The Potential Impact of New Zealand-China Free Trade Agreement on New Zealand's Textile, Clothing and Footwear Industries

A thesis presented in partial fulfilment
of the requirements for the degree of

Master of Applied Economics

at the Department of Applied and International Economics
Massey University
Palmerston North
New Zealand

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2005

ABSTRACT

The New Zealand and Chinese governments are currently negotiating a Free Trade Agreement (FTA). The proposed FTA would provide a basis for a significant expansion of trade between New Zealand and China. According to the joint feasibility study by the New Zealand Ministry of Foreign Affairs and Trade and the Chinese Ministry of Commerce, both countries will gain at the macro level of economic activities. However, the potential impact on specific industries will be different. Textiles, clothing and footwear industries in New Zealand have undergone significant contraction since the country's trade liberalisation and reduction in protection in the mid-1980s. More recently, these industries in New Zealand have achieved dramatic restructuring and rationalisation in the process of adopting trade liberalisation and the reduction in protection. Nevertheless, the industries are the few that still have relatively highly tariffs in New Zealand. Given the outstanding performance of China's textiles, clothing and footwear industries, the future of the textiles, clothing and footwear industries in New Zealand would be hard to predict. This thesis examines the potential impact of the proposed Free Trade Agreement (FTA) between New Zealand and China on the textiles, clothing and footwear industries in New Zealand.

A survey method was used for the purpose of this study. Firstly, the recent performance of the textiles, clothing and footwear industries in New Zealand and China and the two way trade between the two nations were analysed in detail to provide the basis for the assessment of the potential impacts under the context of the proposed FTA. Next, to examine such potential impact directly, a sample of 15 textiles, clothing and footwear firms currently operating in New Zealand was selected.

Qualitative information, including threats, opportunities and firms' response strategies arising from a NZ-China FTA, was obtained through interviewing each firm's senior executives.

The results of this study show that New Zealand's trade liberalisation since the mid-1980s has yielded a substantially more competitive and productive industry base. Trade liberalisation and reduction in protection since the mid-1980s has forced many textile, clothing and footwear (TCF) firms to exit the industry, so the survivors are all relatively strong players in their respective niche markets. However, a further contracting of the industries in terms of manufacturing capability will be inevitable in the environment of a free trade deal with China, given the rapidity of China in expanding its production and lowering its prices and the intrinsic disadvantage of TCF industries in New Zealand. The employment in TCF manufacturing will further decline. The bilateral free trade with China would further reinforce the need for New Zealand TCF industries to continue to restructure and to move into design-based, high-end merchandise with a niche market focus. The findings of this study highlight two directions of future TCF industries in the context of an FTA with China: firstly, the future of New Zealand TCF industries will be one in which changes will be driven by design talent, technology and speed to market. Secondly, another possible way out for New Zealand TCF industries lies in the management of markets, organizing a global supply chain of subcontractors and in retailing.

ACKNOWLEDGEMENTS

It has been a great experience for me to complete this thesis. I would like to express my sincere thanks and gratitude to the many people who assisted in the development of this thesis report.

First of all, I would like to express my deepest appreciation to my supervisors, Professor Allan Rae and Dr. Neil Campbell for their support, guidance and encouragement throughout the course of this research. Their invaluable guidance, comments, constructive criticisms and technical and editorial advice are essential to the completion of this thesis. Their experience and wisdom were very helpful in enabling me to put this thesis into its final form and I have gained immensely from them.

Secondly, I would like to express my appreciation to all the firms' directors I interviewed for their generosity with their time and their patience in answering my questions. Without their support and contribution, this thesis would not have come this far. I also wish to thank Ms. Liz Francis, CEO of Textiles New Zealand and Ms. Julie Murphy, information Analyst of Textiles New Zealand, for their useful information and invaluable suggestions for this thesis.

Finally, I am greatly indebted to my family for their moral and financial support. In particular, special appreciation goes to my father, whose support, wisdom about life and encouragement have always inspired me in my life. In addition, special appreciation is also extended to my fiancée, Qi Chen for her endless moral support and love.

TABLE OF CONTENTS

Chapter Three
Overview of Global TCF Industries

Chapter Four
New Zealand's TCF Industries

Chapter Five
New Zealand's International Trade in TCF Products

Chapter Six
TCF Industries in China

Chapter Seven
Trade in TCF Products between New Zealand and China

Chapter Eight
Survey Results and Discussion

Chapter Nine
Recommendations and Conclusions

LIST OF FIGURES

LIST OF TABLES

Chapter One
Introduction

The New Zealand and Chinese governments are currently negotiating a free trade agreement.[1] Textile, clothing and footwear products (TCF) are China's top exports to New Zealand, accounting for more than half of New Zealand's total textile, clothing and footwear imports. Although it has withstood substantial trade liberalisation since the mid-1980s, the TCF industries in New Zealand still benefit from some tariff protection that could be phased out in a potential FTA. Therefore, the purpose of this thesis is to critically evaluate the potential impact of a free trade agreement with China on New Zealand's TCF industries, so as to gain a better understanding of the difficulties and challenges facing the industry and the ways in which the industry and its firms are likely to develop in the future.

1.1 Background of the Study

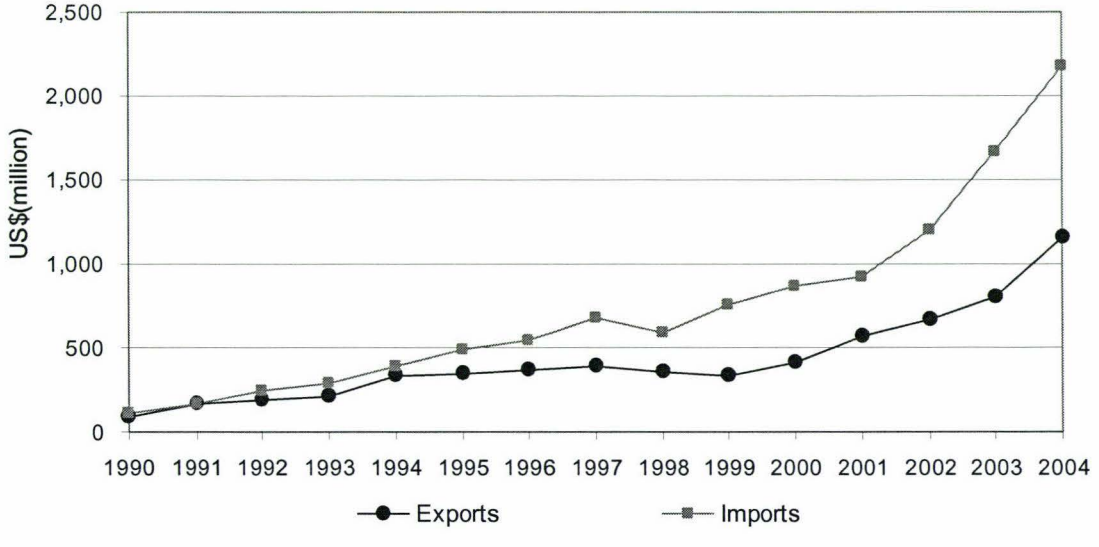
China has undergone an economic transformation virtually unparalleled in world history. Since the adoption of the economic reform and "open door" policy in the late 1970s, China's economic development has been spectacular with GDP increasing at an average annual rate of 9.5 per cent during the period 1978-2000 and the annual growth rate has continued in the 7-9% range during the period of 2000-2004 (World Bank, 2005). China has also taken a series of substantial actions to liberalize trade to respond to, and also take advantage of, the globalisation of the world economy since the late 1970s. China has, in fact, surprised the world with its gradual market-oriented

[1] In the remainder of this thesis this is referred as NZ-China FTA

approach to reforms. As a result, China has significantly strengthened its international competitiveness, with the total mechanised imports and exports reached US$1,154.7 billion in 2004 (WTO, 2004). Meanwhile, China's economic growth means greater prosperity for its people. China's middle class population has reached an estimated 150 million people, and its ranks are being added to every day. It is this emerging middle class that has driven the rapidly increasing demands for products that New Zealand is able to provide. In this sense, China is one of the world's most dynamic economies, along with the United States, becoming one of the twin engines of the global economy.

Since the establishment of the diplomatic relations between New Zealand and China on 22 December 1972, New Zealand-China economic and trade ties have seen a stable and healthy development. Since 1990, bilateral trade has experienced a fast development (see Figure 1.1). China has become New Zealand's fourth largest trading partner in terms of both imports and exports and is one of the newest and fastest growing markets.

Figure 1.1 New Zealand's Merchandise Trade with China: 1990-2004



Source: Based on data from UN Commodity Trade Database.

Further development of bilateral economic connections is expected to increase with the currently negotiated free trade agreement. Formal FTA negotiations between New Zealand and China were launched in October 2004 after Chinese President Hu Jintao visited New Zealand. The summary of the progress of the NZ-China FTA is shown in Table 1.1. The first round of negotiations was launched on December 2004, and by the time of writing, five rounds of negotiations have finished, and the sixth round of negotiations will begin in early March 2006.

Table 1.1 Progress of NZ-China FTA

Progress	Time
▪ Trade and Economic Cooperation Framework between New Zealand and China	May 2004
▪ Joint Feasibility Study	November 2004
▪ First Round of Negotiations	December 2004
▪ Second Round of Negotiations	February 2005
▪ Third Round of Negotiations	May 2005
▪ Fourth Round of Negotiations	July 2005
▪ Fifth Round of Negotiations	November 2005
▪ Sixth Round of Negotiations	March 2006

As a small open economy, New Zealand relies heavily on international trade for its development. The fast growth of the Chinese economy and its huge domestic market would ensure more benefit for New Zealand in the context of free trade with China. An FTA with China would raise the country's profile in one of the world's most important economies. The joint feasibility study conducted by the Chinese Ministry of Commerce and the Ministry of Foreign Affairs and Trade of New Zealand (2004) has concluded that both countries would benefit from having an FTA. According to

economic modelling by their study, total free trade could lift New Zealand exports of goods and services by between US$250 million and US$400 million a year during the next 20 years. For China, the expected gain would be between US$55 million and US$100 million annually.

1.2 Statement of the Problem

While it is generally accepted that a NZ-China FTA would bring significant gains to the New Zealand economy, especially for the sectors in which New Zealand has strong competitive advantage, such as agriculture, the future picture of the manufacturing industry in general is not so clear, especially the TCF industries.

Generally, being one of the oldest sectors in the history of industrial development, TCF industries are often referred to as a "traditional industries" which are characterised by labour intensity, low technology and low capital investment. Therefore, TCF industries in developed countries are all subject to contraction in the face of increasing import competition from low wage developing countries. Historically, TCF industries in New Zealand were highly protected by the government and are still one of the last few that retains some tariff protection today. TCF industries in New Zealand have been subject to significant contraction since New Zealand's trade liberalisation and reduction in protection. The industries were hit hard by extensive tariff cuts in the mid-1980s.

With the abundant labour force with low wages, it is generally accepted that China has a strong comparative advantage in producing labour-intensive products, such as

TCF products. China is a major player in the global TCF industries and Chinese TCF products are seen flourishing in world markets. In recent years, New Zealand's imports of TCF products were increasingly dominated by China, which supplied about 60 per cent of New Zealand's import of TCF products in 2004.[2]

New Zealand has undergone significant restructuring and rationalisation in the process of adapting to the trade liberalisation and reduction in protection since the mid-1980s. In recent years, the industries have begun to rebuild by switching focus away from competing with cheap imports and towards producing higher-value items for export. However, given the competitive strength of China's TCF industries, the future of New Zealand's TCF industries in the context of a free trade with China is uncertain.

Therefore, it is of significance to study the potential impact on the TCF industries, given a free trade agreement with China, in order to have literature available for those involved in the TCF industries in New Zealand and TCF industries in other high wage countries.

1.3 Objectives of the Study

This study attempts to critically evaluate the potential impact of a free trade agreement with China on New Zealand's textile, clothing and footwear industry, so as to gain a better understanding of the difficulties and challenges facing the industry and how the industry and firms are likely to develop in the future. Therefore, the primary

[2] UN Commodity Trade Database.

objective of this study is to analysis whether the textile, clothing and footwear industries can survive and prosper in New Zealand in the face of the increasing competitive pressure from China or whether it is really a "sunset industry". Secondly, the study aims to provide some policy recommendations for the future development of TCF industries in New Zealand.

Based on the objectives of the study, the following research questions are addressed:

- To what extent will the industry be affected by a bilateral free trade agreement with China?
- What is the future of New Zealand's TCF industry under an FTA with China?
- How might the industries adjust in the context of a FTA with China?

1.4 Research Methodology

Generally, the most common method used in the literature of impacts of trade policy is computable general equilibrium (CGE) modelling (e.g. Brown et al., 1992; Robinson et al., 1993; CIE, 2003). Given the purpose of this study and the small size but complex character of TCF industries in New Zealand, this method might not the best option. Instead, a survey method was used for the purpose of the study. This is accomplished in two stages.

In the first stage of the research, the information and data regarding the TCF industries in New Zealand are collected and analysed; meanwhile the Chinese TCF industries are also covered. The main purpose of this stage is to get a completed picture and a better understanding of the historical performance of the industries so as

to predict the potential impacts of the industries that could arise from a free trade agreement with China.

In the second stage of the research, the face-to-face interview survey method is used.[3] Fact-to-face interviewing techniques have enable researchers to discuss corporate issues and strategies with senior company representatives and to collect qualitative information that is used to supplement the survey findings. This includes the following three major activities:

- Prepare the sample and interview questions;
- Conduct the interviews;
- Analyse the results;

1.5 Organisation of the Study

The thesis is organized as follows. In Chapter Two, the relevant trade theories are reviewed so as to provide the framework for further analysis. An overview of world TCF industries is presented in Chapter Three. New Zealand's TCF industries are covered in Chapter Four and Chapter Five. Chapter Six provides an overview of Chinese TCF industries. TCF trade between New Zealand and China is discussed in Chapter Seven. The survey results and discussion are presented in Chapter Eight. Lastly, conclusions and recommendations are formulated in Chapter Nine.

[3] A more detailed description of the interview survey is presented in Chapter Eight.

Chapter Two
Review of the Literature

This chapter reviews the relevant international trade theories with the objective of setting the framework for the analysis in future chapters. The chapter can be divided into two parts. The first part is a general review of the theories on regional economic integration; since the main issue investigated in this study is dealing with the potential impact of an FTA with China on TCF industries in New Zealand, the ability to compete or the competitiveness of New Zealand TCF industries against Chinese TCF industries will play the key role in determining the outcome. Therefore, the second part of this chapter reviews the trade theories with emphasis on the concept of competitiveness in order to determine what the future may hold for New Zealand's TCF industries given an FTA with China.

2.1 Brief Review of the Theory of FTA

Given that the main interest of this study is to assess the potential impact of TCF industries in New Zealand in the context of a Free Trade Agreement with China, it is reasonable to briefly review the theory of preferential trading arrangements.

FTA is not a new concept in New Zeeland.[4] Bilateral and regional free trade agreements have long played an important role in New Zealand. As a small economy, New Zealand heavily relies on international trade. Thus, in the face of ever-expanding

[4] Information concerning New Zealand's regional trading agreement in this paragraph is mainly taken from New Zealand Ministry of Foreign Affair and Trade. http://www.mfat.govt.nz.

economic integration worldwide, New Zealand is actively involved in order to safeguard its trading interests. For instance, Closer Economic Relations (CER) with Australia came into effect in 1983; Closer Economic Partnership (CEP) with Singapore entered into force on 1 January 2001; negotiations on a Closer Economic Partnership (CEP) Agreement between New Zealand and Thailand were concluded in November 2004 and came into effect on 1 July 2005; the so called Pacific Three Closer Economic Partnership (P3 CEP) which involved New Zealand, Singapore and Chile, spanning the Pacific and Asia, was concluded July 2005. Besides currently negotiating China on an FTA, New Zealand is also actively negotiating an FTA with Malaysia, and a Closer Economic Partnership (CEP) with Hong Kong.

The NZ-China FTA is an economic integration between New Zealand and China. In economic theory, economic integration is defined as the discriminatory removal of all trade impediments between at least two participating countries and the establishment of a certain element of co-ordination and cooperation between them (El-Agraa, 1998). Economic integration thus results in the uniting of two or more national economies in a regional trading arrangement.

Economic integration can take several forms: a customs union (CU), a free trade area (FTA), a common market, an economic union or complete economic integration (Markusen et al, 1995). A Free Trade Area (Agreement), as in this study, is a form of preferential trade liberalisation in which two or more nations within the world trading community eliminate or substantially reduce barriers to trade among themselves (Brown & Hogendorn, 1994). Each member, however, maintains its own set of trade restrictions against outsiders and they do not adopt a common tariff for non-member as they would in a Custom Union (CU). Prior to Viner (1950), the FTA is assumed to

be welfare improving since the countries involved are able to specialise in the production of commodities in which they have comparative advantage. However, Viner (1950) argued that the effects of a FTA on the welfare of member countries are ambiguous. According to Viner (1950), there are two kinds of effect: trade creation and trade diversion. Trade creation occurs when the lowering of tariffs allows the partner country imports to replace high-cost domestic production; this improves welfare. Trade diversion, on the other hand, occurs when the removal of tariffs causes trade to be diverted from a third country (lower-cost production) to the partner country (higher-cost production); in this case reducing welfare (Carbaugh, 2005). In a Vinerian framework, welfare therefore depends on the extent of trade creation relative to trade diversion.

Therefore, it is reasonable to say that a FTA creates both opportunities and challenges for the economy involved via easing trade barriers and increasing trade flows among them, with economic costs and benefits which have to be carefully considered. However, this is out of the scope of this study. Although the impact of the FTA on economic growth remains a debatable matter, there is not doubt that the FTA does not always benefit everyone. While trade bring gains to a country, there are both winners and losers in the economy of the country. Some sectors of the economies involved will benefit within the FTA, while other sectors will lose. Trefler (2001) examined the short-run adjustment costs and long-run efficiency gains from the Canada-US FTA between 1989 and 1996 and concluded that for industries subject to large tariff cuts, the short-run cost included a 15 per cent decline in employment and about a 10 per cent decline in both output and the number of plants.

TCF industries in New Zealand are among the few industries that still enjoy a higher tariff protection, and thus the industries may be losers under the context of an FTA with China. But at the same time, there are expected to be some gains to the industries. As pointed out by Balassa (1969), economic growth can be achieved by the productivity and economies of scale obtained by firms in a more competitive environment and in a larger market offered by an FTA. An FTA with China would also further improve the productivity and efficiency of the TCF industries.

2.2 Theory of Ricardian Comparative Advantage

The theory of comparative advantage is one of the most fundamental insights economists have provided to explain actual patterns of international trade. The standard model of comparative advantage that relies on differences in labour productivity was first put forward by David Ricardo in 1817, which supplanted Adam Smith's absolute advantage theory (Maneschi, 1998). According to Adam Smith's theory of absolute advantage, a country specialises in the production of those goods in which it has an absolute advantage.[5] This suggests that a country will export goods which it has absolute cost advantage and import goods which it has absolute cost disadvantage. Ricardo (1817) extended this absolute advantage theory to comparative advantage theory. Obviously, there is a problem with the theory of absolute advantage in practice. What if a country has absolute advantage in all goods? According to the theory of Smith, no trade will occur in such a superior country. By contrast, according to Ricardo, the superior country will specialize where it has the greatest absolute advantage and the inferior country should specialize where it has the least absolute

[5] A country has an absolute advantage in the production of a good relative to another country if it can produce the good at lower cost or with higher productivity.

disadvantage. Put in other words, trade is determined by relative and not absolute efficiency in production. Following this principle, trade can still happen in certain goods even though its trading partners can produce those goods more cheaply.[6] As pointed out by Crimwade (1989), so long as there exists a difference in comparative cost between any two countries, a basis exists for specialisation and trade. Trade is driven by the principles of comparative advantage, and trade analysis of TCF industries between New Zealand and China should be based on this framework.

2.3 Hecksher-Ohlin Theory of Trade

In both Smith and Ricardo's models, patterns of international trade are determined by differences in the cost of production, i.e. labour productivity.[7] However, Ricardo did not satisfactorily explain why comparative advantages are different between countries and what determines comparative advantage, or why countries possess a comparative advantage in the production of certain goods. The Hecksher-Ohlin (H-O) or Factor Proportions theory of trade, which was developed by two Swedish economists, Eli Heckscher and Bertil Ohlin, describe a world in which international trade is based on factor endowments(Ruffin, 1999).[8] That is, in the H-O theory of trade, comparative advantage and trade are determined by national differences in factor endowments. Different goods require different proportions of the various factors of production in their production.[9] Some goods such as grains are land intensive, some are labour intensive such as clothing and footwear, and some are capital intensive such as

[6] In a Ricardian world, both countries benefit from trade based on comparative advantage.

[7] Labour productivity here simply means the quantity of output that can be produced with a unit of labour.

[8] For this reason, this theory is often referred to as Factor Endowment Theory.

[9] Basically, the factors of production refer to land, labour and capital.

automobiles. The factor endowments are different across countries as some are labour abundant and others are capital abundant. Therefore, the relative factor prices are different from country to country. Countries export goods that are intensive in the country's relatively abundant factors.

While the theory is not successful in explaining international trade in the real world, it is still of significant importance in the study of international trade and thus in this study.[10] The theory provides significant insight in explaining the global shifting of TCF production from developed countries to developing countries. Furthermore, the theory has important implications in analysing future prospects for TCF industries in New Zealand. Given the different factor endowment between New Zealand and China, according to this theory, TCF industries in each country have their own comparative advantage; and they need to specialise in the production according to their comparative advantage.

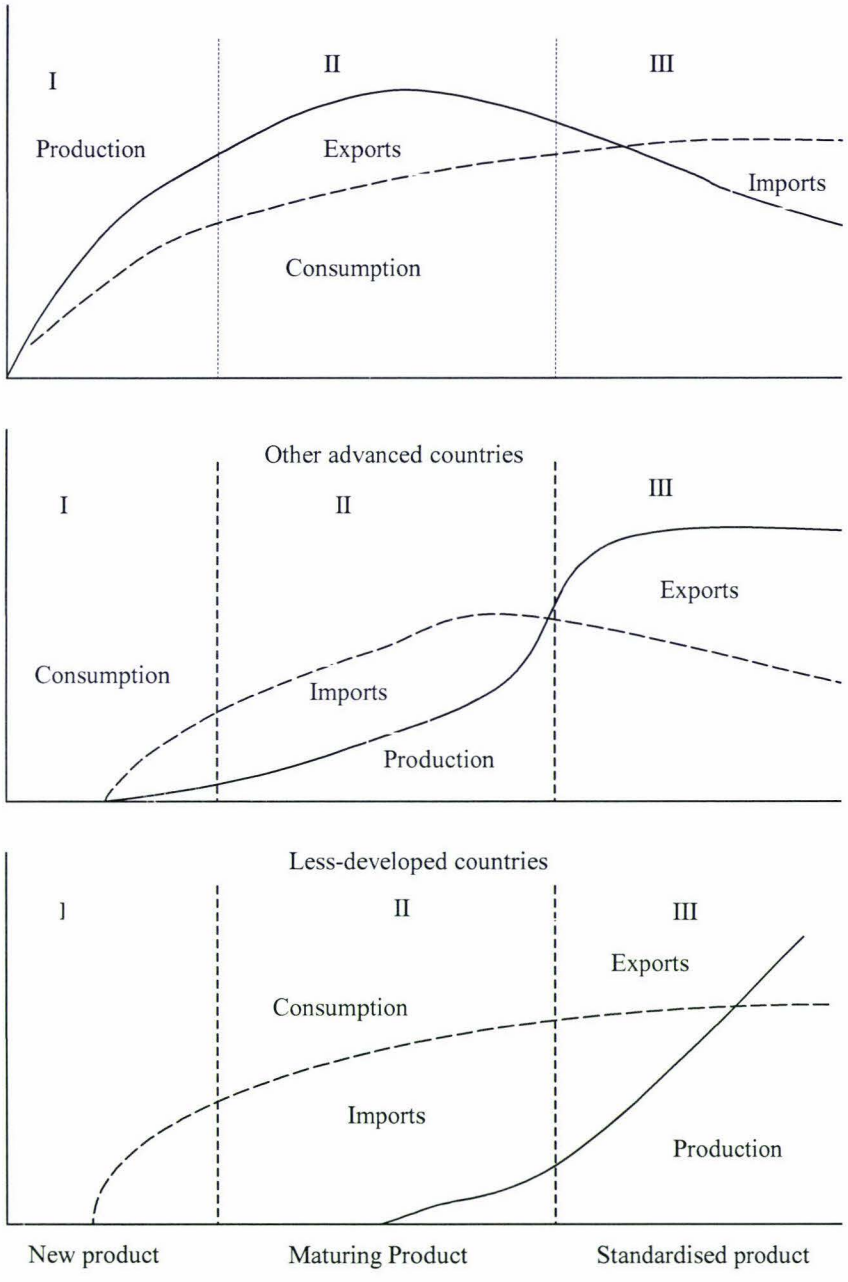
2.4 Product Life Cycle Theory

One of the weaknesses of the H-O theory is that it is a static theory of trade; technology change has no influence on the patterns of trade and specialisation. In a dynamic world, however, technological changes occur in different nations at different rates of speed (Carbaugh, 2005). Vernon (1966) developed a model of trade to take account of the importance of product innovation, and this is referred to as product life cycle theory. Vernon argued that many manufactured goods go through a product cycle of introduction, growth, maturity and decline. Thus, comparative advantages of

[10] See Leontief (1953).

these goods shift over time from one country to another (Cho & Moon, 2001). Vernon (1966) distinguished between three stages (see Figure 2.1).

Figure 2.1 The Product Life-Cycle Model of Trade



Source: Vernon (1981).

The first stage is the new-product stage. Customers have few possible suppliers to choose between and demand for the product is therefore high in relation to what can be supplied by the market. Demand also tends to be both price and income inelastic. This indicates that firms entering early in the product life cycle can benefit from

market power and monopoly profits. The second stage is the maturing-product stage. In this stage, products become more and more standardised, and firms can no longer compete entirely with product characteristics. Meanwhile, customers become more and more sensitive to price and over time the price decreases and exports will increase. The final stage is the standardised product stage. At this stage, the product is mainly competing on price (Gandolfo, 1998). The product is completely standardised such that price is the most important factor in ensuring that a firm maintains or enlarges its share of the market. Therefore, producers will seek the lowest-cost location for producing the product; as a result, production is increasingly shifting to the developing countries where labour is relatively cheap. Thus, in this stage, high-wage countries become net importers of the products in question, and low-wage countries become the most important exporters (as in Figure 2.1).

The prediction of the theory is that most product innovations will occur in high wage economies since high wage rates encourage producers to develop products which save on labour time. The conclusion from this theory is that high wage economies will tend to specialise in the production and export of new products, while developing countries will specialise in known products (Gandolfo, 1998). Again, the product life cycle theory provides further explanation of global shifts of TCF production, and moreover, it also provides theoretical support in the fact that much TCF production still remains in high wage countries. The theory provides useful insights in analysing the development of TCF in New Zealand under the context of a FTA with China.

2.5 Demand Side of Trade Theory

One common feature of the theories discussed in preceding sections is that all of them take the view point of the supply side. One of the weaknesses of the H-O theory of trade is that it ignores the part played by demand-side factors in international trade (Maneschi, 1998). Tastes are assumed to be identical in different countries. One of the demand-side theories of trade is the so-called theory of overlapping demands which was formulated by Linder (1961). The theory emphasises the importance of differences in consumer preferences for different varieties of products in international trade, rather than differences in the cost of producing different goods. [11] Linder (1961) points out that much of trade in manufacturing goods took place between countries with similar factor endowments and argued that, while factor endowments played a dominant role in determining patterns of trade in primary commodities, the structure of demand was more important for trade in manufactured goods. Demand for varieties arises because of variations in income across consumers, who buy a specific quality regarding their preferences and income constraints. Consumers with higher effective labour endowments demand the higher quality good. Therefore, one prediction of the model is that higher income country specialises completely in differentiated goods with high quality, whilst lower income country exports the homogeneous goods and differentiated goods with low quality. The model also predicts that higher bilateral differences in factor endowment lead to a higher share of intra-industry trade (IIT).[12]

An important application of this theory in this study is that different factor costs are not the sole determinant of the competitive advantage of particular industries. In this

[11] Product variety refers to the number of variants within a specific product group, see Lancaster (1990).

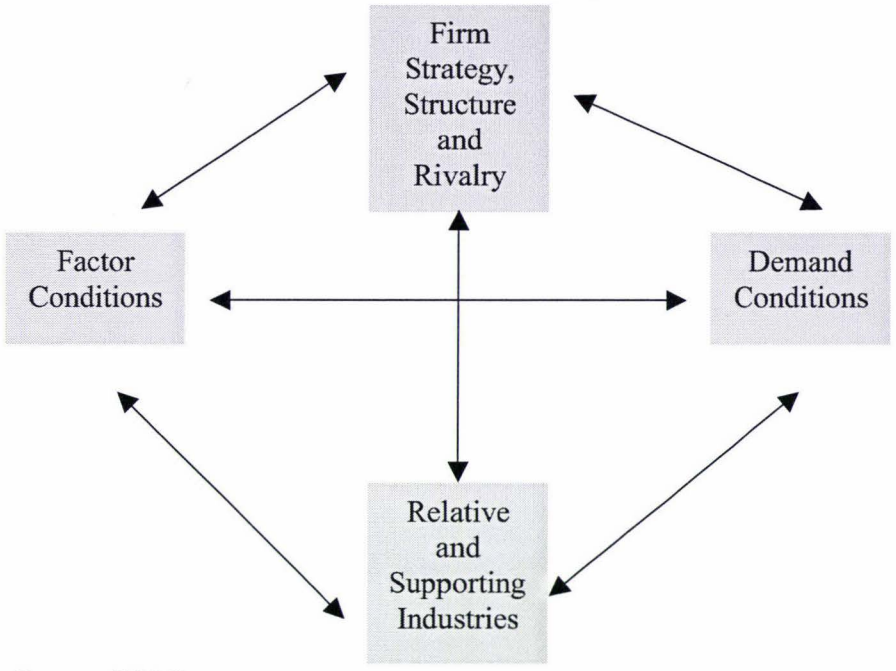
[12] IIT is defined as simultaneous import and export of the similar product within the same industry, see Markusen et al (1995).

case, the consumer demand is of significant importance in analysing the competitiveness of TCF industries in New Zealand. Furthermore, given the different factor endowments between New Zealand and China, according to the theory, it would therefore be worthwhile to check the IIT of TCF products between the two countries.

2.6 Porter's Diamond Model

Porter (1990) introduced the diamond model that allows the analysis of why a nation gains a competitive advantage in a particular industry. The diamond model is composed of two parts: indigenous and exogenous factors. The indigenous factors include factor conditions, demand conditions, firm structure, strategy and rivalry and related and supporting industries. Porter states that international success in a particular industry is determined by these four broad mutually reinforcing factors which create an environment which enables these firms to compete (see Figure 2.2). The exogenous factors are government and chances.

Figure 2.2 Porter's Diamond of National Advantage



Source: Porter (1990)

2.6.1 Factor Conditions

Factor conditions refer to inputs used as factors of production - such as labour, land, natural resources, capital and infrastructure (Porter, 1990). This sounds similar to standard economic theory where the key of international comparative advantage lies in factor endowments, but Porter (1990) argues that the traditional factor endowment argument of standard trade theory is too simplistic. He argues that the factors most important to comparative advantage are not inherited as in H-O theory, but are created. Furthermore, the broad categories of production factors, i.e. land, labour, and capital, are too general. He divides factors into basic and advanced. Basic factors such as natural resources, climate and un/semi-skilled labour are "passively inherited"; while advanced factors are those whose development demands large and substantial investment in human and physical capital.

2.6.2 Demand Conditions

The demand conditions refer to the state of home demand for products and services produced in a country (Porter, 1990). Porter places particular emphasis on the role of home demand in providing the impetus for upgrading competitive advantage (Grant, 1991) According to Porter, home demand conditions influence the shaping of particular factor conditions, they have impact on the pace and direction of innovation and product development. Porter further points out that home demand is determined by three major characteristics:

- Mixture, that is the mix of customers needs and wants;
- Scope and growth rate;
- The mechanisms that transmit domestic preferences to foreign markets;

Porter states that a country can achieve national advantages in an industry or market segment if home demand provides clear and earlier signals of demand trends to domestic suppliers than to foreign competitors. Normally, home markets have a much higher influence on an organization's ability to recognize customers' needs than foreign markets do.

2.6.3 Related and Supporting Industries

The third broad determinant of the competitiveness of an industry in Porter's diamond model is the existence or non-existence of internationally competitive supply industries and supporting industries (Porter, 1990). One internationally successful industry may lead to advantages in other related or supporting industries. Competitive supplying industries will reinforce innovation and internationalization in industries at later stages in the value system. Besides suppliers, related industries are of importance.

These are industries that can use and coordinate particular activities in the value chain together, or that are concerned with complementary products (e.g. hardware and software). Porter (1990) takes the shoe and leather industry in Italy as a typical example. Italy is not only successful with shoes and leather, but with related products and services such as leather working machinery, design, etc.

2.6.4 Firm Strategy, Structure and Rivalry

The fourth broad determinant of international competitiveness in an industry in Porter's framework is the conditions in a country that determines how companies are established, organized and managed, and that determine the characteristics of domestic competition. Porter (1990) suggested that the managerial style favoured in the country leads to competitiveness. Generally, management structures, working morale, or interactions between firms are shaped differently in different countries. According to Porter's framework, this will provide advantages and disadvantages for particular industries.

According to conventional trade theory, domestic competition is wasteful as it leads to duplication of effort and prevents firms from achieving economies of scale (Cho & Moon, 2001). However, Porter (1990) argued that domestic rivalry is critically important for the competitive advantage of an industry. Competitiveness of an industry does not grow from one or two firms experiencing economies of scale due to their dominance of the market. By contrast, domestic rivalry creates pressure on firms to cut costs, improve quality and innovate. Thus Porter suggests that domestic rivalry

and the search for competitive advantage within a nation can help provide firms with the bases for achieving such advantage on a more global scale.

2.6.5 Assessment of Porter's Diamond Model

Although Porter's diamond model is a revolutionary enrichment in explaining competitiveness on both the national and industrial level, the model has been subject to quite a number of critiques.[13] While the model is useful in analysing the competitiveness of a particular industry, one weakness of the model is that it focuses exclusively on "home base" concept (Grant, 1991; Rugman, 1991; Moon et al, 1998). The problem here is that for small open economies, the domestic demand conditions are relatively less important in determining the competitive advantage of an industry, and the influence of rivalry between domestic firms will not be significant in shaping the competitiveness of an industry. Therefore, it was argued that the theory will not work well for small open economies (Bellak & Weiss, 1993; Cartwright, 1993; Rugman & D'Cruz, 1993).

However, as pointed out by Grant (1991), the strength of Porter's diamond model is its cogency in explaining the international success of particular industries. Therefore, whatever the critiques of the diamond model, it is a useful tool in analysing the source of competitive advantage in a particular industry, thus providing valuable information on further improvements in the competitiveness of an industry. It covers a range of potential significant influences on competitive advantage which need to be considered. Furthermore, Porter's diamond model is mainly designed to explain the source of

[13] See Cho & Moon (2001, pp.95-101) for a review of debates concerning Porter's diamond model.

national or industrial competitiveness possessed by the economies of advanced countries. As pointed out by Cho (1994), this would limit the ability of the model in explaining the levels and dynamic changes of economies of developing countries. However, this would make the model more suitable in this study.

In summary, any of the individual theories discussed in this chapter is unlikely to be a sufficient explanation of international trade, and thus not sufficient for the analysis in this study. However, the theories discussed in this chapter are useful in understanding many of the international trade patterns in TCF industries. Furthermore, they are also helpful in evaluating the competitiveness of TCF industries in New Zealand, and provide a basis for the analysis in the remainder of this study. In the following chapter the TCF industries are discussed from a global perspective.

Chapter Three
Overview of Global TCF Industries

This chapter provides a general view of the global TCF industries and highlights the new trends of the development of the industries so as to get a better understanding of the nature of the TCF industries and what international environment New Zealand TCF manufacturers is facing.

3.1 Description of the TCF Industries

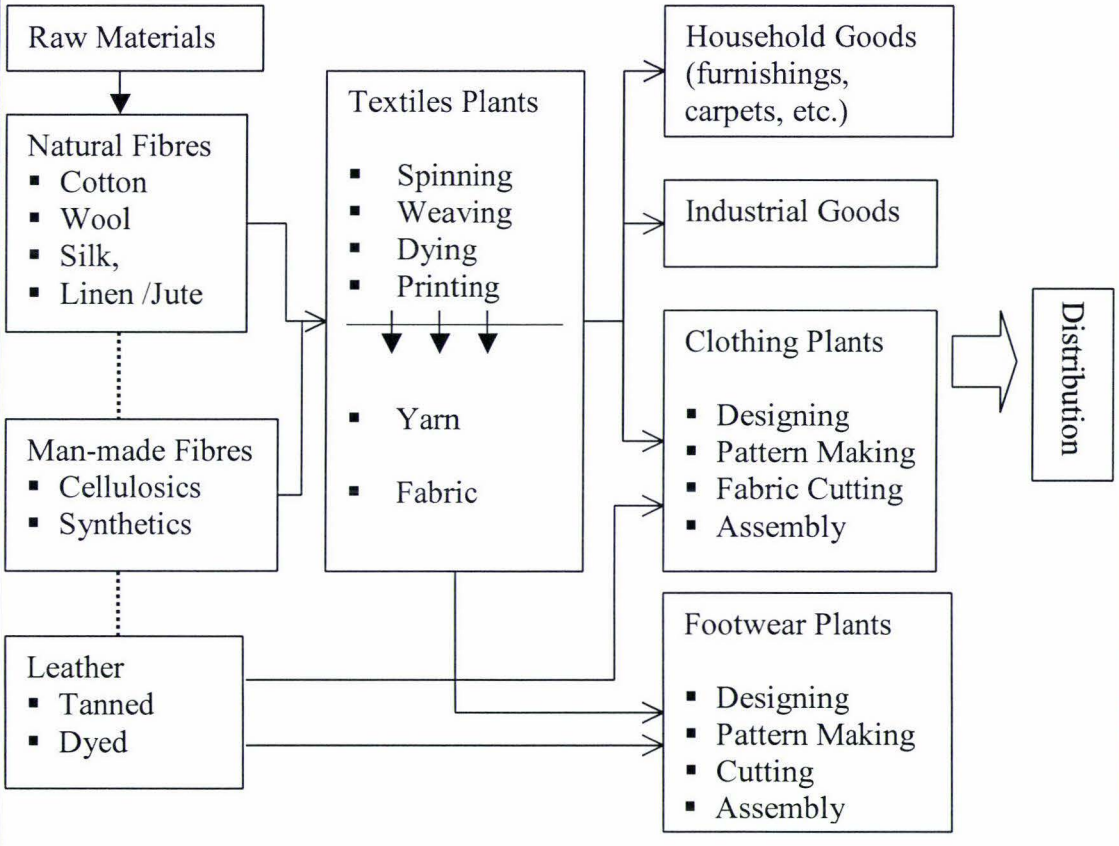
TCF industries have played an important role in the history of the world economy. They are typically the entry industries for countries embarking on a program of industrialisation (Bonacich et al, 1994). This can be evidenced by the early stage of industrialisation in Britain, parts of North America and Japan and more recently the export-oriented industrialisation in Asian NIEs (newly industrialised economies).[14] TCF are not only the oldest, but also the most globalised industries in the world as most nations in the world produce for the international market (Gereffi, 1999, Dickerson, 1995).

