FORM	29.03	4018.14	23661.74	27679.88	-19643.60
579	PLASTIC WASTE, SCRAP ETC	59.25	464.69	195.63	660.32	269.06
581	PLASTIC TUBE,PIPE,HOSE	52.25	8925.44	25237.98	34163.42	-16312.55
582	PLASTIC PLATE,SHEETS,ETC	86.44	35134.21	46160.70	81294.92	-11026.49
583	MONOFILAMENT OF PLASTICS	76.01	769.45	1255.22	2024.67	-485.77
591	INSECTICIDES, ETC.	94.76	53920.21	48552.23	102472.45	5367.98
592	STARCHES,INULIN,ETC.	85.64	28633.57	21440.59	50074.17	7192.98
593	EXPLOSIVES,PYROTECHNICS	10.70	228.59	4045.46	4274.05	-3816.87
597	PREPRD ADDITIVES,LIQUIDS	4.23	237.75	11009.37	11247.12	-10771.61
598	MISC.CHEMICAL PRODTS.NES	59.91	11464.19	26809.88	38274.08	-15345.69
	Av IITB and Totals	**58.71**	**325360.94**	**739300.46**	**1064661.40**	**-413939.52**
611	LEATHER	5.94	9714.76	297.11	10011.87	9417.66
612	MANUFACT.LEATHER ETC.NES	94.07	446.81	396.77	843.58	50.04
613	FURSKINS,TANNED,DRESSED	1.94	484.95	4.75	489.70	480.20
621	MATERIALS OF RUBBER	23.99	1408.35	10334.10	11742.46	-8925.75
625	RUBBER TYRES,TUBES,ETC.	88.69	9367.51	7463.24	16830.75	1904.27
629	ARTICLES OF RUBBER, NES	44.86	5406.39	18699.44	24105.82	-13293.05
633	CORK MANUFACTURES	58.98	281.30	672.56	953.86	-391.25
634	VENEERS, PLYWOOD, ETC.	14.50	44118.95	3449.31	47568.26	40669.64
635	WOOD MANUFACTURES, NES	51.71	29220.16	10190.04	39410.19	19030.12
641	PAPER AND PAPERBOARD	78.51	95373.97	147577.71	242951.69	-52203.74
642	PAPER,PAPERBOARD,CUT ETC	91.47	85844.40	72346.63	158191.02	13497.77
651	TEXTILE YARN	22.61	44652.61	5690.36	50342.97	38962.26
652	COTTON FABRICS, WOVEN	47.92	3507.77	1105.19	4612.96	2402.59
653	FABRICS,MAN-MADE FIBRES	81.87	6928.17	4801.18	11729.34	2126.99
654	OTH.TEXTILE FABRIC,WOVEN	51.42	5139.62	1778.62	6918.23	3361.00
655	KNIT.CROCHET.FABRIC NES	38.05	11088.61	2605.06	13693.67	8483.55
656	TULLE,LACE,EMBROIDRY.ETC	92.17	850.38	994.82	1845.20	-144.44
657	SPECIAL YARN,TXTL.FABRIC	87.28	17888.68	13850.63	31739.31	4038.06
658	TEXTILE ARTICLES NES	83.17	9374.81	13169.90	22544.71	-3795.09
659	FLOOR COVERINGS, ETC.	67.03	56294.71	28380.55	84675.27	27914.16
661	LIME,CEMENT,CONSTR.MATRL	68.92	4401.37	2314.01	6715.38	2087.36
662	CLAY,REFRCT.CONSTR.MATRL	5.32	319.53	11689.30	12008.83	-11369.77
663	MINERAL MANUFACTURES,NES	40.33	3485.73	13800.16	17285.88	-10314.43
664	GLASS	56.07	7540.65	19358.70	26899.36	-11818.05
665	GLASSWARE	7.15	1341.07	36181.33	37522.40	-34840.25
666	POTTERY	67.04	1163.13	586.42	1749.55	576.71
667	PEARLS,PRECIOUS STONES	61.83	2993.72	6689.39	9683.12	-3695.67
671	PIG IRON,SPIEGELEISN,ETC	0.04	0.63	2977.41	2978.04	-2976.78
672	INGOTS ETC.IRON OR STEEL	0.14	0.31	457.13	457.45	-456.82
673	FLAT-ROLLED IRON ETC.	50.31	32218.53	10827.59	43046.12	21390.93
674	FLAT-ROLLED PLATED IRON	39.32	28042.92	6862.48	34905.39	21180.44
675	FLAT-ROLLED, ALLOY STEEL	59.19	2862.48	1203.35	4065.82	1659.13
676	IRON,STL.BAR,SHAPES ETC.	87.37	36620.42	28408.06	65028.48	8212.35

SITC	Description	Grubel - Lloyd Index (IITBi)	Export (X) (000)US$	Import (M) (000)US$	Total Trade (Xi+Mi)	Trade Balance (Xi-Mi)
677	RAILWAY TRACK IRON,STEEL	0.47	4.28	1823.75	1828.03	-1819.46
678	WIRE OF IRON OR STEEL	36.30	1408.70	6353.13	7761.82	-4944.43
679	TUBES,PIPES,ETC.IRON,STL	48.64	9405.95	29273.59	38679.54	-19867.64
681	SILVER,PLATINUM,ETC.	12.34	63047.10	4145.62	67192.72	58901.47
682	COPPER	49.81	20915.73	63066.75	83982.48	-42151.02
683	NICKEL	0.70	1.97	558.39	560.35	-556.42
684	ALUMINIUM	86.56	39199.82	51375.59	90575.41	-12175.77
685	LEAD	18.47	11800.82	1200.81	13001.63	10600.01
686	ZINC	0.06	5.09	17809.70	17814.79	-17804.61
689	MISC.NON-FERR.BASE METAL	23.40	14.97	112.96	127.93	-97.99
691	METALLIC STRUCTURES NES	62.43	10500.37	23139.29	33639.65	-12638.92
692	CONTAINERS,STORAGE,TRNSP	83.61	14479.43	20156.17	34635.60	-5676.73
693	WIRE PRODUCTS EXCL.ELECT	86.03	4399.72	3320.81	7720.53	1078.91
694	NAILS,SCREWS,NUTS,ETC.	23.04	1982.36	15227.72	17210.09	-13245.36
695	TOOLS	74.68	14420.63	8593.45	23014.08	5827.18
696	CUTLERY	92.66	722.40	623.65	1346.05	98.75
697	HOUSEHOLD EQUIPMENT,NES	53.13	11597.45	4195.01	15792.47	7402.44
699	MANUFACTS.BASE METAL,NES	96.42	74411.44	69270.45	143681.88	5140.99
	Av IITB and Totals	**63.36**	**836701.60**	**805410.10**	**1642111.70**	**31291.50**
711	STEAM GENER.BOILERS,ETC.	17.04	1734.94	161.63	1896.57	1573.32
712	STEAM TURBINES	9.22	1931.47	93.33	2024.80	1838.14
713	INTRNL COMBUS PSTN ENGIN	84.45	13541.80	9896.94	23438.74	3644.86
714	ENGINES,MOTORS NON-ELECT	88.79	2182.29	2733.35	4915.63	-551.06
716	ROTATING ELECTRIC PLANT	80.29	2693.48	4015.66	6709.14	-1322.18
718	OTH.POWR.GENRTNG.MACHNRY	99.91	3924.88	3932.08	7856.96	-7.20
721	AGRIC.MACHINES,EX.TRACTR	42.97	35506.54	9717.03	45223.57	25789.51
722	TRACTORS	27.07	6503.45	1018.23	7521.69	5485.22
723	CIVIL ENGINEERING EQUIPT	60.90	22432.00	9822.10	32254.10	12609.89
724	TEXTILE,LEATHER MACHINES	94.55	1599.98	1784.29	3384.27	-184.31
725	PAPER,PULP MILL MACHINES	68.57	2901.42	1513.82	4415.25	1387.60
726	PRINTNG,BOOKBINDNG MACHS	93.71	3523.20	3106.51	6629.72	416.69
727	FOOD-PROCESS.MCH.NON DOM	43.67	16170.27	4517.36	20687.63	11652.91
728	OTH.MACH,PTS,SPCL INDUST	90.93	22370.47	26832.34	49202.81	-4461.87
731	METAL REMOVAL WORK TOOLS	48.01	1531.15	483.70	2014.85	1047.45
733	MACH-TOOLS,METAL-WORKING	18.76	8148.69	843.39	8992.08	7305.30
735	PARTS,NES,FOR MACH-TOOLS	95.68	1363.44	1250.56	2613.99	112.88
737	METALWORKING MACHNRY NES	99.85	4795.95	4782.00	9577.94	13.95
741	HEATNG,COOLNG EQUIP,PART	39.16	88214.90	21477.30	109692.20	66737.60
742	PUMPS FOR LIQUIDS,PARTS	73.87	28035.17	16419.61	44454.78	11615.56
743	PUMPS NES,CENTRIFUGS ETC	98.92	18965.70	19378.23	38343.93	-412.54
744	MECHANICAL HANDLNG EQUIP	58.12	40858.84	16736.22	57595.06	24122.62
745	OTH.NONELEC MCH,TOOL,NES	75.37	23579.64	14258.64	37838.28	9321.00
746	BALL OR ROLLER BEARINGS	38.27	696.66	2944.26	3640.91	-2247.60
747	TAPS,COCKS,VALVES,ETC.	85.19	12896.18	17381.07	30277.25	-4484.90
748	TRANSMISSIONS SHAFTS ETC	74.35	2951.03	4987.59	7938.62	-2036.56
749	NON-ELECT MACH.PARTS,ETC	78.93	2256.95	3461.92	5718.87	-1204.97
751	OFFICE MACHINES	34.25	13549.84	2800.36	16350.20	10749.49
752	AUTOMATC.DATA PROC.EQUIP	60.65	20324.41	46697.90	67022.31	-26373.48
759	PARTS,FOR OFFICE MACHINS	73.61	34426.21	20051.50	54477.70	14374.71
761	TELEVISION RECEIVERS ETC	91.01	1518.69	1818.69	3337.38	-300.00