The TCF industries encompass a diverse range of products and interdependent processes. As shown in Figure 3.1, the production chain covers from processing of raw materials such as cotton wool etc., through to the manufacture of a wide variety of semi-finished and finished products such as clothes, shoes, household linen, and other items used in other industries (Stengg, 2001). Production in TCF industries

[14] Namely Hong Kong, Taiwan, South Korea and Singapore.

comprises a sequence of many steps, each requiring specific but different labour inputs (Webber & Webber, 2001). Different steps of the TCF production chain require very different skills and technologies.

Figure 3.1 TCF Production Chain



Source: Based on Dicken (2003): Figure 10.1.

Specifically, textile production includes two major operations: preparation of yarn and manufacture of fabrics (Dicken, 2003). As shown in Figure 3.1, the outputs of the textile industry can be divided into two major categories according to its end-users: clothing application and non-clothing application.[15] While the clothing application is still of significant importance for the textile industry, the non-clothing application plays an increasing role in the textile industry. Recently, the so-called technical

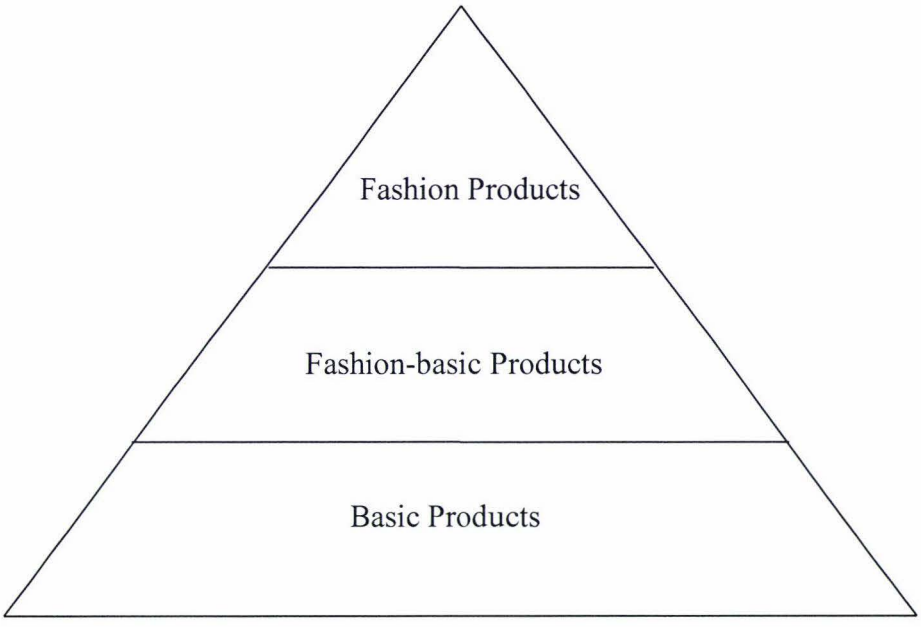
[15] Clothing application here includes footwear application, but only a small part of footwear products use textiles as the major materials; non-clothing application includes household uses and industry uses.

textile plays more and more important role, especially in developed countries.[16] These textiles are increasingly applied in other industrial sectors such as automobiles, furniture, building and electronic industries (OECD, 2004). Comparing with traditional clothing application textiles production, technical textile production is much more capital and technology insensitive.

Clothing and footwear manufacture covers the conversion of textiles/leather into apparel/footwear products by designing, pattern making, cutting and assembly. Most of this process tends to be a very labour intensive process. In contrast to the textile industry, the adoption of new technology in the production of clothing and footwear is relatively limited, and as pointed out by Nordås (2004), the basic production technology of the clothing industry has not changed much over the past century. In this sense, clothing and footwear production are generally thought of as more labour intensive than textiles production. However, this is not the whole story of the clothing and footwear industries. According to Abernathy et al (1999), clothing can be divided into three major types in terms of its fashion content: basic products, fashion-basic products and fashion products. Given the similar features between clothing and footwear, this can be also applied to footwear products (see Figure 3.2).

[16] Technical textile is defined as textile material and products intended for end-uses other than non-protective clothing, household furnishing and floor covering where the fabric or fibrous component is selected principally, but not exclusively, for its performance and properties as opposed to its aesthetic or decorative characteristics, see Denton & Daniels (2002).

Figure 3.2 Clothing and Footwear: Fashion Pyramid



Source: Based on Abernathy et al (1999): Figure 1.1

As one moves close to the top of the pyramid, higher fashion content becomes important, and thus higher product differentiation along with higher quality and thus being higher value-added. Based on this, the clothing and footwear industries can be divided into two major markets: the high-quality fashion market and the mass production segment characterised by lower-quality and /or standardised products. Therefore, the characteristic of the clothing and footwear industries are mixed: they could be labour-intensive and low wage industries, or dynamic and innovative industries, depending on which segments one focuses on (Nordås, 2004).

3.2 Trends of Changes in TCF Industries

3.2.1 Relocation of the TCF industries

There is an increasing trend of shifting of the world's TCF industries toward less-developed economies. As a result of the absence of barriers to entry and the use of

standard technology combined with high labour intensity, the shape of the sector is strongly determined by globalisation and easy relocation of production to low-cost countries, such as South-East Asia and China (Hanzl-Weiß, 2004).

The world TCF industries have been under several major geographical shifts in production since the 1950s (Gereffi, 1999). The first shift took place from western industrialised countries to Japan during the 1950s. By the mid-1970s, Japan had shifted away from low-wage, low value-added manufacturing as it had been recovering from its war-ravaged economy, and the TCF industries shifted to the Asian NIEs (Kessler, 1999). As wages increased throughout the NIEs, these economies were losing their comparative advantage in TCF industries, and thus world TCF production shifted to China and other Asian and Latin American counties (Gereffi, 1999).

Generally, textiles, clothing and footwear are characterised by labour-intensive and low-cost barriers to entry. According to ILO (2000), Labour costs were accounting for 40 per cent of textile production costs and 60 per cent of clothing and footwear production costs. Therefore, developing countries, which are endowed with abundant labour, have comparative advantage in the TCF production. It is clear from Table 3.1 that TCF production continued to move from developed countries to developing countries during the period of 1990 to 2000.[17]

[17] The data might understate the extent of the shift in production because it excludes China, the world's major TCF player.

Table 3.1 Percentage Distribution of World TCF products value-added

	Textile		Clothing & Footwear	
	1990	2000	1990	2000
Total Industrialized Countries	74.9	67.4	75.3	71.9
European Union	27.7	32.3	31.2	31.7
North America	14.6	19.1	17.6	20.8
Japan	13.2	8.5	10.2	9.3
Eastern Europe & Former USSR	17.2	5.2	13.7	7.0
Total Developing Countries	25.1	32.6	24.7	28.1
North Africa	1.2	1.3	1.0	1.5
Sub-Saharan Africa	1.0	1.2	0.6	0.8
Latin America	5.8	6.7	8.5	10.0
South & East Asia	13.6	19.4	10.7	12.3
West Asia & Europe	3.6	4.0	3.9	3.5

Source: UNIDO (2002), International Yearbook of Industrial Statistics 2002.

The main drive behind this shift is the changing comparative advantage. As discussed early in Chapter Two, the standard H-O theory of international trade suggests that each country would export commodities which require relative intensive use of the country's relative abundant factors of production, and import commodities which would demand much of the country's relative scarce factors. As economies becoming mature, developed countries lose comparative advantage in the labour-intensive manufactures and expanded into more capital-intensive industries (Kessler, 1999). This changing pattern of international TCF production is also confirmed by the product life cycle theory.[18] From the historical development of the TCF industries, they emerged as the innovative and high-tech industries in the First Industrial Revolution of the 1770s (Loo, 2002). Then as the industries mature, the labour cost is of increasing importance to the industries; as a result, the industries trend to be relocated to developing countries to take advantage of lower labour costs.

[18] See Chapter Two.

However, it is also clear from Table 3.1 that TCF industries are still dominated by developed countries.[19] The reason behind this is that TCF industries are not entirely labour-intensive, low-technology and static industries, but more diverse and dynamic one (Hoffman & Rush, 1988; Nordås, 2004).[20] Therefore, the trend of this shifting is that labour intensive elements of production are tending to relocate to developing countries to take advantage of much lower labour costs. In particular, production of standardized, labour intensive clothing and footwear products is increasingly migrating to developing countries.

3.2.2 Demand

Demand is of significant importance in shaping the development and prospect of an industry. In particular, demand is a fundamental influence on the size, organisation and the location of the TCF industries in different parts of the world (Dicken, 2003). Generally, the main function of TCF products is to meet the basic need of human beings. Therefore, as income increases, the share of expenditure on the basic-need goods to total expenditure decreases. As a result, the demand for TCF products is growing relative slowly, and consumers spend a smaller share of their income on clothing and footwear than in the past, especially in developed countries (Nordås, 2004). Furthermore, the weakened demand would lead to the relative prices for clothing and footwear declining. Besides, the range of products is very diversified, by gender, age, life style, usage etc, and each with different size and colours; thus the demand for TCF products is highly unstable and changing rapidly due to fashion-

[19] Although the data could overstate the extent of the TCF production in developed countries, it is clear that TCF production in these countries is still significant.

[20] This will be discussed in more detail in section 3.3.3.

related and seasonal fluctuations. Furthermore, consumer preferences are also changing. Today, TCF firms are being asked by their customers to provide many more products in smaller lot sizes with shorter lead times. On one hand, consumers in developed and newly industrializing countries no longer demand standardized products, but rather products that will distinguish their wearer from the masses around them. On the other hand, increasingly sophisticated consumers are demanding the increased variety of product choice. These changes are in turn leading to shorter product seasons, more rapid product cycle turnover, and smaller lot sizes. Thus, the TCF firms must be responsive to these changed demand patterns to maintain competitive advantage. In the new competitive arena, demand is uncertain and time to market have become important factors along with the price. TCF firms are being forced to make use of new and emerging technologies, rather than just drawing on the economies of scale that led to their success in the past (Abernathy et al, 1999).

3.2.3 Increasing Dynamic of TCF Industries

Generally, TCF industries as a whole have been perceived as traditional and mature industry characterised by low-skill labour intensity, low barriers to entry and low capital investments. Lower wage rates in developing countries, together with these characteristics, tend to give developing countries a comparative advantage in textile and apparel manufacture. As a result, their survival is difficult in a high cost environment and therefore they are often recognised as "sunset" industries for an advanced economy. However, it is not the entire picture of the TCF industries which are actually highly sophisticated and dynamic (Nordås, 2004).

In particular, the textile industry is increasingly re-orientating towards non-clothing applications of textiles, i.e. technical textiles which represent the fastest-growing segment of total textile applications. Therefore, a general trend for textile manufacturing is to have more and more capital and technology intensity. In the clothing and footwear sector, as pointed out by Hoffman and Rush (1988), the image of the industries as entirely low-tech is false. The designing, grading, marking and cutting phases of production are becoming increasingly mechanized by computer technology (Bonacich et al, 1994).[21] Furthermore, while the most of the sector is characterised by labour-intensive and low technology, some segments of the sector are not, such as the high-quality fashion market segment. As discussed previously in section 3.1, the clothing and footwear sector consist of two major segments: fashion products segment and standard products segment. In standard products segment, the competition is mainly in price, and therefore, labour cost is an important factor; by contrast, in the high-quality fashion market, the industries are characterised by modern technology, relatively well-paid workers and designers and a high degree of flexibility (Nordås, 2004). In this sense, the clothing and footwear industries can be described as dynamic and diverse industries with the co-existence of dual characteristics: labour-intensive, low-technology and low-paid industries or industries with well-paid professionals and advanced technologies (Loo, 2002). Indeed, in developed countries, distinct spatial concentrations of extremely dynamic and innovative TCF firms employing the latest technologies and well-paid professionals have emerged (Appelbaum & Gereffi, 1994; Knox & Agnew, 1998).

[21] But the application of new technology in the production is still relatively limited (Nordås, 2004).

Besides, the labour cost is not the sole determinant of the competitiveness of today's TCF industries. As discussed previously in Chapter Two, while conventional international trade theory, such as H-O theory, focuses on the relative cost of production as the key factor influencing comparative advantage, other factors are recognised as being just as vital. Changes in technology, innovations, distribution channels and quick response, etc. have become decisive factors for the competitiveness of TCF industries (OECD, 2004).

More to the point, the modern TCF industries are far more than just manufacturing. This is best illustrated by the concept of "commodity chain" used by Gereffi and Korzeniewicz (1994) to describe the new spatial arrangement of TCF production. In this case, the TCF supply chains are broken down into design, production and distribution. Among them, the value-added of manufacturing can be a large part in accessories or a small part in high-fashion products (Gereffi & Memedovic, 2003).

3.3 World Trade in TCF Products

3.3.1 Rules Governing World Trade in TCF Products

As a result of the economic and social importance of TCF industries, international trade in textile and clothing has been subject to strong protectionism for decades. Trade protection in the textile and clothing sectors has a long history (Raffaelli & Jenkins, 1995). Quantitative restrictions on textiles and clothing trade started as early as in the 1930s, when the US negotiated a voluntary export restraint (VER) on Japanese textile exports (Liu & Sun, 2003). Since then international trade in textiles and clothing has been governed by several complicated regimes for more than five

decades. These include such regimes as the Short Term Arrangement Regarding International Trade in Cotton Textiles (STA) in 1961, the Long Term Arrangement Regarding International Trade in Cotton Textiles (LTA) of 1962 to 1973, and the Multi-Fibre Arrangement (MFA) from 1974 to 1994. The most recent of these regimes was the Agreement on Textile and Clothing (ATC) from 1995 to 2004 (Reinert, 2000).

ATC was one of the most significant outcomes of the WTO Uruguay Round trade talks which was crafted in 1994 to abolish the MFA by freezing the number of quotas in place at the time and setting an irrevocable schedule for their elimination (UNDP, 2005). As shown in Table 3.2, under the ATC, bilateral quotas under the MFA were to be enlarged in three stages and fully integrated by January 2005.

Table 3.2 Four Stages of ATC liberalisation

Stage	Date	Minimum Volume Integrated (%)	Remaining Quota Growth Rate (%)
Stage 1	1, January , 1995	16	16
Stage 2	1, January , 1998	17	25
Stage 3	1, January , 2002	18	27
Stage 4	1, January , 2005	All items integrated	All items integrated

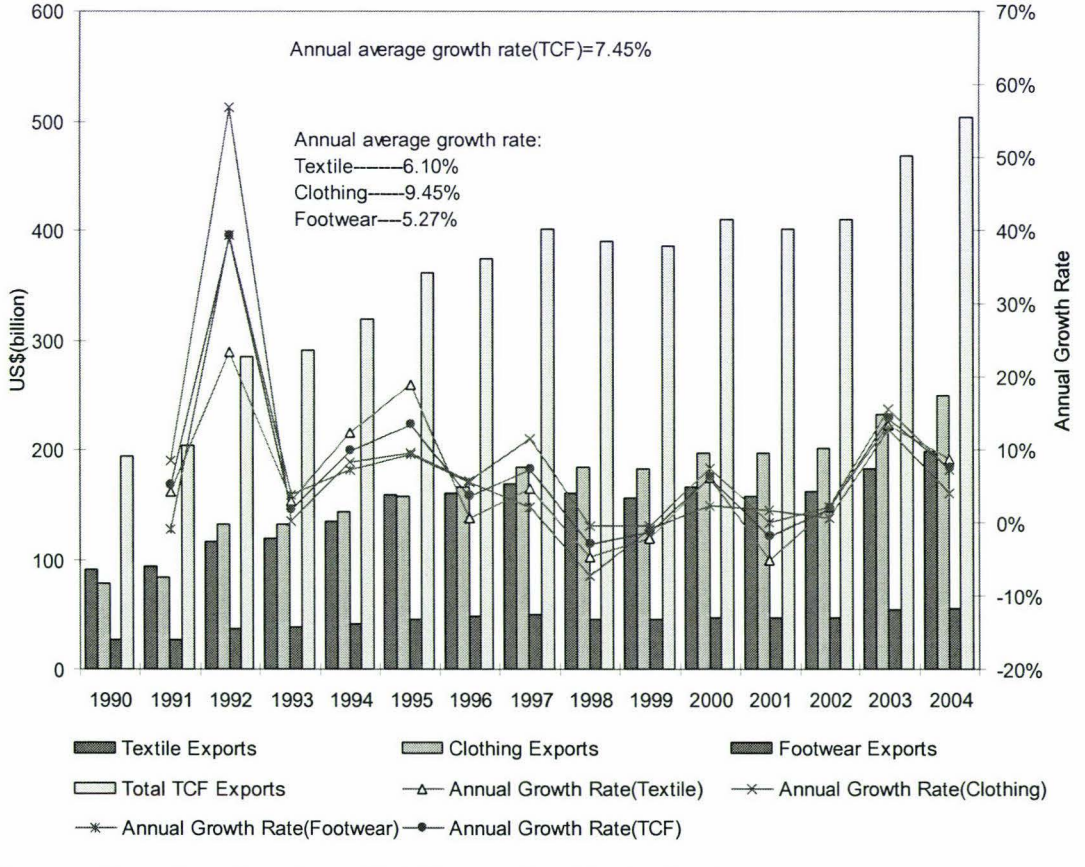
Source: Minor, 2002.

As such, the elimination of quotas implies further liberalising trade in TCF products. On one hand, it would bring both opportunities and challenges to the world TCF producers as some will win and others will lose depending on their competitiveness. On the other hand, such elimination of quotas dose not mean a fully trade liberalisation in TCF trade (UNCTAD, 2005). Trade barriers and non-trade barriers still remain in global TCF trade.

3.3.2 Exports

Despite the protection in TCF industries, they are still very global and trade flows have been continually increasing over past decades, at some 7.5 per cent annually during the period of 1990 to 2004 (see Figure 3.3). Specifically, while world exports of textile grew at about 6 per cent annually during 1990 to 2004, world exports of clothing grew faster than textiles by more than 9 per cent annually during the same period. The exports value of clothing as measured in US$ was seen greater than that of textiles by 1992. The annual average growth rate of exports of footwear was about 5 per cent.

Figure 3.3 Textile, Clothing and Footwear Exports: 1990-2004



Source: Based on data from UN Commodity Trade database.

However, the international trade (exports) in TCF products is dominated by a small number of economies (Table 3.3). The top ten exporters accounted for more than 60 per cent of the world export value of TCF products from 1990 to 2004. The diminishing share of the export value of developed countries is offset by the increasing market share of the less developed countries in Asia, especially China, Hong Kong, Taiwan and South Korea. China has become the world's largest single exporter of TCF products.

It is also clear form Table 3.3 that there was a shift in world market share from developed countries to developing countries during the past decade. In particular, while Germany was the largest exporter of textile products in the early 1990s, China had taken over as the leading exporter and accounted for nearly 17 per cent of world textiles exports in 2004. The largest exporter of clothing in the early 1990s was Italy, and was taken over by China, which accounted for more than 15 per cent of world clothing exports in 1995 and has continued to increase its market share to about 25 per cent by 2004. Trade in footwear exports are similar; Italy was the largest exporter during the period of 1990 to 1995, and was taken over by China which accounted for more than 27 per cent of the world footwear exports by 2004. China has become the world's largest single exporter of TCF products. China's growing strength in this industry was the result of massive investment in capacity, relatively low labour costs, and very high labour productivity leading to very low unit labour costs (Deloitee, 2005).[22]

[22] See Chapter Seven for a more detailed discussion on China's TCF industries.

Table 3.3 World Leading TCF Exporters

Leading Exporter	% Share	Leading Exporter	% share	Leading Exporter	% share
1990		1995		2004	
		Textiles			
Germany	14.78	Germany	9.01	China	16.84
Italy	10.52	China	8.73	Italy	7.82
Belgium-Luxembourg	7.07	China, Hong Kong SAR	8.66	China, Hong Kong SAR	7.2
Rep. of Korea	6.74	Italy	8.02	Germany	7.03
France	6.71	Rep. of Korea	7.72	USA	6.04
Japan	6.51	Belgium-Luxembourg	4.94	Rep. of Korea	5.46
USA	5.59	France	4.68	Belgium	3.81
United Kingdom	4.85	USA	4.62	France	3.69
Netherlands	3.23	Japan	4.5	Japan	3.6
Pakistan	2.95	United Kingdom	2.97	India	3.53
Above 10	68.95		63.85		65.02
		Clothing			
Italy	15.30	China	15.34	China	24.84
Rep. of Korea	10.19	China, Hong Kong SAR	13.58	China, Hong Kong SAR	10.08
Germany	9.11	Italy	9.02	Italy	7.50
France	6.04	Germany	4.78	Germany	4.77
Portugal	4.51	USA	4.24	Turkey	4.50
Turkey	4.31	Turkey	3.90	France	3.15
United Kingdom	3.93	France	3.59	Mexico	3.01
Thailand	3.64	Thailand	3.19	India	2.66
USA	3.32	Rep. of Korea	3.16	Belgium	2.44
India	3.27	United Kingdom	2.84	USA	2.03
Above 10	63.61		63.66		64.97
		Footwear			
Italy	25.70	Italy	17.74	China	27.32
Rep. of Korea	15.88	China, Hong Kong SAR	17.08	Italy	16.72
Spain	5.62	China	14.61	EU-25	12.45
Portugal	4.82	Thailand	4.73	China, Hong Kong SAR	10.24
Brazil	4.36	Indonesia	4.51	Germany	4.26
Germany	4.35	Spain	4.30	Spain	4.17
France	3.22	Portugal	4.05	Belgium	3.49
Thailand	2.92	Rep. of Korea	3.30	Brazil	3.41
Fmr Yugoslavia	2.36	Brazil	3.29	Portugal	2.97
Indonesia	2.10	Germany	3.18	Romania	2.72
Above 10	71.34		76.78		87.76

Source: UN Commodity Trade database.

3.3.3 Imports

The international TCF market (imports) was dominated by a small number of economies as well. As can be seen from Table 3.4, the top ten importing economies accounted for about 60 to 80 per cent of the world import value of TCF products in 2004. In particular, the United States and the European Union (EU) are the two principal markets, especially for clothing and footwear products.[23] In the textiles market, while China is very strong in exports, it is also an important importer of textiles which accounted for nearly 8 per cent of global value of textile imports in 2004.

Table 3.4 World Leading TCF Importers (2004)

Leading Importer of Textiles	Share of World Imports of Textiles (%)	Leading Importer of Clothing	Share of World Imports of Clothing (%)	Leading Importer of Footwear	Share of World Imports of Footwear (%)
EU-25	10.77	USA	23.02	USA	22.50
USA	10.60	EU-25	20.02	EU-25	17.45
China	7.85	Germany	7.55	Germany	6.76
China, Hong Kong SAR	7.24	Japan	6.59	China, Hong Kong SAR	6.41
Germany	6.15	United Kingdom	6.05	United Kingdom	5.90
Italy	4.07	China, Hong Kong SAR	5.21	France	5.73
United Kingdom	4.02	France	5.07	Italy	5.51
France	3.90	Italy	3.46	Japan	4.21
Mexico	2.95	Spain	2.51	Belgium	2.35
Japan	2.87	Belgium	2.15	Spain	1.99
Above 10	60.42		81.63		78.82

* Note: the value for EU does not include intra-EU trade.

Source: UN Commodity Trade database.

[23] The percentage share for EU in this Table was under-estimated because the intra-EU trade was excluded, especially for clothing and footwear as according to UNCTAD (2005), a large proportion of EU clothing imports is sourced from among EU members.

In summary, the analysis of this chapter highlights a number of points which are crucial for this study. While normally perceived as mature industries, the TCF industries remain attractive for both developed and developing economies in terms of their economic and social development. It is also clear from this chapter that the TCF industries are highly sophisticated and dynamic industries, and labour cost, although important in the global relocation of the labour-intensive segments of the TCF production, have lost ground as the determinant factor of international competitiveness.

Chapter Four
New Zealand's TCF Industries

The environment in which the textile, clothing and footwear manufacturers operate has undergone significant changes over the past decades. New Zealand's trade liberalisation and reduction of protection since the mid-1980s has been a catalyst to an open and competitive environment. And New Zealand TCF industries have faced severe pressure of import competition from international source since then. The main objectives of this chapter are to get an overall account and understanding of the industries by providing a profile on New Zealand's TCF Industries.

4.1 Industry Size and Structure

Although the TCF industries are small, they play a significant role in the New Zealand economy. Historically, they originally developed to supply New Zealand's domestic needs. Generally, TCF manufacturing in New Zealand covers a diverse range of activities including:[24]

- early stage processing of leather and natural fibres;
- the production of textiles;
- the transformation of leather, yarns and textiles into clothing and footwear and other fabric products;
- industrial textiles , such as shade cloth, medical and sanitary products, filtration and insulation materials.

[24] MarketNewZealand.com.

Specifically, textile manufacturing in New Zealand includes woollen fibre processing, manmade fibre processing, dyeing, printing and treating of fibres and textiles, and other fibre and textile processing;[25] while a large portion of these textile products are used for clothing production, the portion for home furnishing (such as sheets, towels, furniture covering) and industrial purposes have been rising recently. Clothing manufacturing in New Zealand covers almost all major garment categories, including external wear, underwear, hosiery, nightwear, ties, headgears and leather apparel. The firms making up the New Zealand clothing industry are diverse in terms of size, structure and range of products. They range from cut, make and trim operations that produce finished garments on a contract basis using fabrics supplied to them, through vertically-integrated operations which produce their own fabric, manufacture their own garments, and sell these products in their own stores. Footwear manufacturing is a long-established industry in New Zealand, similar to clothing manufacturing. Almost all major footwear categories are produced in New Zealand, including sports footwear, leather footwear, casual footwear and fashion footwear etc.

4.1.1 The Importance of TCF Industries in New Zealand

TCF industries are significant and important industries for New Zealand, both nationally and regionally. Firms in TCF industries provide jobs opportunities, that contribute to local economies and benefit the communities in which they reside (TCFC Partnership, 2002). Though the industries have been undergoing a period of contraction, it is still significant and of importance in New Zealand in terms of employment. As illustrated in Table 4.1, in 2004, New Zealand's 1800 or so TCF

[25] The major source for this paragraph is from *New Zealand Official Yearbook*, various years.

firms generated turnover of around $3 billion which accounted for about 4.7 per cent of total turnover in manufacturing and provided employment for 16,500 people which is about 6.7 per cent of total employment in the manufacturing sector.

Table 4.1 Performance of TCF Industries in New Zealand

	Turnover (NZ $ Million)	Share in Total Manufacturing (%)	Employment	Share in Total Manufacturing (%)	No. of Firms	Export to NZ Total Export (%)
2002	2,945	4.6	17,340	7.2	1,744	0.89
2004	6,069	4.7	16,490	6.6	1,829	0.92

Source: Based on New Zealand Official Yearbook; Business Demographic, Statistics New Zealand; New Zealand External Trade Statistics; various years.

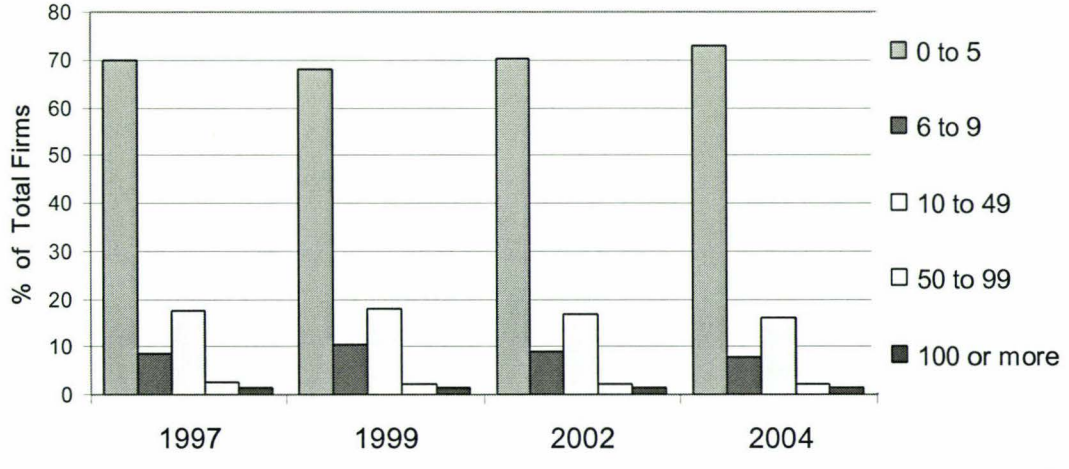
More to the point, the economy of New Zealand is characterized by relying heavily on agricultural products and exports, which in turn hinder the future development of the nation's economy. In this sense, the TCF industries are of significant importance in terms of their contribution to diversify New Zealand's production and exports away from traditional agricultural production and exports, and towards manufacturing production and exports.

4.1.2 Industries Structure

Firstly, New Zealand TCF industries were dominated by very small sized firms, as illustrated in Figure 4.1. There were less than 4 per cent of firms in TCF industries that employed more than 50 employees during the period 1997 to 2004. In contrast, about 70 per cent of firms employ less than five people and the trend is increasing to almost 73 per cent in 2004. It is difficult for New Zealand TCF industries to achieve economies of scale. The lack of scale appears to be a factor inhibiting the

development of TCF industries. Scale is important in terms of bargaining power both in selling output and purchasing inputs; it is also important in attracting labour, especially skilled labour and competent managers. As pointed out by BE & NZIER (2001a), the predominance of very small family owned/ managed businesses is one of the important constraints that limit the future development of New Zealand's TCF industries. First of all, this would lead to a false image of the TCF industries as declining or sunset industries which in turn means these industries will be in a difficult situation to attract trained, motivated and creative staff. Furthermore, small size firms will limit their ability to access equity and working capital from external sources. Finally, a further problem is the intrusion of family issues, such as succession, family arrangements or objectives that keep control of the business within the family circle. In this sense, the characteristics of small sized and family-owned firms limit the ability to improve the relative position of the TCF industries by their ownership structure.[26]

Figure 4.1 Firms Distribution within New Zealand TCF Industries: by Number of Employees



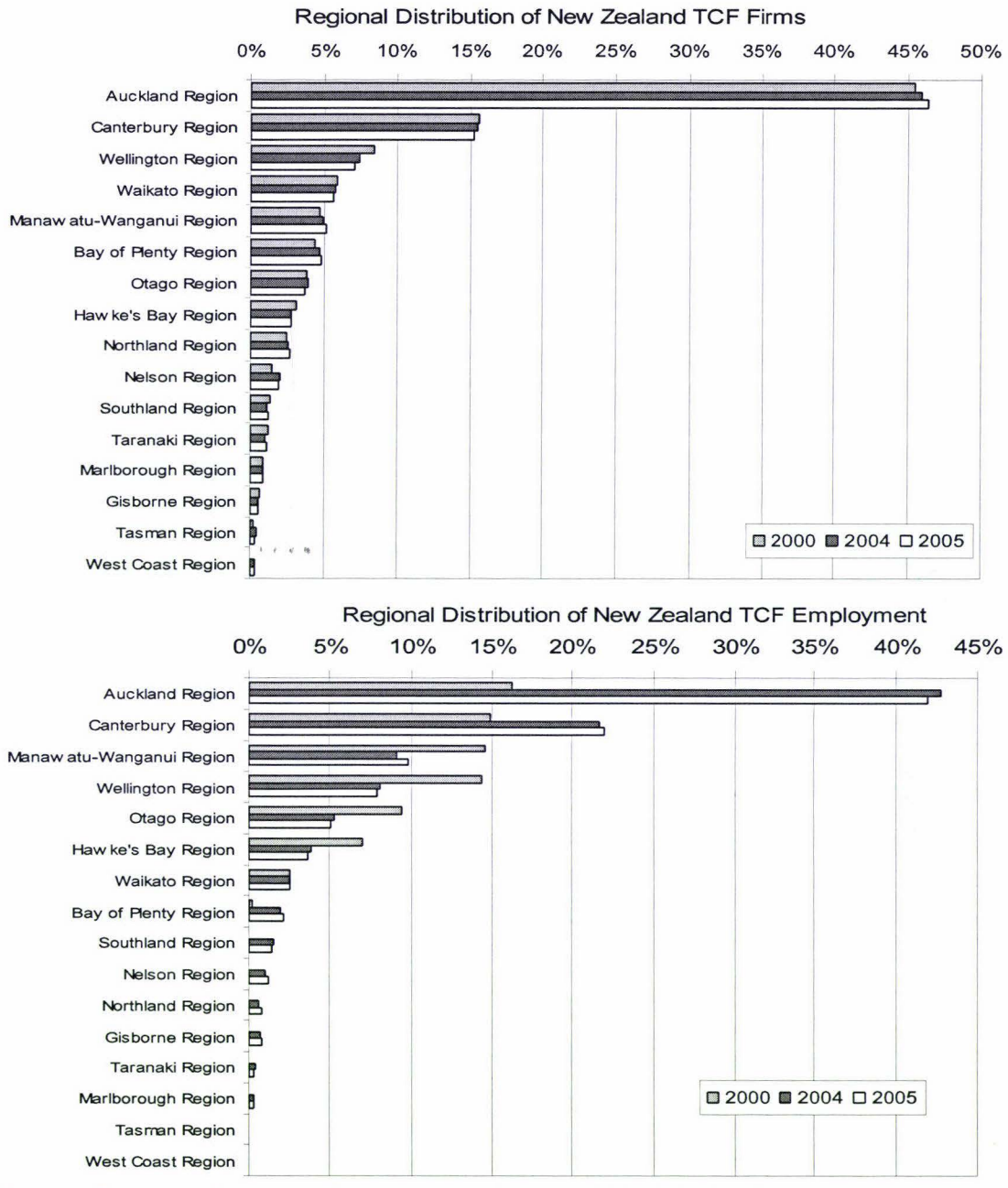
Source: Based on New Zealand Official Yearbook and Business demographic statistics, Statistics New Zealand.

[26] See BE & NZIER (2001a), p9.

However, TCFC Partnership (2002) argued that the small-medium enterprise has its particular advantages. First of all, small firms can respond faster than larger firms to meet the emerging market needs; in other ways, small firms can perform better than larger ones in the niche market. Moreover, small firms do not mean that they are unable to compete with large firms on cost and quality. With the advent and adoption of electronic process technology, small firms to some extent are more competitive in terms of cost and quality because they are more flexible. Finally, concerning the characteristics of TCF products, product life cycles are shrinking and consumer tastes are change quickly. In this case, smaller firms are often more adaptable and cost effective.

Secondly, New Zealand TCF industries are characterized by regional concentration, where a small number of regions dominate the major proportion of the industry (see Figure 4.2). Auckland and Canterbury account for more than 60 per cent of TCF firms in New Zealand. In 2005, more than 40 per cent of employment in TCF industries was in the Auckland region, which increased from about 16 per cent in 2000. In terms of TCF firms distribution, the Auckland region accounted for about 45% of total TCF firms in New Zealand and more recently, the number has increased to about 47%. In this sense, TCF industries have relatively more importance regionally than nationally. Thus, the development of TCF industries will have more regional implications. The potential impact of an FTA with China on New Zealand's TCF industries could be concentrated in specific regions.

Figure 4.2 Regional Distributions of New Zealand TCF Industries

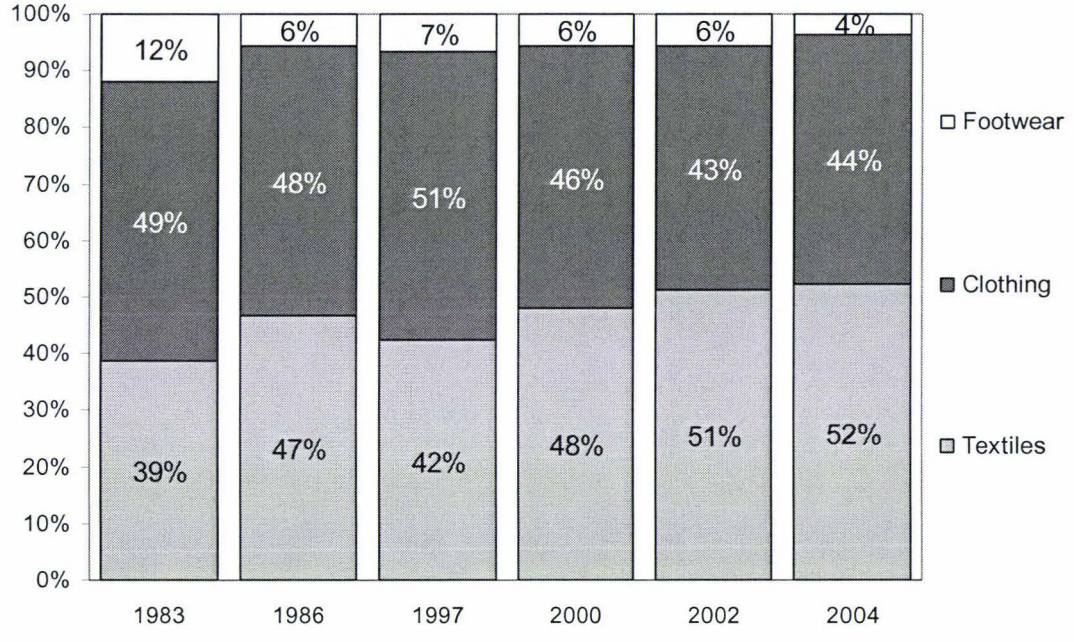


Source: Business demographic statistics, Statistics New Zealand.