SITC	Description	Grubel - Lloyd Index (IITBi)	Export (X) (000)US$	Import (M) (000)US$	Total Trade (Xi+Mi)	Trade Balance (Xi-Mi)
762	RADIO-BROADCAST RECEIVER	93.58	813.65	715.54	1529.19	98.11
763	SOUND RECORDER,PHONOGRPH	59.34	1949.39	4621.27	6570.65	-2671.88
764	TELECOMM.EQUIP.PARTS NES	92.71	37880.30	32734.98	70615.28	5145.32
771	ELECT POWER MACHNY.PARTS	86.01	16388.88	12365.24	28754.12	4023.64
772	ELEC.SWITCH.RELAY.CIRCUT	67.15	55815.81	28210.40	84026.22	27605.41
773	ELECTR DISTRIBT.EQPT NES	68.50	65547.86	34147.65	99695.51	31400.21
774	ELECTRO-MEDCL,XRAY EQUIP	99.16	5726.27	5630.99	11357.26	95.28
775	DOM.ELEC,NON-ELEC.EQUIPT	65.44	63392.21	30831.92	94224.13	32560.28
776	TRANSISTORS,VALVES,ETC.	39.41	7577.22	1859.50	9436.72	5717.72
778	ELECTRIC.MACH.APPART.NES	87.53	33287.75	25904.19	59191.93	7383.56
781	PASS.MOTOR VEHCLS.EX.BUS	30.57	25292.22	140194.52	165486.73	-114902.30
782	GOODS,SPCL TRANSPORT VEH	25.25	5460.90	37797.58	43258.49	-32336.68
783	ROAD MOTOR VEHICLES NES	6.63	9508.09	326.02	9834.11	9182.06
784	PARTS,TRACTORS,MOTOR VEH	80.35	19607.25	29197.32	48804.58	-9590.07
785	CYCLES,MOTORCYCLES ETC.	55.07	10167.33	3863.55	14030.88	6303.78
786	TRAILERS,SEMI-TRAILR,ETC	49.08	34392.50	11184.38	45576.88	23208.12
791	RAILWAY VEHICLES.EQUIPNT	11.59	1006.44	16362.02	17368.46	-15355.58
792	AIRCRAFT,ASSOCTD.EQUIPNT	12.73	107328.66	7295.07	114623.74	100033.59
793	SHIP,BOAT,FLOAT.STRUCTRS	99.27	29384.95	29818.74	59203.69	-433.79
	Av IITB and Totals	**59.91**	**971657.30**	**727978.46**	**1699635.76**	**243678.83**
811	PREFABRICATED BUILDINGS	82.12	3855.33	2685.57	6540.90	1169.76
812	PLUMBNG,SANITRY,EQPT.ETC	18.93	569.70	5448.60	6018.30	-4878.90
813	LIGHTNG FIXTURES ETC.NES	96.58	12380.27	11562.47	23942.74	817.81
821	FURNITURE,CUSHIONS,ETC.	59.32	53260.73	22458.49	75719.22	30802.24
831	TRUNK,SUIT-CASES,BAG,ETC	72.63	3986.87	2273.31	6260.18	1713.56
841	MENS,BOYS CLOTHNG,X-KNIT	13.95	21915.50	1643.69	23559.19	20271.80
842	WOMEN,GIRL CLOTHNG,XKNIT	73.01	23759.30	13659.90	37419.20	10099.40
843	MENS,BOYS CLOTHING,KNIT	11.62	8478.73	523.04	9001.78	7955.69
844	WOMEN,GIRLS CLOTHNG.KNIT	71.75	13891.45	7771.30	21662.75	6120.15
845	OTHR.TEXTILE APPAREL,NES	38.33	48787.87	11566.81	60354.67	37221.06
846	CLOTHING ACCESSRS,FABRIC	71.39	6818.69	3785.31	10603.99	3033.38
848	CLOTHNG,NONTXTL;HEADGEAR	54.94	8266.56	3131.03	11397.58	5135.53
851	FOOTWEAR	25.99	19939.40	2978.69	22918.10	16960.71
871	OPTICAL INSTRUMENTS,NES	84.68	1441.99	1963.79	3405.78	-521.79
872	MEDICAL INSTRUMENTS NES	67.08	35835.64	71009.28	106844.92	-35173.64
873	METERS,COUNTERS,NES	78.98	1454.30	2228.35	3682.65	-774.05
874	MEASURE,CONTROL INSTRMNT	99.60	27084.50	26869.75	53954.25	214.75
881	PHOTOGRAPH APPAR.ETC.NES	67.18	6770.04	3424.14	10194.18	3345.91
882	PHOTO.CINEMATOGRPH.SUPPL	56.58	5662.50	2233.65	7896.16	3428.85
883	CINE.FILM EXPOSD.DEVELPD	3.14	67.33	1.07	68.41	66.26
884	OPTICAL GOODS NES	18.99	1964.91	18727.46	20692.37	-16762.55
885	WATCHES AND CLOCKS	85.06	2219.10	1642.24	3861.34	576.86
891	ARMS AND AMMUNITION	49.75	648.33	1957.93	2606.26	-1309.60
892	PRINTED MATTER	45.65	37389.13	126415.92	163805.04	-89026.79
893	ARTICLES,NES,OF PLASTICS	75.38	112628.28	68120.75	180749.03	44507.52
894	BABY CARRIAGE,TOYS,GAMES	42.43	13093.85	48619.66	61713.51	-35525.81
895	OFFICE,STATIONERY SUPPLS	46.54	1249.82	4121.68	5371.50	-2871.85
896	WORKS OF ART,ANTIQUE ETC	70.97	6105.99	3358.35	9464.34	2747.64
897	GOLD,SILVERWARE,JEWL NES	77.29	33022.58	20797.97	53820.54	12224.61
898	MUSICAL INSTRUMENTS,ETC.	25.67	13826.96	93889.21	107716.17	-80062.25

SITC	Description	Grubel - Lloyd Index (IITBi)	Export (X) (000)US$	Import (M) (000)US$	Total Trade (Xi+Mi)	Trade Balance (Xi-Mi)
899	MISC MANUFCTRD GOODS NES	77.65	13138.90	20700.45	33839.36	-7561.55
	Av IITB and Totals	**57.83**	**539514.55**	**605569.84**	**1145084.40**	**-66055.29**
931	SPEC.TRANSACT.NOT CLASSD	51.20	131429.98	45227.85	176657.83	86202.13
961	COIN NONGOLD NONCURRENT	4.09	9.72	464.85	474.57	-455.14
971	GOLD,NONMONTRY EXCL ORES	12.59	383555.44	25775.39	409330.83	357780.05
	Av IITB and Totals	**24.22**	**514995.14**	**71468.09**	**586463.23**	**443527.05**

Source: Data from United Nations Trade Statistics Head Office New York.

Table 5: New Zealand Intra-industry Trade with Selected partners: 1990 & 2000.

Country	Year	GL index	Aquino Adj.	GL Adj.	Import US$m	% (M) Change	Export US$m	% (X) Change	Tot. Trade US$m	% Change
World	1990	25.96	40.86	26.40	9423.35		9117.50		18540.86	
	2000	28.61	45.18	29.67	13667.00	18.38%	12729.60	16.53%	26396.60	17.48%
Australia	1990	47.78	49.24	48.97	1741.29		1658.92		3400.21	
	2000	48.34	50.08	52.10	2906.14	25.06%	2515.70	20.52%	5421.83	22.92%
Japan	1990	5.67	19.43	7.46	600.34		977.56		1577.90	
	2000	6.30	20.80	6.41	1290.01	36.48%	1246.90	12.11%	2536.91	23.31%
U.S.A	1990	15.67	29.78	23.15	1406.73		719.56		2126.28	
	2000	21.37	34.75	27.75	2285.22	23.79%	1430.83	33.08%	3716.05	27.21%
U.K	1990	12.93	38.44	22.60	605.63		242.74		848.37	
	2000	27.37	41.87	32.03	449.31	-14.82%	335.12	15.99%	784.43	-3.92%
India	1990	12.04	10.82	18.41	5.95		12.24		18.19	
	2000	12.02	28.12	14.85	32.79	69.29%	22.29	29.09%	55.07	50.35%
China	1990	8.34	27.46	18.22	19.24		64.82		84.06	
	2000	5.48	27.18	9.62	633.30	94.10%	252.38	59.13%	885.68	82.66%
South Korea	1990	7.91	34.96	13.31	55.00		130.15		185.15	
	2000	15.03	35.25	18.23	179.23	53.04%	255.52	32.51%	434.75	40.26%
Singapore	1990	26.27	33.80	29.01	65.29		78.91		144.20	
	2000	23.66	35.43	30.67	214.43	53.32%	134.63	26.09%	349.06	41.53%
Indonesia	1990	34.21	39.24	36.43	9.19		10.38		19.57	
	2000	10.08	20.55	12.21	85.74	80.64%	122.00	84.32%	207.74	82.78%
Fiji	1990	26.27	33.80	29.01	65.29		78.91		144.20	
	2000	23.66	36.95	30.67	214.43	53.32%	134.63	26.09%	349.06	41.53%

Source: Data from UN Trade Statistics Department New York, Author's own calculations

Table 6: Trade Intensity From New Zealand to Asian, Pacific and other Specified Countries.

Year	Au	US	UK	Japan	India	China	Skorea	Indonesia	Malaysia	Thailand	Singapore	Philipines	Brunei	Vietnam
1990	16.31	0.89	1.11	2.35	1.03	0.62	2.12	1.58	2.09	0.00	0.73	2.39	0.37	NA
1991	17.55	0.90	1.07	2.42	1.29	0.93	1.92	1.46	2.51	0.00	0.86	1.83	NA	0.67
1992	17.17	0.87	1.14	2.57	1.09	0.96	2.02	1.78	2.08	0.00	0.87	2.58	0.67	NA
1993	17.63	0.73	1.08	2.28	1.49	0.73	2.13	1.59	1.65	0.00	0.61	2.36	0.69	0.66
1994	18.19	0.68	1.15	2.46	1.07	1.05	2.06	1.66	1.41	0.00	0.56	1.53	0.91	1.79
1995	18.07	0.66	1.18	2.47	0.87	0.98	1.95	1.83	1.38	0.00	0.58	1.81	1.39	1.78
1996	17.60	0.61	1.26	2.34	0.81	0.98	1.68	2.02	1.56	0.00	0.59	2.01	0.85	1.44
1997	18.28	0.67	1.18	2.42	0.88	1.11	1.77	2.20	1.73	1.17	0.72	2.30	0.90	1.23
1998	19.36	0.77	1.09	2.67	0.87	1.17	1.87	1.42	1.73	1.41	0.84	2.24	0.63	1.84
1999	19.29	0.76	1.16	2.34	0.99	0.93	1.99	1.93	1.64	1.17	0.95	2.19	0.71	1.87
2000	19.66	0.79	1.08	2.40	0.74	0.87	1.80	3.64	1.63	1.07	0.85	2.88	0.37	2.19

Table 7: Trade Intensity From Asian, Pacific & Specific Countries to New Zealand.