Finally, the employment of TCF industries is concentrated on the clothing and textile sectors. As can be clearly seen from Figure 4.3, about 96 percent of employment was in the textile and clothing sector in 2004, and footwear only accounts for only 4 per cent of total TCF employment. This reflects the relative small size of footwear within the TCF industries. Furthermore, the share of clothing and footwear employment was

seen to be declining during the period 1983 to 2004, while that of textiles was increasing. To some extent, this reflects that the clothing and footwear industries are more labour intensive, at odds to the source of New Zealand's competitive advantage. Therefore, once protection and assistance to the industries decreased progressively, the contraction of the clothing and footwear industries was seen to be larger than that of the textile industry.

Figure 4.3 Distribution of Employment in NZ TCF Industries, 1983-2004



Source: Based on New Zealand Official Yearbook; Business Demographic, Statistics New Zealand.

4.2 New Zealand's Trade Liberalization

4.2.1 An Overview

Historically, New Zealand has been a highly protected economy.[27] Before 1984, New Zealand's tariffs on manufactured goods were amongst the highest in the OECD.

[27] For comprehensive information on New Zealand's history of industry protection, see Rayner & Lattimore (1991), Lattimore & Wooding (1996) and Duncan et al (1992).

Besides, New Zealand also relied heavily on quantitative import controls more than any other developed country. For nearly fifty years leading up to the mid-1980s, New Zealand implemented a highly restrictive import regime. Across the board quantitative controls on imports existed, exchange controls were put in place in 1938 as temporary measures to protect New Zealand manufacturing sector (Hazledine, 1993). However, both measures continued for nearly half a century.

Attempts were made to reduce trade barriers in the early 1950s with the implementation of import licences reduced to 40 per cent of all imports by 1956. From the early 1960s, calls for reducing import restrictions from primary exporters began to be heard. The government resisted these calls, and instead, offered primary exporters compensation in the form of export tax incentives, input subsidies, and also some preferential access to import licenses. Overall, there was only limited trade liberalisation during the late 1960s and 1970s.

Since the mid-1980s, New Zealand began its trade liberalisation, and has experienced a significant economic restructuring. The trade liberalization program included the reduction of tariffs, the removal of import licenses, and the elimination of export incentives and other subsidies. Beginning with the 1987 tariff review and the gradual removal of import licensing, there has been a substantial reduction in protection levels. In the four years following the 1987 review, tariffs were reduced to a maximum of 20 per cent (NZMF, 1992). A second round of tariff reduction was initiated in 1992 resulting in a further one-third decline over three years (Savage, 1994). During the period of 1988 to 2000, tariffs were significantly reduced and New Zealand's tariff profile has reached the point where it has one of the lowest average rates in OECD

countries at 4.1 per cent. There was a period of frozen tariffs during 1999 to 2005. The sixth general tariff review was released in 2003 which set the tariff reduction schedule from 1 July 2006 to 1 July 2009. All tariffs currently at 12.5 per cent or lower will be reduced to 5 cent by 1 July 2008; the highest *ad valorem* tariff rates of between 17 and 19 per cent will reduce gradually to 10 per cent by 1 July 2009; tariffs currently between 0 and 5 per cent will remain unchanged (MED, 2003).

As a result of the protection of New Zealand manufacturing industries from import competition by tariffs and quantitative restrictions, the efficiency of these industries was suffering. In particular, unit costs of production were higher compared to international standards, plant size was often below the minimum efficient scale, and market concentration was high (Pickford, 1985; Bollard & Daly, 1984). In this sense, it was believed that reducing the protection offered to New Zealand industry would encourage more efficient allocation of resources, and improvement of economic welfare. As pointed out by MED (2003), New Zealand's tariff reduction since the mid-1980s has generated significant productivity and welfare gains; while most of the benefits go to consumers, New Zealand manufacturers are increasing international competitiveness.

4.2.2 Reduction in TCF Protection

Generally, TCF industries are relatively labour-intensive compared to other industries, especially for the clothing and footwear sector; however, as discussed in Chapter Three, they are still play an important role in both developing and developed economies. Therefore, TCF industries have been protected worldwide, especially in

developed countries. Prior to the mid 1980s, New Zealand's TCF industries had enjoyed comprehensive protection of competition from imports, through a system of import license control and high tariffs.[28] Therefore, imports of TCF products to New Zealand were significantly restricted and this enabled the mushrooming of a wide range of industries which displaced imported product. Since the mid-1980s, New Zealand has experienced economic reform and trade liberalization; tariffs in these sectors have been reduced annually since 1988 (see Table 4.2).[29] As part of New Zealand's commitment to free trade, tariffs on TCF are set to drop again after the six year Labour Progressive tariff freeze. The outcome of the New Zealand Government's post-2005 review of tariffs was announced on 30 September 2003. Under the reviewed decision New Zealand's applied tariff rates on TCF products will reduce to either five or ten percent.

Table 4.2 Normal Tariff Rate Phasing on TCF Product

	1987	1990	1995	1999	2005	2006*	2007	2008	2009
Textile	40%	25%	21%	12.5%	12.5%	10%	7.5%	5%	
Clothing	65-40%	40%	32.5%	19%	19%	17%	15%	12.5%	10%
Footwear	43%	37%	35%	19%	19%	17%	15%	12.5%	10%

* *The tariff rates for post 2005 are following the announced post-2005 tariff review.*

Source: Infometrics (2002), P.72; New Zealand Customs service (2002);

4.2.3 Reduction in Rate of Assistance on TCF industries

The nominal rate of assistance is the percentage by which gross returns per unit of output are increased by assistance, relative to the situation of no assistance (SYNTEC,

[28] The tariff was up to 65%, see NZIER (1997).

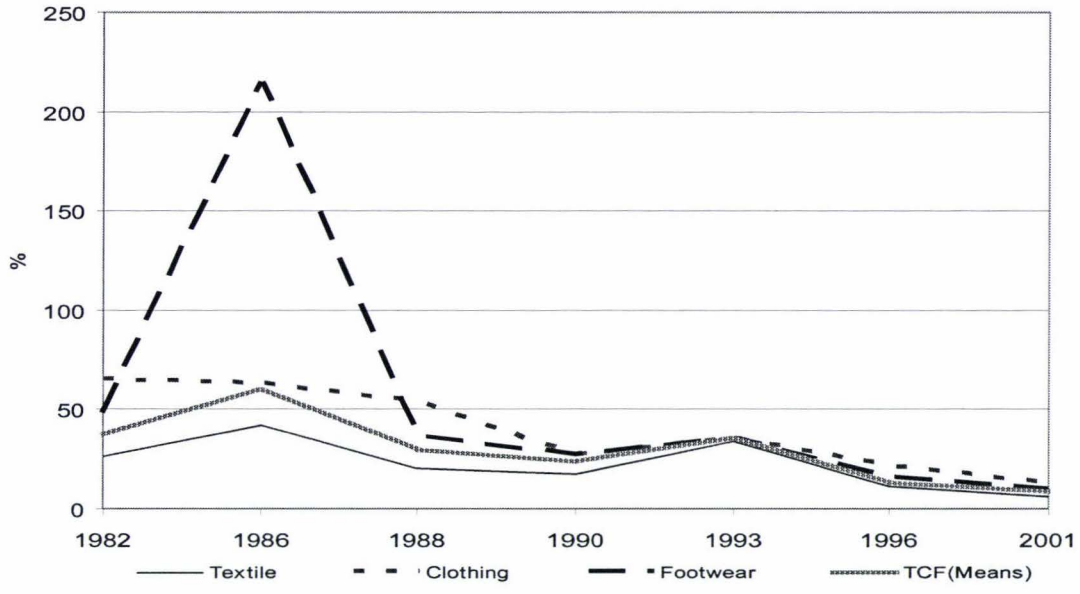
[29] In 1999 the Labour Government decided to freeze further reductions until July 2005.

1988). Forms of assistance, such as tariffs and quotas, directly result in changes to relative prices, and the nominal rate also reflects the extent to which incentives to consume various products have been changed.

The nominal rate of assistance on output (NRO) for TCF industries is presented in Figure 4.4. The NRO for TCF industries tended to decrease during the period of 1982 to 2001. However, assistance peaked in the mid-1980s, and there was increased assistance from 1982 to 1986 after which it gradually decreased from about 65 per cent in 1985 to less than 10 per cent in 2001. Initially, as shown from the figure, the surging NRO was for footwear. According to Lattimore (2003), the reasons may be as follows:

- Prior to 1993, import-licensing arrangements were operating in parallel with tariffs. In this environment, New Zealand markets could be isolated from world price movements and this could lead to volatility in nominal rates of assistance.
- Further, in the early 1990s, the final cessation of import licensing on footwear was accompanied by increased ad valorem tariff rates that may have resulted in increases in the NRO even though this was not the policy intention.

Figure 4.4 Nominal Rates of Assistance on Output in TCF Industries



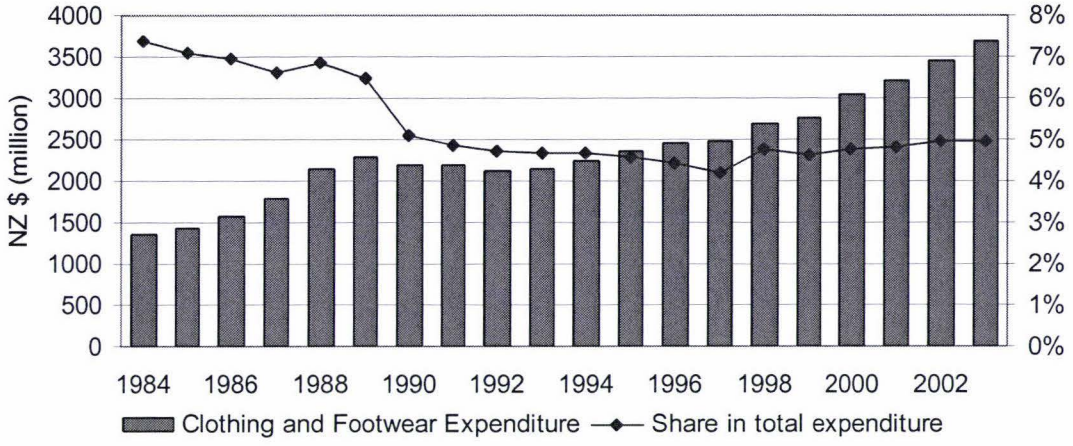
Source: Based on Lattimore (2003), Table 1, p.6.

4.3 Production and Employment

4.3.1 Domestic Demand on TCF Products

As discussed earlier in Chapter Three, clothing and footwear, as the basic need commodity, with the increased of living standard the relative demand of which would decline. Therefore, the share expenditure on clothing and footwear in total expenditure was declining in most developed countries and also for New Zealand. It is clear from Figure 4.5 that the share of expenditure on TCF products in total household expenditure has declined significantly since the mid-1980s. This has had important implications for New Zealand's TCF industries, which used to have a strong domestic focus.

Figure 4.5 Expenditure of Clothing and Footwear by NZ Household, 1984-2003



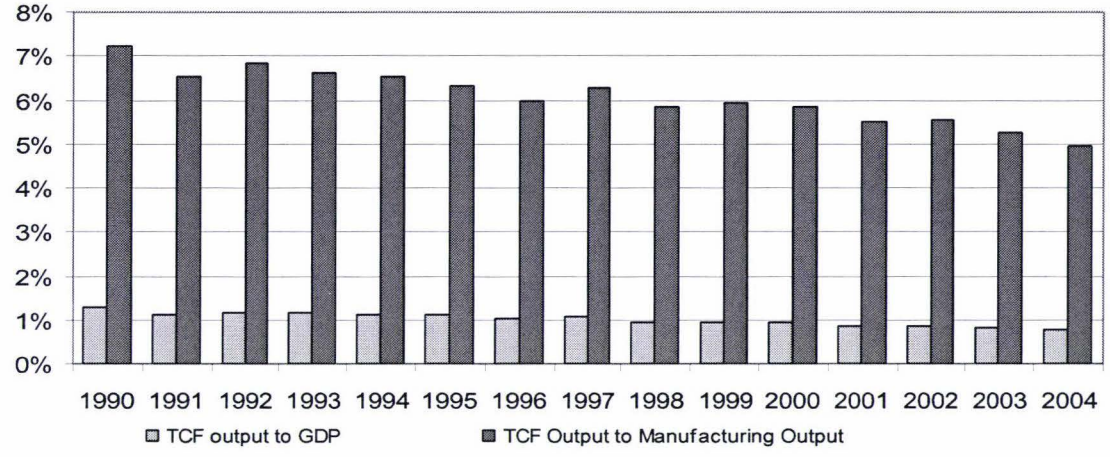
Source: based on New Zealand Official Yearbook, various years.

However, there is an increasing trend of the role of fashion in clothing and footwear. There are still many potential opportunities for manufacturers to exploit. Moreover, with the development of the economy and technology, the demand for non-clothing application textile is also increasing.

4.3.2 Production

Since the late 1980s, the TCF industries in New Zealand have undergone a significant contraction. As shown in Figure 4.6, the share of TCF output in GDP decreased from about 1.3 per cent in 1990 to 0.8 per cent in 2004; the share of TCF output to total manufacturing output declined from 7.2 per cent in 1990 to less than 5 per cent in 2004.

Figure 4.6 Share of TCF Output in GDP and Manufacturing in New Zealand

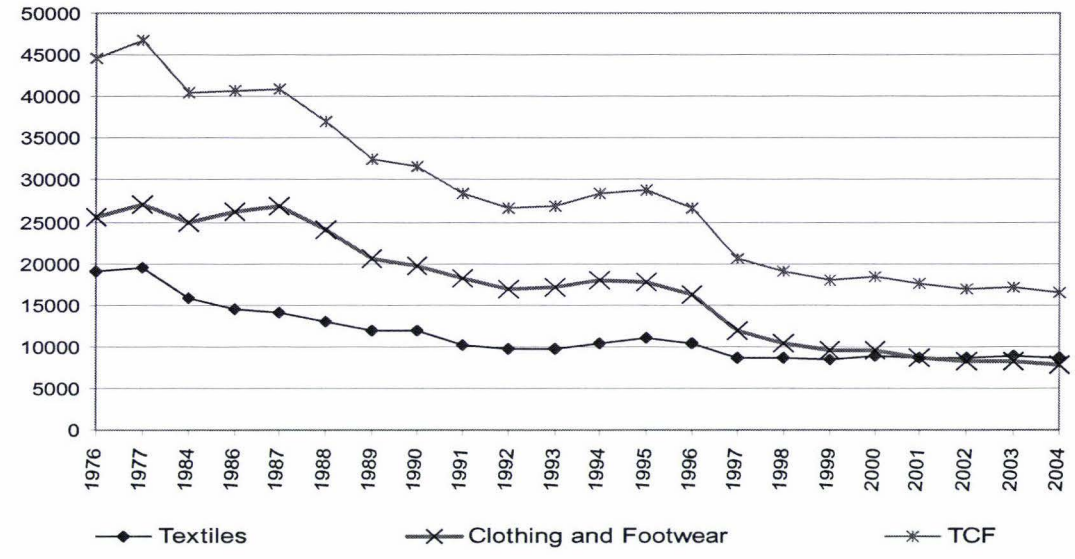


Source: Gross Domestic Product Quarter, Statistics New Zealand and New Zealand Official Yearbook, various years.

4.3.3 Employment

There has been a substantial decline in total TCF employment since 1987, from approximately 40,000 people down to about 25,000 people in 1992. Although there was some growth between 1992 and 1995, employment experienced a sharply decline again to approximately 18,000 people in 1999 and then it relatively stabilised after that (see Figure 4.7). It is clear from the figure that the decline in TCF employment was greatest between 1987 and 1992 when TCF production contracted significantly in response to a number of factors, including the recession, increased import competition and changed consumer tastes.

Figure 4.7 Employment in TCF Industries



Source: Based on New Zealand Official Yearbook, various years and Business Demographic Statistics, Statistics New Zealand.

In contrast to the decrease in TCF employment and enterprises, however, there has been increases in the numbers of both the enterprise and employment in TCF wholesaling (see Table 4.3). This may reflect the shift in value creation from manufacturing to wholesaling and retailing, which in fact is marketing.

Table 4.3 Number of Employment and Enterprises in TCF Wholesale and Retailing

	TCF Wholesale		Clothing and Soft Good Retailing	
	No. of Enterprises	No. of Employees	No. of Enterprises	No. of Employees
1997	741	3,330	2,356	11,410
1998	787	3,430	2,317	11,590
1999	787	3,440	2,208	11,160
2000	864	3,450	2,255	11,330
2001	853	3,470	2,155	11,970
2002	879	3,810	2,130	12,170
2003	917	4,020	2,223	12,770

Source: Business Demographic Statistics, Statistics New Zealand.

In labour-intensive industries, wage differences from one country to another are likely to be one of the main differences of competitiveness, particularly for mass-produced goods. According to a recent labour study on TCF industries by the ILO (2000), for

example, clothing industry labour costs may account for up to 80% of the value of the finished goods. The large differences in TCF industries labour costs between industrialized countries and developing countries are illustrated in Table 4.4. While New Zealand's average labour costs in TCF are below those of many OECD countries, New Zealand's TCF manufacturers face significant disadvantages on wages and labour costs compared with non-OECD countries.

Table 4.4 Labour Cost in TCF Industries (current $ US/hour)

Country	1990	1994	1999
New Zealand	7.6	9.8	11.3
Australia	8.8	9.8	13.7
United States	7.1	8.2	10.8
Italy	12.5	12.5	13.7
South Korea	2.4	2.7	3.1
China	0.26	0.27	0.31
India	0.33	0.29	0.27
Indonesia	0.16	0.28	0.32

Source: Based on ILO, Yearbook of Labour Statistics, various years.

Given such fundamental disadvantages in labour costs, it is clear that New Zealand production cannot be viable in activities in which labour costs are the key criterion for competitiveness. This basic disadvantage explains much of the decline in clothing and footwear manufacturing activity and employment that has occurred in New Zealand since the mid-1980s and in many other developed countries. Therefore, the key to the survival of New Zealand's TCF industries is to alleviate the effects of such high wage differentials through higher productivity.

4.4 Productivity

Productivity is the ratio of output to one or more of the inputs used in production - labour, land, capital (plant, machinery and equipment) etc. Productivity provides a way of looking at how efficiently production inputs are used in an industry.

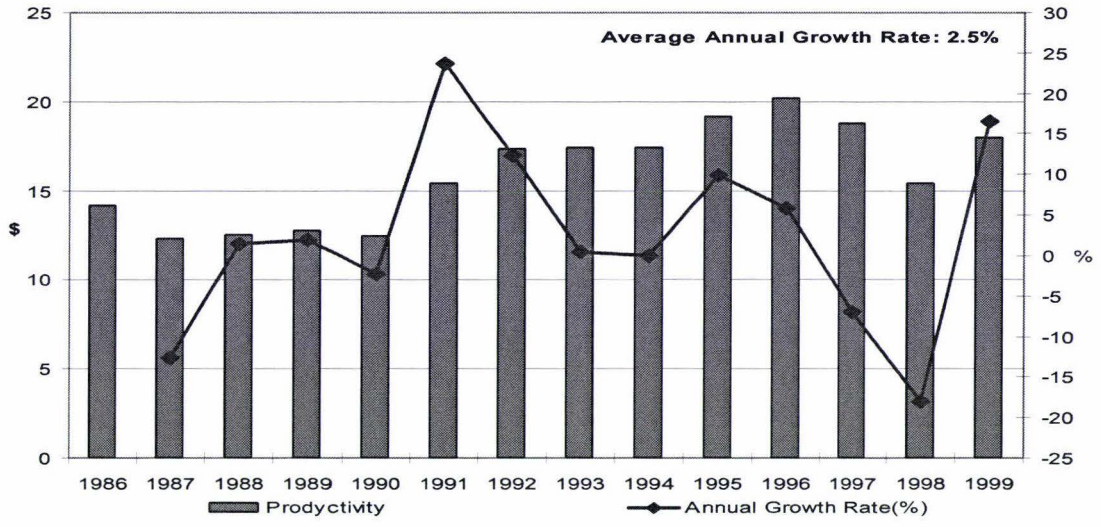
According to Kudyba and Diwan (2002), factors that might affect productivity include the following:

- Scale economies, that is the extent to which increasing the size of the operation contributes to productivity;
- Capital deepening, with more capital-intensive production technologies, and substituting capital for labour;
- The effect of competition from imported goods;

Labour productivity is an important measure of TCF performance, as it reflects the industry's ability to increase production from its existing labour input. The ability to generate additional output per worker has an important bearing on competitiveness and profitability. As discussed earlier, the TCF industries in New Zealand have experienced restructuring, and both output and employment has contracted. However, there has been an increase in labour productivity with an annual average growth rate of about 2.5 per cent (see Figure 4.8).[30] As suggested by the theory of "cold shower", high protection might to some extent erode the incentive for firms to raise productivity; by contrast, the reduction in protection would increase competitive pressure which in turn forces firms to act in a more efficient way (Campbell, 1998). In this sense, as protection was cut back, the increase in labour productivity was not uncommon. Competition from imported goods, on one hand can force domestic manufacturers to become more efficient, but on the other hand, limits the market in which to exercise its efficiencies.

[30] The growth is still lower than the growth rate of total manufacturing.

Figure 4.8 Labour Productivity in TCF Industries



*Note: Labour productivity was calculated as value added per hours of labour input.
Source: WestPactrust, Analysis of Manufacturing Industries, various years.

An improvement in labour productivity may not necessarily reflect an improvement in the efficiency of labour, however, as it may reflect the substitution of capital for labour. According to a recent study conducted by Färe et al (2003) on productivity growth in New Zealand for the period of 1978 to 1998, the total factor productivity performance in TCF industries was better in the 1978 -1984 period than in the 1984 - 1998 period (see Table 4.5). During the period of 1984 to 1998, the annual average growth rate of total factor productivity was negative (-2.11%). Furthermore, changes in efficiency and technology are poorer than that of the period 1978 to 1984. This evidence indicates that New Zealand TCF has benefited little from its trade liberalization in terms of productivity. One reason may lie in the shrinking market share mainly due to the increased import competition and thus limiting the ability of domestic firms to exercise economies of scale.

Table 4.5 Annual Average Productivity Change in TCF Industries (%)

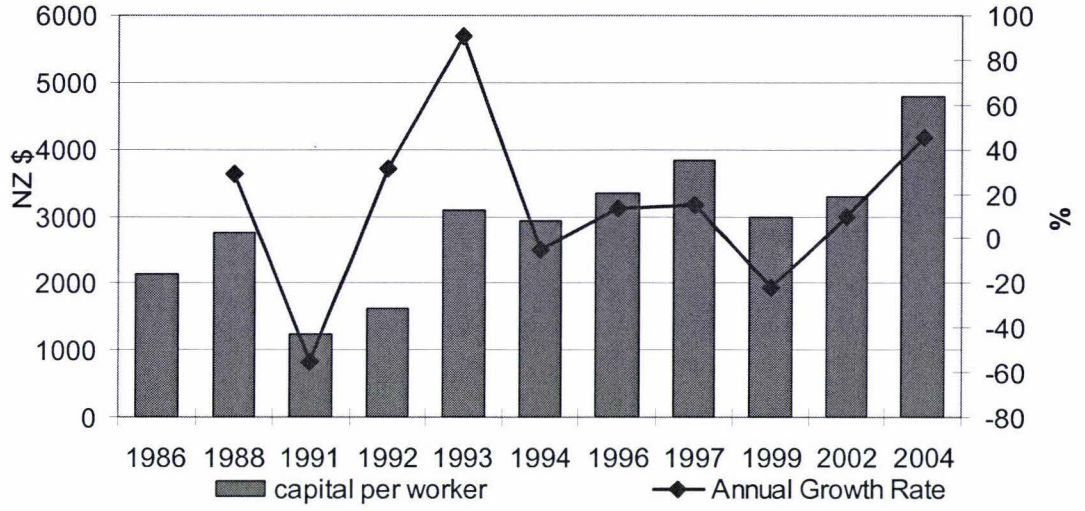
	TFP	ECH	TCH
1978-1984	1.8	0.89	0.93
1984-1998	-2.11	-0.09	-1.8
1978-1998	-0.93	0.23	-0.98
Simple average for Manufacturing (1978-1998)	0.9		

*Note: TFP: Total Factor Productivity; ECH: Efficiency change; TCH: Technical change.

Source: Based on Färe et al. (2003).

The level of capital expenditure will determine the long run productivity capacity of the firm and industry, just as R& D will contribute to the ability of the firm to survive in an evolving technological economy. Increased capitalization and downsizing in the TCF industries have a positive impact on productivity. As shown in Figure 4.9, while the capital per worker fluctuated in some years, the overall trend was increasing. From 1988 to 2004 the number of employees declined by nearly 60 per cent while capital per worker increased 124 per cent. To some extent, this reflects the technological changes in the industries. Given the disadvantages in huge labour costs compared to other developed countries, the current level of capital investment and productivity is not enough to compensate for the labour cost disadvantage. The increasing competitive pressure from imports will not necessarily stimulate the local TCF manufacturers to innovate and to upgrade their competitive position. It might even play an unfavourable role by reducing the investment rate and thus act in compromising its future competitive power.

Figure 4.9 Capital per worker of TCF Industries: 1986-2004



*Note: Capital was measured by Gross Capital Formation. This includes the purchase of new and second hand fixed assets and the cost of work done by a firm's own employees, in producing and installing fixed assets for its own use.

Source: Quarterly Survey of Manufacturing, Statistics New Zealand.

In summary, New Zealand's trade liberalization since the mid-1980s has posed a substantial impact on the domestic TCF industries. The industries have experienced significant contraction and restructuring following the trade liberalization and reduction in protection. Meanwhile, there has been a significant increase in TCF imports from all international sources due to progressive removal of tariff barriers. In the following chapter, New Zealand's international trade in TCF industries will be discussed in detail.

Chapter Five

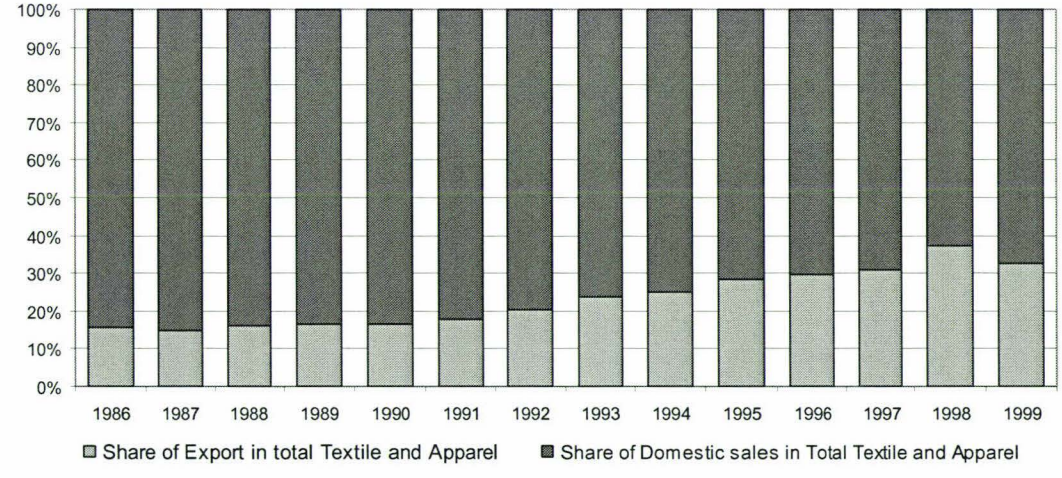
New Zealand's International Trade in TCF Products

5.1 Imports and Exports

5.1.1 An Overview

Historically, TCF industries in New Zealand were focused mainly in the domestic market. Recently, the TCF industries are becoming increasingly integrated with the international marketplace. Generally, inward-looking strategies were replaced by outward-looking strategies. Figure 5.1 shows the changes in proportion between the domestic market and export market for TCF industries. The share of domestic sales was shrinking during the period of 1986 to 1999, in other words, the export share was increasing. The liberalisation of international trade and a progressive reduction in protection has seen New Zealand TCF imports grow at an annual average rate of more than 20 per cent between 1988 and 2004.

Figure 5.1 Changing Share of Domestic market Sales in TCF Industries

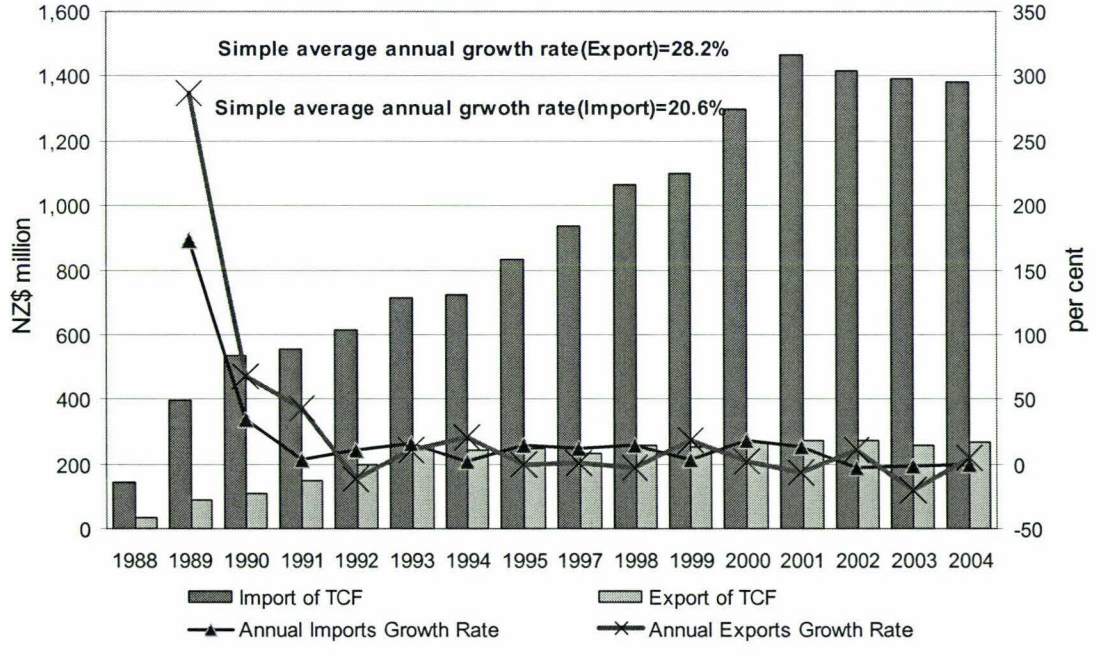


Source: Based on Survey of Manufacturing Industries, NZMF; various of years.

As discussed previously in Chapter Four, as a result of the trade liberalisation and the reduction in protection combined with the changing domestic consumption, the TCF

industries' exposure to international competition has increased, and imports have increased significantly (see Figure 5.2). It is clear that the removal of import licensing and a progressive reduction in tariffs have seen TCF imports as a whole increase significantly from NZ $145 million (CIF) in 1988 to approximately NZ $1.38 billion in the year ending June 2004, or at an annual average growth rate of 20.6 percent.[31] Meanwhile, the TCF exports have increased from NZ $ 34 million (FOB) in 1988 to NZ $265 million in 2004, growing at an average rate of 28 per cent per year over the period 1988 to 2004. During the period of 1988 to 1993, the performance of TCF exports was very good; as pointed out by IC (1997), where a mature, slowly growing domestic market in which imports continued to rise, so that exports have necessarily become an increasingly important strategy for the firms within the industries. However, it seems clear from the figure that the overall TCF exports by value have remained unchanged since 1993.

Figure 5.2 New Zealand TCF Import and Export: 1988-2004 (Year End June)



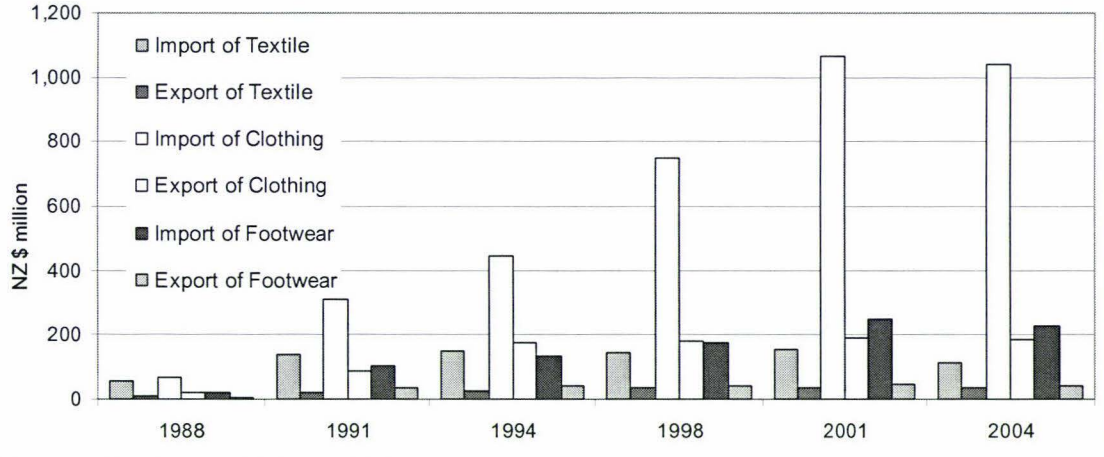
Source: New Zealand External Trade Statistics.

[31] CIF is cost insurance and freight; FOB is free on board.

5.1.2 Sector Performance

Although each of the TCF sectors exports their products to varying extents, all experienced trade deficits (Figure 5.3).[32] Each industry relies on importing products, a trend that has increased over the years. This is more apparent in the clothing industry where imports have grown steadily and peaked in 2001. In contrast, the import of textiles by value has decreased since 1990. To a large extent, the surge of TCF imports was due to the significant increase in clothing and footwear products, especially in clothing imports.

Figure 5.3 Imports and Exports of New Zealand TCF Products

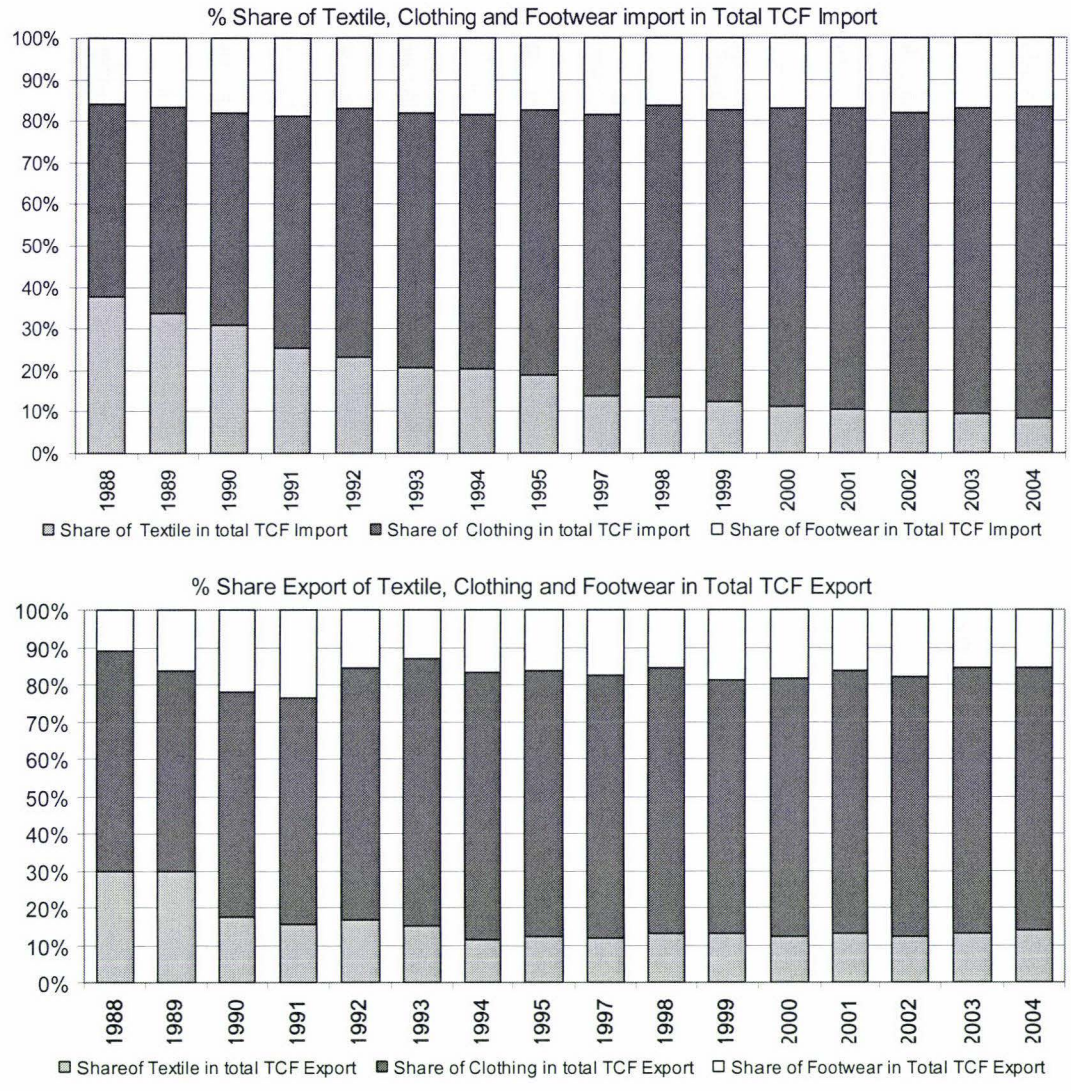


Source: New Zealand External Trade Statistics.

As shown in Figure 5.4, the share of clothing imports in total TCF imports increased significantly from 1988 to 2004, from less than 45 per cent in 1988 to nearly 70 per cent in 2004. The share of footwear imports in total TCF imports was relatively stable, therefore the increased share of clothing import was offset by the decreased share of textile imports. However, concerning New Zealand's TCF exports, it is clear from the figure that the share of clothing exports to total TCF export increased and the share of textiles decreased.

[32] There are trade surpluses in some niche markets. This will be discussed in the following section.

Figure 5.4 Share of Textiles, Clothing and Footwear Imports/Exports in Total TCF Imports/Exports



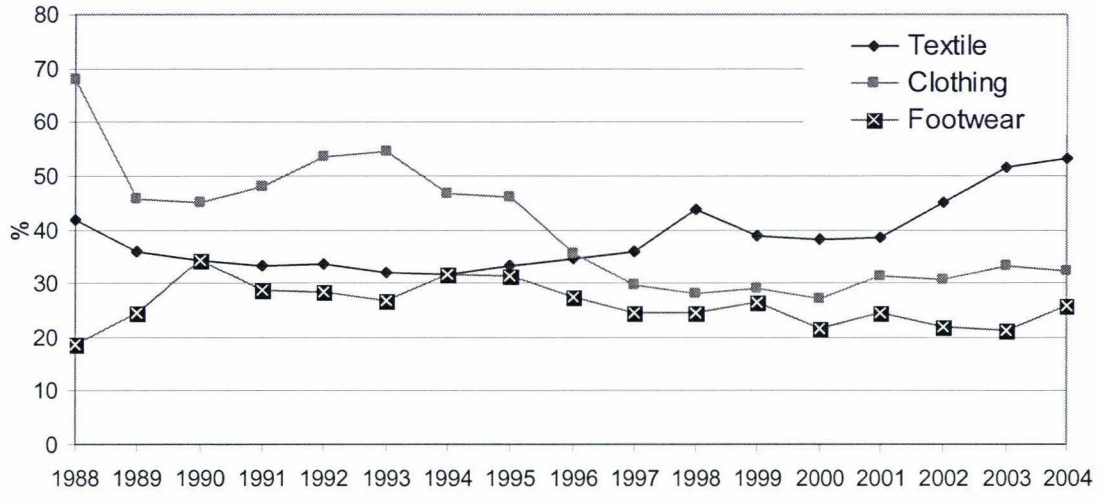
Source: NZ External Trade Statistics.

However, it may not mean that the export performance of the clothing industry was good; on the contrary, the export performance of the industry actually decreased. The export performance, measured simply by export value of each TCF product as the percentage of the same product's import value, is presented in Figure 5.5.[33] This measure for clothing decreased from nearly 70 per cent in 1988 to only around 30 per

[33] While very simple, the method is widely used as proxy of export performance, for example, Pye (2002); Roberts & Thoburn (2002).

cent in 2004; for textiles, however, their measure increased from about 42 per cent to 53 per cent over the period 1988 to 2004.

Figure 5.5 Trade Performance of New Zealand TCF Industries



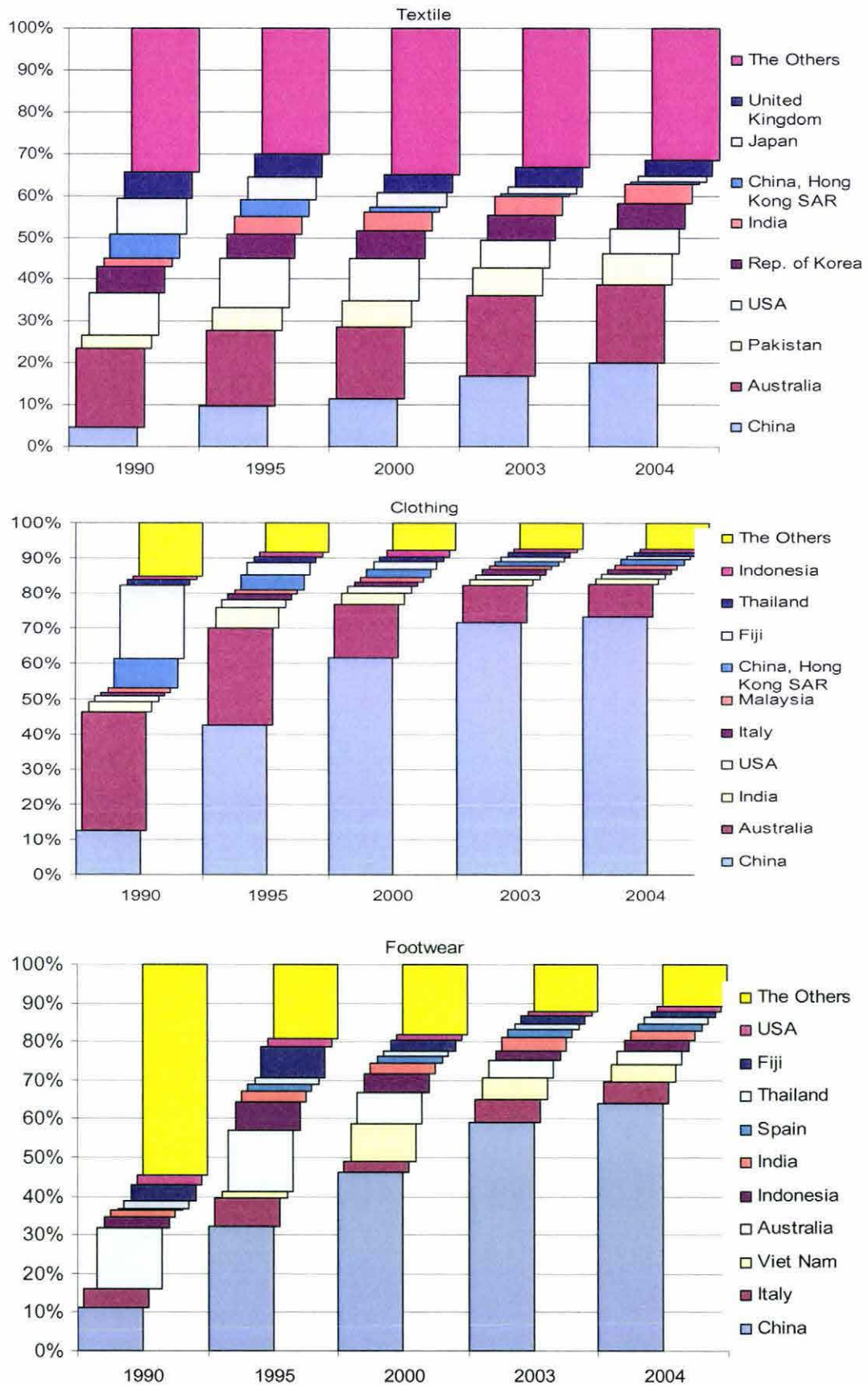
Source: Based on data from UN Commodity Trade database.

5.1.3 Sources of New Zealand's TCF Imports

As discussed in Chapter Three, the structure of the global TCF industries has changed. Labour-intensive production of TCF shifted to relatively low-wage developing countries, such as China, while relatively capital or technology intensive production remained in developed countries. The changes in New Zealand's source of TCF import is closely related to this change, as shown in Figure 5.6. Traditionally, Australia was New Zealand's major source of TCF imports, and this country still had a relatively high share in 1990.[34] However the share of New Zealand's TCF imports from Australia declined significantly during the period 1990 to 2004, by contrast to the share of China. The latter has increased significantly, particularly in clothing and footwear products.

[34] "Closer Economic Relations" with Australia has had been an important role in the dominance of New Zealand's TCF imports by Australia.

Figure 5.6 Changing Sources of TCF Imports

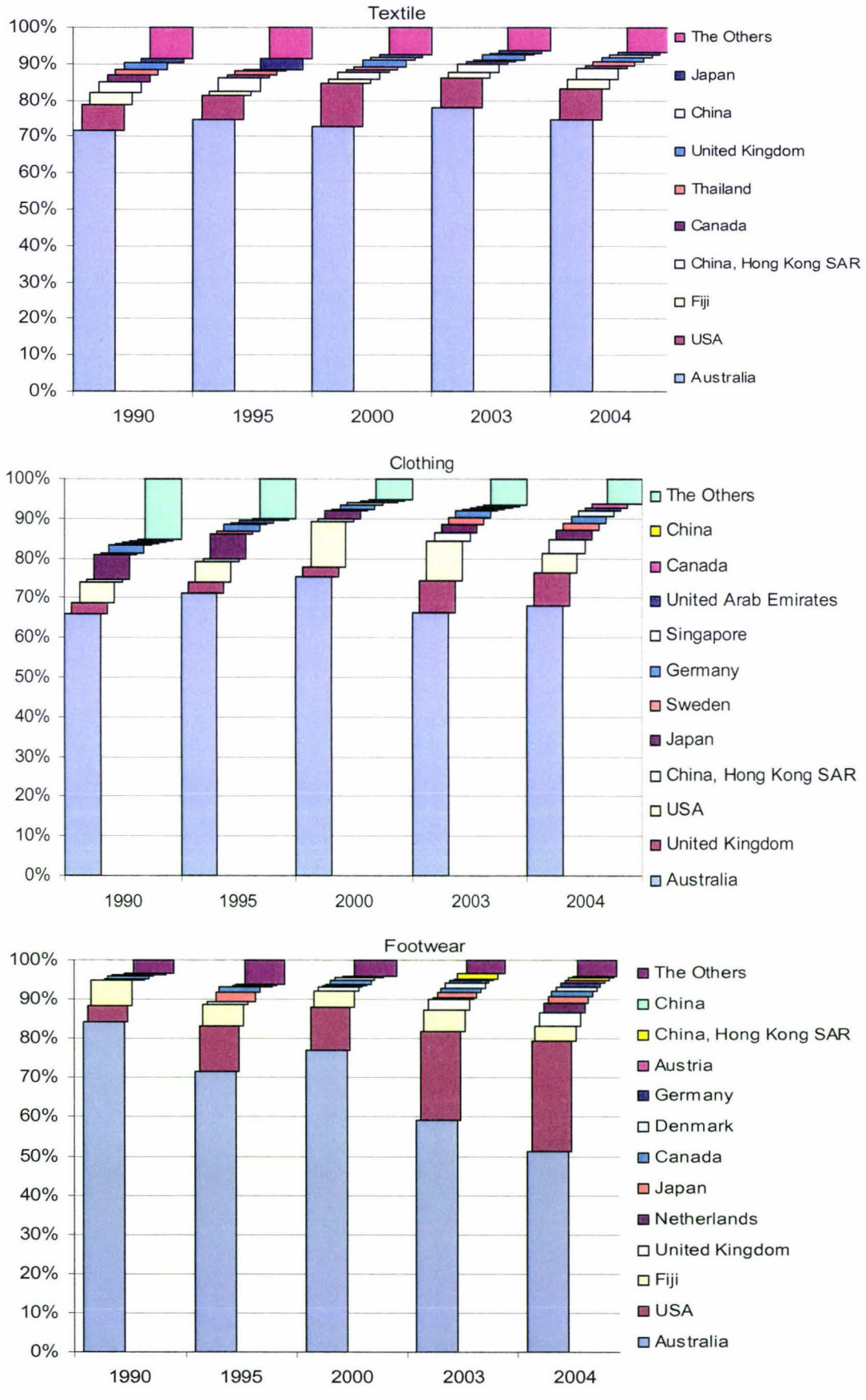


Source: based on data from UN Commodity Trade Database.

5.1.4 Destination of New Zealand's TCF Exports

It is clear from Figure 5.7 that New Zealand's exports of TCF products were limited to a small number of wealthy countries. Among them, Australia is the major market which accounted for about 50 to more than 70 per cent of New Zealand's textiles, clothing and footwear exports in 2004. The top five export markets for each industry accounted for more than 90 per cent of total textiles, clothing or footwear exports by value. Though efforts have been made to diversify export destinations, particularly into Asia, Australia has remained New Zealand's major export market with little change except for footwear, which decreased from more than 80 per cent in 1990 to about 50 per cent in 2004. However, the importance of the US market as New Zealand's TCF exports has increased during the period of 1990 to 2004, especially for footwear exports which increased from 5 per cent in 1990 to nearly 30 per cent of New Zealand's total exports of footwear in 2004. The share of the Asian market for New Zealand's TCF exports is increasing, particularly in Japan, Hong Kong (China), and Thailand. China still accounts for a relatively small share of New Zealand's TCF exports in 2004, although the percentage share had increased during this period.

Figure 5.7 Changing Destination of New Zealand's TCF Exports



Source: based on data from UN Commodity Trade Database.

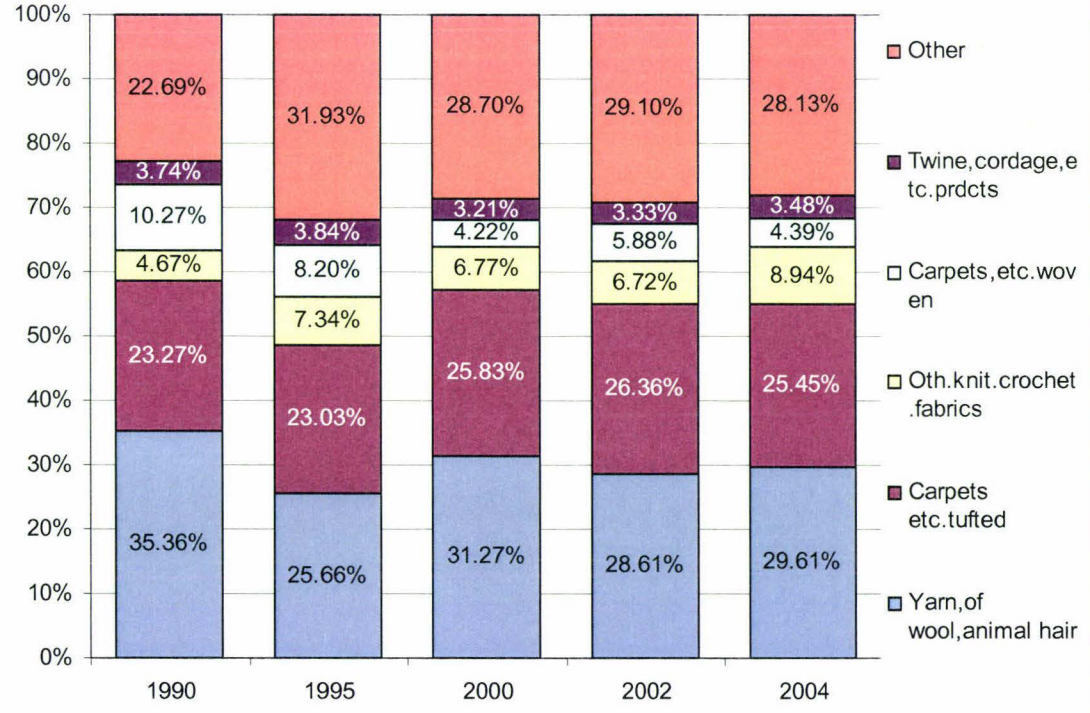
5.2 Export Performance in TCF industries

5.2.1 Textiles

New Zealand's exports of textiles are concentrated in five main product categories (see Figure 5.8):

- Yarn of wool or animal hair (SITC 6511);[35]
- Carpets and other textile floor coverings, tufted, whether or not made up (SITC 6594);
- Carpets and other textile floor coverings, woven, not tufted or flocked, whether or not made up (SITC 6595);
- Knitted or crocheted fabrics, not impregnated, coated, covered or laminated (SITC 6552);
- Twine, cordage, ropes and cables and manufactures thereof, such as finishing nets, rope-markers' wares etc. (SITC 6575);

Figure 5.8 Share of Total Textiles Exports by 4 Digit SITC Category



Source: based on data from UN Commodity Trade Database.

[35] See Appendix A for the detailed list of SITC for TCF industries.

The relatively high percentage share in the exports of yarn of wool or animal hair which accounts for about 30 per cent of New Zealand's total textiles exports for the period of 1990 to 2004, reveals that the exporting of early stages of products still play an important role in New Zealand's textile exports. To a large extent this reflects New Zealand's natural advantage, such as sources of raw materials and low-pollution production techniques. Besides, the importance of industrial textile or technical textile exports in New Zealand's textile export has been increasing over time.

5.2.2 Clothing

Despite the poor performance of the clothing industry in general, as suggested by BE & NZIER (2001a), there are some positive signs that may provide opportunities for potential industry development, including glamour, mid- and high-end women's fashion, industrial work wear, uniforms, outdoor, sports and leisure wear.

From the export structure of the clothing products, there are also some encouraging developments. As shown in Figure 5.9, the exports of clothing products has been concentrated in certain products lines, such as:[36]

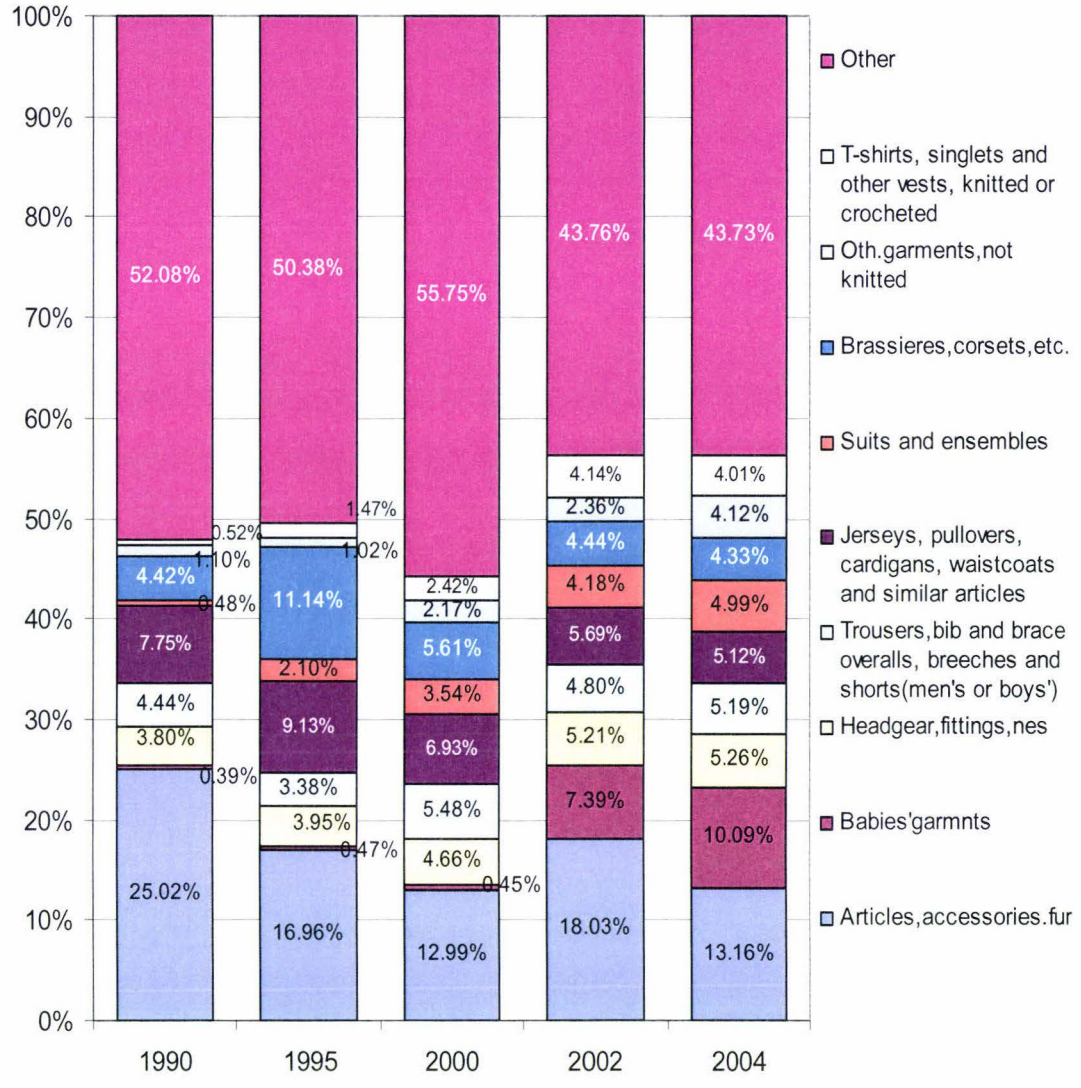
- Articles of apparel, clothing accessories and other articles of fur skin; artificial fur and articles thereof (SITC 8483);
- Babies' garments and clothing accessories (SITC 8451);
- Headgear and fittings (SITC 8484);
- Men or boy's trousers, bib and brace overalls, breeches and shorts (SITC 8414);
- Men or boy's suits and ensembles (SITC 8412);

[36] The entire results for all the 4 digit clothing industry can be found in Appendix B.

- Brassieres, girdles, corsets, garters and similar articles, and parts etc. (SITC 8455);
- Articles of garments with textile fabrics, not knitted or crocheted (SITC 8458);
- T-shirts, singlets and other vests, knitted or crocheted (SITC 8454);

Among these product lines, some have traditionally played an important role in New Zealand's clothing exports, but some have not, particularly baby's garments and clothing (SITC 8451), articles of garments with textile fabrics not knitted or crocheted (SITC 8458) and T-shirts, singlets and other vests, knitted or crocheted (SITC 8454). These product lines were emerging as new lines of clothing export in New Zealand, particularly in baby's garments and clothing which increased from only 0.39 per cent in 1990 to almost 11% in 2004. Baby garments and clothing are relatively high value-added and capital and technology intensive. The reason is simply due to an increasing trend of people around the world taking more care in the choice of quality clothing for babies. The recent good performance of this product line in New Zealand was a reflection of this trend. Above and beyond the increasing share of articles of garments with textile fabrics, not knitted or crocheted (SITC 8458) and T-shirts, singlets and other vests, knitted or crocheted (SITC 8454) product lines in New Zealand's total clothing exports reflect increasing competitiveness in some market segments, such as industrial work wear, uniforms, outdoor, sports and leisure wear, that are consistent with the study by BE & NZIER (2001a). However, the trade statistics seems to indicate the competition in women's fashion products was decreasing recently, although this was thought to be an important market segment for New Zealand's clothing industry in the studies on New Zealand's TCF industries (TCFC Partnership, 2002; BE & NZIER, 2001b).

Figure 5.9 Share of Total Clothing Exports by 4 Digit SITC Category

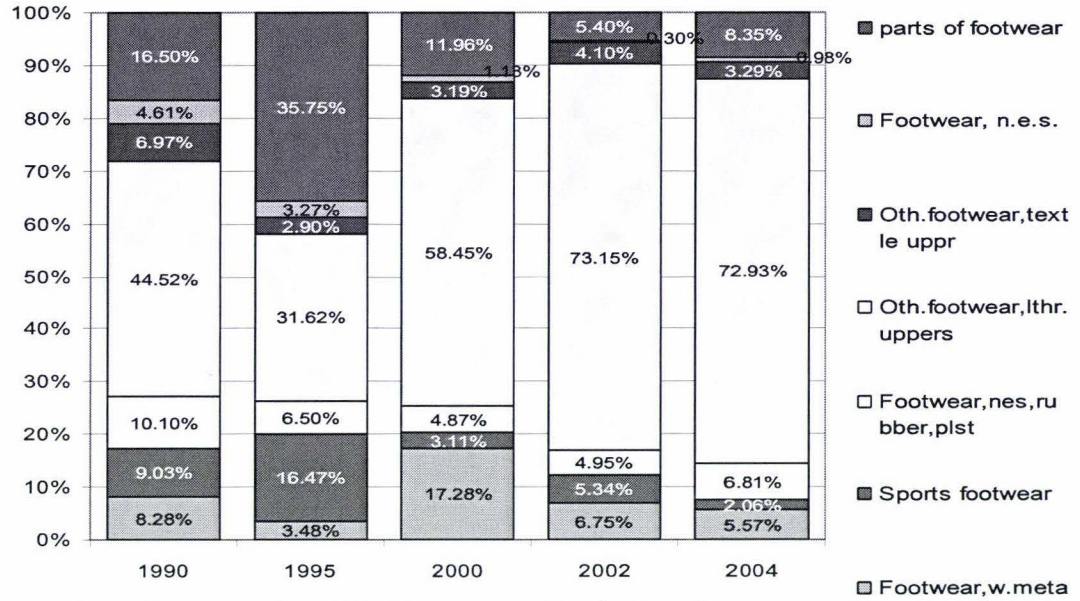


Source: based on data from UN Commodity Trade Database.

5.2.3 Footwear

Figure 5.10 shows that the export of footwear from New Zealand was increasingly dominated by the leather footwear (SITC 8514). In contrast, there has been a substantial decrease in other footwear, such as sports footwear which accounted for a relatively high share in 1990 (9.03%), but accounted for only approximately 2% in 2004. This is indicative of a decline in international competitiveness.

Figure 5.10 Share of Total Footwear Exports by 4 Digit SITC Category



Source: based on data from UN Commodity Trade Database.

5.3 Intra-Industry Trade in New Zealand TCF

Intra-industry trade (IIT) can generally be defined as simultaneous exports and imports of similar products. As discussed previously in Chapter Two, consumer demand is also an important force of international trade. Nowadays consumers are increasingly demand a variety of products. Therefore, it is not surprise to find that a economy is importing the TCF products meanwhile exporting the similar product. As pointed out by Ruffin (1999), the significance of IIT arises from its basic character: it need not be based on comparative advantage. The production differentiation is the key determinant of the IIT (Bernhofen, 2001).

The Grubel-Lloyd (GL) index (Grubel & Lloyd, 1975) was used to measure the extent of intra-industry trade. The GL index is computed as:

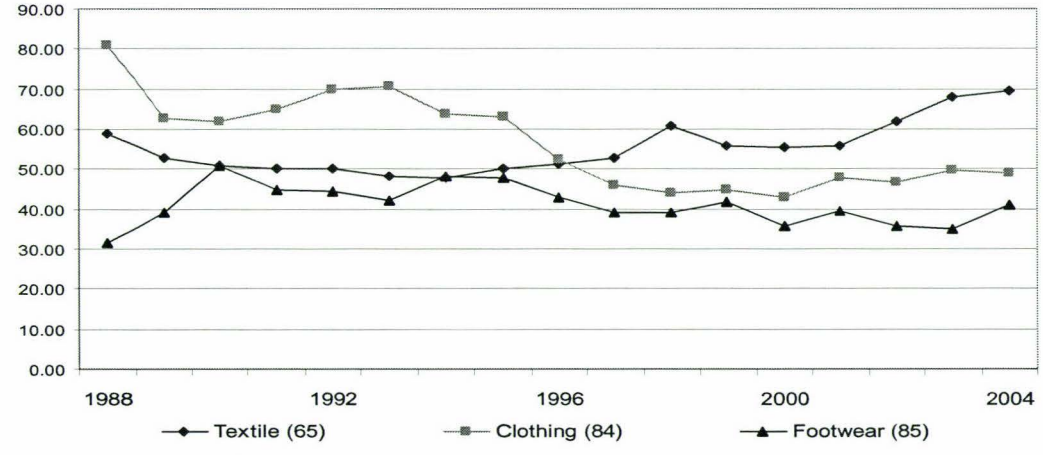
$$GL_i = \frac{(X_i + M_i) - |X_i - M_i|}{X_i + M_i} * 100$$

where Xi and M_i refer to exports and imports of commodity i , respectively.

It is easy to show that the GL index will lie in the interval of 0 to 100. If GL equals 100, all trade in commodity i is intra-industry trade; if GL equal to zero, then there is no evidence of intra-industry trade at all.

Using data from the United Nations Commodity Trade Database, the GL index was constructed at the 4 digit-level SITC Rev.3. The detailed results are presented in Appendix C. The overall results are quite mixed. At the aggregate level, the GL index for the textile industry (SITC 65) increased during the period of 1988 to 2004, indicating an increasing intra-industry trade in this industry. By contrast, the GL index for the clothing industry (SITC 84) fell from more than 80 in 1988 to about 49 in 2004. The index for the footwear industry increased during the period but was subject to fluctuation (see Figure 5.11).

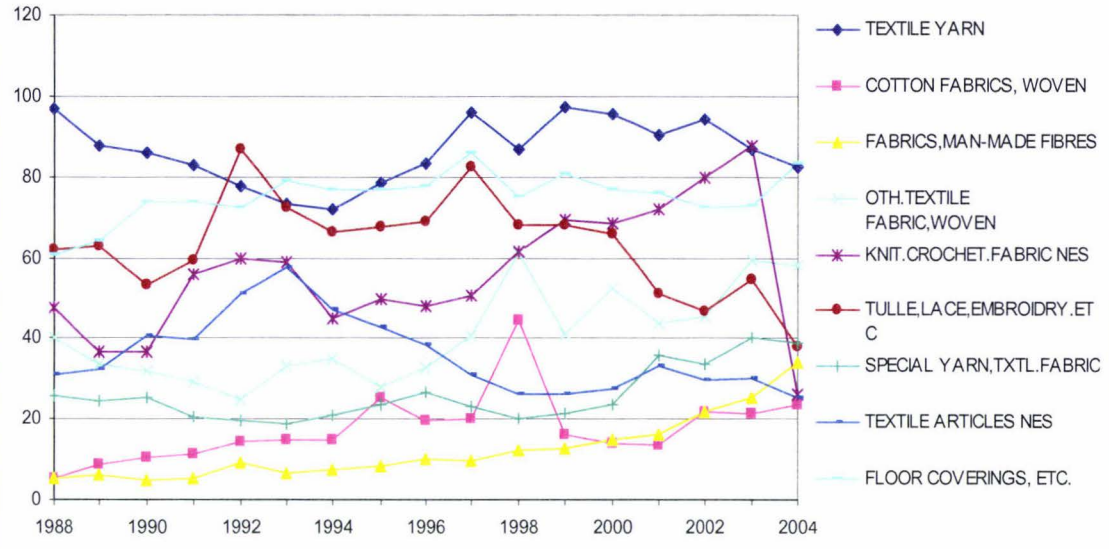
Figure 5.11 IIT for New Zealand TCF



Source: based on data from UN Commodity Trade Database.

Within the textile industry, intra-industry trade is obvious in textile yarn and floor covering, while in the category of cotton fabrics and man-made fibres the evidence is relatively weak.

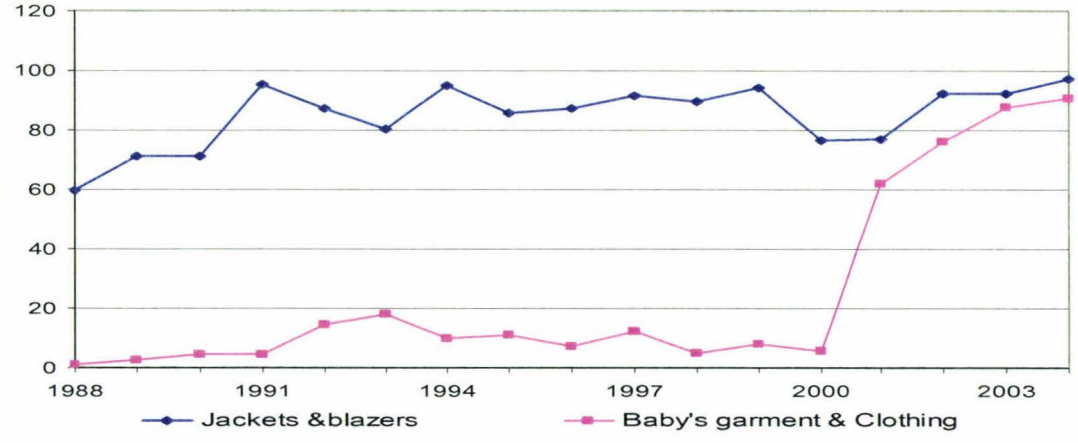
Figure 5.12 GL indices for Textile Industry (3 digits SITC)



Source: based on data from UN Commodity Trade Database.

In the clothing industry, the evidence shows a substantial decline in the index, reflecting the increasing import penetration in this industry. However, within that industry, some commodities, shows stronger evidence of intra-industry trade. As shown in Figure 5.12, the indices for SITC 8413 (containing men's or boys' jackets and blazers) and SITC 8451 (baby's garments and clothing) were quite close to 100. The baby's garment and clothing index increased substantially from the year 2000.

Figure 5.13 IIT for Selected Clothing Commodity



Source: based on data from UN Commodity Trade Database.

5.4 Comparative Advantage

The H-O theory discussed previously in Chapter Two suggests that a country's comparative advantage is basically determined by its factor endowment ratio, relative to the rest of the world. In this section, Balassa's (1965) revealed comparative advantage (RCA) index is used to analyse New Zealand's comparative advantage in TCF. The idea behind the index is that the direction of trade flows reveals countries' specialization patterns and hence their comparative advantage.

The RCA index for a particular product or industry is given by the share of that product or industry in the country's total exports relative to the product or industry's share in total world exports. Thus, the aim is to identify whether a country has a revealed comparative advantage rather than to specify the underlying sources of the comparative advantage. Formally, the index for country i commodity/industry j can be calculated as:

$$RCA_{ij} = \frac{X_{ij}/X_i}{X_{wj}/X_w}$$

where

X_{ij} = country i's export of commodity j

X_{wj} = world exports of commodity j

X_i = total exports of country i

X_w = total world exports

The index of revealed comparative advantage (RCA_{ij}) has a relatively simple interpretation. If it takes a value greater than unity, the country has a revealed comparative advantage in that product or industry. If the value is less than unity, the country is said to have a comparative disadvantage in that product or industry.

The results are shown in Table 5.1. It is clear from the table that the results indicate the comparative advantage for overall TCF is weak, especially for clothing and footwear. Further more, the results show a declining trend for clothing and footwear, while the comparative advantage of New Zealand was seen increasing during the period of 1999 to 2003. A break down study of the TCF to 3 digit SITC revealed that New Zealand has comparative advantage in production of some TCF products, such as textile yarns(SITC 651), floor cover(SITC 659), non-textile clothing(SITC 848) and footwear with metal toe-caps(8511).

Table 5.1 RCA Index for New Zealand TCF Industries

	SITC Rev.3	1999	2000	2001	2002	2003
Textiles	65	0.48	0.44	0.40	0.50	0.58
Textile yarn	651	0.83	0.71	0.55	0.77	0.94
Cotton fabrics, woven	652	0.08	0.06	0.05	0.09	0.11
Fabrics, man-made fibres	653	0.08	0.10	0.10	0.16	0.19
Oth. Textile fabric, woven	654	0.27	0.32	0.25	0.30	0.45
Knit. Crochet. Fabric nes	655	0.46	0.39	0.39	0.42	0.44
Tulle, lace, embroidery. etc	656	0.38	0.34	0.21	0.20	0.24
Special yarn, txtl. fabric	657	0.19	0.20	0.28	0.26	0.33
Textile articles nes	658	0.33	0.34	0.39	0.37	0.37
Floor coverings, etc	659	2.59	2.51	2.40	3.14	3.63
Clothing	84	0.29	0.24	0.26	0.26	0.26
Mens, boys clothing, x-knit	841	0.27	0.21	0.21	0.22	0.23
Women, girl clothing, xknit	842	0.24	0.17	0.14	0.14	0.14
Mens, boys clothing, knit	843	0.39	0.38	0.31	0.31	0.29
Women, girls clothing. knit	844	0.36	0.28	0.29	0.23	0.18
Othr. Textile apparel, nes	845	0.22	0.17	0.23	0.23	0.25
Clothing accessrs, fabric	846	0.25	0.25	0.21	0.21	0.16
Clothing, nontxtl; headgear	848	0.71	0.68	0.86	0.95	0.85
Footwear	85	0.29	0.24	0.24	0.24	0.24
Footwear,w.metal toe-cap	8511	4.42	3.25	2.15	1.07	0.87
Sports footwear	8512	0.04	0.04	0.07	0.08	0.04
Footwear,nes,rubber,plst	8513	0.06	0.08	0.08	0.08	0.09
Oth.footwear,lthr.uppers	8514	0.33	0.30	0.34	0.36	0.37
Oth.footwear,textle uppr	8515	0.22	0.11	0.13	0.16	0.11
Footwear, n.e.s.	8517	0.76	0.22	0.18	0.05	0.04
Parts of Footwear	8519	0.34	0.29	0.16	0.13	0.24

Source: based on data from UN Commodity Trade Database.

This chapter has shown that New Zealand's trade liberalisation since the mid-1980s has opened the domestic TCF industries to international competition. As a result, imports have increased significantly. However, exports are also increasing in response to import competition in the domestic market. While overall comparative disadvantage was found for New Zealand TCF industries, comparative advantages were found in the production of some products. A key point to assess the potential impact of a free trade deal with China is examining the similarity of the production and export structure between the two countries. Therefore, in the following chapter China's TCF industries will be discussed and a two way trade analysis of TCF industries between New Zealand and China is presented in Chapter Seven.

Chapter Six
TCF Industries in China

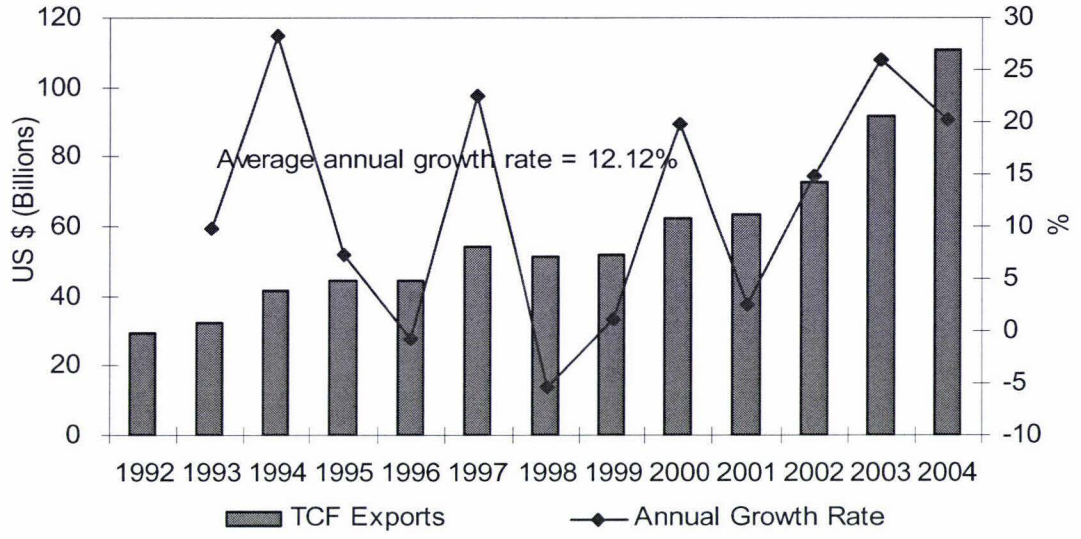
This chapter presents an overview of the TCF industries in China. Particular emphasis is made on the development status and prospects of China's TCF industries so as to help assess the potential impact on New Zealand's TCF industries.

6. 1 Overview

TCF is one of the industries that contribute greatly to the Chinese economy. Since the 1980s, China has developed rapidly in international TCF trading and became one of the largest exporters of TFC goods. Nowadays, TCF industries play an important role in China's foreign exchange earnings and contribute greatly to the country's development.

Since the introduction of economic reforms in 1978, China's exports of TCF have grown rapidly. As shown in Figure 6.1, the export of TCF by value has increased significantly, growing at an average of more than 12 per cent per year between 1992 and 2004. The overall performance of TCF industries has been remarkable since the reforms. Further evidence can be found in Table 6.1, where China's TCF global exports have been increasing steadily during the period 1992 to 2004. China is the world's largest exporter of TCF products, accounting for more than 22 per cent of the total in 2004. The share is even higher for clothing and footwear products.

Figure 6.1 China's TCF Exports, 1992-2004



Source: based on data from UN Commodity Trade Database.