Year	Au	US	UK	Japan	India	China	Skorea	Indonesia	Malaysia	Thailand	Singapore	Philipine	Brunei	Vietnam
1990	18.11	0.90	1.44	1.43	0.43	0.30	0.72	1.10	0.83	0.63	1.39	0.40	NA	NA
1991	20.31	0.88	1.01	1.38	0.57	0.39	0.71	0.39	0.87	0.30	1.37	0.48	0.87	NA
1992	21.84	1.04	0.96	1.29	0.74	0.42	0.62	0.45	2.24	0.36	1.89	0.55	NA	NA
1993	22.38	0.88	1.02	1.29	0.57	0.54	0.56	0.64	1.63	0.65	1.17	0.48	NA	NA
1994	23.72	0.89	1.06	1.32	0.73	0.55	0.57	0.47	1.58	0.56	1.59	0.48	0.55	0.36
1995	26.98	0.92	1.01	1.28	0.70	0.56	NA	1.06	0.91	0.60	1.18	0.47	0.99	0.08
1996	25.93	0.86	0.98	1.39	0.71	0.54	NA	0.73	1.11	0.64	1.09	0.35	2.28	0.40
1997	27.87	0.76	0.89	1.23	0.81	0.50	NA	0.62	0.98	0.65	1.15	0.34	2.86	0.85
1998	27.94	1.03	0.91	1.29	0.84	0.65	0.70	0.95	1.27	0.99	1.47	0.24	NA	1.26
1999	29.83	0.92	0.74	1.35	0.80	0.69	0.76	0.76	1.43	1.18	1.42	0.20	2.53	0.93
2000	27.39	1.07	0.73	1.18	0.76	0.76	0.77	0.81	1.69	1.31	1.24	0.23	1.50	1.09

Source: IMF Direction of Trade Statistics Yearbook 1997,2001

APPENDIX 1

Methodology

The purpose of this Appendix is to present the various methodologies used to measure the extent of intra-industry trade (IIT). A variety of measures have been proposed and discussed in the literature. For example, Balassa (1966,), Grubel and Lloyd (1975), Aquino (1978 Greenaway and Milner (1981), Lloyd and Lee (2002) and others.

In 1975, Grubel and Lloyd defined IIT as the value of exports in an industry which is exactly matched by imports in the same industry. Its value is measured by:

$$Gi = (Xi + Mi) - |Xi - Mi| \qquad (1)$$

Where Gi is the value of intra-industry trade and Xi and Mi are the values of exports and imports of industry 'i', or a given country for a given period.

Inter-industry trade is defined as:

$$Si = |Xi - Mi| \qquad (2)$$

If total trade is made up of intra-industry (Gi) and inter-industry (Si) trade, IIT is clearly the value of total trade remaining when net trade |Xi - Mi| has been accounted for.

To obtain an index which provides easy comparisons across countries and industries, values are expressed as percentages of each industry's (or country's) combined exports and imports. Inter-industry trade thus becomes:

$$BLi = ITi = \frac{|Xi - Mi|}{(Xi + Mi)} \, x\,100 \qquad (3)$$

And intra-industry trade becomes:

$$ITT_B\, i = \frac{(Xi + Mi)\,|Xi - Mi|}{(Xi + Mi)} \, x\,100 \qquad (4)$$

This measure is statistically pleasing as it provides a range from 0 to 100, with higher values representing higher levels of IIT. Grubel-Lloyd devised a summary measure to calculate IIT across industries or countries at a given SITC product group levels of aggregation. The summary measure is a weighted average of IIT_i, the weight being the share of each industry in the country's total trade.

The Grubel-Lloyd summary measure is therefore:

$$IIT_B = \overline{Bi} = \frac{\sum_{i=1}^{n}(Xi + Mi) \sum_{i=1}^{n} |Xi - Mi|}{\sum_{i+1}^{n}(Xi + Mi)} x100 \qquad (5)$$

where $IIT\overline{B}i$ is the weighted average of the value of IITB across industries, i = 1 ... n, and n is the number of industries in the sample. $IIT\overline{B}i$ is an accurate measure if there is balanced trade. However, if total trade (or the trade of that subset of industries we are measuring) is unbalanced, then the index is downward biased because the denominator is overstated. In such a situation the $IIT\overline{B}i$ measure cannot attain its maximum value of 100%.

In order to avoid any bias introduced by unbalanced trade, the mean must be adjusted by removing this trade imbalance. In view of this Grubel and Lloyd devised the adjusted measure.

The Adjusted Measure is:

$$IIT_C = Ci = \frac{\sum_{i=1}^{n}(Xi + Mi) \sum_{i+1}^{n} |Xi - Mi|}{\sum_{i=1}^{n}(Xi + Mi) \left| \sum_{i=1}^{n} Xi - \sum_{i=1}^{n} Mi \right|} x\,100 \qquad (6)$$

Note, Ci applies to aggregate trade flows only and does not have a counterpart at the level of an individual industry. In addition, when for all i either Xi exceeds Mi or falls

short of it, Ci = 100, regardless of the size of these trade imbalances. (See Kol and Menness 1987, for detail).

AQUINO ADJUSTED MEASURE (1978)

Aquino argued that the adjustment should be made at each industry level rather than aggregate level Aquino simulates balanced trade by calculating 'theoretical values' of exports and imports at the industry level:

$$X_i^e = \frac{Xi\ 0.5\sum_{i=1}^{n}(Xi + Mi)}{\sum_{i=1}^{n} Xi} : M^e = Mi\ \frac{0.5\sum_{i=1}^{n}(Xi + Mi)}{\sum_{i=1}^{n} Mi} \qquad (7)$$

The derived values for exports (Xi^e) and imports (Mi^e) are applied to the Grubel-Lloyd measures in equations (4) and (5), to arrive at the corresponding measures IITQi at the industry level and IITQ for total trade.

The Aquino measure is:

$$IITQ = \frac{\sum_{i=1}^{n}(Xi + Mi)\ \sum_{i=1}^{n} |X_i^e - Mi^e|}{\sum_{i=1}^{n}(Xi + Mi)} x100 \qquad (8)$$

Balassa Index:

$$\ddot{B}Li = \frac{1}{n}\sum_{i=1}^{n}\left[\frac{|Xi - Mi|}{Xi + Mi}\right] \qquad (9)$$

$\ddot{B}Li$ is the Balassa measure of IIT, Xi and Mi are exports and imports of industry i.

This is unweighted average of the ratios $|Xi - Mi|/(Xi + Mi)$. It is, in fact a measure of inter-industry trade, IIT being residual. IIT increases as the value $\ddot{B}Li$ decreases, it varies from one to zero.

Appendix 2

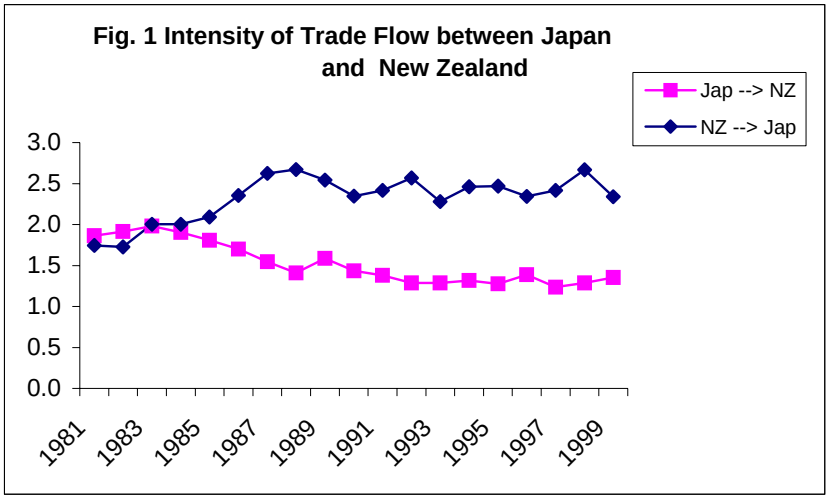
Fig. 1 Intensity of Trade Flow between Japan and New Zealand
Jap --> NZ
NZ --> Jap
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999

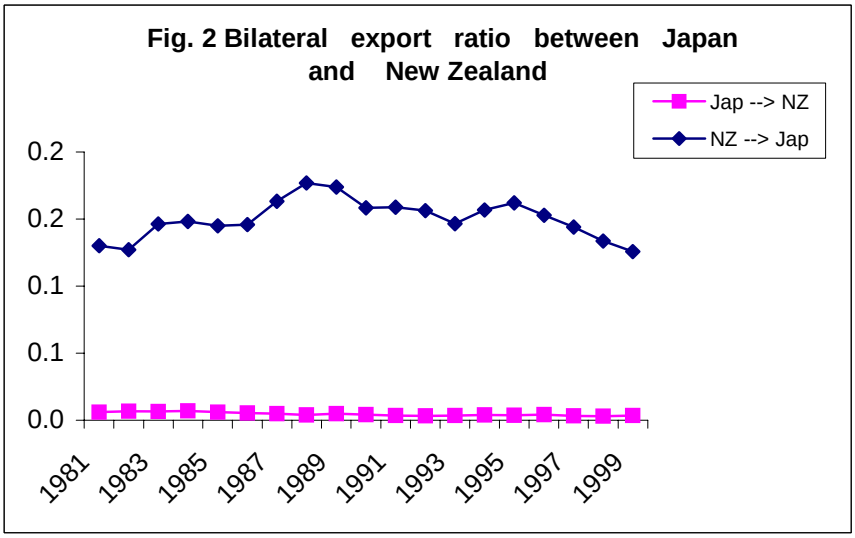
Fig. 2 Bilateral export ratio between Japan and New Zealand
Jap --> NZ
NZ --> Jap
0.2
0.2
0.1
0.1
0.0
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999

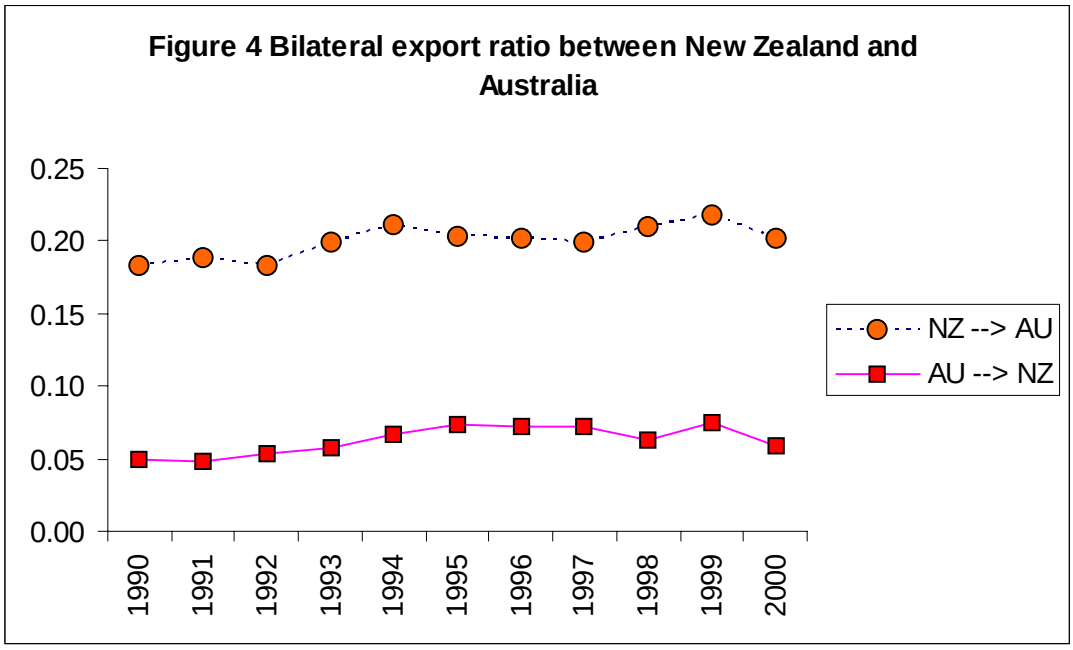
Figure 4 Bilateral export ratio between New Zealand and Australia
0.25
0.20
0.15
0.10
0.05
0.00
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
NZ --> AU
AU --> NZ

Appendix 3: Table 8a

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, 1990 and 2000 (High and Low IIT)

1990	High IITBi		2000	High IITBi	
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
057	Fruit,Nuts Excl.Oil Nuts	96.69	047	Other Cereal Meal,Flours	93.59
062	Sugar Confectionery	95.67	025	Eggs,Birds,Yolks,Albumin	90.14
059	Fruit, Vegetable Juices	79.11	098	Edible Prod.Preprtns,Nes	84.80
058	Fruit,Preserved,Prepared	73.78	057	Fruit,Nuts Excl.Oil Nuts	82.02
048	Cereal Preparations	65.28	058	Fruit,Preserved,Prepared	80.42
091	Margarine And Shortening	61.39	056	Vegtables,Prpd,Prsvd,Nes	76.58
011	Bovine Meat	55.06	073	Chocolate,Oth.Cocoa Prep	68.49
056	Vegtables,Prpd,Prsvd,Nes	51.81	059	Fruit, Vegetable Juices	61.08
	Low IITBi		062	Sugar Confectionery	58.97
016	Meat,Ed.Offl,Dry,Slt,Smk	44.80	054	Vegetables	58.34
073	Chocolate,Oth.Cocoa Prep	44.79	022	Milk And Cream	55.95
017	Meat,Offl.Prpd,Prsvd,Nes	44.57		**Low IITBi**	
098	Edible Prod.Preprtns,Nes	40.37	011	Bovine Meat	47.21
054	Vegetables	39.93	081	Animal Feed Stuff	45.14
037	Fish Etc.Prepd,Prsvd.Nes	30.34	048	Cereal Preparations	45.00
061	Sugars,Molasses,Honey	27.48	017	Meat,Offl.Prpd,Prsvd,Nes	31.21
022	Milk And Cream	20.60	037	Fish Etc.Prepd,Prsvd.Nes	28.90
012	Other Meat, Meat Offal	19.12	001	Live Animals	28.68
036	Crustaceans,Molluscs Etc	10.48	012	Other Meat, Meat Offal	23.66
075	Spices	8.11	036	Crustaceans,Molluscs Etc	22.58
044	Maize Unmilled	7.18	016	Meat,Ed.Offl,Dry,Slt,Smk	20.83
001	Live Animals	6.89	072	Cocoa	18.18
081	Animal Feed Stuff	6.20	091	Margarine And Shortening	18.00
025	Eggs,Birds,Yolks,Albumin	6.02	024	Cheese And Curd	12.69
074	Tea And Mate	5.88	023	Butter,Other Fat Of Milk	11.93
024	Cheese And Curd	4.02	061	Sugars,Molasses,Honey	9.13
	High IITBi & Low IITBi			**High IITBi & Low IITBi**	
122	Tobacco, Manufactured	96.78	122	Tobacco, Manufactured	86.35
112	Alcoholic Beverages	61.20	112	Alcoholic Beverages	71.41
111	Non-Alcohol.Beverage,Nes	12.16	111	Non-Alcohol.Beverage,Nes	51.03

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, 1990 and 2000 (High and Low IIT)

1990	High IITBi		2000	High IITBi	
	High IITBi & Low IITBi			**High IITBi & Low IITBi**	
245	Fuel Wood, Wood Charcoal	96.97	291	Crude Animal Materls.Nes	89.79
267	Other Man-Made Fibres	82.83	289	Prec.Metal Ores,Conctrts	84.65
291	Crude Animal Materls.Nes	80.14	288	Non-Ferrous Waste,Scrap	71.90
222	Oilseed(Sft.Fix Veg.Oil)	59.73	223	Oilseed(Oth.Fix.Veg.Oil)	66.56
247	Wood Rough,Rough Squared	49.17	292	Crude Veg.Materials, Nes	66.25
266	Synthetic Fibres	46.58	272	Fertilizers, Crude	60.41
272	Fertilizers, Crude	44.44	266	Synthetic Fibres	49.11
292	Crude Veg.Materials, Nes	42.17	269	Worn Clothing,Textl.Artl	42.11
289	Prec.Metal Ores,Conctrts	40.00	278	Other Crude Minerals	24.90
277	Natural Abrasives, Nes	32.26	277	Natural Abrasives, Nes	23.86
282	Ferrous Waste And Scrap	30.69	247	Wood Rough,Rough Squared	23.36
246	Wood In Chips, Particles	21.28	267	Other Man-Made Fibres	23.26
232	Synthetic Rubber, Etc.	19.68	287	Ore,Concentr.Base Metals	18.30
287	Ore,Concentr.Base Metals	13.61	268	Wool, Other Animal Hair	12.15
263	Cotton	13.56	282	Ferrous Waste And Scrap	9.30
278	Other Crude Minerals	13.01	273	Stone, Sand And Gravel	8.87
273	Stone, Sand And Gravel	12.35	222	Oilseed(Sft.Fix Veg.Oil)	7.21
	High IITBi & Low IITBi			**High IITBi & Low IITBi**	
1990			2000		
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
334	Petroleum Products	97.82	333	Petroleum Oils, Crude	64.37
335	Residual Petrol.Products	22.80	322	Briquettes,Lignite,Peat	63.78
333	Petroleum Oils, Crude	12.70	334	Petroleum Products	6.48
322	Briquettes,Lignite,Peat	5.05	335	Residual Petrol.Products	3.18
	High IITBi & Low IITBi			**High IITBi & Low IITBi**	
411	Animal Oils And Fats	64.64	422	Fixed Veg.Fat,Oils,Other	89.53
431	Animal,Veg.Fats,Oils,Nes	42.93	431	Animal,Veg.Fats,Oils,Nes	59.18
422	Fixed Veg.Fat,Oils,Other	35.81	411	Animal Oils And Fats	35.82
421	Fixed Veg.Fat,Oils, Soft	11.33	421	Fixed Veg.Fat,Oils, Soft	0.75
	High IITBi & Low IITBi			**High IITBi & Low IITBi**	
592	Starches,Inulin,Etc	98.86	582	Plastic Plate,Sheets,Etc	94.59

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, 1990 and 2000 (High and Low IIT)

1990	High IITBi		2000	High IITBi	
583	Monofilament Of Plastics	95.48	524	Other Chemical Compounds	92.60
553	Perfumery,Cosmetics,Etc.	93.66	554	Soap,Cleaners,Polish,Etc	84.49
516	Other Organic Chemicals	86.99	562	Fertilizer,Except Grp272	69.54
574	Polyacetal,Polycarbonate	84.77	575	Oth.Plastic,Primary Form	66.61
541	Medicines,Etc.Exc.Grp542	67.26	541	Medicines,Etc.Exc.Grp542	62.24
582	Plastic Plate,Sheets,Etc	66.26	574	Polyacetal,Polycarbonate	56.75
598	Misc.Chemical Prodts.Nes	59.05	581	Plastic Tube,Pipe,Hose	55.48
554	Soap,Cleaners,Polish,Etc	58.78	516	Other Organic Chemicals	54.88
581	Plastic Tube,Pipe,Hose	51.34	592	Starches,Inulin,Etc	54.59
533	Pigments, Paints, Etc.	49.47	591	Insecticides, Etc.	49.59
512	Alcohol,Phenol,Etc.Deriv	45.86	593	Explosives,Pyrotechnics	49.28
573	Polymers,Vinyl Chloride	44.94	598	Misc.Chemical Prodts.Nes	42.40
575	Oth.Plastic,Primary Form	31.38	553	Perfumery,Cosmetics,Etc.	41.60
571	Polymers Of Ethylene	29.47	512	Alcohol,Phenol,Etc.Deriv	40.91
591	Insecticides, Etc.	21.57	525	Radio-Active Materials	38.69
542	Medicaments	20.08	515	Organo-Inorganic Compnds	35.04
562	Fertilizer,Except Grp272	16.91	514	Nitrogen-Funct.Compounds	33.47
532	Dyeing,Tanning Materials	16.34	583	Monofilament Of Plastics	32.94
513	Carboxylic Acids,Derivts	13.87	533	Pigments, Paints, Etc.	29.22
524	Other Chemical Compounds	12.58	597	Preprd Additives,Liquids	26.29
515	Organo-Inorganic Compnds	11.87	571	Polymers Of Ethylene	21.87
522	Inorganic Chem.Elements	10.61	551	Essntl.Oil,Perfume,Flavr	16.86
531	Synth.Colours,Lakes,Etc	10.47	542	Medicaments	16.28
551	Essntl.Oil,Perfume,Flavr	4.51	572	Polymers Of Styrene	15.80
523	Metal.Salts,Inorgan.Acid	3.93	531	Synth.Colours,Lakes,Etc	11.36
572	Polymers Of Styrene	2.69	573	Polymers,Vinyl Chloride	11.10
597	Preprd Additives,Liquids	2.48	579	Plastic Waste, Scrap Etc	5.87
511	Hydrocarbons,Nes,Derivts	0.73	522	Inorganic Chem.Elements	5.87
514	Nitrogen-Funct.Compounds	0.43	513	Carboxylic Acids,Derivts	3.75
SITC	**High IITBi & Low IITBi**		**SITC**	**Hig IITBi & Low IITBi**	
658	Textile Articles Nes	99.26	684	Aluminium	96.71
693	Wire Products Excl.Elect	97.70	691	Metallic Structures Nes	95.96