Table 6.1 Share of China's TCF Exports to World Total, 1992-2004

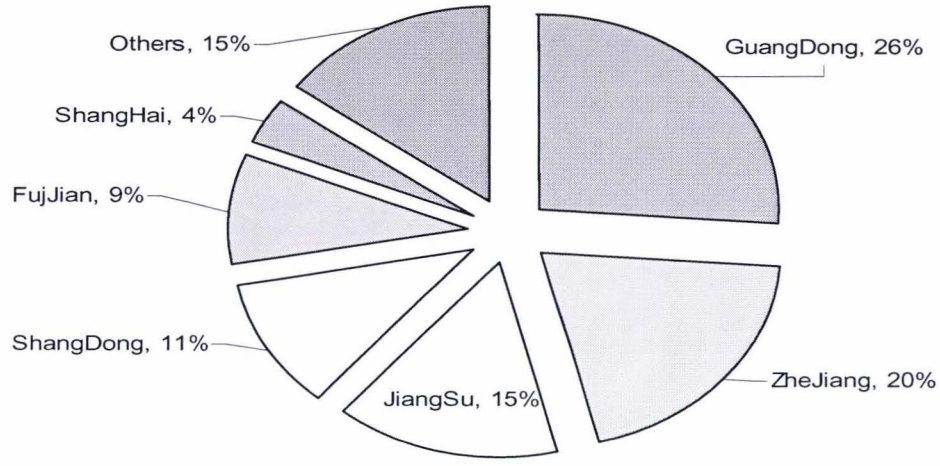
	TCF (%)	Textiles (%)	Clothing (%)	Footwear (%)
1992	10.64	7.43	13.03	12.54
1993	11.76	7.82	14.38	14.61
1994	13.71	9.54	17.01	15.10
1995	12.92	9.43	15.66	15.07
1996	12.36	8.15	15.40	15.14
1997	14.07	8.90	17.54	17.72
1998	13.67	8.60	16.62	18.67
1999	13.97	8.94	16.68	19.46
2000	15.76	10.45	18.63	21.54
2001	16.36	11.39	18.87	21.64
2002	18.36	13.57	20.77	23.61
2003	20.14	15.53	22.63	24.41
2004	22.52	17.74	25.04	27.53

Source: based on data from UN Commodity Trade Database.

TCF production in China, just as in other light industries, is highly regionally concentrated. The majority of China's TCF factories are located in eastern and coastal provinces. It is clear from Figure 6.2 that six provinces account for more than 80 per cent of total clothing output.[37]

[37] These provinces all belong to eastern and coastal areas.

Figure 6.2 Regional Distribution of Clothing Output in China, 2004



Source: CNITC (2005).

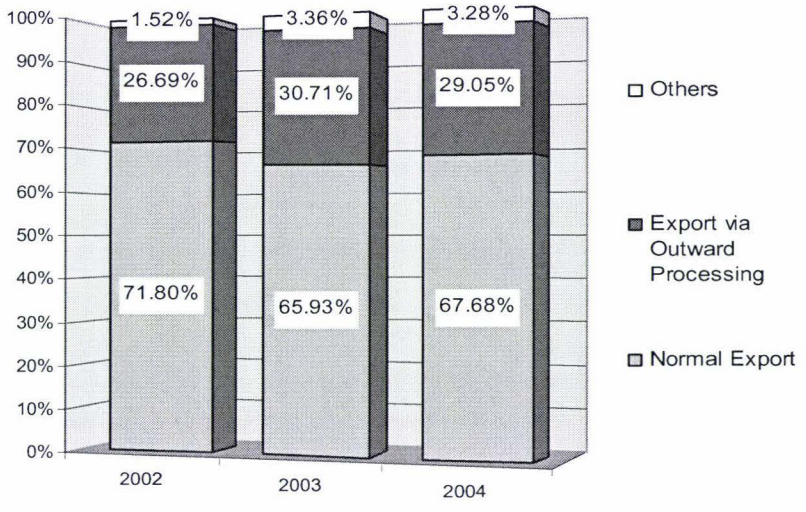
Many other industries also concentrate in the coastal area, which is developing very fast since China's economic reforms and open door policy. The reasons behind this are apparent. First of all, the open door policy was first applied in the coastal areas. The earliest four Special Economic Zones includes Shenzhen, Zhuhai, Xiamen, and Shantou, which are all located in this area. Historically, this area has widespread contact with overseas Chinese, making it easier to attract foreign investment, technology and management skills.

Foreign direct investment (FDI) has played an important role in China's TCF exports and development (Smook, 2004). Since the late 1970s there has been a rapid inflow of FDI into China. The contribution of this can not be understated as Low labour cost does not necessarily infer export competitiveness if productivity is low. Foreign investment brings not only physical capital, but also technology, management and marketing skills and better access to export markets. In many cases, investment is informal, taking the form of compensation, processing and assembly.[38] More recently, an important driving force for the rapid growth of textiles , clothing and footwear

[38] According to Yang (1992), this type of investment is more flexible in meeting export demand.

industries is the outward processing arrangements with firms from Hong Kong (China), Taiwan (China) and the Republic of Korea (Nordås, 2005). The outward processing arrangement has contributed nearly one-third of China's textile and clothing exports recently (see Figure 6.3).

Figure 6.3 Textile and Clothing Export Structure in China 2002-2004[39]



Source: CNTIC(2005)

6.2 Increasing Demand for TCF

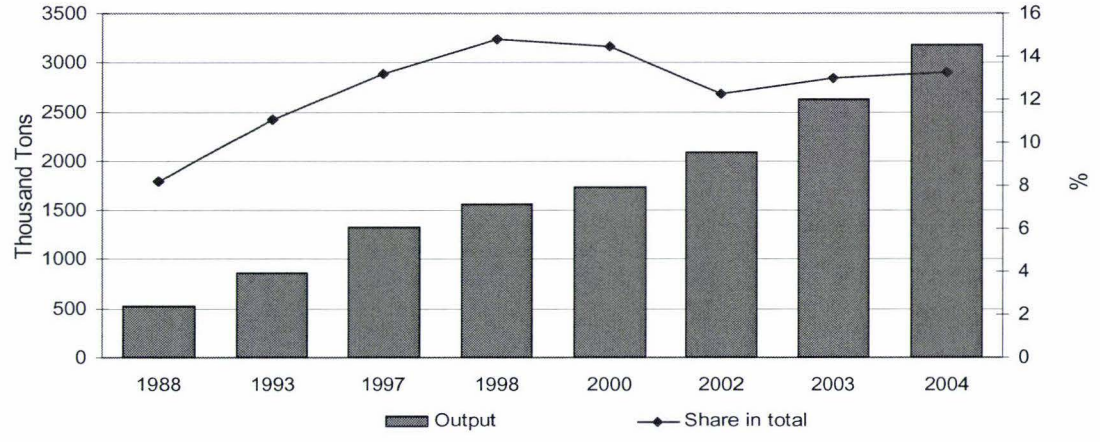
One important factor contributing to the fast development of China's TCF industries is the large domestic demand. China is the world's most populous country, and indeed, with 1.3 billion in population there is no doubt of its buying power. With the improvement of living standard as a result of economic growth, people need more clothing and footwear, demanding both improved quality and styles.[40] Clothing and footwear have become the symbols of fashion for modern Chinese people, rather than seeing it as a tool for keeping warm. Therefore, the domestic market for clothing and

[39] Outward processing implies that the lead firm in an area, such as Hong Kong (China) produces the fabric, does the dyeing and printing of fabric, and then contracts out the sewing and other operations to the firm in China, either through partnerships with local firms or through foreign direct investment.

[40] Recently, real GDP growth has been at more than 9 per cent in China.

footwear has become larger and larger, and this in turn drives the demand for clothing application textiles. Furthermore, the rapid economic development in China also created new opportunities for non-clothing application textile manufacturers, as shown in Figure 6.4.

Figure 6.4 Industrial Textile Output and Its Share in Total Processing Textile Fibres



Source: CNTIC (2005).

However, increasing demand for TCF products does not necessarily guarantee continuous growth in TCF industries. The supply potential is another important factor. TCF production requires a lot of labour, especially in manufacturing clothing and footwear. China's competitive advantage in TCF lies largely in its abundant supply of unskilled labour. TCF production is concentrated in coastal area, but as a result of fast development in the economy, the demand for labour in this area is increasing too, and in some regions rapid export expansion has led to shortage in unskilled labour. Given great variations in labour costs in different parts of China, it will take a considerable time for an overall labour shortage in China to emerge, but labour costs in the coastal areas are actually increasing speedily (Yang & Zhong, 1998). But one thing that can not be neglected is that the supply of labour in China's TCF industries may decline in the future. Firstly, the first generation of the one-child policy is now entering the workforce; therefore it is very likely that the labour pool will shrink.

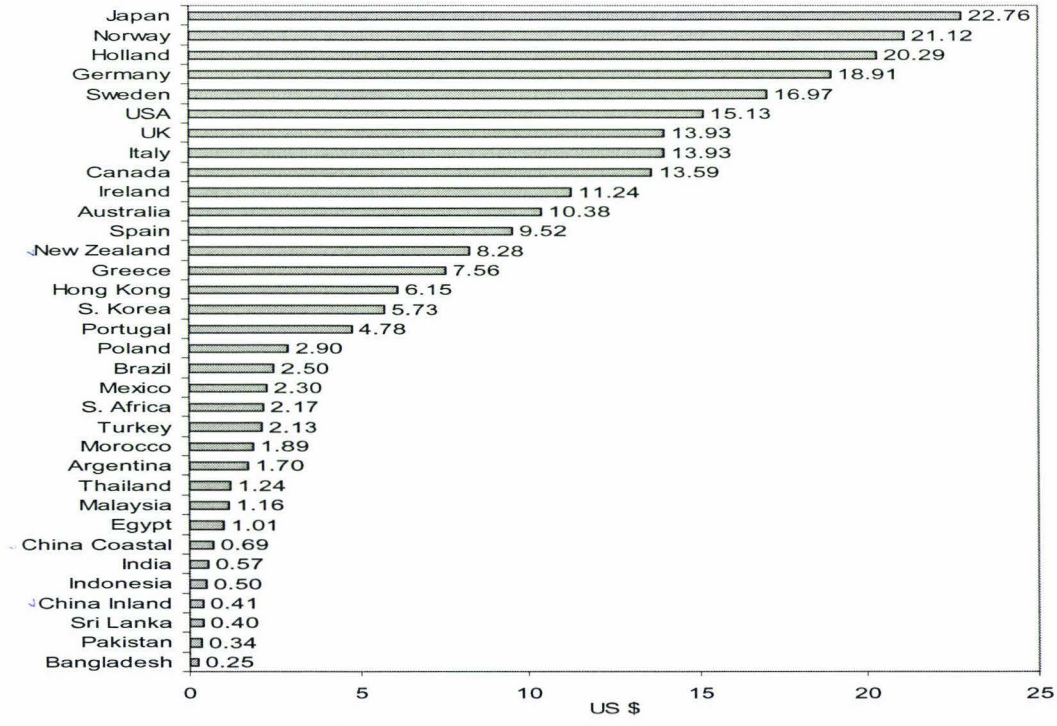
Secondly, as the future looks brighter for China's farmers, fewer and fewer migrant workers are willing to work in the TCF industry, thus removing a traditional labour source (Moore, 2001).

6.3 China's TCF Production and Productivity

6.3.1 Labour Cost

China has a very large pool of both skilled and unskilled labour and this abundant supply of labour obviously would guarantee a relatively low wage. Figure 6.5 compares labour costs in textile and clothing production in China with other countries and reveals that China has the overwhelming advantage in terms of labour cost although it is somewhat higher than a few other developing countries. However, bear in mind that labour costs in China should have started to rise with the fast economic development, especially in the eastern and coastal Special Economic Zones (SEZs).

Figure 6.5 Comparison of Labour Cost in Textile and Clothing Industry



Source: Werner International Management Consultants (2003).

6.3.2 Production

One important characteristic of China's TCF industries is that they are fully integrated (IFM, 2004), and TCF production does not rely heavily on imports. TCF in China encompasses all segments of the supply chain, from the production of raw materials, such as cotton, man-made fibres and leather, to manufacturing of yarns and fabrics and the processing of these inputs into final goods. As pointed out by USITC (2004), China has the ability to produce almost any type of TCF material at any quality at a more competitive price. Nordås (2004) also found evidence of vertical integration within China. Using 1997 input-output tables from China in the GTAP database[41], Nordås (2004) finds this share of imported intermediates to be only 8.1% for textiles produced by China, and 5.7% for clothing.[42]

However, trade data showed that China is the second largest importer of textiles in the world (WTO, 2004).[43] In other words, textiles are imported as intermediate products in production and exports of clothing, as China relies on imports of high quality textiles, particularly for the sale of clothing items in foreign markets. The ratio of imported textiles to exports of clothing is shown in Figure 6.6 where imported textiles are assumed as intermediate material in the exports of clothing. It is clear that the ratio of imports of textiles to exports of clothing declined noticeably since the mid-1990s, partly because of the rapid expansion of clothing exports. Nevertheless, over the same period, imports of textiles also increased from $8.7 to $13.5 billion.

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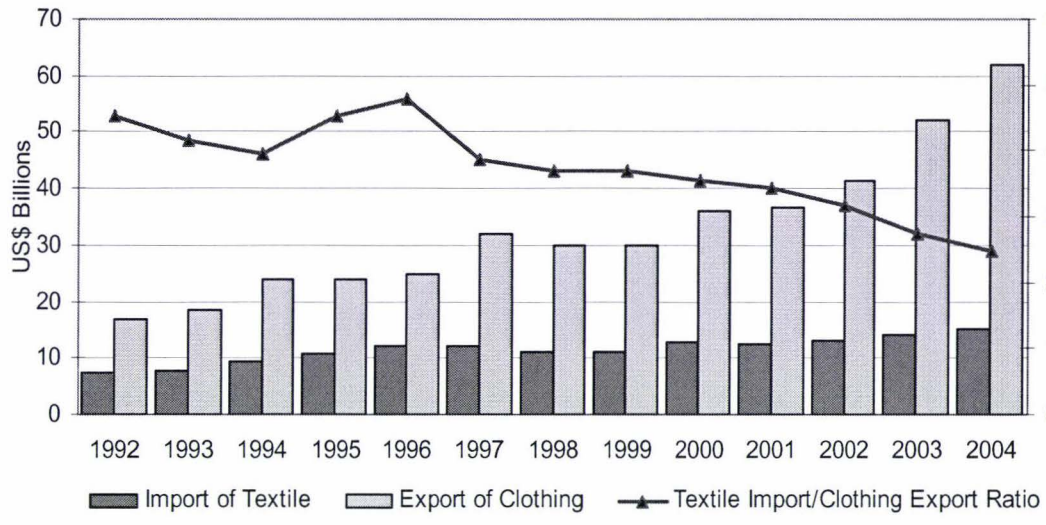
[41] GTAP is Global Trade Analysis Project, Purdue University, USA.

[42] Using methodology of Hummels et al. (2001) who define an index of the proportion of imported intermediate inputs in output as: Share of imported intermediates = Imported intermediate inputs/ Total final output.

[43] Not including European Union (15).

Figure 6.6 Ratio of Imports of Textile to Exports of Clothing 1992-2004



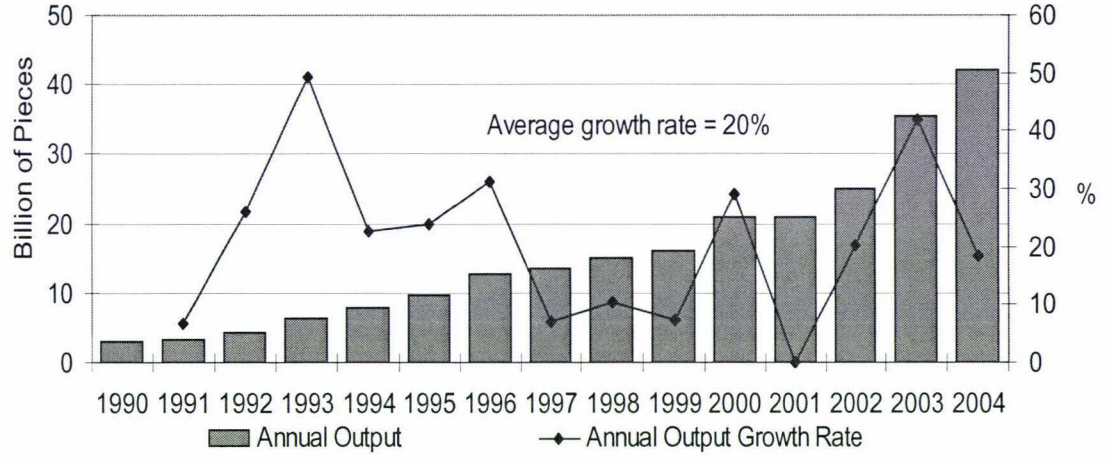
Source: based on data from UN Commodity Trade Database.

Prior to China's economic reform, clothing and footwear production was characterized by low efficiency and a low level of technology, and was dominated by state-owned enterprises (Moore, 2001). The inward-looking policies under central planning made it very difficult for the industry to exploit its vast labour resources by specializing in labour–intensive exports Since the economic reform and open door policy of the late 1970s, the huge market and cheap labour cost has attracted significant foreign investment, including investment from Hong Kong, Macau and Taiwan, in the pattern of either as direct investment or joint ventures. Since the 1980s, a large portion of clothing and footwear manufacturers in Hong Kong and Taiwan have shifted a significant part of their production to the mainland of China, especially in Guangdong and Fujian Provinces, manufacturing mainly for export.[44] With the technical assistance provided by them, efficiency and productivity increased significantly. In addition, most foreign investors also engage in supporting industries such as tanning, shoe mould making, shoe parts and others with an aim to enhance

[44] Due to the geographic proximity and cultural approximation between Hong Kong and Guangdong Province, Taiwan and Fujian Province.

their capability in cost reduction, increase of flexibility in production and quality control. In this case, the overall industry developed rapidly, manufacturers can produce clothing and footwear of a standard quality acceptable to the world market. The output of clothing has increased significantly since then, as shown in Figure 6.7. Output grew at 20 per cent annually since 1990. In the year 2003 more than 20,000 companies produced more than 6 billion pairs of shoes of all kinds, of which over 3.87 billion were for exporting and earned foreign exchange of $9.47 billion. Sixty percent of the shoes made in China enter the international market, accounting for 25% of the total turnover of the shoe industry in the world.[45]

Figure 6.7 Annual Clothing Output and Growth Rate in China: 1990-2004



Source: Based on Data from Almanac of China's Textile Industry, various years.

Despite the significant expansion in production and export, the clothing and footwear industries in China remain in the mass production, low-end market. Firstly, the fast growing clothing industry, as pointed out by IFM (2004), suffers from low profitability. The clothing industry in China consists mainly of small and mostly privately owned firms making low-value added and mass production standard

[45] From China Light Industry Information Centre, http://www.clii.com.cn/shoes/index.asp

products on contract to foreign buyers.[46] Secondly, the overall footwear industry in China remains competitive at the lower-end of the international market, concentrating on low-value added mass production and outward processing. According to Smook (2004), there is a substantial part of manufacturers who received subcontract production from world-class foreign brand names, such as NIKE, REEBOK, ADIDAS; these producers employ modern machinery and technology and have consistently developed their production. Finally, although a small amount of clothing and footwear manufacturers have successfully established their own brand names in China, world-famous brand names are non-existent in China's clothing and footwear industries.

6.3.3 Productivity

The productivity of TCF industries in China has increased substantially. It can be clearly seen from Table 6.2 that value added in the textile industry rose by nearly 55 per cent from 1997 to 2003, while the total employment rate actually fell by around 17 per cent. Labour productivity (measured by value added per worker) increased more than 86 per cent. In the clothing and footwear industries, the increase is not so large. Total employment increased by 25.6 per cent and industry value-added increased by nearly 55 per cent. Meanwhile labour productivity increased by around 23 per cent. To a large extent, this reflects improvements in productivity in the sector as well as a shift towards higher value added activities. China is upgrading its production capacity in TCF industries. According to USITC (2004), China was the

[46] In 2002, there were about 70,000 textile and clothing enterprises in China, of which only 2 per cent of clothing companies and 20 per cent of spinning mills were state-owned or state-controlled (People's Daily, 2002).

world's largest investor in new spinning and weaving equipment during the period of 1997 to 2001.

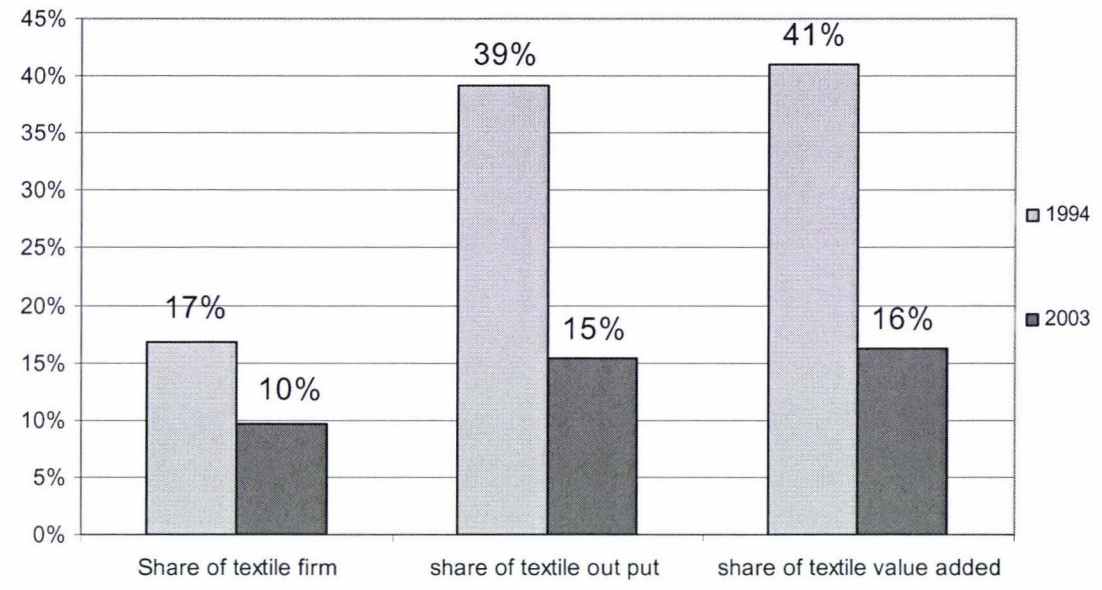
Table 6.2 Employment, Output, and Productivity in China's TCF Industries

	1997	2002	% Change 97-02
Employment			
Total manufacturing	49,799,000	45,066,000	-9.50
Textiles	5,780,000	4,792,000	-17.09
Share in manufacturing employment	11.61	10.63	-8.40
Clothing and footwear	2,117,000	2,658,000	25.56
Share in manufacturing employment	4.25	5.90	38.82
Value added (at Producer's price in million US $)			
Total manufacturing	182,191	314,764	72.77
Textiles	12,288	18,957	54.27
Clothing and footwear	5,821	9,014	54.85
Value added per worker (US $)			
Total manufacturing	3,659	6,985	90.90
Textiles	2,126	3,956	86.08
Clothing and footwear	2,750	3,391	23.32

Source: UNIDO (2005).

The sharp decline in employment in the textile industries on one hand reflects the restructuring of the industry. Historically, China's textile industry consisted mostly of state-owned enterprises (SOEs), which have excess capacity and employment, and use outdated technology (USITC, 2004). As a result of China's further changes in its economy, the share of SOEs in textiles decreased significantly (see Figure 6.8). On the other hand, as textile production is more capital-intensive compared to clothing and footwear, it reflects the replacement of labour by capital.

Figure 6.8 Shrinking Share of SOEs in China's Textile Industry



Source: China Statistical Yearbook, 1995 and 2004, State Statistical Bureau of the People's Republic of China.

6.4 Comparative Advantage of China's TCF Industries

Using the same method as in Chapter Five, the comparative advantage of China's TCF sector was estimated. The results are given in Table 6.3. It is clear from the results that China has a significant comparative advantage in almost all TCF items. The comparative advantage in clothing and footwear sectors is larger than in the textile sector. Given its large pool of labour and the inherent features of clothing and footwear industries which are more labour intensive, they are no doubt stronger in exporting clothing and footwear products. However, it is also clear from the results that the comparative advantage for overall clothing and footwear has declined from 1999 to 2003. The comparative advantage for the overall textiles fluctuated around a slight upward trend over the same period.

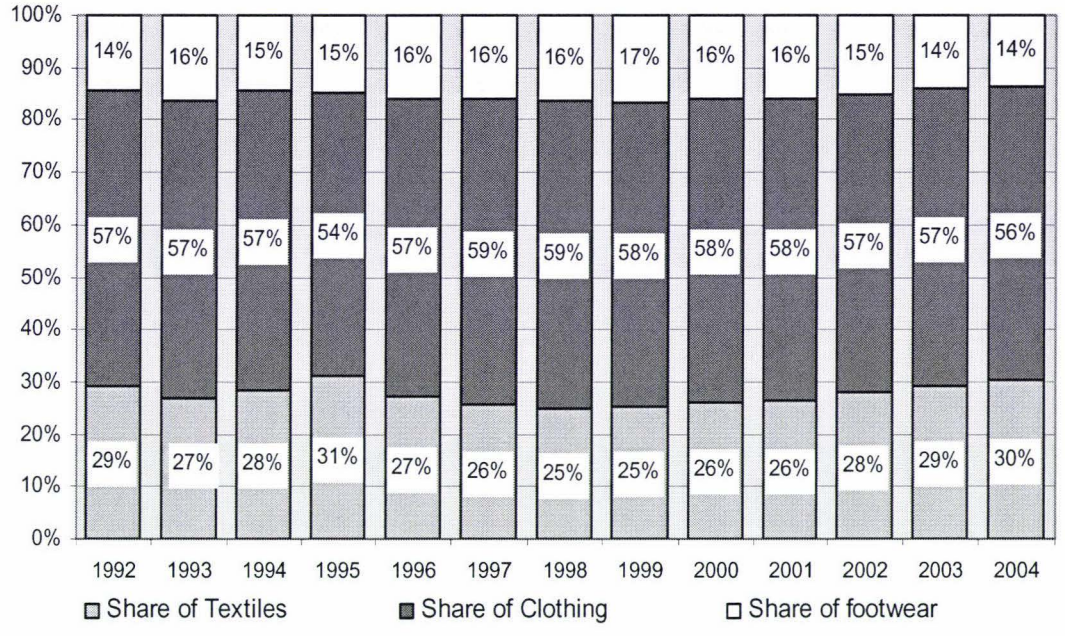
Table 6.3 China's RCA Index for TCF industries, 1999-2003

	SITC Rev.3	1999	2000	2001	2002	2003
Textiles	65	2.58	2.67	2.67	2.69	2.66
Textile yarn	651	2.18	2.21	2.21	2.09	1.97
Cotton fabrics, woven	652	3.85	3.70	3.70	4.01	5.44
Fabrics, man-made fibres	653	2.48	2.82	2.82	3.12	3.31
Oth. Textile fabric, woven	654	2.53	2.72	2.72	2.55	2.45
Knit. Crochet. Fabric nes	655	2.41	2.54	2.54	2.91	2.75
Tulle, lace, embroidery. etc	656	1.37	1.34	1.34	1.42	1.57
Special yarn, txtl. fabric	657	0.80	0.95	0.95	1.00	0.95
Textile articles nes	658	5.26	5.22	5.22	4.66	4.55
Floor coverings, etc	659	1.35	1.39	1.39	1.34	1.17
Clothing	84	4.81	4.76	4.36	4.12	3.46
Mens, boys clothing, x-knit	841	5.03	4.88	4.49	3.90	3.16
Women, girl clothing, xknit	842	4.45	4.49	4.14	3.98	3.33
Mens, boys clothing, knit	843	4.82	4.51	4.00	4.06	3.65
Women, girls clothing. knit	844	4.98	4.40	3.74	3.99	3.67
Othr. Textile apparel, nes	845	4.72	4.65	4.23	3.93	3.18
Clothing accessrs, fabric	846	3.35	3.67	3.44	3.42	3.00
Clothing, nontxtl; headgear	848	6.95	7.33	7.07	6.89	5.79
Footwear	85	5.61	5.50	5.00	4.68	4.18
Footwear,w.metal toe-cap	8511	3.19	3.01	2.96	2.48	2.48
Sports footwear	8512	8.49	7.33	7.36	7.36	6.34
Footwear,nes,rubber,plst	8513	10.93	9.89	9.00	8.51	7.53
Oth.footwear,lthr.uppers	8514	3.69	3.62	3.11	2.94	2.51
Oth.footwear,textle uppr	8515	10.04	9.15	8.57	7.60	6.70
Footwear, n.e.s.	8517	4.92	7.13	4.48	4.35	7.23
Parts of Footwear	8519	2.03	2.11	2.02	1.76	1.58

Source: based on data from UN Commodity Trade Database.

The export of clothing has accounted for more than half of China's total TCF exports (see Figure 6.9). Given the intricate nature of unskilled labour-intensive production and the low level of entry barriers in the clothing industry, the domination of clothing exports in China's total TCF exports is not surprising. A large volume in exported clothing may not necessarily mean that China exports the entire segment of the clothing industry, thus a further assessment in more detail is required.

Figure 6.9 Share of China Total TCF Exports, 1992-2004



Source: based on data from UN Commodity Trade Database.

Even though China is shown to have a significant comparative advantage in TCF production, the overall TCF industries in China are still labour-intensive industries offering entry-level jobs to unskilled workers. It is clear from Table 6.4 that the unit value of exports of textiles and clothing is below the world average.

Table 6.4 Relative Unit Value of Exports of Textile and Clothing in China: 1998-2003*

	1998	1999	2000	2001	2002	2003
Textile	0.9	0.9	0.9	0.9	0.9	0.7
Clothing	0.9	0.8	0.8	0.8	0.8	1.0

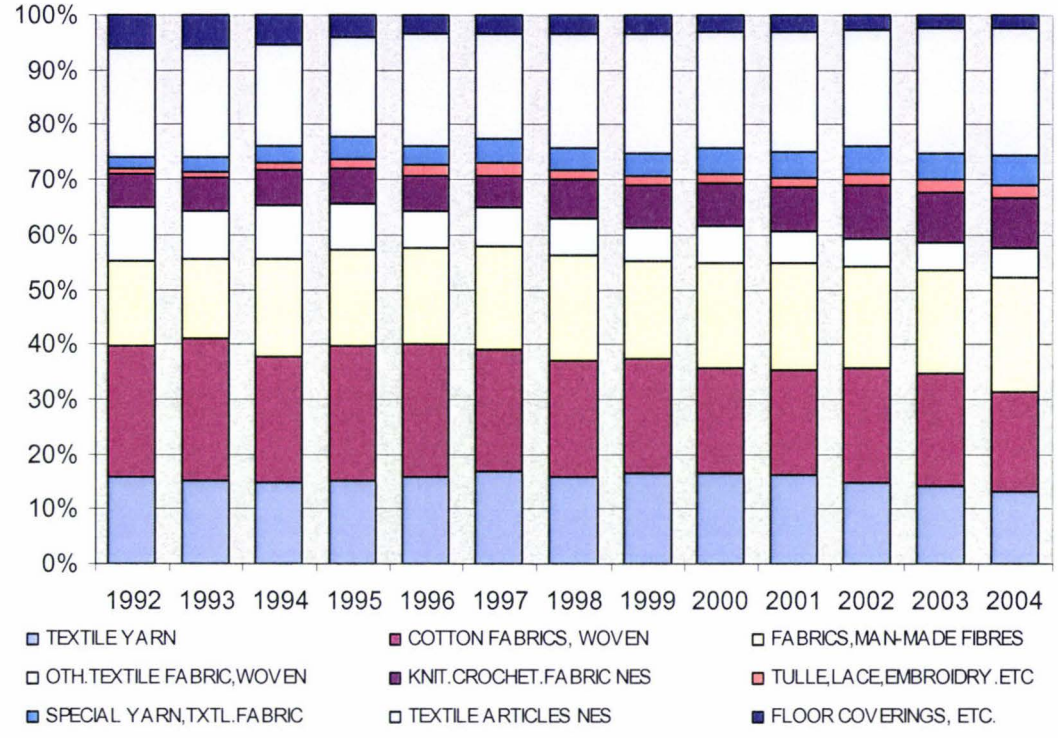
*Note: This is calculated as value of exports divided by quantity in China relative to the World unit value. Thus, world average is equal to 1.

Source: ITC.

A large portion of China's textile exports are attributed to textile yarn, cotton fabric, man-made fabric and general textile articles which are normally used in the making of clothing (see Figure 6.10). However, as pointed out by Yeung and Mok (2004), higher

value-added textile products for decorative purposes and industrial use are almost non-existent in China.

Figure 6.10 Composition of China's Textile Export, 1992-2004



Source: based on data from UN Commodity Trade Database.

Though China is expanding its TCF industries, it does not mean it can occupy the entire market segment. China has only few internationally recognized brand names and few experienced clothing and footwear designers. China's textiles industry is still competing at the lower end of the international market, concentrating on low value-added mass production and outward processing of clothing without its own brand names or design technologies. Despite the painful restructuring of the last few years, the industry is yet to create any famous designs or brands. TCF industries in China suffer from a lack of design and fashion capabilities, and insufficient communication with the consumer markets (IFM, 2004). Besides, China still lacks the ability to produce high-end textiles. China still relies heavily on imported textiles to the

production of higher quality clothing items (Waldron & Longworth, 2005). Furthermore, low labour costs are no longer a guarantee for competitiveness; as design, research and development (R&D) and marketing skills are increasingly important for competitiveness and added value, as in fashion garments and sportswear. However, it is also important to note that China has been engaged in upgrading its TCF production and is starting to participate more actively in design and innovation.

Chapter Seven

Trade in TCF Products between New Zealand and China

7.1 Overview

As discussed in the preceding chapter, China is emerging as one of the fastest growing manufacturers in the TCF industry. With New Zealand reducing tariff barriers and the development of bilateral economic relations, imports of TCF products from China have increased significantly. China has recently emerged as one of the major sources of New Zealand's TCF imports. As illustrated in Table 7.1, New Zealand has suffered trade deficits in the trading of textiles, clothing and footwear with China during the period 1990 to 2004. Imports of TCF products from China were increasing significantly at an average growth rate of 14%, 28%, and 23% respectively on an annual basis for textiles, clothing and footwear.

However, New Zealand's export of textiles to China was also increasing rapidly during the same period. In nominal terms, New Zealand's export of textiles to China was increasing at an annual average rate of 129 per cent, 113 percent for clothing and 81 per cent for footwear. Such high growth rates may be attributed to two main factors: first of all, prior to the early 1990s, New Zealand TCF industries were more focused on domestic markets, therefore the amount of New Zealand's total TCF exports was relatively small. Furthermore, the main destination of New Zealand's TCF exports was Australia, thus the amount of TCF trade with China in the early 1990s was very small. Secondly, since the early 1990s, China and New Zealand have witnessed an encouraging development in bilateral economic relations. China has emerged as a major trading partner of New Zealand. Between 1990 and 2004, bilateral trade with China grew at an average annual growth rate of 98.5 percent, compared to

9.1 and 5.1 percent with Australia and the US respectively. Due to the fast development of bilateral economic relations and increasing cooperation between China and New Zealand, there was an ideal environment for TCF export development.

From the export-to-import ratio, it is easy to find that the textile industry was performing relatively better than clothing and footwear industries. Firstly, the overall trade performance in textiles was better than the other two; second, the trade performance showed an increasing trend during the period; however, trade in clothing and footwear were all subject to decline. It again confirms that textiles industry were more capital intensive, while clothing and footwear are more labour intensive. Therefore, New Zealand may have more competitive advantage in the textile industry as it is more capital abundant, while China may have more strength in clothing and footwear as it is more labour abundant. Textile producers are more competitive in the more capital-intensive and technology-intensive processes, that characterize much of textile production.

Table 7.1 Two Way Trade in TCF Products between New Zealand and China: 1990-2004 (in US$000)

Year	Textiles(SITC 65)				Clothing (SITC 84)				Footwear (SITC 85)			
	NZ Export	NZ Import	Trade Balance	EX/IM*	NZ Export	NZ Import	Trade Balance	EX/IM*	NZ Export	NZ Import	Trade Balance	EX/IM*
1990	29	17,947	-17,918	0.002	73	18,829	-18,757	0.004	9	6,775	-6,766	0.001
1991	13	23,287	-23,273	0.001	23	33,810	-33,787	0.001	14	10,914	-10,900	0.001
1992	19	31,285	-31,266	0.001	167	64,401	-64,234	0.003	11	17,540	-17,529	0.001
1993	284	29,486	-29,202	0.010	203	75,032	-74,830	0.003	30	23,417	-23,388	0.001
1994	422	35,247	-34,825	0.012	226	109,450	-109,224	0.002	61	27,717	-27,656	0.002
1995	486	46,741	-46,255	0.010	433	129,430	-128,997	0.003	2	30,879	-30,877	0.000
1996	285	43,723	-43,438	0.007	113	148,070	-147,958	0.001	0	35,663	-35,663	0.000
1997	598	45,787	-45,189	0.013	1,188	192,573	-191,385	0.006	4	45,959	-45,954	0.000
1998	650	33,940	-33,290	0.019	392	180,445	-180,053	0.002	0	37,289	-37,289	0.000
1999	452	39,808	-39,356	0.011	304	220,726	-220,421	0.001	40	42,035	-41,995	0.001
2000	608	41,921	-41,312	0.015	202	247,810	-247,608	0.001	3	50,088	-50,085	0.000
2001	1,302	42,713	-41,411	0.030	205	258,900	-258,695	0.001	32	50,734	-50,702	0.001
2002	2,902	55,581	-52,678	0.052	543	296,327	-295,784	0.002	0	64,424	-64,424	0.000
2003	1,477	72,438	-70,961	0.020	646	372,281	-371,635	0.002	9	78,956	-78,946	0.000
2004	2,604	94,549	-91,945	0.028	424	453,596	-453,172	0.001	34	97,696	-97,662	0.000
Annual Average Growth Rate (%)	129	14			113	28			81	23		

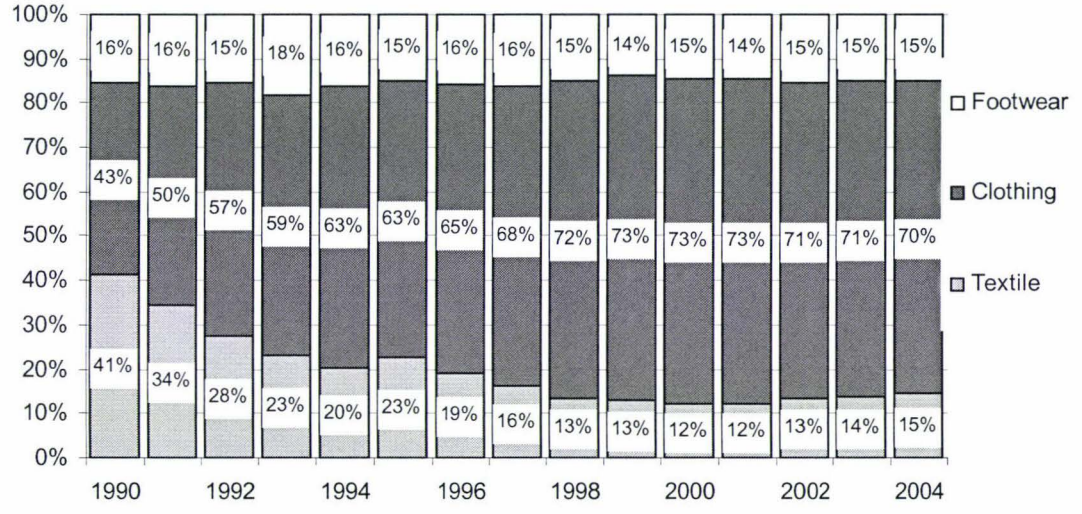
* This is estimated by the share of exports to imports. Thus, if the value is equal to one, that means trade balance, if the value is greater than one , that means trade surplus and if the value is less than one, that means trade deficit.