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, 1990 and 2000 (High and Low IIT)

1990	High IITBi	
621	Materials Of Rubber	97.15
612	Manufact.Leather Etc.Nes	95.35
695	Tools	92.22
654	Oth.Textile Fabric,Woven	91.48
694	Nails,Screws,Nuts,Etc.	91.06
674	Flat-Rolled Plated Iron	88.19
691	Metallic Structures Nes	88.14
684	Aluminium	87.73
678	Wire Of Iron Or Steel	84.65
661	Lime,Cement,Constr.Matrl	82.44
697	Household Equipment,Nes	81.87
656	Tulle,Lace,Embroidry.Etc	81.03
673	Flat-Rolled Iron Etc.	78.23
629	Articles Of Rubber, Nes	73.18
613	Furskins,Tanned,Dressed	72.81
655	Knit.Crochet.Fabric Nes	68.27
685	Lead	67.82
681	Silver,Platinum,Etc.	67.39
625	Rubber Tyres,Tubes,Etc.	65.74
659	Floor Coverings, Etc.	64.56
682	Copper	64.30
657	Special Yarn,Txtl.Fabric	59.22
642	Paper,Paperboard,Cut Etc	58.98
664	Glass	58.79
699	Manufacts.Base Metal,Nes	56.64
679	Tubes,Pipes,Etc.Iron,Stl	49.57
641	Paper And Paperboard	46.40
635	Wood Manufactures, Nes	41.89
666	Pottery	39.91
651	Textile Yarn	39.58
692	Containers,Storage,Trnsp	28.77
696	Cutlery	27.78
611	Leather	27.61

2000	High IITBi	
696	Cutlery	94.14
695	Tools	90.79
699	Manufacts.Base Metal,Nes	89.99
612	Manufact.Leather Etc.Nes	89.30
693	Wire Products Excl.Elect	87.31
621	Materials Of Rubber	86.46
673	Flat-Rolled Iron Etc.	82.13
674	Flat-Rolled Plated Iron	81.96
641	Paper And Paperboard	78.44
682	Copper	78.08
629	Articles Of Rubber, Nes	75.82
697	Household Equipment,Nes	73.38
658	Textile Articles Nes	72.04
692	Containers,Storage,Trnsp	71.67
633	Cork Manufactures	71.45
654	Oth.Textile Fabric,Woven	65.30
656	Tulle,Lace,Embroidry.Etc	64.78
665	Glassware	64.59
613	Furskins,Tanned,Dressed	63.09
666	Pottery	62.87
642	Paper,Paperboard,Cut Etc	61.81
659	Floor Coverings, Etc.	61.01
635	Wood Manufactures, Nes	60.68
663	Mineral Manufactures,Nes	57.52
625	Rubber Tyres,Tubes,Etc.	57.26
679	Tubes,Pipes,Etc.Iron,Stl	54.56
611	Leather	53.94
652	Cotton Fabrics, Woven	52.34
657	Special Yarn,Txtl.Fabric	49.86
655	Knit.Crochet.Fabric Nes	44.63
651	Textile Yarn	41.11
685	Lead	39.85
653	Fabrics,Man-Made Fibres	30.70

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, 1990 and 2000 (High and Low IIT)

1990	High IITBi		2000	High IITBi	
663	Mineral Manufactures,Nes	27.16	634	Veneers, Plywood, Etc.	23.30
633	Cork Manufactures	18.73	681	Silver,Platinum,Etc.	15.89
652	Cotton Fabrics, Woven	15.59	694	Nails,Screws,Nuts,Etc.	15.23
665	Glassware	12.50	675	Flat-Rolled, Alloy Steel	14.94
675	Flat-Rolled, Alloy Steel	9.46	678	Wire Of Iron Or Steel	14.02
667	Pearls,Precious Stones	9.09	664	Glass	12.72
634	Veneers, Plywood, Etc.	8.80	686	Zinc	12.36
662	Clay,Refrct.Constr.Matrl	8.72	661	Lime,Cement,Constr.Matrl	10.55
653	Fabrics,Man-Made Fibres	8.20	672	Ingots Etc.Iron Or Steel	8.70

High IITBi & Low IITBi

1990

SITC	Description High and Low IIT	IITBi
747	Taps,Cocks,Valves,Etc.	97.70
741	Heatng,Coolng Equip,Part	96.50
728	Oth.Mach,Pts,Spcl Indust	91.17
723	Civil Engineering Equipt	89.79
772	Elec.Switch.Relay.Circut	88.58
778	Electric.Mach.Appart.Nes	87.54
743	Pumps Nes,Centrifugs Etc	85.42
711	Steam Gener.Boilers,Etc.	81.87
742	Pumps For Liquids,Parts	80.24
784	Parts,Tractors,Motor Veh	79.02
775	Dom.Elec,Non-Elec.Equipt	78.81
776	Transistors,Valves,Etc.	78.32
744	Mechanical Handlng Equip	76.71
786	Trailers,Semi-Trailr,Etc	72.61
748	Transmissions Shafts Etc	69.66
712	Steam Turbines	68.97
721	Agric.Machines,Ex.Tractr	68.56
785	Cycles,Motorcycles Etc.	65.55
764	Telecomm.Equip.Parts Nes	64.66
724	Textile,Leather Machines	57.38
733	Mach-Tools,Metal-Working	56.88

High IITBi & Low IITBi

2000

SITC	Description High Low IIT	IITBi
792	Aircraft,Assoctd.Equipnt	99.14
723	Civil Engineering Equipt	98.40
784	Parts,Tractors,Motor Veh	97.36
747	Taps,Cocks,Valves,Etc.	96.94
786	Trailers,Semi-Trailr,Etc	96.77
728	Oth.Mach,Pts,Spcl Indust	95.71
718	Oth.Powr.Genrtng.Machnry	95.33
744	Mechanical Handlng Equip	92.25
772	Elec.Switch.Relay.Circut	89.87
749	Non-Elect Mach.Parts,Etc	89.39
785	Cycles,Motorcycles Etc.	89.27
778	Electric.Mach.Appart.Nes	89.16
745	Oth.Nonelec Mch,Tool,Nes	86.79
773	Electr Distribt.Eqpt Nes	86.50
748	Transmissions Shafts Etc	86.35
764	Telecomm.Equip.Parts Nes	79.34
771	Elect Power Machny.Parts	79.14
735	Parts,Nes,For Mach-Tools	76.05
726	Printng,Bookbindng Machs	73.66
711	Steam Gener.Boilers,Etc.	69.63
759	Parts,For Office Machins	66.28

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, 1990 and 2000 (High and Low IIT)

1990	High IITBi		2000	High IITBi	
745	Oth.Nonelec Mch,Tool,Nes	54.42	725	Paper,Pulp Mill Machines	63.36
761	Television Receivers Etc	49.45	742	Pumps For Liquids,Parts	62.43
726	Printng,Bookbindng Machs	49.33	743	Pumps Nes,Centrifugs Etc	60.34
731	Metal Removal Work Tools	47.34	793	Ship,Boat,Float.Structrs	55.60
727	Food-Process.Mch.Non Dom	45.47	775	Dom.Elec,Non-Elec.Equipt	55.54
749	Non-Elect Mach.Parts,Etc	45.34	727	Food-Process.Mch.Non Dom	51.08
774	Electro-Medcl,Xray Equip	44.30	741	Heatng,Coolng Equip,Part	50.55
773	Electr Distribt.Eqpt Nes	42.64	733	Mach-Tools,Metal-Working	49.80
759	Parts,For Office Machins	38.51	714	Engines,Motors Non-Elect	49.76
718	Oth.Powr.Genrtng.Machnry	38.06	721	Agric.Machines,Ex.Tractr	45.79
771	Elect Power Machny.Parts	35.35	774	Electro-Medcl,Xray Equip	44.58
	High IITBi & Low IITBi			**High IITBi & Low IITBi**	
SITC	**1990**		**SITC**	**2000**	
737	Metalworking Machnry Nes	33.30	713	Intrnl Combus Pstn Engin	40.51
792	Aircraft,Assoctd.Equipnt	29.36	783	Road Motor Vehicles Nes	38.11
716	Rotating Electric Plant	28.89	763	Sound Recorder,Phonogrph	35.62
751	Office Machines	24.54	737	Metalworking Machnry Nes	32.41
793	Ship,Boat,Float.Structrs	22.21	731	Metal Removal Work Tools	29.37
746	Ball Or Roller Bearings	17.61	751	Office Machines	28.21
762	Radio-Broadcast Receiver	15.24	776	Transistors,Valves,Etc.	27.38
714	Engines,Motors Non-Elect	14.31	716	Rotating Electric Plant	26.23
725	Paper,Pulp Mill Machines	10.28	782	Goods,Spcl Transport Veh	23.76
713	Intrnl Combus Pstn Engin	10.04	752	Automatc.Data Proc.Equip	21.47
791	Railway Vehicles.Equipnt	9.49	746	Ball Or Roller Bearings	21.26
763	Sound Recorder,Phonogrph	7.96	762	Radio-Broadcast Receiver	11.47
752	Automatc.Data Proc.Equip	2.84	712	Steam Turbines	2.76
722	Tractors	1.09	791	Railway Vehicles.Equipnt	2.70
782	Goods,Spcl Transport Veh	0.85	781	Pass.Motor Vehcls.Ex.Bus	0.14

	High IITBi & Low IITBi			**High IITBi & Low IITBi**	
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
831	Trunk,Suit-Cases,Bag,Etc	93.18	845	Othr.Textile Apparel,Nes	99.27
841	Mens,Boys Clothng,X-Knit	90.50	846	Clothing Accessrs,Fabric	96.53

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, 1990 and 2000 (High and Low IIT)

1990	High IITBi		2000	High IITBi	
843	Mens,Boys Clothing,Knit	87.65	844	Women,Girls Clothng.Knit	95.28
845	Othr.Textile Apparel,Nes	87.32	895	Office,Stationery Suppls	94.69
874	Measure,Control Instrmnt	84.61	874	Measure,Control Instrmnt	89.70
844	Women,Girls Clothng.Knit	83.63	872	Medical Instruments Nes	85.44
893	Articles,Nes,Of Plastics	83.26	843	Mens,Boys Clothing,Knit	82.58
846	Clothing Accessrs,Fabric	82.16	897	Gold,Silverware,Jewl Nes	80.61
895	Office,Stationery Suppls	77.41	842	Women,Girl Clothng,Xknit	78.51
894	Baby Carriage,Toys,Games	74.68	893	Articles,Nes,Of Plastics	76.67
851	Footwear	73.60	821	Furniture,Cushions,Etc.	76.27
813	Lightng Fixtures Etc.Nes	73.15	813	Lightng Fixtures Etc.Nes	76.13
821	Furniture,Cushions,Etc.	70.98	848	Clothng,Nontxtl;Headgear	74.13
884	Optical Goods Nes	70.83	851	Footwear	69.92
899	Misc Manufctrd Goods Nes	67.07	831	Trunk,Suit-Cases,Bag,Etc	69.60
	1990 High IITBi & Low IITBi			**2000 High IITBi & Low IITBi**	
896	Works Of Art,Antique Etc	64.93	899	Misc Manufctrd Goods Nes	62.10
872	Medical Instruments Nes	55.36	811	Prefabricated Buildings	61.93
842	Women,Girl Clothng,Xknit	47.76	841	Mens,Boys Clothng,X-Knit	61.63
892	Printed Matter	45.80	896	Works Of Art,Antique Etc	50.30
897	Gold,Silverware,Jewl Nes	38.82	891	Arms And Ammunition	49.32
848	Clothng,Nontxtl;Headgear	24.60	894	Baby Carriage,Toys,Games	37.65
812	Plumbng,Sanitry,Eqpt.Etc	22.85	892	Printed Matter	31.47
881	Photograph Appar.Etc.Nes	17.64	873	Meters,Counters,Nes	28.81
873	Meters,Counters,Nes	14.23	871	Optical Instruments,Nes	17.02
882	Photo.Cinematogrph.Suppl	11.73	812	Plumbng,Sanitry,Eqpt.Etc	8.61
811	Prefabricated Buildings	11.08	898	Musical Instruments,Etc.	7.81
871	Optical Instruments,Nes	7.35	883	Cine.Film Exposd.Develpd	6.41
885	Watches And Clocks	6.30	881	Photograph Appar.Etc.Nes	5.65
898	Musical Instruments,Etc.	6.27	885	Watches And Clocks	4.13
	High IITBi & Low IITBi			**High IITBi & Low IITBi**	
961	Coin Nongold Noncurrent	75.48	961	Coin Nongold Noncurrent	66.67
971	Gold,Nonmontry Excl Ores	19.08	971	Gold,Nonmontry Excl Ores	11.96

Table 8b

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, (High & Low IIT)					
2000			2009		
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
	High IITBi			**High IITBi**	
047	OTHER CEREAL MEAL,FLOURS	93.59	059	FRUIT, VEGETABLE JUICES	95.57
025	EGGS,BIRDS,YOLKS,ALBUMIN	90.14	062	SUGAR CONFECTIONERY	95.52
098	EDIBLE PROD.PREPRTNS,NES	84.80	058	FRUIT,PRESERVED,PREPARED	94.31
057	FRUIT,NUTS EXCL.OIL NUTS	82.02	017	MEAT,OFFL.PRPD,PRSVD,NES	89.38
058	FRUIT,PRESERVED,PREPARED	80.42	022	MILK AND CREAM	86.09
056	VEGTABLES,PRPD,PRSVD,NES	76.58	048	CEREAL PREPARATIONS	81.04
073	CHOCOLATE,OTH.COCOA PREP	68.49	047	OTHER CEREAL MEAL,FLOURS	78.87
059	FRUIT, VEGETABLE JUICES	61.08	074	TEA AND MATE	76.84
062	SUGAR CONFECTIONERY	58.97	044	MAIZE UNMILLED	76.83
054	VEGETABLES	58.34	098	EDIBLE PROD.PREPRTNS,NES	75.95
022	MILK AND CREAM	55.95	057	FRUIT,NUTS EXCL.OIL NUTS	71.49
			056	VEGTABLES,PRPD,PRSVD,NES	69.07
			081	ANIMAL FEED STUFF	59.03
			073	CHOCOLATE,OTH.COCOA PREP	57.43
			011	BOVINE MEAT	54.88
			001	LIVE ANIMALS	53.74
			054	VEGETABLES	52.19
	Low IITBi			**Low IITBi**	
011	BOVINE MEAT	47.21	071	COFFEE,COFFEE SUBSTITUTE	46.90
081	ANIMAL FEED STUFF	45.14	012	OTHER MEAT, MEAT OFFAL	42.58
048	CEREAL PREPARATIONS	45.00	091	MARGARINE AND SHORTENING	32.28
017	MEAT,OFFL.PRPD,PRSVD,NES	31.21	061	SUGARS,MOLASSES,HONEY	29.36
037	FISH ETC.PREPD,PRSVD.NES	28.90	075	SPICES	25.17
001	LIVE ANIMALS	28.68	025	EGGS,BIRDS,YOLKS,ALBUMIN	21.73
012	OTHER MEAT, MEAT OFFAL	23.66	024	CHEESE AND CURD	18.98
036	CRUSTACEANS,MOLLUSCS ETC	22.58	036	CRUSTACEANS,MOLLUSCS ETC	11.57
016	MEAT,ED.OFFL,DRY,SLT,SMK	20.83	037	FISH ETC.PREPD,PRSVD.NES	11.00
072	COCOA	18.18	072	COCOA	10.04
091	MARGARINE AND SHORTENING	18.00	023	BUTTER,OTHER FAT OF MILK	8.94
024	CHEESE AND CURD	12.69	034	FISH,FRESH,CHILLED,FROZN	7.05
023	BUTTER,OTHER FAT OF MILK	11.93	016	MEAT,ED.OFFL,DRY,SLT,SMK	5.61
061	SUGARS,MOLASSES,HONEY	9.13	035	FISH,DRIED,SALTED,SMOKED	1.93
075	SPICES	8.83	045	OTHER CEREALS, UNMILLED	0.49
046	MEAL,FLOUR OF WHEAT,MSLN	8.66	042	RICE	0.28
074	TEA AND MATE	5.32	041	WHEAT, MESLIN, UNMILLED	0.00
044	MAIZE UNMILLED	3.85			
045	OTHER CEREALS, UNMILLED	3.04			
071	COFFEE,COFFEE SUBSTITUTE	1.70			
034	FISH,FRESH,CHILLED,FROZN	1.47			
	High IITBi			**High IITBi**	
122	TOBACCO, MANUFACTURED	86.35	111	NON-ALCOHOL.BEVERAGE,NES	82.64

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, (High & Low IIT)					
2000			2009		
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
112	ALCOHOLIC BEVERAGES	71.41	122	TOBACCO, MANUFACTURED	55.74
111	NON-ALCOHOL.BEVERAGE,NES	51.03	112	ALCOHOLIC BEVERAGES	53.24
	High IITBi			**High IITBi**	
291	CRUDE ANIMAL MATERLS.NES	89.79	231	NATURAL RUBBER, ETC.	95.39
289	PREC.METAL ORES,CONCTRTS	84.65	232	SYNTHETIC RUBBER, ETC.	91.88
288	NON-FERROUS WASTE,SCRAP	71.90	287	ORE,CONCENTR.BASE METALS	91.88
223	OILSEED(OTH.FIX.VEG.OIL)	66.56	281	IRON ORE, CONCENTRATES	84.54
292	CRUDE VEG.MATERIALS, NES	66.25	274	SULPHUR,UNRSTD.IRON PYRS	69.69
272	FERTILIZERS, CRUDE	60.41	263	COTTON	67.37
			291	CRUDE ANIMAL MATERLS.NES	63.92
			269	WORN CLOTHING,TEXTL.ARTL	63.22
			272	FERTILIZERS, CRUDE	62.63
	Low IITBi			**Low IITBi**	
266	SYNTHETIC FIBRES	49.11	222	OILSEED(SFT.FIX VEG.OIL)	47.97
269	WORN CLOTHING,TEXTL.ARTL	42.11	278	OTHER CRUDE MINERALS	46.83
278	OTHER CRUDE MINERALS	24.90	292	CRUDE VEG.MATERIALS, NES	43.88
277	NATURAL ABRASIVES, NES	23.86	282	FERROUS WASTE AND SCRAP	42.99
247	WOOD ROUGH,ROUGH SQUARED	23.36	223	OILSEED(OTH.FIX.VEG.OIL)	35.57
267	OTHER MAN-MADE FIBRES	23.26	288	NON-FERROUS WASTE,SCRAP	31.56
287	ORE,CONCENTR.BASE METALS	18.30	277	NATURAL ABRASIVES, NES	22.63
268	WOOL, OTHER ANIMAL HAIR	12.15	245	FUEL WOOD, WOOD CHARCOAL	21.35
282	FERROUS WASTE AND SCRAP	9.30	211	HIDES,SKINS(EX.FURS),RAW	18.50
273	STONE, SAND AND GRAVEL	8.87	289	PREC.METAL ORES,CONCTRTS	12.38
222	OILSEED(SFT.FIX VEG.OIL)	7.21	247	WOOD ROUGH,ROUGH SQUARED	10.07
211	HIDES,SKINS(EX.FURS),RAW	5.44	248	WOOD, SIMPLY WORKED	8.60
248	WOOD, SIMPLY WORKED	4.77	268	WOOL, OTHER ANIMAL HAIR	8.22
232	SYNTHETIC RUBBER, ETC.	1.95	273	STONE, SAND AND GRAVEL	7.33
251	PULP AND WASTE PAPER	0.72	246	WOOD IN CHIPS, PARTICLES	5.04
			266	SYNTHETIC FIBRES	4.49
			251	PULP AND WASTE PAPER	1.95
			285	ALUMINIUM ORE,CONCTR.ETC	0.03
	High IITBi			**High IITBi**	
333	PETROLEUM OILS, CRUDE	64.37	344	PETROLEUM GASES, NES	85.81
322	BRIQUETTES,LIGNITE,PEAT	63.78	335	RESIDUAL PETROL.PRODUCTS	58.02
	Low IITBi			**Low IITBi**	
334	PETROLEUM PRODUCTS	6.48	334	PETROLEUM PRODUCTS	36.48
335	RESIDUAL PETROL.PRODUCTS	3.18	322	BRIQUETTES,LIGNITE,PEAT	34.96
			333	PETROLEUM OILS, CRUDE	24.11
			342	LIQUEFIED PROPANE,BUTANE	3.36
	High IITBi			**High IITBi**	
422	FIXED VEG.FAT,OILS,OTHER	89.53	422	FIXED VEG.FAT,OILS,OTHER	86.51
431	ANIMAL,VEG.FATS,OILS,NES	59.18	411	ANIMAL OILS AND FATS	61.74