Source: Based on data from UN Commodity Trade Database.

7.2 New Zealand's Imports of TCF Products from China by SITC 4-digit level

The pattern of TCF imports from China is quite similar with New Zealand's overall TCF imports (as discussed in Chapter Five). From Figure 7.1, it can be clearly seen that the share of clothing imports in total TCF imports was expanding significantly from 1990 to 2004; In contrast, the share of textile imports was shrinking by nearly the amount the clothing industry was expanding. The imports of clothing and footwear was seen to account for nearly 90 per cent of total TCF imports since 1998.

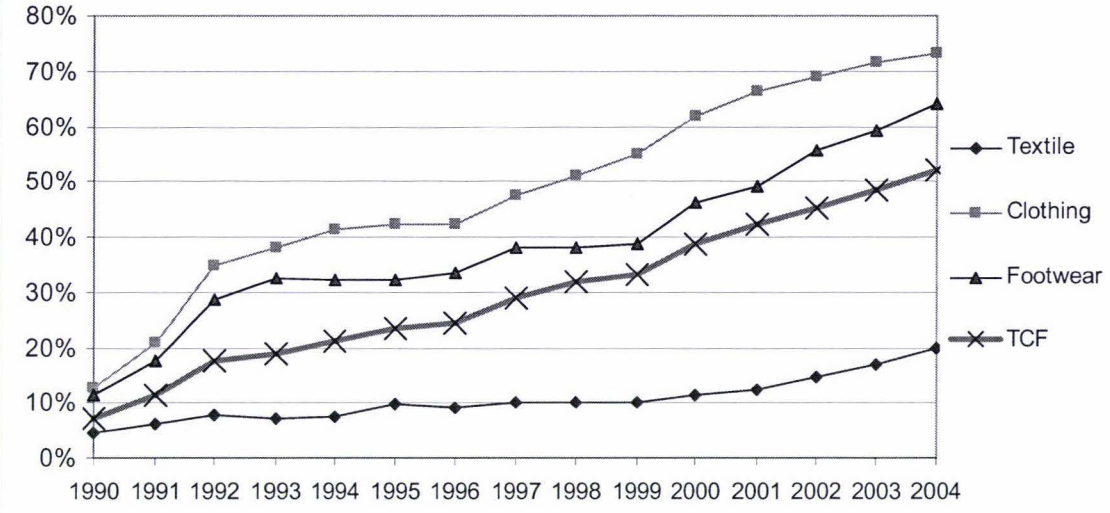
Figure 7.1 Share of TCF Import from China, 1990 - 2004



Source: Based on data from UN Commodity Trade Database.

In addition, as shown in Figure 7.2, the market share of clothing and footwear imported from China in New Zealand's total imported clothing and footwear has increased extraordinarily, from about 1 per cent in 1990 for both clothing and footwear to above 60 and 70 per cent in 2004 for clothing and footwear respectively. The market share of textile imports from China was also increasing during this period. However, the level is relatively stable, from about 5 per cent in 1990 to around 20 per cent in 2004.

Figure 7.2 Share of TCF Import from China in New Zealand Total TCF Import



Source: Based on data from UN Commodity Trade Database.

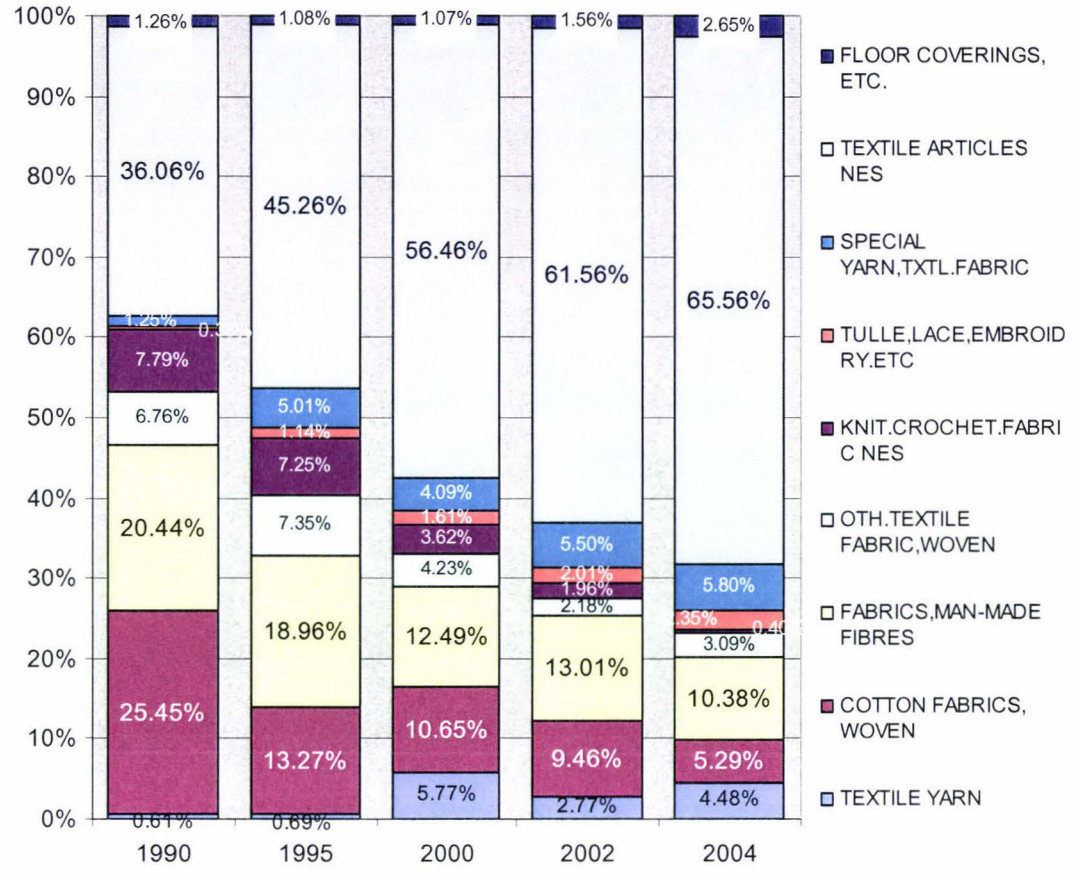
All these largely reflected the fact that China is rapidly increasing its competitive advantage in clothing and footwear where are relative more labour intensive; also it reflected New Zealand's decreasing competitiveness in clothing and footwear. Hence, the threats arising from an FTA with China, and the difficulties faced by clothing and footwear industries, would be larger than those facing the textile industry.

7.2.1 Textiles

Imports of textiles from China were characterized by an increasing concentration on textile made-up articles (SITC 658). As illustrated in Figure 7.3, the market share of made-up textile articles imported from China in total textile imports from China was increasing from about 36 per cent in 1990 to nearly 66 per cent in 2004.[47] Special yarns (SITC 657) were also increasing its share too, although all others categories were subject to decreases in their import market share.

[47] See Appendix D for more detailed results (4 digit levels SITC product).

Figure7.3 Share of Textiles Import from China by 3 Digit SITC Categories



Source: Based on data from UN Commodity Trade Database.

7.2.2 Clothing

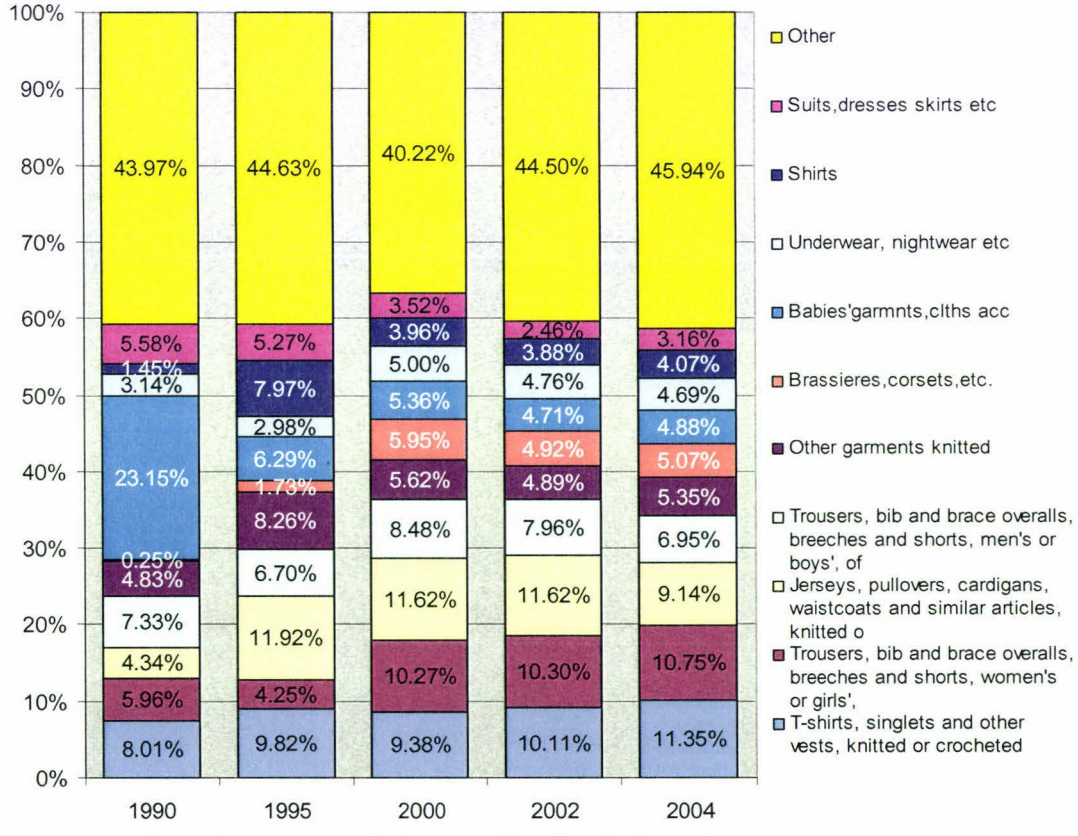
The clothing imported from China has a high level of concentration. It can be clearly seen from Figure 7.4, that ten product categories account for around 60 per cent of New Zealand's clothing imported from China for the entire period of 1990 to 2004. In order of importance these included[48]:

- T-shirts, singlets and other vests, knitted or crocheted (SITC 8454);
- Trousers, bib and brace overalls, breeches and shorts (SITC 8426);
- Jerseys, pullovers, cardigans, waistcoats and similar articles, knitted or crocheted (SITC 8453);

[48] See Appendix E for more detailed results.

- Trousers, bib and brace overalls, breeches and shorts (SITC 8414);
- Other garments, knitted or crocheted (SITC 8459);
- Brassieres, girdles, corsets, braces, suspenders, garters and similar articles, and parts thereof, whether or not knitted or crocheted (SITC 8455);
- Babies' garments and clothing accessories (SITC 5451);
- Slips, petticoats, briefs, panties, nightdresses, bathrobes, dressing-gowns and similar articles (8448);
- Shirts (SITC 8415);
- Suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, bib and brace overalls, breeches and shorts (SITC 8442);

Figure 7.4 Share of Clothing Imports from China by SITC 4 Digit Category



Source: *Based on data from UN Commodity Trade Database.*

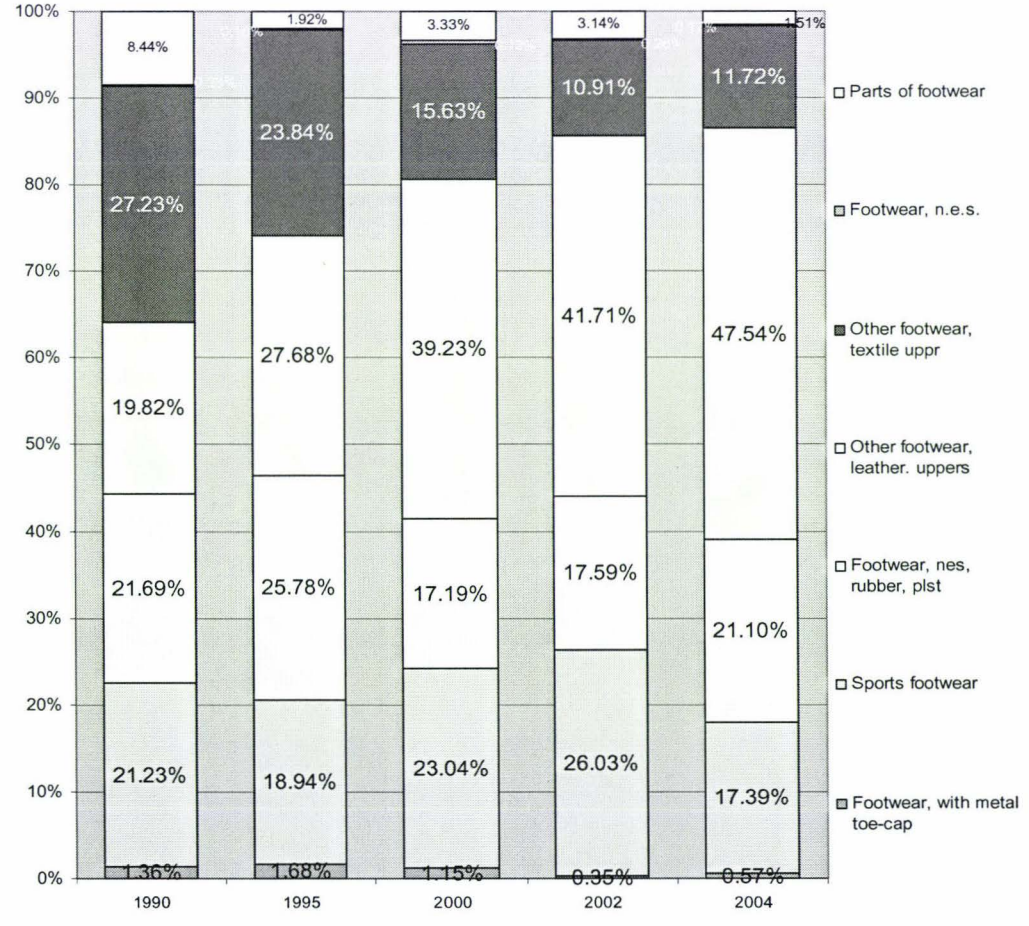
However, some product lines are actually shrinking in market share. For instance, baby's garments and clothing (SITC 8451) decreased from about 23 per cent in 1990

to less than 5 per cent in 2004. In these particular products, New Zealand was actually improving its export performance, as discussed in the previous chapter. Though New Zealand's clothing market was flourishing with China's imported goods, there are some niche markets that New Zealand producers can specialize in.

7.2.3 Footwear

Imports of footwear from China have been increasing (see Figure 7.5). Particularly, New Zealand's imports of footwear were increasingly concentrating on leather footwear. Imports of leather footwear products accounted for nearly half of New Zealand's total footwear imports from China in 2004, compared with less than 20 per cent in 1990.

Figure 7.5 Share of Total Footwear Imports from China



Source: *Based on data from UN Commodity Trade Database.*

7.3 Unit Price of TCF Imports from China

As was suggested by the theory of competitive advantage (discussed in Chapter Two), a country with relatively high resources of labour tends to specialize in manufacturing the labour intensive product with a relatively lower value-added and low-end market target. A country with relatively higher resources in capital and technology would specialize in production of capital intensive products with high value-added and high-end market target. Therefore, it would be rational to assume that TCF products imported from China were lower value-added and mass production products. Following the method used by Stengg (2001) and Aiginger (2001), unit price is used as the indicator to calculate imported goods prices. The unit price was obtained by dividing the value of the imported or exported goods by the corresponding measure of the physical quality of imports or exports. The assumption is simple: higher price would indicate higher quality.[49]

The unit price of imports of TCF from China was constructed by the three digit SITC level, and the unit price for New Zealand's overall TCF imports and New Zealand's unit price of TCF exports were also constructed for comparison. The results are shown in Table 7.2. It is clear from the table, that the unit prices of TCF products China exported to New Zealand were lower than New Zealand's average import price for TCF products, and was much lower than the unit price of New Zealand's exports over the period 1990 and 2003.[50] By assumption, it might provide evidence that TCF products exported by China to New Zealand have lower quality and lower value,

[49] Though simple, using unit price as a proxy for export price has been subjected to many criticisms, see King (1993).

[50] The unit value of New Zealand's imports from China in 2004 and unit value of New Zealand's exports in 2004 is not comparable due to different units.

which might meet the need of the low-end market.[51] In contrast, the TCF products New Zealand made have higher quality and higher value and were aimed at the high-end market segment. Therefore, New Zealand's TCF products and China's TCF products can be actually differentiated by quality.

Although their share of the total employment falls off sharply with the rising of GDP per capita, few if any rich countries have closed down their textiles and clothing sectors altogether. There are always market segments that are technologically sophisticated and fetch relatively high prices. New Zealand's competitive strength lies precisely in the higher quality of its products. However, one thing that cannot be neglected is that China is also upgrading the quality of its products.

[51] The term "quality" not only includes the ability to satisfy a particular need of durability reliability , but also includes issues such as better design, better marketing , or higher fashion content (see Stengg, 2001).

Table 7.2 Unit Price: Comparison (US $/Unit)

SITC Code	Commodity	Unit	Unit Value of NZ Imports from China				Unit Value of NZ Total Imports				Unit Value of NZ Total Exports			
			1990	2000	2003	2004*	1990	2000	2003	2004*	1990	2000	2003	2004
651	Textile yarn	Weight in kilograms	4.91	5.62	5.75	5.21	5.47	6.76	5.75	4.97	7.92	4.93	6.17	6.91
652	Cotton fabrics,woven	Area in square metres	0.83	1.03	6.02	6.23	1.67	1.71	8.59	8.91	2.08	3.17	11.27	14.39
653	Fabrics,man-made fibres	Area in square metres	0.82	0.58	4.94	5.39	1.56	1.13	6.68	7.17	2.22	1.60	7.62	7.30
654	Oth.textile fabric,woven	Area in square metres	3.83	1.76	14.81	14.07	1.23	0.88	3.97	4.89	4.94	11.81	27.86	23.85
655	Knit.crochet.fabric nes	Area in square metres	0.51	0.42	3.37	4.96	1.42	0.23	5.17	8.58	3.16	0.52	5.94	9.85
656	Tulle,lace,embroidry.etc					6.11				12.29				
657	Special yarn,txtl.fabric	Area in square metres		0.40		3.42		0.37		5.43	3.59	1.85		
658	Textile articles nes	Number of items	0.88	1.29	3.91	4.35	1.38	1.24	3.95	4.84				
659	Floor coverings,etc	Area in square metres		7.44		3.05		8.86		4.48		10.65		5.28
841	Mens,boys clothing,x-knit	Number of items	5.30	5.09	10.42	11.69	7.99	6.44	12.55	13.80	14.74	26.07	41.10	39.01
842	Women,girls clothing,x-knit	Number of items	4.77	5.02	12.92	13.83	9.29	6.40	15.63	16.41	18.49	20.29	60.21	60.97
843	Mens,boys clothing,knit	Number of items	1.20	2.00	9.62	8.73	3.57	2.48	10.89	9.89	8.81	5.51	28.31	30.62
844	Women,girls clothing,knit	Number of items	3.35	1.92	12.34	12.35	4.04	2.27	13.69	13.68	8.17	4.36	32.39	30.54
845	Othr.textile apparel,nes	Number of items	1.96	3.35	12.83	13.06	4.01	3.77	14.25	14.37	9.90	7.49	34.75	30.75
846	Clothing accessrs,fabric	Number of items	0.21	0.55	7.70	8.82	0.59	0.63	9.12	12.31	1.12	3.03	27.38	81.14
848	Clothing,nontxtl;headgear	Number of items	1.18	0.54	12.59	7.28	1.76	0.79	15.13	7.63	23.32			19.01
8511	Footwear,w.metal toe-cap	Number of pairs	5.75	12.93	13.06	7.25	19.95	19.92	11.57	11.34	31.55	21.35	6.85	9.43
8512	Sports footwear	Number of pairs	3.90	9.83	9.19	10.19	9.75	11.56	10.62	11.79	16.16	12.58	28.81	17.86
8513	Footwear,nes,rubber,plst	Number of pairs	2.26	4.19	4.68	4.73	3.51	4.93	5.06	4.97	8.61	5.82	7.36	8.91
8514	Oth.footwear,lthr.uppers	Number of pairs	6.10	10.91	11.38	11.83	13.94	14.01	14.19	14.34	19.84	26.19	26.84	27.55
8515	Oth.footwear,textle uppr	Number of pairs	1.62	2.82	5.13	5.26	3.14	3.48	5.66	5.76	8.09	9.17	13.88	16.68
8517	Footwear, nes	Number of pairs	1.87	4.89	4.28	9.17	4.77	7.33	6.29	12.58	23.57	13.69	29.78	30.18
8519	Parts of footwear	Number of pairs	3.41	3.84	19.74	18.36	4.15	2.11	15.74	15.86	4.07	2.33	16.02	

*Note: the unit for New Zealand's imports in 2004 is expressed in terms of weight in kilograms.

Source: Based on UN Commodity Trade database.

7.4 Bilateral Intra-Industry Trade in TCF Products

Previous analysis showed that China is an important source of New Zealand's imported TCF products, but that New Zealand's exports of TCF products are not as significant as imported TCF products. Table 7.3 shows the bilateral intra-industry trade for TCF between New Zealand and China for the period of 1990 to 2004. It is apparent from the table that the evidence for intra-industry trade in TCF products was very weak at the 2 digit SITC level. The GL index for footwear (SITC 85) was the lowest among TCF products; furthermore it was subject to decline during the period 1990 to 2004. Clothing has a higher index than footwear, but it also has been quite low since 1990. Moreover, no evidence can be found to support a bilateral intra-industry trade in clothing and footwear at the more disaggregated at three digit SITC level. In contrast, the GL index for textiles (SITC 65) was also not high; however, it has substantially increased since 1990. More to the point, a break down of the aggregate level of the textile industry , as can be seen from the table, shows evidence of a relatively high level of bilateral intra-industry trade in some product lines, including:

- SITC 655, Knitted or crocheted fabrics;
- SITC 659, Floor coverings, etc;

There is also evidence for increasing intra-industry trade in textile yarn (SITC 651) and woven textile fabrics (SITC 654).

Table 7. 3 Bilateral IIT Index for New Zealand and China TCF Industries

SITC Code	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
65	0.32	0.11	0.12	1.91	2.36	2.06	1.29	2.58	3.76	2.25	2.86	5.92	9.93	4	5.36
651	7.55	0	7.39	35.75	83	95.47	67.82	49.8	84.2	5.04	0	4.19	1.97	5.41	13.9
652	0	0	0	0.48	2.26	0.12	0.59	0	0	0	0.17	0.24	0.75	1.13	2.86
653	1.34	0	0	0	0	0.56	0.91	0.12	0.09	0.14	0.16	1.02	1.14	0.65	2.17
654	0	0	0	0	0	0	0	12.96	0	2.28	0.4	3.17	1.23	6.18	10.05
655	0	0	0.15	0	0	0	0	0.27	1.38	2.13	5.29	3	8.3	0.13	80.23
656	0	0	3.02	2.11	1.24	0.42	0.23	5.59	2.25	0.89	3.94	3.63	1.55	0.32	4.8
657	0	0	0	0	0.77	1.35	0.35	0.35	0.68	28.91	0.39	0.18	0	1.61	1.1
658	0	0.03	0	0.01	0	0.03	0	0.45	0.63	0.07	0.83	2.11	2.69	0.19	0.1
659	0	13.96	0	90.86	55.02	29.05	3.56	19.22	13.81	34.28	99.24	83.51	54.83	91.78	67.61
84	0.77	0.14	0.52	0.54	0.41	0.67	0.15	1.23	0.43	0.28	0.16	0.16	0.37	0.35	0.19
841	0.83	0	0	0.2	0.04	0.32	0.02	2.36	0.14	0	0.16	0.12	0.61	0.17	0.19
842	0.63	0	0.56	0.41	1.01	0.38	0.02	0.14	0.29	0.4	0.37	0.11	0.05	0.04	0.1
843	0	0	2.52	0	1.46	0.2	0.29	0.09	1.2	0.18	0.1	0.25	0.2	0.25	0.32
844	3.74	0	0.97	0	0.13	0.85	0	0	0.42	0.28	0.05	0.11	0.01	0.06	0.16
845	0.56	0.08	0.24	0.66	0.16	0.39	0.04	0.04	0.26	0.36	0.11	0.2	0.08	0.08	0.09
846	0	0.39	0	0.39	0	0	0	9.3	1.33	0	0.2	0	0.09	0.14	0.01
848	0	0.95	0	2.87	1.76	5.66	2.02	12.11	2.56	0.12	0.08	0.18	4.73	5.97	1.41
85	0.25	0.25	0.12	0.25	0.44	0.02	0	0.02	0	0.19	0.01	0.13	0	0.02	0.07
8511	0	0	0	0	0	0	0	0	0	16.5	0	0	0	0	0
8512	0	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0.34
8513	1.17	0	0.39	0	0	0	0	0	0	0	0	0	0	0.13	0.02
8514	0	0	0	0.94	1.53	0	0	0	0	0	0	0.01	0	0	0.02
8515	0	0	0	0	0	0	0	0	0	0	0.07	0.43	0	0	0
8517	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.26
8519	0	5.52	0	0	0	0.82	0	0.47	0	0	0	3.69	0	0	0

Source: Based on data from UN Commodity Trade database.

7.5 Comparison of Comparative Advantage

In Chapters Five and Six the competitive advantage of TCF industries for both New Zealand and China had been constructed at the aggregate industry level. Given the interests of this study, in this section some modifications will be made to the calculations of comparative advantage, in order to focus in more detail on the TCF industries. The calculations of the RCA index in this section is borrowed from Balasubramanyam and Wei (2005).The RCA index is estimated as the percentage share of each country's exports of that commodity (SITC 3 digit) in the sector (SITC 2 digit). The index is formulated as follows:

$$RCA_{ij} = \frac{X_{ij}/X_{iJ}}{X_{wj}/X_{wJ}}$$

where

X_{ij} = country i's export of commodity j which is disaggregated to 3 digit level of SITC;

X_{iJ} = country i's export of sector J that commodity j belongs to, i.e. textiles (SITC 65), clothing (SITC 84), or footwear (85);

X_{wj}= world exports of commodity j, which is disaggregated to 3 digit level of SITC;

X_{wJ} = world exports of sector J that commodity j belongs to, i.e. textiles (SITC 65), clothing (SITC 84), or footwear (85);

The numerator represents the percentage share of a country's exports of a particular commodity in a given sector; the denominator represents the percentage share of world exports of the same commodity in that sector. By this formulation, RCA index reveals a country's specialisation pattern within a set of industries (TCF industries in this case) and hence the comparative advantage. The explanation of RCA index in this

section is the same as that in Chapters Five and Six. The results are reported in Table 7.4.

Generally, New Zealand and China are seen to be different in terms of the specialisation structure in TCF. In the textile sector, New Zealand is much stronger in textile yarn (SITC 651) and floor covering (SITC 659), while weaker in cotton fabrics (SITC 652) and tulles articles (SITC 656). In the clothing sector, China has the overwhelming comparative advantage, however the results also suggest some areas in which New Zealand has comparative advantage, especially in non-textile clothing articles (SITC 848). In the footwear sector, New Zealand appears to have more competitive advantage in footwear with metal toe-caps (SITC 8511) and leather footwear (SITC8514), but has comparative disadvantage in sports footwear (SITC 8512). China has a strong comparative advantage in sports footwear. These results may suggest that New Zealand and China, to some extent, are complementary to each other in TCF production. New Zealand's TCF manufacturers need to develop capabilities to facilitate movement along supply chains with the objective of minimising direct competition with China. Thus, given generally the strong comparative advantage of China's TCF sector, there are some niche market segments in which New Zealand can compete with China's imports.

Table 7.4 Comparative Advantage in TCF: Comparison between China and New Zealand

Commodity	SITC Rev.3	China						New Zealand						
		1992	1995	2000	2002	2003	2004	1992	1995	1996	2000	2002	2003	2004
Textile yarn	651	0.71	0.81	0.81	0.74	0.72	0.68	1.54	1.37	1.35	1.62	1.52	1.52	1.59
Cotton fabrics,woven	652	1.80	1.71	1.34	1.49	1.40	1.28	0.22	0.36	0.26	0.14	0.18	0.18	0.13
Fabrics,man-made fibres	653	0.73	0.79	1.00	1.01	1.10	1.29	0.14	0.13	0.14	0.22	0.31	0.30	0.44
Oth.textile fabric,woven	654	1.22	1.06	1.00	0.82	0.80	0.93	0.32	0.41	0.51	0.73	0.58	0.74	0.64
Knit.crochet.fabric nes	655	1.22	1.02	1.03	1.16	1.09	0.98	1.40	1.12	0.98	0.88	0.82	0.72	1.01
Tulle,lace,embroidry.etc	656	0.44	0.53	0.55	0.56	0.60	0.70	1.37	1.05	1.03	0.78	0.40	0.38	0.26
Special yarn,txtl.fabric	657	0.16	0.34	0.36	0.38	0.37	0.40	0.47	0.50	0.56	0.45	0.52	0.54	0.56
Textile articles nes	658	2.69	2.09	2.14	1.95	1.96	1.85	1.39	1.39	1.25	0.78	0.72	0.60	0.54
Floor coverings,etc	659	0.74	0.60	0.48	0.48	0.43	0.42	4.39	5.67	5.80	5.69	6.18	5.91	6.08
Mens,boys clothing,x-knit	841	1.38	1.14	1.01	0.86	0.85	0.86	0.63	0.64	0.80	0.90	0.84	0.90	0.98
Women,girls clothing,x-knit	842	1.26	1.08	0.92	1.04	0.97	0.90	0.68	0.51	0.44	0.72	0.53	0.56	0.65
Mens,boys clothing,knit	843	0.71	0.82	0.97	1.00	1.10	1.13	0.75	0.75	1.22	1.59	1.19	1.13	0.81
Women,girls clothing,knit	844	0.57	0.65	0.88	0.97	1.27	1.20	0.91	1.22	1.36	1.16	0.89	0.71	0.73
Othr.textile apparel,nes	845	0.86	0.92	1.05	0.96	0.93	0.95	0.78	1.07	1.02	0.70	0.89	0.97	1.01
Clothing accessrs,fabric	846	0.55	0.68	0.70	0.86	0.88	0.95	1.21	0.72	0.68	1.06	0.82	0.61	0.77
Clothing,nontxtl;headgear	848	0.92	1.44	1.50	1.64	1.73	1.63	3.73	3.35	2.92	2.85	3.67	3.34	2.78
Footwear,w.metal toe-cap	8511	0.46	0.56	0.71	0.40	0.46	0.55	7.15	2.67	0.91	13.29	4.45	3.56	3.23
Sports footwear	8512	1.28	1.16	1.35	1.61	1.52	1.62	0.68	1.15	0.91	0.18	0.33	0.16	0.14
Footwear,nes,rubber,plst	8513	1.77	1.66	1.75	1.82	1.82	1.77	0.17	0.37	0.26	0.31	0.33	0.35	0.43
Oth.footwear,lthr.uppers	8514	0.60	0.63	0.65	0.63	0.59	0.60	0.99	0.65	0.99	1.23	1.48	1.52	1.47
Oth.footwear,textle uppr	8515	2.75	2.26	1.64	1.64	1.61	1.40	0.45	0.41	1.40	0.46	0.68	0.47	0.51
Footwear, nes	8517	1.11	0.79	1.63	0.75	1.76	1.36	2.42	2.91	1.21	0.90	0.19	0.16	0.55
Parts of Footwear	8519	0.46	0.65	0.39	0.37	0.36	0.38	2.42	3.77	2.13	1.18	0.55	1.01	0.85

Source: Based on data from UN Commodity Trade database.

The analysis of this chapter reveals that, in general, China's TCF industries are more competitive than those of New Zealand, but there are other potential opportunities New Zealand TCF manufacturers can explore. Although imported TCF products from China are growing significantly, they are mainly mass-production items and meet the need of low-end markets. A free trade agreement with China would likely result in further increases in imported TCF products from China. New Zealand TCF industries have undergone significant restructuring and rationalization during past decades, and more recently, TCF manufacturers in New Zealand increasingly focus on high-end markets. Is this sense, the potential impact of the free trade policy on TCF industries with China will not be as severe as New Zealand's trade liberalization in the mid-1980s. A more detailed discussion is presented in the following chapter with survey results obtained from interviews of 15 TCF firms currently operating in New Zealand.

Chapter Eight
Survey Results and Discussion

The previous analysis of this study was based mainly on historical data and information from relevant literature. The China-NZ FTA is still under negotiation and conclusions have yet to be made. Therefore, there are many uncertainties on this issue. In this chapter the potential impact of free trade with China on New Zealand's TCF industries will be analysed in detail by using information obtained from a survey of fifteen TCF firms currently operating in New Zealand.

8.1 Methodology

A survey sample of fifteen textiles, clothing and footwear firms located primarily in the Auckland and Manawatu areas was selected non-randomly for the purpose of obtaining a geographical spread which approximately reflects the location of the industry. A list of firms was sourced from *New Zealand Business Who's Who* and *Kompass New Zealand Explore 2005*. The companies selected cover a wide range of products and vary in size, market orientation and location so as to make the sample as far as possible representative of the New Zealand production base.

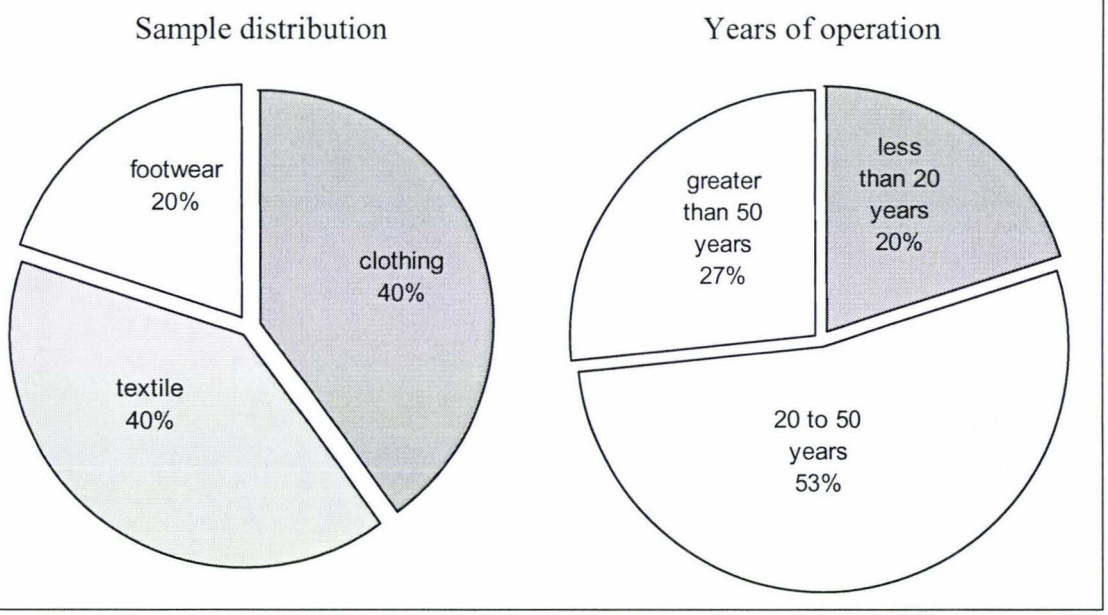
The survey was conducted from December 2005 to February 2006 through semi-structured face-to-face interviews with the firm executives.[52] First a pre-contact letter was sent to firm directors, followed by a telephone call directly to their office to

[52] The companies that have participated in the research and notes for the interviewees are presented in Appendixes F and G respectively.

enquire about their willingness to participate in the interview and to set up a time for the interview for those who agreed.

The firms interviewed for this study consist of 6 textile firms, 6 clothing firms and 3 footwear firms (see Figure 8.1). Most of these firms had operated in New Zealand for many years. About 80 per cent of the firms had been operating for more than 20 years, and about 27 per cent of firms had operated for more than 50 years.

Figure 8.1 Sample information



8.2 Competitiveness of TCF industries: New Zealand vs. China

The analysis of this section is based on the application of Porter's competitive advantage theory.[53] The competitive advantage of any industry is the result of the interaction between several factors. According to Porter (1990), these are factor conditions, demand conditions, strategy, structure and rivalry and lastly, relative

[53] For the discussion of theoretical framework of this theory, see Chapter Two.

supported industries. To explore this, the interviewees were asked to respond to the questions of the competitiveness of their business against China in terms of strength, weakness, opportunities and threats under the context of a free trade agreement with China.[54] The results are summarized in Table 8.1. Combining the results of the survey, these four determinants will be examined so as to identify the competitive advantage of New Zealand TCF industries compared to China and to gain some understanding of the future prospects for New Zealand TCF industries.

[54] The reason for using strength, weakness, opportunities and threats instead of Porter's four factors is that the question in the former form would be easier for interviewees to make responses. Furthermore, the questions in the former form was expected to provide more comprehensive information.