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, (High & Low IIT)					
2000			2009		
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
	Low IITBi			**Low IITBi**	
411	ANIMAL OILS AND FATS	35.82	431	ANIMAL,VEG.FATS,OILS,NES	32.94
421	FIXED VEG.FAT,OILS, SOFT	0.75	421	FIXED VEG.FAT,OILS, SOFT	3.49
	High IITBi			**High IITBi**	
582	PLASTIC PLATE,SHEETS,ETC	94.59	591	INSECTICIDES, ETC.	94.76
524	OTHER CHEMICAL COMPOUNDS	92.60	532	DYEING,TANNING MATERIALS	91.83
554	SOAP,CLEANERS,POLISH,ETC	84.49	514	NITROGEN-FUNCT.COMPOUNDS	87.20
562	FERTILIZER,EXCEPT GRP272	69.54	554	SOAP,CLEANERS,POLISH,ETC	86.96
575	OTH.PLASTIC,PRIMARY FORM	66.61	582	PLASTIC PLATE,SHEETS,ETC	86.44
541	MEDICINES,ETC.EXC.GRP542	62.24	592	STARCHES,INULIN,ETC.	85.64
574	POLYACETAL,POLYCARBONATE	56.75	583	MONOFILAMENT OF PLASTICS	76.01
581	PLASTIC TUBE,PIPE,HOSE	55.48	562	FERTILIZER,EXCEPT GRP272	70.05
516	OTHER ORGANIC CHEMICALS	54.88	541	MEDICINES,ETC.EXC.GRP542	68.99
592	STARCHES,INULIN,ETC.	54.59	598	MISC.CHEMICAL PRODTS.NES	59.91
			516	OTHER ORGANIC CHEMICALS	59.57
			553	PERFUMERY,COSMETICS,ETC.	59.53
			579	PLASTIC WASTE, SCRAP ETC	59.25
			511	HYDROCARBONS,NES,DERIVTS	58.67
			581	PLASTIC TUBE,PIPE,HOSE	52.25
	Low IITBi			**Low IITBi**	
591	INSECTICIDES, ETC.	49.59	513	CARBOXYLIC ACIDS,DERIVTS	47.62
593	EXPLOSIVES,PYROTECHNICS	49.28	533	PIGMENTS, PAINTS, ETC.	43.30
598	MISC.CHEMICAL PRODTS.NES	42.40	573	POLYMERS,VINYL CHLORIDE	42.42
553	PERFUMERY,COSMETICS,ETC.	41.60	574	POLYACETAL,POLYCARBONATE	30.95
512	ALCOHOL,PHENOL,ETC.DERIV	40.91	542	MEDICAMENTS	29.93
525	RADIO-ACTIVE MATERIALS	38.69	515	ORGANO-INORGANIC COMPNDS	29.45
515	ORGANO-INORGANIC COMPNDS	35.04	575	OTH.PLASTIC,PRIMARY FORM	29.03
514	NITROGEN-FUNCT.COMPOUNDS	33.47	523	METAL.SALTS,INORGAN.ACID	27.87
583	MONOFILAMENT OF PLASTICS	32.94	524	OTHER CHEMICAL COMPOUNDS	27.70
533	PIGMENTS, PAINTS, ETC.	29.22	522	INORGANIC CHEM.ELEMENTS	24.03
597	PREPRD ADDITIVES,LIQUIDS	26.29	571	POLYMERS OF ETHYLENE	20.04
571	POLYMERS OF ETHYLENE	21.87	531	SYNTH.COLOURS,LAKES,ETC.	18.97
551	ESSNTL.OIL,PERFUME,FLAVR	16.86	572	POLYMERS OF STYRENE	16.13
542	MEDICAMENTS	16.28	551	ESSNTL.OIL,PERFUME,FLAVR	11.82
572	POLYMERS OF STYRENE	15.80	593	EXPLOSIVES,PYROTECHNICS	10.70
531	SYNTH.COLOURS,LAKES,ETC.	11.36	597	PREPRD ADDITIVES,LIQUIDS	4.23
573	POLYMERS,VINYL CHLORIDE	11.10	512	ALCOHOL,PHENOL,ETC.DERIV	2.27
579	PLASTIC WASTE, SCRAP ETC	5.87	525	RADIO-ACTIVE MATERIALS	0.04
522	INORGANIC CHEM.ELEMENTS	5.87			
513	CARBOXYLIC ACIDS,DERIVTS	3.75			
532	DYEING,TANNING MATERIALS	3.66			
523	METAL.SALTS,INORGAN.ACID	2.03			
511	HYDROCARBONS,NES,DERIVTS	0.86			

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, (High & Low IIT)					
2000			2009		
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
	High IITBi			**High IITBi**	
684	ALUMINIUM	96.71	699	MANUFACTS.BASE METAL,NES	96.42
691	METALLIC STRUCTURES NES	95.96	612	MANUFACT.LEATHER ETC.NES	94.07
696	CUTLERY	94.14	696	CUTLERY	92.66
695	TOOLS	90.79	656	TULLE,LACE,EMBROIDRY.ETC	92.17
699	MANUFACTS.BASE METAL,NES	89.99	642	PAPER,PAPERBOARD,CUT ETC	91.47
612	MANUFACT.LEATHER ETC.NES	89.30	625	RUBBER TYRES,TUBES,ETC.	88.69
693	WIRE PRODUCTS EXCL.ELECT	87.31	676	IRON,STL.BAR,SHAPES ETC.	87.37
621	MATERIALS OF RUBBER	86.46	657	SPECIAL YARN,TXTL.FABRIC	87.28
673	FLAT-ROLLED IRON ETC.	82.13	684	ALUMINIUM	86.56
674	FLAT-ROLLED PLATED IRON	81.96	693	WIRE PRODUCTS EXCL.ELECT	86.03
641	PAPER AND PAPERBOARD	78.44	692	CONTAINERS,STORAGE,TRNSP	83.61
682	COPPER	78.08	658	TEXTILE ARTICLES NES	83.17
629	ARTICLES OF RUBBER, NES	75.82	653	FABRICS,MAN-MADE FIBRES	81.87
697	HOUSEHOLD EQUIPMENT,NES	73.38	641	PAPER AND PAPERBOARD	78.51
658	TEXTILE ARTICLES NES	72.04	695	TOOLS	74.68
692	CONTAINERS,STORAGE,TRNSP	71.67	661	LIME,CEMENT,CONSTR.MATRL	68.92
633	CORK MANUFACTURES	71.45	666	POTTERY	67.04
654	OTH.TEXTILE FABRIC,WOVEN	65.30	659	FLOOR COVERINGS, ETC.	67.03
656	TULLE,LACE,EMBROIDRY.ETC	64.78	691	METALLIC STRUCTURES NES	62.43
665	GLASSWARE	64.59	667	PEARLS,PRECIOUS STONES	61.83
613	FURSKINS,TANNED,DRESSED	63.09	675	FLAT-ROLLED, ALLOY STEEL	59.19
666	POTTERY	62.87	633	CORK MANUFACTURES	58.98
642	PAPER,PAPERBOARD,CUT ETC	61.81	664	GLASS	56.07
659	FLOOR COVERINGS, ETC.	61.01	697	HOUSEHOLD EQUIPMENT,NES	53.13
635	WOOD MANUFACTURES, NES	60.68	635	WOOD MANUFACTURES, NES	51.71
663	MINERAL MANUFACTURES,NES	57.52	654	OTH.TEXTILE FABRIC,WOVEN	51.42
625	RUBBER TYRES,TUBES,ETC.	57.26	673	FLAT-ROLLED IRON ETC.	50.31
679	TUBES,PIPES,ETC.IRON,STL	54.56			
611	LEATHER	53.94			
652	COTTON FABRICS, WOVEN	52.34			
	Low IITBi			**Low IITBi**	
657	SPECIAL YARN,TXTL.FABRIC	49.86	682	COPPER	49.81
655	KNIT.CROCHET.FABRIC NES	44.63	679	TUBES,PIPES,ETC.IRON,STL	48.64
651	TEXTILE YARN	41.11	652	COTTON FABRICS, WOVEN	47.92
685	LEAD	39.85	629	ARTICLES OF RUBBER, NES	44.86
653	FABRICS,MAN-MADE FIBRES	30.70	663	MINERAL MANUFACTURES,NES	40.33
634	VENEERS, PLYWOOD, ETC.	23.30	674	FLAT-ROLLED PLATED IRON	39.32
681	SILVER,PLATINUM,ETC.	15.89	655	KNIT.CROCHET.FABRIC NES	38.05
694	NAILS,SCREWS,NUTS,ETC.	15.23	678	WIRE OF IRON OR STEEL	36.30
675	FLAT-ROLLED, ALLOY STEEL	14.94	621	MATERIALS OF RUBBER	23.99
678	WIRE OF IRON OR STEEL	14.02	689	MISC.NON-FERR.BASE METAL	23.40
664	GLASS	12.72	694	NAILS,SCREWS,NUTS,ETC.	23.04
686	ZINC	12.36	651	TEXTILE YARN	22.61
661	LIME,CEMENT,CONSTR.MATRL	10.55	685	LEAD	18.47
672	INGOTS ETC.IRON OR STEEL	8.70	634	VENEERS, PLYWOOD, ETC.	14.50