Table 8.1 Strengths, Weaknesses, Opportunities and Threats

Strengths	Opportunities
▪ Good design, production and technical capacities; ▪ Higher quality of products; ▪ Quick response capacity and capability; ▪ Existence of unique or desirable raw materials; ▪ Closer connection with local consumers; ▪ Good in distribution and marketing of TCF products;	▪ Developing international TCF markets; ▪ A "Made in New Zealand" label still a competitive point; ▪ Local consumers still prefer locally made TCF products; ▪ Existence of many potential niche markets; ▪ Improving e-commerce capabilities; ▪ Increasing efficiency; ▪ Investing in training and up-skilling existing employees;
Weaknesses	**Threats**
▪ Relatively high operation costs, especially labour costs; ▪ Poor industry image domestically; ▪ Small size of domestic markets; ▪ Distance from the major TCF markets; ▪ Lack of government supports; ▪ Difficult to access to finance;	▪ Intense price competition from China; ▪ Most of successful products may suffer loss as a result of inflow of cheap, low quality products from China; ▪ As China TCF industries develop and become more sophisticated, their design and quality may improve;

8.2.1 Factor Conditions

The labour factor is an important component of the factor conditions. All the evidence, including the results from the analyses in previous chapters and the survey results, suggest that the major threats of an FTA with China on New Zealand TCF industries result from the significant difference in labour costs between New Zealand and China. However, labour costs are just one part of the labour factor in Porter's framework in which the important attribute does not lie in just the factor itself, but rather in the efforts or motivation to overcome disadvantage factors. The most important factor conditions for countries to compete with cheap labour cost countries (such as China) in TCF industries may be skilled human resources such as creative designers (Schmitz & Knorringa, 1999; OECD, 2004). Therefore, New Zealand's TCF industries should take advantage of its pool of skilled, innovative and creative labour to compete with China in the environment of a bilateral free trade agreement with China.

The other important element of the factor conditions is the inputs for the industries. The availability of cost-competitive and quality raw materials domestically, such as fabric and leather, can provide a basis for competitive advantage and is of great importance for the development of TCF industries. According to USITC (2004), the availability of raw materials not only affects production of goods for delivery, but also for production of samples prior to order placement. China, in this case, has a competitive local supply of raw materials; almost all the materials needed in the production of TCF can be sourced domestically.[55] In contrast, due to lack of resources required to produce TCF, the TCF industries in New Zealand rely heavily on imported materials. As stated by interviewees, the majority of fabrics used in

[55] However, exports of clothing in China to a large extent still relies on the import of higher quality textiles, see Chapter Six.

clothing production or design in New Zealand are imported, and a large portion of leather used in manufacturing footwear is also imported. This shows that New Zealand TCF manufacturing has a competitive disadvantage compared to China. However, there are still some potential opportunities New Zealand TCF manufacturers can explore. For instance, some firms from the interviews emphasis that the existence of New Zealand's unique or desirable raw materials is an important strength and opportunity for the industries. New Zealand is one of the world's largest producers and exporters of crossbred wool and enjoys a reputation for producing some of the finest quality wool in the world.[56] Therefore, diversifying products from China and by using local raw materials such as wool would significantly contribute to the competitiveness of New Zealand TCF industries in the context of an FTA with China.

8.2.2 Demand Conditions

The demand conditions here involve both domestic and foreign demand facing New Zealand TCF industries. The importance of the two kinds of demand conditions is not equal, with domestic demand having a higher influence on the shaping of competitiveness of TCF industries. Porter (1990) states that a country can achieve national advantages in an industry or market segment, if domestic demand provides clear and earlier signals of demand trends to domestic suppliers than to foreign competitors. Normally, domestic markets have a much higher influence on an organization's ability to recognize customers' needs than do foreign markets.[57]

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[56] MarketNewZealand.com

[57] It is consistent with the conclusion of the TCFC Partnership (2002) that TCF industries need to build a strong domestic base before venturing into overseas markets.

Almost all firms interviewed identified the size of the domestic market as the major weakness and constraint of their business. Furthermore, this small market is shrinking as a result of changing consumption patterns and increasing import competition from cheaper sources, in particular from China. In contrast, with a population of 1.3 billion, the Chinese TCF market is one of the largest in the world. And as the national wealth is improving, the demand for TCF products is increasing.[58] In this case, the TCF industries in New Zealand have a serious competitive disadvantage compared to China. However, quick response capacity and capability of New Zealand TCF manufacturers can to some extent offset this disadvantage. As discussed earlier in Chapter Three, consumer preferences in wealthy nations and regions have shifted radically in the past two decades. Consumers are now demanding specialized and customized items in preference to standard products; New Zealand is not an exception. There is an increasing tendency that TCF industries are more and more fashion oriented, and the high rate of fashion change and a highly segmented demand is certainly more easily satisfied by domestic producers than foreigners (in this case, Chinese). Furthermore, proximity, both physically and culturally, allows close contact in the products' development process. Close proximity creates opportunities to engage in joint development work in ways that are difficult for Chinese TCF firms to match. In addition, as mentioned by one firm's executive, many New Zealand consumers still prefer New Zealand-made products compared to imported products. Therefore, the domestic producers have a competitive advantage in this sense, including the speed of response to change in demand; lower distribution costs; and lower inventory costs.

[58] See Chapter Six.

Concerning the foreign markets for TCF products, China has the competitive advantage over New Zealand; and this can be seen as Chinese TCF products have flourished worldwide and have a very high market share in two of the world's largest TCF markets: the U.S and the EU. By contrast, New Zealand's major TCF export market is Australia, which is a small market compared to the world market. However, given the size of the New Zealand economy, Australia's market is reasonably large compared to New Zealand. Thus, geographic and cultural proximity together with the preferred access to Australia under ANZCEP could make New Zealand TCF firms more competitive than China at least in the short run. As pointed out by BE and NZIER (2001a), ever-changing fashions, promotion schedules and seasonal offerings demand manufacturing flexibility which is difficult for North Hemisphere producers to match in the tiny and out-of-season Australian market.

8.2.3 Firm Strategy, Structure and Rivalry

The third broad determinant of competitive advantage in a particular industry in Porter's framework is the firms' strategy and structure and rivalry between firms. According to Porter (1996), firm strategy plays a centre part in determining the competitiveness of an industry in the global market. More than a few of firms interviewed shown that they have established a basis for competitive advantage which might be sustainable into the future. These include good technical expertise and good product quality, market knowledge and an established customer base, and appropriate positioning in suitable market niches. However, they also recognized that they need to keep adapting to changing trends and to innovation. As regards the structure of New Zealand TCF industries, they are dominated by small-medium sized firms. A large

portion of firms interviewed are family-owned and managed. Therefore, they do not need a very elaborate corporate structure.

Porter (1990) argues that vigorous domestic rivalry and competition between firms based in the same national economy frequently does much to create and sustain international competitive advantage for an industry. However, the interview results show that competition among New Zealand TCF firms is not intense; whereas there is a reasonable level of cooperation within the industries, for instance, the collaboration on export marketing promotion, technical cooperation on problems with machinery, sharing of information on customers with poor payment records and sharing production facilities and so on.

8.2.4 Related and Supporting Industries

There are a number of industries which are related to TCF industries in the sense used by Porter. To explore the existence and character of these related and supporting industries, the firm executives interviewed were asked to make comments on them in terms of the significant influence on their business. One significant example of the related industries identified by the interviewees is the industry that contributes directly or indirectly to the design and creation of TCF products. Another one is the industry that supplies inputs for TCF production. As discussed earlier in section 8.2.1, the success of the New Zealand wool industry provides enormous potential for further development and prosperity of New Zealand TCF industries. In addition, clustering is

not present in New Zealand TCF industries; however, there are quite a few institutions and organizations carrying out the coordination of TCF industries in New Zealand.[59]

8.3 Potential Impact on New Zealand TCF Industries

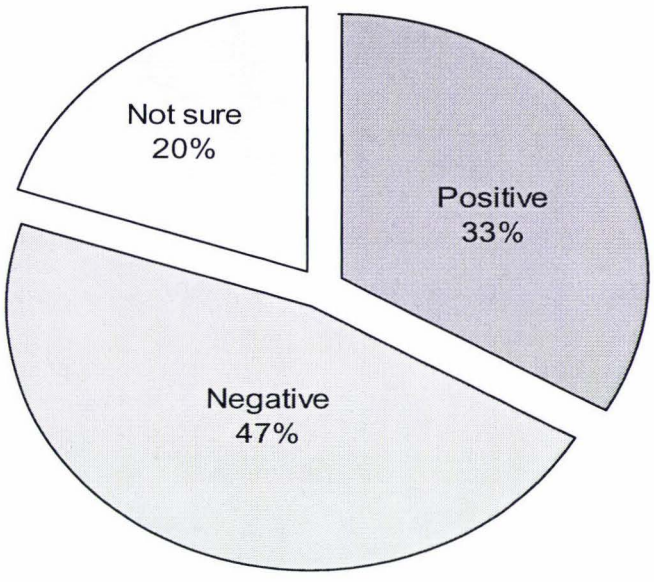
The competitive analysis in the above section reveals that while TCF industries in China have overwhelming competitive advantages, there are still many potentials that New Zealand TCF industries can explore based on its unique competitive advantages. In this section, the potential changes of New Zealand TCF industries in the context of an FTA with China will be discussed in detail.

The interviewees were asked about their opinion regarding a free trade deal with China. As shown in Figure 8.2, nearly half of the firms interviewed stated negative attitudes towards the NZ-China FTA. However, many respondents also pointed out that the changes would be inevitable in New Zealand TCF industries, regardless of whatever Free Trade Agreement might be negotiated with China. As stated by one respondent:

"Change and uncertainty are unavoidable in any business environment ... and all we can do is to adapt ourselves to no matter what changed market environment..."

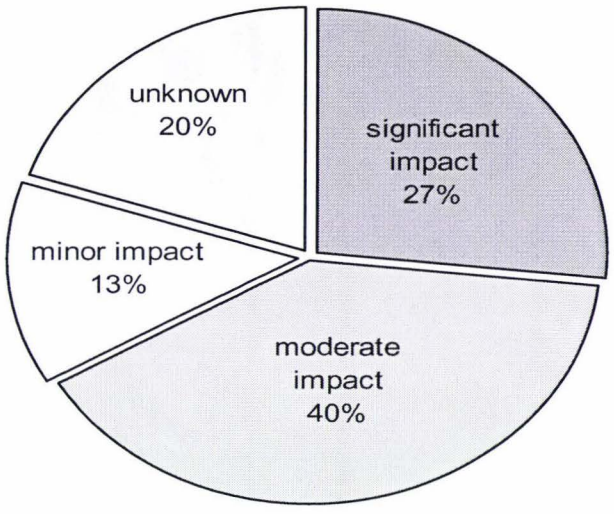
[59] See Appendix H for a list of major TCF industry organisations.

Figure 8.2 Attitudes towards an FTA with China



To further explore the potential impact on their business arising from an FTA with China, the interviewees were asked to give feedback on China's potential impact as a competitive threat to the New Zealand's TCF market. A simple statistical summary is shown in Figure 8.3. Around a quarter of firms think it will have a significant impact on their business, but the majority of firms believe the impact will be modest or little. However, no matter how the firms perceive China's competitive threat, it is generally accepted by all the interviewees that bilateral free trade with China will inevitably increase the competition in New Zealand's TCF market and undermine preference margins enjoyed by some individual firms. All the firms interviewed agreed that an FTA with China does not mean the end of TCF industries in New Zealand, as the outcome will depend on their ability to adjust and to identify market opportunities in a fragmented market. Besides, it was clear from the interviews that many firms are nevertheless still relatively optimistic about their future development.

Figure 8.3 Competitive Threat of China on TCF Firms



From the interviews, there are two likely impacts on New Zealand's TCF industries resulting from the FTA with China: on one side, a bilateral free trade agreement with China would increase competition in the domestic market; China as the main low cost exporter in the world, will very likely be able to more easily penetrate the local New Zealand market. As a result, at the industry level, most firms will suffer the increasing competitive threat, domestic production capacity will decline and industry outputs will go on contracting. On the other side, as mentioned by some firms' executives, free trade with China would bring them some opportunities for their business directly or indirectly in the mean time, for instance lower material costs, joint ventures with Chinese firms etc. The two effects will not be symmetrical, however, the latter was expected to be smaller than the former. Quite a few firms interviewed clearly stated that a bilateral free trade agreement with China would not adversely affect their business, and were not afraid of importing products from China. They see China as an opportunity to help them operate more effectively in the international market. It seems clear from the interviews that the prospects for New Zealand producers in particular

market segments are quite positive. Many firms interviewed indicated that a range of opportunities exist or are likely to emerge in domestic and export markets.

As mentioned earlier, in the process of adapting to the trade liberalization and reduction in protection, the New Zealand TCF industries have achieved dramatic transformations in the form of structure and competitiveness. The survey results suggest that some individual firms, and even parts of the sector, have developed their strengths and performing well in responding to increasing import competition as a result of trade liberalisation since the mid-1980s. Some firms are in a process of transition and have reasonable prospects of operating successfully in an environment of increasing competition from low cost Chinese products. Further change in the TCF industries, therefore, is considered inevitable. Therefore, the potential impact of the NZ-China FTA would be more in changing the structure of the industries rather than just the size of the industries. It is particularly important to consider not just what will happen following a NZ-China FTA, but the ultimate structural impacts on the industries. In fact, it will be a gradually evolving long-term structural change. For the past two decades, the interplay of global and local forces has profoundly affected the structure of the New Zealand TCF sector. The major changes identified by the firms interviewed covered in this study are: [1] shift domestic production capacity offshore to take advantage of low costs, including shifting overseas, contracting out or out-sourcing; [2] focus on low-volume and high-end niche markets by providing quick response supplies; [3] increasing concentration on quality, design, service and brand development strategies; [4] increasing focus on marketing; and [5] increasing export orientation. These are discussed separately below.

8.3.1 Increasing and Shifting Domestic Production Capacity

Shifting production offshore is a wide spread strategy for TCF industries in developed countries in response to increasing import competition from low cost countries (e.g. Graziani, 1998; Abernathy, et al, 2004). While TCF are often perceived as one industry, the factor endowment is quite different; as discussed previously in Chapter Three, the textile industry is more capital and technology intensive than clothing and footwear industries. As a result, the textile industry in developed countries is more competitive than clothing and footwear industries. More to the point, while shifting production offshore to reduce costs in clothing and footwear industries has proved to be an effective option in response to import competition, it seems a less rational option for the textile industry. Preceding chapters have revealed that there would be a more sizeable impact in the clothing and footwear industries than in the textile industry under the environment of a free trade agreement with China. From the interviews, it seemed clear that textile firms are generally more confident with an FTA with China than were the clothing and footwear firms in terms of keeping production locally-based. Almost all the textile firms interviewed admitted that nearly the entire manufacturing process is maintained locally. In contrast, relocating production offshore is very common in clothing and footwear firms. All the clothing and footwear firms interviewed under this study contract-out their production to low cost countries, initially to Fiji, but currently the dominant trend is to China. As stated by these firms, with cheaper labour, raw materials and factory overheads, the costs of production are reduced substantially while the quality of the product is similar.

However, the extent of the production shift is diverse. While the majority of firms shift most of their production offshore, some firms still retain a large part of the

production locally; at least one firm interviewed said that about 90 per cent of their manufacturing will remain in New Zealand.

8.3.2 Increasing Flexibility

Another potential change arising from an FTA with China will be further increases in the flexibility of TCF production. As discussed in Chapter Three, the TCF market has become more and more differentiated and more frequent fashion changes have become the rule, and manufacturers are forced to respond far more rapidly to consumer demand and specifications (Dicken, 2003). While low labour costs can still give China a competitive edge in TCF industries, as identified by Nordås (2004), "time to market" now plays a far more crucial role in determining competitiveness of TCF industries. It is clear from the interviews that many firms are aware of this. Some firms have focused on low-volume and quick-response supply systems which provide flexibility in responding to demand shifts. Many firms interviewed expressed that the low volume and high fashion niche markets are important for New Zealand TCF to retain production capacity in New Zealand.

It is relatively easy and possible for New Zealand TCF firms to maintain competitive advantage in these market segments; as one interviewee said, "*We are competitive in small order and quick response... we can fill ordesr quickly, normally 1-2 weeks, whereas imports require much longer*". Geographical proximity to the market is an important factor in determining the ability to respond quickly. It is especially true for clothing and footwear industries in which fashion is changing very fast today. Therefore, the proximity to domestic market means that it would be possible to retain

a significant part of TCF production in New Zealand by developing quick response systems even under the context of an FTA with China.

8.3.3 Increasing Design-led

An FTA with China would reinforce the trend of increasing design-leadership in TCF firms. Firms are concentrating more on quality, design, service and brand development in response to the competition arising from cheaper and imported products. Clearly, with the magnitude of the labour cost differentials between New Zealand and China, it is unlikely that New Zealand TCF manufactures could compete in the same market segments with China. Thus, one possible response for New Zealand TCF manufacturers to potential intense competition from China would be to differentiate their product in terms of higher quality and in terms of design and fashion. Holding the high end of value-added domestically, only this segment of the market will have a sustainable development.

Firstly, consumer preferences, influenced by brand image, fashion content and the quality of the product, are of importance in the potential impact from the NZ-China FTA. The study by Stengg (2001) suggests that the quality aspect is much more relevant for the textile industry than for the clothing industry, where competition is mainly determined by prices. The preceding chapter indicates that the New Zealand TCF products would be more competitive in terms of quality compared with China, but can not compete when competition is determined by prices. A bilateral free trade with China would result in falling prices of TCF products, therefore having a stronger

competitive impact on the clothing and footwear industries than on textile producers who can fend off stronger competition with higher quality.

Secondly, the interviews also suggested that nurturing and promoting a brand name, based on a reputation for quality, represents the best chance of retaining market share while continuing to manufacture in New Zealand.[60] Furthermore, "Made in New Zealand" creates a better impression with customers than "Made in China", as the latter competes mainly on price, although undoubtedly this aspect has become a lot more significant in recent years. A further advantage accrues to those who target a market segment which is high-variety and has a strong element of fashion (e.g. sporting or leisure clothing and footwear), as ideally this requires a flexible response in production to actual (seasonal) retail sales coupled with frequent dispatches of small orders to customers, especially when those items are relatively high-valued.

8.3.4 TCF industries in New Zealand will increase marketing focus

The potential impact of free trade with China could include a side effect of a major shift in value creation from manufacturing to marketing. All the clothing and footwear firms interviewed emphasized that the importance of marketing in their business increases as import competition increases. The reason behind this is not complicated; as domestic manufacturers lose market share, they began to imitate large retailers by developing their own low-cost offshore suppliers. Eventually, manufacturers abandoned part or most of their domestic manufacturing in favour of specializing in product design, global supply chain coordination and marketing.

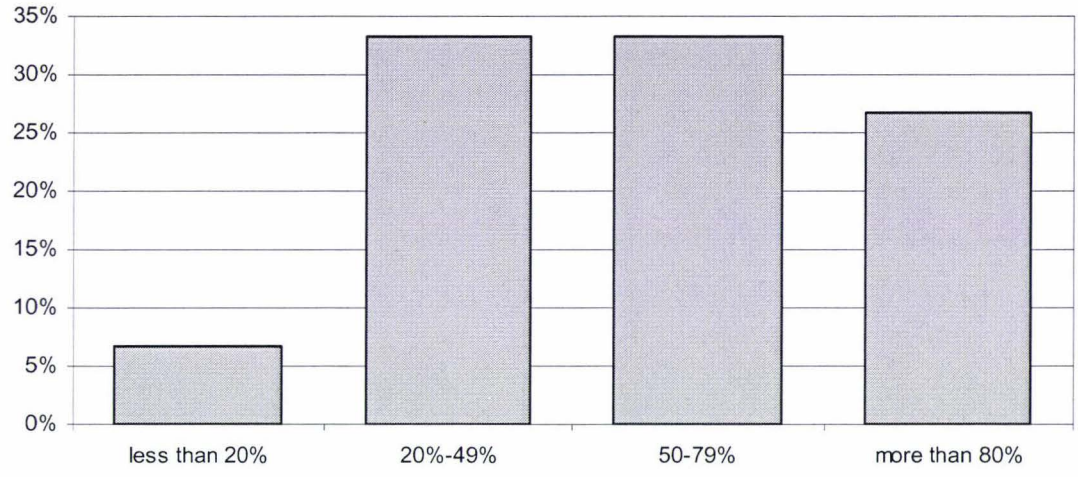
[60] "Quality" here means more than the technical quality of products; it also comprises issues such as better design, higher fashion content, see Stengg (2001).

Many firms interviewed, especially in the clothing and footwear sectors, have developed this kind of characteristics. They have focused on product innovation, brand management and knowledge of customers. Therefore, a new type of clothing and footwear enterprise will arise. The clothing and footwear manufacturers will act more as agents between customer needs, know-how possessors which include creative designers and the potential of the global production network than as producers. In this case, as pointed out by Gereffi (1999), a residual manufacturing capacity remains at home for handling of last-minute and special tasks, stock keeping and logistics as well as core manufacturing for the preparation and support of foreign production and for sales. This development is the same as clothing and footwear producers acting as dealers. This change will result in more effective marketing, which would underpin the creation of new markets and the growth of niche segments of the industries.

8.3.5 Increasing Export Orientation

Given the small domestic market and increasing competition locally, the New Zealand TCF industries have been increasing their export focus. Almost all firms covered by this study export their products, but they differ in extent (see Figure 8.4). More than half of the firms interviewed export more than 50 per cent of their products, and only one firm interviewed exports less than 20 per cent of its products. Although some firms have proven successful in exporting to the U.S or the EU market, Australia is the major market for their products. This kind of single export market focus would undermine the future development of New Zealand TCF industries.

Figure 8.4 Percentage of Production that is Exported by Firms Interviewed



The export orientation is increasing more significantly in the textile industry than in clothing and footwear industries. The previous chapter suggests that the textile industry in New Zealand is more competitive than the clothing and footwear industries in general. In this sense, the textile industry would find it easier to survive than would the clothing and footwear industries in the environment of free trade agreement with China. However, the inter-dependence of the TCF industries means that any large-scale contraction in one industry can have repercussion for others. Therefore, further contraction on clothing and footwear would threaten the textile industry. And from the interviews with textile firms, this is what they really worry about with a free trade agreement with China.

8.4 Potential Impact on TCF Productivity

All the firms interviewed admitted the importance of productivity in their business, and they are all consistently engaged in productivity improvement. As discussed in Chapter Three, one side effect from trade liberalization on TCF industries is

improvement in productivity. Given the more capital and technology intensive textile industry, there is future potential to improve productivity so as to offset the vast labour cost difference. However, for clothing and footwear sectors which are much more labour intensive, the potential to improve productivity is relatively limited. A recent study by the OECD (2004, p160) has pointed out that applied technologies in textile and clothing industries over the past decades have a differentiated path; the textile industry can point to numerous improvements and innovations which should allow it to extend its secular productivity trend, but the clothing industry can only point to various improvements in the fragment process of sewing a garment.

New Zealand's TCF industries would experience further improvement in productivity as a consequence of free trade with China. The productivity gain in the textile sector would likely be much larger than that in the clothing and footwear sector. Productivity improvement is an important strategy in response to the intense competition from imported goods. For some firms, increasing productivity to some extent will provide a means to offset increasing import competition. There are many examples of strong productivity gains from the interviews which helped those firms to cope with increasing competition in the past.

However, improvements in productivity alone will not assure survival in this industry. As mentioned by many firms interviewed by this study, productivity improvement cannot sufficiently reduce the labour cost difference between New Zealand and China. They believed that even raising productivity to world's best practice levels would not enable them to overcome their cost disadvantage with Chinese competitors. In addition, improving productivity would require consistent capital investment, which

in practice can be very burdensome for New Zealand TCF producers most of which are of medium and small size. Furthermore, most firms are nervous about investing given that the industry outlook is so uncertain. Therefore, some firms find it difficult to invest in new equipment even though the long-term savings may be substantial. Finally, China is improving its productivity as well; there are no real barriers keeping Chinese firms from utilizing modern technologies to their advantage.

8.5 Impacts on TCF Employment

From the above discussion, a bilateral free trade agreement with China would see continuing job losses in New Zealand TCF industries, as firms either close or relocate to cheaper sites of production. Specifically, the hardest losses would be in high volume, non-niche producers which have relied on cheap labour for much of their competitiveness. Although many firms are successful in niche markets with quick-turn, high-end fashion, or differentiated products, these markets are simply not large enough to induce job growth to compensate for the job losses in other markets.

Moreover, changes would be inevitable in New Zealand TCF industries, with contraction in employment, regardless of free trade with China. First of all, trade liberalization in TCF products would be inevitable from the long run view point, increasing competitiveness and restructuring are the only ways for New Zealand TCF industries to survive in the future. Moreover, further increases in productivity will inevitably reduce employment. The increasing competition from low-wage countries, such as China, will force New Zealand's TCF manufacturing to restructure towards

more capital and technology intensive, and thus even if the industries remain unchanged, the number of employment in the industries might still subject to decline.

Given that circumstance, it is difficult to predict what size a sustainable TCF industry may be; much will depend in the success of major producers in finding new market niches, or by developing rapid response skills. According to the study done by Infometrics (2002), given zero tariffs applied to TCF products, the employment in clothing and footwear industries is expected to decrease by about 8 per cent, while in the textile industry it is only 0.44 per cent (see Table 8.2).

Table 8.2 Potential Change of Output and Employment in TCF Industries

Zero Tariff	Textiles	Clothing	Footwear
Gross Output	-0.56%	-8.10%	-8.05%
Employment	-0.44%	-8.03%	-8.18%

Source: Infometrics (2002), p 92

Furthermore, a Free trade agreement with China would not only accelerate the decline in employment in TCF industries, but also the restructuring of employment. As discussed in the preceding section, free trade with China would further change the structure of the TCF industries as a whole, and this will further change the structure of TCF employment. Firstly, as the industry is moving towards the high-end market, the demand for low-skill labour would decrease, but the demand for high-skill, creative people would increase. The results of the interviews highlight some job opportunities that are expected to increase in the context of a free trade deal with China, such as design, management, technical expert, information and technology (IT), and product development. Secondly, with the increasing significance of the role of marketing in

future TCF industries in New Zealand, there will a shift of employment from traditional production to marketing and distribution. This is of crucial importance to New Zealand's economy. Generally, it is difficult for people laid off from TCF industries to be re-employed in other areas due to their skill disadvantages, but the prosperity of the marketing and distribution of TCF industries would provide enormous opportunities for these people, and their know-how of TCF products will give them the advantage in doing the jobs.

8.6 Potential Response to the NZ-China FTA

The study conducted by Dobson and Rae (1990, p242) on agribusiness's response to economic liberalisation in New Zealand, pointed out that firms which made rapid, correct adjustments to the changing environment could gain a competitive edge over those that reacted too slowly. This was generally accepted by the TCF firms interviewed in this study, and all the firms interviewed admitted that their industries will not survive without proactive responses to the competitive threat arising from free trade. The interviewees were asked how they expect to respond given bilateral free trade with China in terms of firm strategies. The summarized strategies are shown in Table 8.3.

It seems clear that most firms interviewed are responding actively to the prospect of an FTA with China. However, as pointed by some firm executives, the future is uncertain and hard to predict, so any particular response is subject to risk. But what is certain is that China has an overwhelming competitive advantage in TCF industries, and it is unlikely that this advantage will disappear in the short run. Therefore, a free

trade deal with China will at least in the short to medium term mean further competition for New Zealand TCF industries. As a result, no matter what response firms take, the key will be counteracting this competitive threat by improving their own competitiveness.

Table 8.3 Proposed Strategies in Responding to a NZ-China FTA

- ❖ Increasing productivity of production;
- ❖ Emphasis on innovation;
- ❖ Differentiate from Chinese products and promote high-quality end products;
- ❖ Focusing on niche markets such as small orders, e.g. low quantity, quick turn, higher priced production runs;
- ❖ Strengthening brand-building capabilities
- ❖ Improving production "capabilities" instead of production "capacity";
- ❖ More concentration on the export market;
- ❖ More focus on the service components of business, for instance marketing and design;
- ❖ Shifting manufacturing operations to low wage countries (China is a popular option);

There are different responses concerning the FTA with China. Firstly, there are options in favour of increasing productivity of manufacturing operations, and they are preferred more by textile firms. However, many firms state that their performance is still not good enough to compete with China despite the productivity improvement. The strategy to rely solely on productivity improvement would not be successful in the context of a free trade agreement with China. Secondly, there are popular options

among the firms interviewed that the operation needs to adjust towards more high-end quality products, which have a significant design component and more short-run turnaround and a market niche. Many firms interviewed under this study that had undertaken this strategy in responding to past trade liberalisation had shown it to be successful. Together with the discussion in previous chapters, this strategy seems to be an effective response to an FTA with China. As a supplement to this strategy, firms also believed they needed to make efforts to establish strategies to increase value-added through investments in value chains, including design, brand-building, management and faster delivery. Thirdly, options were expressed in favour of increasing the focus on exporting products. While all the firms interviewed regarded exporting goods as an option (as discussed previously in section 8.3), many firms had already enjoyed success from an export-orientated strategy, thus solely relying on exporting is quite risky too. Although some individual firms interviewed under this study had been shifting export markets away from Australia to the U.S or EU markets, Chapter Five revealed that Australia still dominates New Zealand's TCF exports. Australia and China are also negotiating a free trade agreement. Therefore, a response strategy relying on exporting, without diversifying export markets, would be vulnerable. Besides, there are more than a few firms interviewed emphasis the importance of taking advantage of the New Zealand's sourced raw materials, especially in the textile firms. Lastly, some firms in the clothing and footwear industries mentioned that a response strategy of focusing more on marketing operations and shifting the main manufacturing operations to low cost countries (such as China).

Chapter Nine
Recommendations and Conclusions

9.1 Summary

The New Zealand's TCF industries have undergone dramatic changes during the past decades as a result of New Zealand's ongoing trade liberalisation since the mid-1980s. As a result, both TCF industries output and employment have been declining significantly. A free trade agreement with China would be expected to accelerate the process of the trade liberalisation. This thesis has endeavoured to explore this potential impact of the NZ-China FTA on New Zealand's TCF industries.

The analysis commenced with the study of the global TCF industries and particular attention has been paid to the developed countries. Generally, TCF industries are relatively labour-intensive; TCF manufacturers in developed countries are facing the intensive competitive threat from low cost countries; as a result, TCF production and employment in developed countries are contracting significantly. However, the study also suggests that TCF are not just labour-intensive and mature industries, but diverse and dynamic industries where technology and innovation are of crucial importance.

The thesis then examined the TCF industries in New Zealand. The recent experience of the New Zealand TCF industries analysed suggests that while there is undoubted decline in the industries output and employment, New Zealand's TCF industries have achieved dramatic transformations in the process of adapting to the trade liberalisation and reduction in protection during the past two decades; and this has yielded a substantially more competitive and productive industry base. Increasing intense

competition in domestic market has forced New Zealand TCF manufacturers to increasingly export and niche market focus. However, the study also finds that the productivity improvement in New Zealand's TCF industries is not significant. Insufficient investment in research and development (R&D) is the main reason behind this. On one hand, the poor industries image makes it harder for the industries to attract new capital to re-invest while; on the other hand, most of the TCF manufacturers are reluctant to invest more in production due to the intensive import competition.

The thesis further investigates the China's TCF industries and trade on TCF products between New Zealand and China. The study finds that while China is by far the biggest TCF exporter in the world, its exports are mainly focused on the low-end market segment where the labour cost is the main competitive factor. The study also suggests that New Zealand's clothing and footwear industries will suffer more than the textile industry in the environment of a bilateral free trade agreement with China. Furthermore, while the comparative analysis based on historical trade data reveals that in general China's TCF industries are more competitive than those of New Zealand, New Zealand does have comparative advantage in certain parts of the industries; for example, textiles products that are based on domestic raw materials such as wool, carpets, and technical textiles.

To explore the research questions set up in Chapter One directly, the thesis employs a survey method based on the interviews of fifteen TCF firms currently operating in New Zealand. The study found that the production and employment in New Zealand's TCF industries will continue to shrink. But the magnitude is expected to be much

smaller than that of New Zealand's trade liberalisation and reduction in tariffs in the mid-1980s. A bilateral free trade agreement with China would further reinforce the need for New Zealand TCF industries to continue to restructure. The industries will increase export orientation, further shift the labour intensive parts of TCF production offshore, increasing niche market focus, increasing the concentration on product quality, design and service and increasingly recogning the importance of marketing.

9.2 Recommendations

The survival of New Zealand's TCF industries in the face of the NZ-China FTA will in a large extent depend on the reaction of the industries today. New Zealand TCF industries should be well prepared for the environment where more intense competition will arise from the NZ-China FTA.

The study shows that the overwhelming competitiveness of China's TCF industries is backed mainly by its cheap and productive labour. Clearly, with the magnitude of the labour cost differences between New Zealand and China, it is unlikely that New Zealand TCF manufacturers could compete with China in the same market segments. Therefore, the future success of New Zealand TCF industries lies in the market segments where price is not the main determinant factor of competitiveness. One possible way to achieve this is to focus on the high-end market with higher value-added and therefore higher profit margins. Another possible way is to develop specialised products and compete with China in the market by product differentiation. The TCF products are heterogeneous, and there are areas where New Zealand manufacturers can produce a sufficiently differentiated product that will allow then to

successfully compete with China's producers in the environment of the NZ-China FTA. For example, taking advantage of New Zealand's unique raw materials, such as merino wool. Also, New Zealand TCF manufacturers can develop "quick-respond" capability and focus on niche markets; this would further involve New Zealand TCF manufacturers constantly seeking new markets and improving ways of doing business. All these would require substantial investment in R&D.

The poor image of the TCF industries in New Zealand needs to be reversed, from low technology, labour intensive, low skill, and 'sunset' industries to technology and capital intensive ones requiring highly skilled labour and dynamic industries. This is of significant importance if New Zealand TCF industries are to compete with China in the environment of an FTA with China. Given the importance of innovation and creativity in the survival and prosperity of TCF industries in New Zealand, a pool of talented people is the key factor. It is very difficult for the industry to attract creative and talented people with the current industry image. Furthermore, without a good industry image, it would be difficult to attract and involve the young generation to develop such specialised industries. Thus, future development of the industries will suffer. Another important implication from reversing the industry's image is that it will make the industries easier to access finance. Reversing the industry's image cannot be done by individual firms alone. It requires all the firms to work together and the support of the government is also very important in order to achieve this.

9.3 Conclusions

This study shows a high degree of certainty that New Zealand TCF industries are uncompetitive in terms of labour cost. As a result, New Zealand TCF industries are uncompetitive in products where the price is the main competitive factors. While China's TCF industries are upgrading, they remain at the low-end market segment with mass production. Therefore, the competitiveness of New Zealand TCF industries in high-end market segments is uncertain where the labour cost is not the sole determinant factor.

The size of the New Zealand TCF industries in terms of production and employment in the environment of the NZ-China FTA will further decrease. The NZ-China FTA would further force New Zealand's TCF industries to continue restructuring and rationalise. On one side, the productivity and efficiency of the industries will constantly improve and more labour will be replaced by the capital in production; as a result, the number of workers employed in New Zealand's TCF industries is expected to further decline. On the other side, the labour intensive sector of the TCF production would vanish in New Zealand in the face of the NZ-China FTA; therefore, both production and employment is expected to further decline.

The findings of this study also suggest that the potential restructuring is expected to produce some positive outcomes which might result in an invigorated but very different industry. That is, one based on high skill labour, new technology, niche markets and high value-added products targeting the upper segment of the export and domestic markets. The potential restructuring is expected to mean that New Zealand TCF firms will not only be in production, but also in the management of markets,

organizing a global supply chain of subcontractors, and the development of new products and distribution. Such a positive outcome would yield vigorous and profitable TCF industries in New Zealand. However, the industry will not automatically upgrade to a revitalized one without any painful experiences. The path to success will require active, effective and appropriate strategies by these industries.

9.4 Suggestions for Further Research

This study has contributed in many ways to the literature of the impact of trade liberalisation on TCF industries. While this study focused on New Zealand cases, it does however provide a good background on extending the study in other developed countries.

There are a number of ways that the research can be expanded. Firstly, the main interest of this thesis has been focused on New Zealand's TCF industries. The NZ-China FTA is expected to affect New Zealand's TCF industries; and this in turn will have an effect on the welfare of the country. Therefore, a subsequent study might seek to determine the welfare effect of the changed specialisation pattern, such as if the TCF industries in New Zealand are wiped out. Besides, one main constraint of this thesis is the lack of production data of New Zealand's TCF industries. Further research could also be conducted to assess the relationship between the NZ-China FTA and productivity growth in New Zealand's TCF industries via access to the production data. Finally, there may also be other analytical tools that can be applied to the study, such as the general equilibrium method, econometrics tool etc., which may also be applicable to these kinds of problems.