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, (High & Low IIT)					
2000			2009		
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
662	CLAY,REFRCT.CONSTR.MATRL	7.50	681	SILVER,PLATINUM,ETC.	12.34
689	MISC.NON-FERR.BASE METAL	7.09	665	GLASSWARE	7.15
676	IRON,STL.BAR,SHAPES ETC.	6.89	611	LEATHER	5.94
667	PEARLS,PRECIOUS STONES	3.15	662	CLAY,REFRCT.CONSTR.MATRL	5.32
677	RAILWAY TRACK IRON,STEEL	1.62	613	FURSKINS,TANNED,DRESSED	1.94
687	TIN	0.61	683	NICKEL	0.70
			677	RAILWAY TRACK IRON,STEEL	0.47
			672	INGOTS ETC.IRON OR STEEL	0.14
			686	ZINC	0.06
			671	PIG IRON,SPIEGELEISN,ETC	0.04
	High IITBi			**High IITBi**	
792	AIRCRAFT,ASSOCTD.EQUIPNT	99.14	718	OTH.POWR.GENRTNG.MACHNRY	99.91
723	CIVIL ENGINEERING EQUIPT	98.40	737	METALWORKING MACHNRY NES	99.85
784	PARTS,TRACTORS,MOTOR VEH	97.36	793	SHIP,BOAT,FLOAT.STRUCTRS	99.27
747	TAPS,COCKS,VALVES,ETC.	96.94	774	ELECTRO-MEDCL,XRAY EQUIP	99.16
786	TRAILERS,SEMI-TRAILR,ETC	96.77	743	PUMPS NES,CENTRIFUGS ETC	98.92
728	OTH.MACH,PTS,SPCL INDUST	95.71	735	PARTS,NES,FOR MACH-TOOLS	95.68
718	OTH.POWR.GENRTNG.MACHNRY	95.33	724	TEXTILE,LEATHER MACHINES	94.55
744	MECHANICAL HANDLNG EQUIP	92.25	726	PRINTNG,BOOKBINDNG MACHS	93.71
772	ELEC.SWITCH.RELAY.CIRCUT	89.87	762	RADIO-BROADCAST RECEIVER	93.58
749	NON-ELECT MACH.PARTS,ETC	89.39	764	TELECOMM.EQUIP.PARTS NES	92.71
785	CYCLES,MOTORCYCLES ETC.	89.27	761	TELEVISION RECEIVERS ETC	91.01
778	ELECTRIC.MACH.APPART.NES	89.16	728	OTH.MACH,PTS,SPCL INDUST	90.93
745	OTH.NONELEC MCH,TOOL,NES	86.79	714	ENGINES,MOTORS NON-ELECT	88.79
773	ELECTR DISTRIBT.EQPT NES	86.50	778	ELECTRIC.MACH.APPART.NES	87.53
748	TRANSMISSIONS SHAFTS ETC	86.35	771	ELECT POWER MACHNY.PARTS	86.01
764	TELECOMM.EQUIP.PARTS NES	79.34	747	TAPS,COCKS,VALVES,ETC.	85.19
771	ELECT POWER MACHNY.PARTS	79.14	713	INTRNL COMBUS PSTN ENGIN	84.45
735	PARTS,NES,FOR MACH-TOOLS	76.05	784	PARTS,TRACTORS,MOTOR VEH	80.35
726	PRINTNG,BOOKBINDNG MACHS	73.66	716	ROTATING ELECTRIC PLANT	80.29
711	STEAM GENER.BOILERS,ETC.	69.63	749	NON-ELECT MACH.PARTS,ETC	78.93
759	PARTS,FOR OFFICE MACHINS	66.28	745	OTH.NONELEC MCH,TOOL,NES	75.37
725	PAPER,PULP MILL MACHINES	63.36	748	TRANSMISSIONS SHAFTS ETC	74.35
742	PUMPS FOR LIQUIDS,PARTS	62.43	742	PUMPS FOR LIQUIDS,PARTS	73.87
743	PUMPS NES,CENTRIFUGS ETC	60.34	759	PARTS,FOR OFFICE MACHINS	73.61
793	SHIP,BOAT,FLOAT.STRUCTRS	55.60	725	PAPER,PULP MILL MACHINES	68.57
775	DOM.ELEC,NON-ELEC.EQUIPT	55.54	773	ELECTR DISTRIBT.EQPT NES	68.50
727	FOOD-PROCESS.MCH.NON DOM	51.08	772	ELEC.SWITCH.RELAY.CIRCUT	67.15
741	HEATNG,COOLNG EQUIP,PART	50.55	775	DOM.ELEC,NON-ELEC.EQUIPT	65.44
			723	CIVIL ENGINEERING EQUIPT	60.90
			752	AUTOMATC.DATA PROC.EQUIP	60.65
			763	SOUND RECORDER,PHONOGRPH	59.34
			744	MECHANICAL HANDLNG EQUIP	58.12
			785	CYCLES,MOTORCYCLES ETC.	55.07
	Low IITBi			**Low IITBi**	

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, (High & Low IIT)					
2000			2009		
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
733	MACH-TOOLS,METAL-WORKING	49.80	786	TRAILERS,SEMI-TRAILR,ETC	49.08
714	ENGINES,MOTORS NON-ELECT	49.76	731	METAL REMOVAL WORK TOOLS	48.01
721	AGRIC.MACHINES,EX.TRACTR	45.79	727	FOOD-PROCESS.MCH.NON DOM	43.67
774	ELECTRO-MEDCL,XRAY EQUIP	44.58	721	AGRIC.MACHINES,EX.TRACTR	42.97
724	TEXTILE,LEATHER MACHINES	43.81	776	TRANSISTORS,VALVES,ETC.	39.41
713	INTRNL COMBUS PSTN ENGIN	40.51	741	HEATNG,COOLNG EQUIP,PART	39.16
783	ROAD MOTOR VEHICLES NES	38.11	746	BALL OR ROLLER BEARINGS	38.27
763	SOUND RECORDER,PHONOGRPH	35.62	751	OFFICE MACHINES	34.25
737	METALWORKING MACHNRY NES	32.41	781	PASS.MOTOR VEHCLS.EX.BUS	30.57
731	METAL REMOVAL WORK TOOLS	29.37	722	TRACTORS	27.07
751	OFFICE MACHINES	28.21	782	GOODS,SPCL TRANSPORT VEH	25.25
776	TRANSISTORS,VALVES,ETC.	27.38	733	MACH-TOOLS,METAL-WORKING	18.76
716	ROTATING ELECTRIC PLANT	26.23	711	STEAM GENER.BOILERS,ETC.	17.04
782	GOODS,SPCL TRANSPORT VEH	23.76	792	AIRCRAFT,ASSOCTD.EQUIPNT	12.73
752	AUTOMATC.DATA PROC.EQUIP	21.47	791	RAILWAY VEHICLES.EQUIPNT	11.59
746	BALL OR ROLLER BEARINGS	21.26	712	STEAM TURBINES	9.22
762	RADIO-BROADCAST RECEIVER	11.47	783	ROAD MOTOR VEHICLES NES	6.63
712	STEAM TURBINES	2.76			
791	RAILWAY VEHICLES.EQUIPNT	2.70			
781	PASS.MOTOR VEHCLS.EX.BUS	0.14			
	High IITBi			**High IITBi**	
845	OTHR.TEXTILE APPAREL,NES	99.27	874	MEASURE,CONTROL INSTRMNT	99.60
846	CLOTHING ACCESSRS,FABRIC	96.53	813	LIGHTNG FIXTURES ETC.NES	96.58
844	WOMEN,GIRLS CLOTHNG.KNIT	95.28	885	WATCHES AND CLOCKS	85.06
895	OFFICE,STATIONERY SUPPLS	94.69	871	OPTICAL INSTRUMENTS,NES	84.68
874	MEASURE,CONTROL INSTRMNT	89.70	811	PREFABRICATED BUILDINGS	82.12
872	MEDICAL INSTRUMENTS NES	85.44	873	METERS,COUNTERS,NES	78.98
843	MENS,BOYS CLOTHING,KNIT	82.58	899	MISC MANUFCTRD GOODS NES	77.65
897	GOLD,SILVERWARE,JEWL NES	80.61	897	GOLD,SILVERWARE,JEWL NES	77.29
842	WOMEN,GIRL CLOTHNG,XKNIT	78.51	893	ARTICLES,NES,OF PLASTICS	75.38
893	ARTICLES,NES,OF PLASTICS	76.67	842	WOMEN,GIRL CLOTHNG,XKNIT	73.01
821	FURNITURE,CUSHIONS,ETC.	76.27	831	TRUNK,SUIT-CASES,BAG,ETC	72.63
813	LIGHTNG FIXTURES ETC.NES	76.13	844	WOMEN,GIRLS CLOTHNG.KNIT	71.75
848	CLOTHNG,NONTXTL;HEADGEAR	74.13	846	CLOTHING ACCESSRS,FABRIC	71.39
851	FOOTWEAR	69.92	896	WORKS OF ART,ANTIQUE ETC	70.97
831	TRUNK,SUIT-CASES,BAG,ETC	69.60	881	PHOTOGRAPH APPAR.ETC.NES	67.18
899	MISC MANUFCTRD GOODS NES	62.10	872	MEDICAL INSTRUMENTS NES	67.08
811	PREFABRICATED BUILDINGS	61.93	821	FURNITURE,CUSHIONS,ETC.	59.32
841	MENS,BOYS CLOTHNG,X-KNIT	61.63	882	PHOTO.CINEMATOGRPH.SUPPL	56.58
896	WORKS OF ART,ANTIQUE ETC	50.30	848	CLOTHNG,NONTXTL;HEADGEAR	54.94
	Low IITBi			**Low IITBi**	
891	ARMS AND AMMUNITION	49.32	891	ARMS AND AMMUNITION	49.75
894	BABY CARRIAGE,TOYS,GAMES	37.65	895	OFFICE,STATIONERY SUPPLS	46.54
892	PRINTED MATTER	31.47	892	PRINTED MATTER	45.65
873	METERS,COUNTERS,NES	28.81	894	BABY CARRIAGE,TOYS,GAMES	42.43

New Zealand-Australia Intra Industry Trade by industry : 3-digit SITC, (High & Low IIT)					
2000			2009		
SITC	**Description**	**IITBi**	**SITC**	**Description**	**IITBi**
871	OPTICAL INSTRUMENTS,NES	17.02	845	OTHR.TEXTILE APPAREL,NES	38.33
812	PLUMBNG,SANITRY,EQPT.ETC	8.61	851	FOOTWEAR	25.99
898	MUSICAL INSTRUMENTS,ETC.	7.81	898	MUSICAL INSTRUMENTS,ETC.	25.67
883	CINE.FILM EXPOSD.DEVELPD	6.41	884	OPTICAL GOODS NES	18.99
881	PHOTOGRAPH APPAR.ETC.NES	5.65	812	PLUMBNG,SANITRY,EQPT.ETC	18.93
885	WATCHES AND CLOCKS	4.13	841	MENS,BOYS CLOTHNG,X-KNIT	13.95
882	PHOTO.CINEMATOGRPH.SUPPL	3.73	843	MENS,BOYS CLOTHING,KNIT	11.62
884	OPTICAL GOODS NES	0.65	883	CINE.FILM EXPOSD.DEVELPD	3.14
	High IITBi			**High IITBi**	
961	COIN NONGOLD NONCURRENT	66.67	931	SPEC.TRANSACT.NOT CLASSD	51.20
	Low IITBi			**Low IITBi**	
971	GOLD,NONMONTRY EXCL ORES	11.96	971	GOLD,NONMONTRY EXCL ORES	12.59
931	SPEC.TRANSACT.NOT CLASSD	0.61	961	COIN NONGOLD NONCURRENT	4.09
Source: UN COMTRADE Database. Own Estimations.					

Source: Data from United Nations Trade Statistics Head Office New York.

Figure 2: New Zealand-Selected countries IIT 3-Digit Summary values

NZ to Others Indices Characteristics in 1990 and 2000 at 3-digit SITC level