APPENDICES

Appendix A

SITC Codes for TCF Products

SITC Code	Description
	TEXTILES
65	Textile yarn, fabrics, made-up articles, n.e.s., and related products
651	Textile yarn
6511	Yarn of wool or animal hair (excluding wool tops)
6512	Cotton sewing thread, whether or not put up for retail sale
6513	Cotton yarn, other than sewing thread
6514	Sewing thread of man-made fibres, whether or not put up for retail sale
6515	Synthetic filament yarn (other than sewing thread), textured, not put up for retail sale, including monofilament of less than 67 decitex
6516	Other synthetic filament yarn (other than sewing thread), including monofilament of less than 67 decitex
6517	Artificial filament yarn (other than sewing thread); artificial monofilament, n.e.s.; strip and the like of artificial textile materials, n.e.s.
6518	Yarn (other than sewing thread) of staple fibres; synthetic monofilament, n.e.s.; strip and the like of synthetic textile materials of an apparent width not exceeding 5 mm
6519	Yarn of textile fibres, n.e.s. (including paper yarn and yarn, slivers and rovings of glass fibre)
652	Cotton fabrics, woven (not including narrow or special fabrics)
6521	Cotton gauze, pile and chenille fabrics, woven
6522	Cotton fabrics, woven, unbleached (other than gauze and pile and chenille fabrics)
6523	Other woven fabrics, containing 85% or more by weight of cotton, bleached, dyed, printed or otherwise finished, weighing not more than 200 g/m2
6524	Other woven fabrics, containing 85% or more by weight of cotton, bleached, dyed, printed or otherwise finished, weighing more than 200 g/m2
6525	Other woven cotton fabrics, containing less than 85% by weight of cotton, mixed mainly or solely with man-made fibres, bleached, dyed, printed or otherwise finished, weighing not more than 200 g/m2
6526	Other woven cotton fabrics, containing less than 85% by weight of cotton, mixed mainly or solely with man-made fibres, bleached, dyed printed or otherwise finished, weighing more than 200 g/m2
6529	Other woven fabrics of cotton
653	Fabrics, woven, of man-made textile materials (not including narrow or special fabrics)
6531	Fabrics, woven, of synthetic filament yarn (including woven fabrics obtained from materials of heading 651.88), other than pile and chenille fabrics
6532	Fabrics, woven, of synthetic staple fibres, containing 85% or more by weight of such fibres (other than pile and chenille fabrics)
6533	Fabrics, woven, of synthetic staple fibres, containing less than 85% by

weight of such fibres, mixed mainly or solely with cotton (other than pile and chenille fabrics)

6534 Fabrics, woven, of synthetic staple fibres, containing less than 85% by weight of such fibres, mixed mainly or solely with fibres other than cotton (other than pile and chenille fabrics)

6535 Fabrics, woven, of artificial filament yarn (including woven fabrics obtained from materials of heading 651.77)

6536 Fabrics, woven, containing 85% or more by weight of artificial staple fibres

6538 Fabrics, woven, of artificial staple fibres, containing less than 85% by weight of such fibres (other than pile and chenille fabrics)

6539 Pile fabrics and chenille fabrics, woven, of man-made fibres (other than fabrics of group 652 or 656)

654 Other textile fabrics, woven

6541 Fabrics, woven, of silk or of silk waste

6542 Fabrics, woven, containing 85% or more by weight of wool or of fine animal hair (other than pile and chenille fabrics)

6543 Fabrics, woven, of wool or of fine animal hair, n.e.s.

6544 Fabrics, woven, of flax

6545 Fabrics, woven, of jute or of other textile bast fibres of group 264

6546 Fabrics, woven, of glass fibres (including narrow fabrics)

6549 Fabrics, woven, n.e.s.

655 Knitted or crocheted fabrics (including tubular knit fabrics, n.e.s., pile fabrics and openwork fabrics), n.e.s.

6551 Pile fabrics (including "long pile" fabrics and terry fabrics), knitted or crocheted, whether or not impregnated, coated, covered, or laminated

6552 Other knitted or crocheted fabrics, not impregnated, coated, covered or laminated

656 Tulles, lace, embroidery, ribbons, trimmings and other smallwares

6561 Narrow woven fabrics (other than goods of subgroup 656.2); narrow fabrics consisting of warp without weft assembled by means of an adhesive (bolducs)

6562 Labels, badges and similar articles of textile materials, in the piece, in strips or cut to shape or size, not embroidered

6563 Gimped yarn, and strip and the like of heading 651.77 or 651.88, gimped (other than metallized yarn and gimped horsehair yarn); chenille yarn (including flock chenille yarn); loop-wale yarn; braids in the piece; ornamental trimmings in the piece, without embroidery, other than knitted or crocheted; tassels, pompons and similar articles

6564 Tulles and other net fabrics (not including woven, knitted or crocheted fabrics); lace in the piece, in strips or in motifs

6565 Embroidery in the piece, in strips or in motifs

657 Special yarns, special textile fabrics and related products

6571 Felt, whether or not impregnated, coated, covered or laminated, n.e.s.

6572 Non-wovens, whether or not impregnated, coated, covered or laminated, n.e.s.

6573 Coated or impregnated textile fabrics and products, n.e.s.

6574 Quilted textile products in the piece, composed of one or more layers of textile materials assembled with padding by stitching or otherwise, n.e.s.

6575 Twine, cordage, ropes and cables and manufactures thereof (e.g., fishing nets, ropemakers' wares)

6576 Hat shapes, hat forms, hat bodies and hoods
6577 Wadding, wicks, and textile fabrics and articles for use in machinery or plant
6578 Rubber thread and cord, textile-covered; textile yarn, and strip and the like of heading 651.77 or 651.88, impregnated, coated, covered or sheathed with rubber or plastics
6579 Special products of textile materials
658 Made-up articles, wholly or chiefly of textile materials, n.e.s.
6581 Sacks and bags, of textile materials, of a kind used for the packing of goods
6582 Tarpaulins, awnings and sun-blinds; tents; sails for boats, sailboards or landcraft; camping goods
6583 Blankets and travelling-rugs (other than electric)
6584 Bedlinen, table linen, toilet linen and kitchen linen
6585 Curtains and other furnishing articles, n.e.s., of textile materials
6589 Made-up articles of textile materials, n.e.s.
659 Floor coverings, etc.
6591 Linoleum and similar floor coverings
6592 Carpets and other textile floor coverings, knotted, whether or not made up
6593 "Kelem", "Schumacks", "Karamanie" and similar hand-woven rugs
6594 Carpets and other textile floor coverings, tufted, whether or not made up
6595 Carpets and other textile floor coverings, woven, not tufted or flocked, whether or not made up
6596 Carpets and other textile floor coverings, n.e.s.

CLOTHING

84 Articles of apparel and clothing accessories
841 Men's or boys' coats, capes, jackets, suits, blazers, trousers, shorts, shirts, underwear, nightwear and similar articles of textile fabrics, not knitted or crocheted (other than those of subgroup 845.2)
8411 Overcoats, car coats, capes, cloaks, anoraks (including ski jackets), windcheaters, wind jackets and similar articles (other than those of subgroup 841.2 and heading 841.3)
8412 Suits and ensembles
8413 Jackets and blazers
8414 Trousers, bib and brace overalls, breeches and shorts
8415 Shirts
8416 Singlets and other vests, underpants, briefs, nightshirts, pyjamas, bathrobes, dressing-gowns and similar articles
842 Women's or girls' coats, capes, jackets, suits, trousers, shorts, shirts, dresses and skirts, underwear, nightwear and similar articles of textile fabrics, not knitted or crocheted (other than those of subgroup 842.2)
8421 Overcoats, car coats, capes, cloaks, anoraks (including ski jackets), windcheaters, wind jackets and similar articles (other than those of subgroup 845.2)
8422 Suits and ensembles
8423 Jackets and blazers
8424 Dresses
8425 Skirts and divided skirts
8426 Trousers, bib and brace overalls, breeches and shorts
8427 Blouses, shirts and shirt blouses

8428 Singlets and other vests, slips, petticoats, briefs, panties, nightdresses, pyjamas, negligées, bathrobes, dressing-gowns and similar articles

843 Men's or boys' coats, capes, jackets, suits, blazers, trousers, shorts, shirts, underwear, nightwear and similar articles of textile fabrics, knitted or crocheted (other than those of subgroup 845.2)

8431 Overcoats, car coats, capes, cloaks, anoraks (including ski jackets), windcheaters, wind jackets and similar articles (other than those of heading 843.23)

8432 Suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts

8437 Shirts

8438 Underpants, briefs, nightshirts, pyjamas, bathrobes, dressing-gowns and similar articles

844 Women's or girls' coats, capes, jackets, suits, trousers, shorts, shirts, dresses and skirts, underwear, nightwear and similar articles of textile fabrics, knitted or crocheted (other than those of subgroup 845.2)

8441 Overcoats, car coats, capes, cloaks, anoraks (including ski jackets), windcheaters, wind jackets and similar articles (other than those of heading 844.23)

8442 Suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, bib and brace overalls, breeches and shorts

8447 Blouses, shirts and shirt blouses

8448 Slips, petticoats, briefs, panties, nightdresses, pyjamas, negligées, bathrobes, dressing-gowns and similar articles

845 Articles of apparel, of textile fabrics, whether or not knitted or crocheted, n.e.s.

8451 Babies' garments and clothing accessories

8452 Garments made up of fabrics of subgroup 657.1 or headings 657.2, 657.32, 657.33 or 657.34

8453 Jerseys, pullovers, cardigans, waistcoats and similar articles, knitted or crocheted

8454 T-shirts, singlets and other vests, knitted or crocheted

8455 Brassières, girdles, corsets, braces, suspenders, garters and similar articles, and parts thereof, whether or not knitted or crocheted

8456 Swimwear

8458 Other garments, not knitted or crocheted

8459 Other garments, knitted or crocheted

846 Clothing accessories, of textile fabrics, whether or not knitted or crocheted (other than those for babies)

8461 Clothing accessories (other than those for babies), not knitted or crocheted

8462 Pantihose, tights, stockings, socks and other hosiery (including stockings for varicose veins and footwear without applied soles), knitted or crocheted

8469 Gloves, mittens and mitts, knitted or crocheted; other made-up clothing accessories, knitted or crocheted; knitted or crocheted parts of garments or of clothing accessories

848 Articles of apparel and clothing accessories of other than textile fabrics; headgear of all materials

8481 Articles of apparel and clothing accessories, of leather or of composition leather (not including gloves, mittens and mitts of heading 894.77)

8482 Articles of apparel and clothing accessories (including gloves), for all

purposes, of plastics or of vulcanized rubber (other than hard rubber)

8483 Articles of apparel, clothing accessories (not including headgear) and other articles of furskin; artificial fur and articles thereof

8484 Headgear and fittings therefor, n.e.s.

FOOTWEAR

85 Footwear

851 Footwear

8511 Footwear incorporating a protective metal toecap, not including sports footwear

8512 Sports footwear

8513 Footwear, n.e.s., with outer soles and uppers of rubber or plastics

8514 Other footwear with uppers of leather or composition leather

8515 Other footwear, with uppers of textile materials

8517 Footwear, n.e.s.

8519 Parts of footwear (including uppers, whether or not attached to soles other than outer soles); removable insoles, heel cushions and similar articles; gaiters, leggings and similar articles, and parts thereof

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Source: United Nation Commodity Trade Statistics Database.

Appendix B

Share of Total Clothing Exports by 4 Digit SITC Categories

Commodity	SITC Code	1990	1995	2000	2002	2004
Overcoats,outerwear,etc.	8411	1.26%	1.32%	1.21%	1.58%	1.33%
Suits and ensembles	8412	0.48%	2.10%	3.54%	4.18%	4.99%
Jackets and blazers, men's or boys', of textile materials, not knitted	8413	1.67%	3.95%	5.22%	3.56%	3.04%
Trousers, bib and brace overalls, breeches and shorts, men's or boys'	8414	4.44%	3.38%	5.48%	4.80%	5.19%
Shirts	8415	2.13%	2.87%	2.83%	1.65%	2.61%
Underwear,nightwear etc.	8416	0.44%	0.73%	0.30%	0.14%	0.24%
Overcoats,oth.coats etc.	8421	0.37%	1.72%	1.13%	0.62%	0.99%
Suits and ensembles	8422	0.86%	0.32%	0.91%	0.19%	0.16%
Jackets and blazers, women's or girls', of textile materials, not knitted	8423	1.63%	0.99%	2.12%	1.55%	1.86%
Dresses, women's or girls', of textile materials, not knitted or crochete	8424	1.93%	1.44%	1.55%	1.04%	1.06%
Skirts and divided skirts, women's or girls', of textile materials, not k	8425	0.89%	1.38%	1.68%	2.55%	3.47%
Trousers, bib and brace overalls, breeches and shorts, women's or girls'	8426	1.62%	2.54%	5.20%	2.74%	3.88%
Blouses, shirts and shirt-blouses, women's or girls', of textile material	8427	0.89%	0.95%	1.91%	2.04%	2.12%
Underwear,nightwear etc.	8428	2.10%	2.26%	0.87%	1.27%	0.85%
Overcoats, car coats, capes, cloaks, anoraks (including ski jackets)	8431	0.79%	0.10%	2.33%	0.35%	0.29%
Suits,jackts,trousrs.etc	8432	2.31%	1.22%	1.14%	0.63%	0.58%
Shirts,mens boys,knit	8437	0.50%	1.16%	3.08%	4.64%	2.97%
Underwear,nightwear etc.	8438	0.49%	1.11%	1.59%	0.42%	0.29%
Overcoats, car coats, capes, cloaks, anoraks (including ski jackets), win	8441	0.50%	0.34%	0.33%	0.41%	0.93%
Suits,dresses skirts etc	8442	1.33%	1.36%	3.21%	3.59%	2.08%
Blouses, shirts and shirt-blouses, women's or girls', knitted or crochete	8447	0.51%	1.09%	1.98%	1.26%	1.57%
Underwear, nightwear etc	8448	4.59%	7.10%	4.38%	2.78%	2.47%
Babies'garmnts,clths acc	8451	0.39%	0.47%	0.45%	7.39%	10.09%
Garment,felt,txtl fabric	8452	0.98%	0.54%	0.50%	0.17%	0.19%
Jerseys, pullovers, cardigans, waistcoats and similar articles, knitted o	8453	7.75%	9.13%	6.93%	5.69%	5.12%
T-shirts, singlets and other vests, knitted or crocheted	8454	0.52%	1.47%	2.42%	4.14%	4.01%
Brassieres,corsets,etc.	8455	4.42%	11.14%	5.61%	4.44%	4.33%
Swimwear	8456	3.65%	2.47%	1.63%	1.40%	0.67%
Oth.garments,not knitted	8458	1.10%	1.02%	2.17%	2.36%	4.12%
Other garments knitted	8459	0.46%	3.43%	2.15%	2.24%	3.57%
Accessories,notknitted	8461	2.29%	1.17%	2.74%	1.73%	1.62%
Hosiery,etc.knitted	8462	4.06%	3.08%	2.15%	1.74%	1.34%
Oth.made-up cloth.access	8469	0.80%	0.34%	1.86%	1.59%	1.93%
Leather apparel,accessrs	8481	10.86%	3.21%	0.89%	1.11%	0.92%
Plastc,rubbr,apparel,etc	8482	2.17%	2.19%	0.85%	0.81%	0.73%
Articles,accessories.fur	8483	25.02%	16.96%	12.99%	18.03%	13.16%
Headgear,fittings,nes	8484	3.80%	3.95%	4.66%	5.21%	5.26%

Source: based on data from UN Commodity Trade Database.

Appendix C

GL Indices for New Zealand TCF Industries

SITC Code	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
65	58.84	52.83	50.89	49.95	50.28	48.35	47.97	50.14	51.40	52.71	60.79	55.85	55.40	55.73	62.02	68.09	69.42
651	96.96	87.53	85.97	82.90	77.46	73.29	72.20	78.55	83.26	96.07	87.03	97.23	95.71	90.17	94.34	86.81	82.56
6511	18.49	18.59	20.10	15.45	18.58	22.57	31.48	26.46	25.71	24.06	7.52	23.22	37.04	44.51	36.80	40.83	39.49
6512	59.23	35.92	44.92	19.43	28.64	18.47	20.87	55.43	32.63	28.70	86.88	41.14	10.52	22.16	12.90	7.34	9.38
6513	5.16	2.83	4.19	1.65	2.35	0.34	0.37	0.44	3.25	2.87	11.63	2.66	11.76	9.67	7.52	5.00	12.02
6514	8.87	8.45	8.91	11.32	8.74	7.39	8.51	10.93	6.88	5.57	5.60	7.04	3.62	9.56	2.36	3.60	4.60
6515	1.55	1.63	0.13	1.50	5.26	6.38	0.58	0.13	0.09	0.89	0.77	1.12		2.07	0.03	1.53	1.07
6516	4.43	3.95	2.80	3.51	13.96	9.95	27.77	24.65	6.02	15.82	18.87	4.58	8.09	8.98	5.11	0.65	4.51
6517	11.61	0.46	11.13	2.89	16.77	23.27	33.85	14.66	2.85	65.30	75.91	46.59	3.00	0.39	4.29	1.20	17.24
6518	11.12	7.18	4.89	3.12	2.60	3.88	1.98	1.61	1.55	6.01	7.27	4.69	2.81	6.31	5.44	13.46	13.55
6519	28.71	17.61	15.47	15.48	6.25	5.05	16.04	35.83	30.05	31.24	38.65	30.52	43.56	44.24	43.14	63.97	60.12
652	5.26	8.60	10.38	11.40	14.44	14.85	14.95	25.17	19.65	19.86	44.30	16.20	14.17	13.64	21.97	21.17	23.41
6521	5.46	9.58	8.77	6.27	8.06	6.88	10.55	7.71	11.58	9.42	5.96	6.80	12.07	21.90	15.63	37.45	41.51
6522	7.63	55.88	17.96	10.70	2.19	3.07	10.53	10.56	4.21	7.07	41.25	11.84	4.42	10.22	21.30	40.81	57.95
6523	5.08	7.04	10.46	11.68	16.94	19.26	19.66	26.25	20.30	17.90	39.15	15.19	13.24	11.63	17.63	22.52	17.91
6524	4.27	4.95	10.59	7.05	8.90	4.82	6.84	5.21	8.72	9.43	42.65	10.83	7.60	7.61	12.01	10.59	22.21
6525	2.35	11.39	7.68	22.88	11.29	25.37	15.61	16.61	32.42	51.90	42.83	6.35	6.32	16.43	14.36	17.36	25.87
6526	7.57	8.00	7.23	4.76	2.88	1.90	3.52	68.11	30.13	5.97	39.73	11.77	26.04	20.08	45.05	22.55	12.26
6529	23.56	25.85	14.96	70.78	97.20	77.83	83.67	70.66	99.46	66.36	33.73	70.86	97.87	66.26	81.95	61.25	76.96
653	5.15	6.08	4.61	5.31	9.30	6.38	7.28	8.32	10.02	9.76	12.38	12.56	14.64	16.21	21.81	25.16	34.07
6531	6.33	7.56	5.29	4.85	17.65	6.06	2.34	4.00	6.22	5.10	4.18	5.90	8.20	10.00	12.58	21.67	22.57
6532	8.84	7.17	4.36	6.33	10.86	7.35	7.90	13.60	15.87	15.70	18.28	12.42	11.89	14.39	17.98	18.66	18.69

SITC Code	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
6533	6.00	7.47	4.85	6.15	6.72	7.99	13.29	14.41	14.64	16.48	17.63	22.69	25.30	27.86	21.60	22.02	25.62
6534	1.49	3.00	4.60	4.98	2.69	4.48	7.87	7.88	10.63	9.50	7.22	10.40	12.44	12.57	22.29	18.35	24.92
6535	5.18	4.76	12.51	5.81	5.99	4.72	13.53	3.22	4.86	8.46	6.59	14.07	18.09	12.36	17.78	29.80	39.69
6536	2.23	1.80	2.45	3.92	7.05	9.41	7.59	9.88	11.78	6.91	39.46	5.38	14.24	31.58	62.06	80.62	93.40
6538	3.45	3.97	3.29	4.19	4.38	4.66	3.89	3.01	3.99	5.10	6.22	9.80	21.67	21.66	62.58	32.02	48.75
6539	0.60	5.02	0.95	5.99	4.40	2.64	3.16	3.52	2.28	3.34	4.33	29.36	11.84	10.37	10.12	35.53	96.28
654	40.29	33.78	32.07	29.04	24.98	33.08	35.08	27.77	32.77	40.47	61.02	40.86	52.22	43.64	45.54	59.47	58.21
6541	2.16	1.73	5.39	2.34	2.89	2.88	4.55	9.18	12.14	8.59	19.61	5.94	8.65	8.48	13.23	21.88	31.46
6542	94.33	96.33	73.06	68.29	60.06	60.55	74.04	46.99	78.61	83.14	69.94	82.07	84.52	76.92	57.57	75.85	83.29
6543	93.10	46.65	16.04	8.34	9.21	4.63	9.88	9.44	5.33	16.19	19.48	9.16	77.90	70.37	98.23	80.76	80.04
6544	0.96	2.08	8.20	2.06	4.01	3.05	3.72	34.16	6.47	11.62	28.50	14.79	21.61	8.59	16.88	23.45	32.90
6545	1.72	0.79	10.05	0.68	7.77	0.91	3.58	0.51	0.17	0.43	0.86	0.19	0.51	0.51	0.28	0.99	5.25
6546	4.95	14.15	14.92	23.33	20.64	57.48	36.30	15.36	8.75	5.78	5.84	11.20	2.00	6.18	4.77	5.01	8.16
6549	42.20	21.29	33.59	52.98	28.23	54.14	46.87	42.84	57.82	43.81	47.85	26.48	31.29	30.89	12.66	30.20	40.21
655	47.48	36.82	36.76	56.06	59.85	59.09	44.84	49.76	48.13	50.82	61.73	69.56	68.56	71.93	79.82	87.67	26.23
6551	5.34	1.95	10.23	9.44	2.73	2.68	1.41	0.91	9.96	17.56	17.50	64.07	35.31	23.66	45.20	38.78	33.49
6552	53.40	41.86	42.03	65.04	69.40	68.77	53.67	60.18	59.28	60.48	73.06	70.86	75.13	82.74	87.45	96.35	
656	62.04	62.80	53.45	59.49	86.91	72.53	66.27	67.49	68.94	82.66	68.04	68.26	66.03	51.14	46.54	54.49	37.75
6561	64.12	37.54	30.72	24.47	40.46	39.28	32.65	56.45	49.89	47.48	47.61	54.03	49.95	48.44	37.91	25.79	23.49
6562	19.62	18.59	23.00	17.14	11.24	19.69	25.67	36.08	27.56	17.45	32.29	42.36	57.92	80.41	89.06	66.74	88.82
6563	18.20	23.33	11.20	10.76	25.08	23.46	44.85	37.43	44.67	49.26	35.43	31.50	34.06	56.18	47.52	76.24	60.59
6564	7.28	8.95	12.19	10.89	14.28	25.99	39.52	27.03	26.34	30.29	79.53	88.72	94.54	15.87	49.25	79.04	68.40
6565	3.56	6.31	4.49	10.02	13.37	11.34	7.53	7.13	5.06	6.64	10.31	12.85	33.68	19.20	20.87	21.07	13.81
657	25.75	24.31	25.39	20.71	19.59	18.95	20.89	23.70	26.68	23.03	19.94	21.47	23.76	35.97	33.79	39.99	38.99
6571	19.32	15.04	9.19	11.32	10.18	12.52	13.98	9.53	5.50	7.51	11.93	7.74	12.22	32.62	38.78	52.37	42.18
6572	13.92	15.13	22.26	7.93	3.23	5.76	4.26	4.56	3.47	4.41	3.32	1.38	2.23	2.72	3.88	3.09	3.95

SITC Code	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
6573	7.87	5.91	12.81	5.17	5.22	5.05	7.10	6.64	10.60	7.98	5.58	8.14	11.98	20.60	9.20	16.77	16.19
6574	41.84	78.04	34.00	2.08	12.49	21.64	15.80	64.04	59.02	45.65	39.43	92.16	16.36	37.34	93.36	97.79	82.30
6575	87.67	92.70	99.60	90.00	77.14	71.27	88.92	80.53	81.44	64.21	68.51	69.14	60.86	63.96	60.91	79.00	74.27
6576	36.26	0.96	0.13	3.19	0.04		3.39		2.82			0.09	0.93	24.70	52.60	70.90	78.54
6577	20.17	15.87	14.33	14.33	16.35	13.37	15.77	21.05	22.02	20.65	11.45	10.99	25.88	50.94	51.23	47.64	49.83
6578	53.90	98.30	98.46	38.67	72.39	87.88	70.87	42.90	81.63	90.38	51.07	16.91	37.05	25.35	30.11	48.15	80.25
6579	14.91	2.18	2.05	1.05	2.68	4.41	4.41	2.14	3.50	10.17	7.86	6.97	2.67	3.90	2.83	5.88	3.03
658	30.92	32.24	40.45	39.54	51.19	57.54	47.29	42.73	38.45	30.77	26.37	26.01	27.45	33.03	29.50	30.25	25.24
6581	9.05	11.14	8.97	6.97	3.91	7.31	3.75	10.22	8.46	9.84	7.95	6.26	4.06	9.88	30.95	4.08	7.22
6582	79.13	92.49	50.95	80.42	83.33	68.69	71.14	86.26	83.16	95.39	84.62	93.38	93.10	80.75	99.35	93.76	75.40
6583	81.88	90.08	96.93	79.27	85.20	59.73	54.24	64.82	40.29	26.48	37.87	68.61	32.42	24.69	17.01	21.25	27.19
6584	11.94	8.40	15.27	31.15	51.75	60.04	44.66	33.41	28.74	17.28	14.24	7.42	9.51	15.16	9.45	8.16	7.46
6585	82.34	80.90	68.55	34.80	44.54	35.25	38.42	55.90	32.82	17.59	21.07	14.44	24.90	31.54	41.96	41.15	27.98
6589	81.04	81.33	77.03	70.62	59.12	55.23	51.00	42.02	53.14	56.16	44.69	48.81	41.00	36.00	38.07	44.54	36.78
659	60.44	64.08	73.77	73.68	72.53	79.13	76.78	76.81	77.62	85.80	75.25	80.92	76.69	75.87	72.50	72.86	83.14
6591	27.84	21.63	9.95	88.32	22.54	0.02	12.38	1.08	6.17	1.64	8.82	49.49	22.88	94.73		6.73	11.74
6592	94.16	22.58	57.09	65.33	17.65	20.17	23.19	18.72	7.66	13.76	36.08	22.24	20.55	11.66	19.12	8.39	14.94
6593	58.61	34.39	63.14	41.44	31.92	68.50	45.32	67.15	52.14	34.23	94.95	49.50	58.18	18.55	77.18	49.61	24.77
6594	45.05	55.70	70.63	64.79	58.85	62.95	66.18	70.26	70.37	85.31	72.79	77.14	70.24	74.18	63.77	66.02	77.40
6595	82.94	73.73	63.36	81.91	76.40	82.37	82.50	71.27	74.52	63.28	63.30	66.97	77.40	49.41	75.61	70.15	83.37
6596	56.33	37.73	75.72	80.66	75.14	98.13	85.76	91.94	92.39	90.39	76.49	74.49	73.05	83.43	79.23	88.56	93.97
84	80.80	62.76	62.02	64.83	69.86	70.67	63.78	63.18	52.32	45.90	43.94	44.96	42.82	47.68	46.88	49.81	48.94
841	38.11	36.04	43.92	48.54	61.33	57.49	50.72	54.34	54.28	54.57	49.96	50.31	46.47	46.50	46.88	52.50	52.90
8411	86.01	96.89	88.74	91.80	50.50	55.20	52.69	49.73	43.01	32.16	43.69	65.99	35.04	46.71	40.94	43.46	37.76
8412	12.76	9.45	32.04	24.11	98.17	90.39	94.34	85.57	73.90	92.66	63.86	58.61	71.65	60.71	46.88	46.96	53.49

SITC Code	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
8413	59.54	71.07	71.30	95.22	87.16	80.50	94.96	85.89	87.38	91.36	89.63	94.38	76.59	77.02	92.28	92.21	97.38
8414	31.87	27.77	43.25	44.77	65.66	68.28	49.48	40.29	44.51	46.48	31.98	33.35	28.81	28.32	31.76	35.20	37.46
8415	16.61	18.27	29.31	25.26	31.02	19.29	28.03	35.32	30.50	42.81	40.52	34.85	32.80	25.54	23.08	28.35	34.23
8416	96.70	81.25	47.02	62.80	68.15	56.26	40.08	37.40	27.51	44.00	13.66	24.16	15.76	10.33	8.06	18.70	15.71
842	22.04	28.43	32.59	52.67	58.54	60.56	52.61	39.18	26.27	30.47	35.07	36.90	32.68	30.80	28.21	30.57	34.47
8421	44.97	30.07	39.19	32.54	22.69	21.03	50.25	85.27	53.26	50.31	63.02	81.62	40.75	20.14	19.55	23.40	24.56
8422	25.62	22.72	42.57	97.73	99.60	88.98	41.62	25.72	20.75	40.28	66.34	48.23	72.73	66.69	30.21	28.82	28.01
8423	16.90	57.03	61.30	85.66	81.81	63.90	61.79	37.43	15.15	28.26	39.63	46.29	50.46	43.12	42.74	27.40	49.33
8424	19.84	35.25	36.64	50.74	51.28	35.84	42.58	29.58	38.87	34.59	39.17	42.31	47.17	63.82	50.73	54.22	50.70
8425	40.98	37.75	20.79	26.54	49.88	63.14	50.40	36.07	33.18	26.65	31.67	42.00	38.33	39.25	43.06	55.40	58.72
8426	6.04	14.30	22.43	45.31	53.25	60.67	48.08	38.36	18.76	26.93	29.10	27.00	26.12	17.91	16.49	19.41	22.35
8427	13.50	21.22	12.88	18.40	29.51	30.01	36.92	16.82	13.82	26.72	29.24	35.25	25.28	20.70	27.96	37.05	40.63
8248	47.52	59.25	91.86	92.10	97.29	73.61	93.28	82.55	50.29	35.28	29.97	22.61	23.71	27.42	39.53	26.89	30.40
843	85.86	39.13	49.95	40.19	41.37	56.53	37.84	43.76	52.94	46.15	44.12	51.34	56.01	52.85	53.40	60.26	47.41
8431	20.45	47.37	45.85	97.79	89.43	71.39	29.81	33.07	28.33	21.22	21.99	93.42	63.31	23.14	48.00	73.01	46.83
8432	35.06	91.68	95.24	56.28	48.39	51.95	47.70	47.75	38.15	27.42	22.22	44.62	45.31	46.21	31.68	34.24	34.85
8437	49.91	7.63	12.02	21.50	33.97	44.39	22.56	31.11	50.71	51.02	50.93	51.02	41.99	60.01	70.30	76.63	63.87
8438	55.48	45.73	45.05	35.21	32.25	87.60	57.17	68.71	80.94	60.01	54.28	50.15	53.38	48.47	20.98	23.49	16.47
844	69.65	39.12	51.42	61.09	59.27	59.82	49.14	69.85	59.83	56.38	48.51	49.90	42.68	49.85	43.69	37.00	38.64
8441	55.29	54.44	47.27	44.10	54.39	72.91	64.79	71.67	54.50	86.54	22.08	40.70	16.73	16.40	22.10	50.27	48.54
8442	72.81	24.34	21.93	22.58	36.88	42.11	37.15	26.00	24.85	32.05	31.84	37.46	40.02	69.84	60.87	35.09	36.49
8447	92.48	33.89	31.25	44.68	87.85	63.76	45.76	54.54	41.92	30.41	32.56	39.66	49.32	48.32	38.73	38.67	45.33
8448	49.84	52.12	83.86	98.57	73.52	79.33	64.60	89.91	88.16	88.03	73.48	65.64	47.72	42.54	37.63	34.91	34.47
845	50.38	36.97	45.18	46.23	53.05	57.83	47.72	58.69	47.98	40.46	32.95	33.18	29.09	38.08	39.01	44.29	45.63
8451	1.06	2.52	4.71	4.78	14.46	18.13	10.01	11.07	7.14	12.27	4.88	8.26	5.94	61.76	76.14	87.58	90.81
8452	63.14	75.81	63.01	74.80	29.79	65.36	87.07	66.92	78.17	83.28	37.53	58.52	39.47	32.18	9.22	19.12	15.87

SITC Code	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
8453	99.03	61.91	59.62	42.45	36.44	41.45	55.85	64.96	57.80	39.55	31.51	34.71	33.66	37.21	30.42	32.90	35.46
8454	5.96	9.30	6.34	11.01	22.22	25.06	20.54	15.80	16.31	13.69	18.36	20.38	14.14	24.95	24.07	24.48	22.36
8455	63.58	59.95	97.02	89.61	89.76	72.21	88.12	74.39	88.14	98.96	70.56	65.76	49.04	47.05	49.55	47.17	48.97
8456	26.74	51.12	84.06	59.52	72.20	97.21	98.92	85.81	55.26	50.63	54.26	54.75	48.03	45.78	45.21	33.18	25.35
8458	48.64	53.06	71.07	52.94	66.20	68.60	34.38	31.76	30.25	68.34	60.80	50.67	51.22	42.95	62.13	81.13	79.96
8459	36.87	20.13	14.72	20.03	43.18	53.03	27.98	47.77	20.21	10.14	10.65	16.06	22.63	24.96	27.83	38.48	39.60
846	65.71	53.90	67.26	81.53	82.84	88.55	69.61	61.16	47.91	47.84	48.66	56.18	60.22	53.84	47.33	43.48	47.98
8461	68.35	63.49	49.73	55.61	65.07	63.84	47.24	42.38	44.46	51.64	58.51	72.28	66.57	56.22	50.19	55.57	57.47
8462	84.49	53.13	96.11	96.98	93.94	83.76	97.88	84.16	53.02	46.14	45.23	46.80	42.64	43.86	33.27	35.30	27.97
8469	41.33	34.89	44.42	70.62	26.42	31.30	21.81	31.27	38.78	45.17	28.87	31.94	90.77	74.86	79.13	43.89	74.68
848	51.15	58.71	65.03	72.14	66.27	75.75	66.83	79.54	98.66	70.62	99.17	81.04	86.55	99.78	99.95	96.16	90.12
8481	81.36	84.07	88.60	85.35	98.96	92.87	94.44	94.30	72.40	58.76	73.80	39.22	37.44	38.34	41.04	44.97	38.51
8482	95.39	62.14	56.69	58.60	65.06	51.85	52.39	49.82	56.97	25.72	58.39	24.40	14.64	15.77	14.97	16.73	14.55
8483	2.74	3.11	2.36	4.49	2.17	3.47	3.02	4.26	10.20	10.39	6.36	16.18	18.00	14.47	14.64	13.89	25.53
8484	89.92	58.33	79.71	80.78	95.03	90.84	75.03	73.39	57.21	57.64	61.65	64.91	65.56	72.60	71.05	66.18	71.76
85	31.34	39.26	51.00	44.63	44.43	42.07	48.06	47.68	42.96	39.25	39.27	41.67	35.51	39.54	35.83	35.03	41.10
851	31.34	39.26	51.00	44.63	44.43	42.07	48.06	47.68	42.96	39.25	39.27	41.67	35.51	39.54	35.83	35.03	41.10
8511	25.88	32.36	68.44	80.09	79.30	94.17	94.35	69.71	30.87	74.96	79.16	55.93	71.31	83.39	86.70	57.59	66.05
8512	6.49	17.97	29.49	29.49	36.06	35.35	54.37	54.71	43.11	46.13	18.88	7.75	7.05	13.32	10.75	6.04	6.49
8513	44.40	40.56	54.26	11.77	7.09	14.59	18.30	25.73	15.36	10.18	9.38	9.15	14.59	15.11	14.22	14.39	18.84
8514	33.10	45.15	57.48	39.71	50.36	45.09	37.79	32.23	39.15	36.25	42.51	44.82	40.91	49.83	48.94	47.83	53.88
8515	6.51	11.07	31.84	43.05	13.42	7.82	19.60	13.79	43.08	50.74	29.82	26.27	11.81	15.87	19.84	13.06	17.57
8517	67.61	47.28	23.26	40.46	59.28	61.54	32.90	30.53	81.23	67.55	86.19	59.27	76.43	80.80	45.83	47.16	92.40
8519	29.97	34.58	42.70	75.07	75.26	76.69	86.88	73.61	96.39	67.91	59.30	52.44	62.33	49.01	33.79	53.10	69.96

Source: Based on UN ComTrade database.

Appendix D

Share of Textile Import from China: 4 Digit SITC Categories

Commodity	SITC Code	1990	1995	2000	2002	2004
Yarn,of wool,animal hair	6511	0.26%	0.15%	2.82%	0.21%	0.64%
Cotton sewing thread	6512	0.02%	0.02%	0.04%	0.07%	0.91%
Cotton yarn,excl. thread	6513	0.08%	0.06%	0.08%	0.45%	0.85%
Thread of man-made fibre	6514	0.07%	0.09%	0.00%	0.21%	0.12%
Synth.filament yarn,bulk	6515	0.00%	0.00%	0.08%	0.07%	0.57%
Oth.synth.filament yarn	6516	0.04%	0.31%	0.72%	0.20%	0.65%
Artif.filament yarn, nes	6517	0.04%	0.00%	0.00%	0.00%	0.06%
Yarn,staple fibres, etc.	6518	0.05%	0.02%	1.72%	1.21%	0.40%
Yarn,textile fibres, nes	6519	0.05%	0.04%	0.32%	0.34%	0.29%
Cotton gauze,etc.woven	6521	0.62%	0.54%	0.18%	0.27%	0.20%
Cotton fabric,wvn,unblch	6522	0.61%	1.80%	0.62%	0.53%	0.15%
Oth85%+cottn.fabric<200g	6523	19.00%	6.37%	6.63%	6.04%	3.02%
Oth85%+cottn.fabric200g+	6524	4.66%	3.87%	2.01%	1.52%	1.04%
Oth<85%cottn.fabric<200g	6525	0.53%	0.04%	0.68%	0.77%	0.29%
Oth<85%cottn.fabric200g+	6526	0.02%	0.14%	0.42%	0.26%	0.20%
Oth.woven fabrics,cotton	6529	0.02%	0.52%	0.10%	0.09%	0.39%
Fabric,synth.filmnt.yarn	6531	3.23%	3.39%	2.17%	3.55%	3.88%
Fabric,85%+syn.stpl.fibr	6532	0.49%	0.12%	1.08%	1.76%	1.54%
Fabrc<85%syn.stp.fbr+ctn	6533	12.46%	12.39%	6.78%	4.24%	2.25%
Fabr<85%syn.stp.fbr+othr	6534	2.09%	1.63%	0.88%	1.27%	1.70%
Fabric,artif.filmnt yarn	6535	0.35%	0.44%	0.30%	0.11%	0.10%
Fabrics, woven, containing 85% or more by weight of artificial staple fib	6536	0.65%	0.83%	0.12%	0.08%	0.09%
Fabric,<85%art.stpl.fibr	6538	0.28%	0.03%	0.29%	0.31%	0.16%
Pile,chnlle.fabrc,m-made	6539	0.88%	0.13%	0.87%	1.68%	0.66%
Fabric,of silk,silk wste	6541	2.51%	0.84%	0.71%	0.70%	0.90%
Fabric85%+wool,fine hair	6542	2.36%	3.77%	1.44%	0.75%	1.30%
Fabric,wool,fne.hair,nes	6543	0.04%	0.19%	0.31%	0.08%	0.08%
Fabrics, woven, of flax	6544	1.12%	2.30%	0.69%	0.15%	0.19%
Fabrics, woven, of glass fibres (including narrow fabrics)	6546	0.00%	0.03%	0.36%	0.29%	0.43%
Fabrics, woven, nes	6549	0.66%	0.24%	0.57%	0.21%	0.19%
Pile fabric,knit,crochet	6551	1.10%	0.08%	0.02%	0.28%	0.40%
Oth.knit.crochet.fabrics	6552	6.69%	3.47%	3.60%	1.68%	
Narrow fabric,woven,othr	6561	0.00%	0.95%	1.03%	1.38%	1.74%
Labels,badge etc.not emb	6562	0.19%	0.00%	0.03%	0.05%	0.09%
Gimped yarn, etc.	6563	0.06%	0.05%	0.18%	0.18%	0.23%
Tulles,net fabric, lace	6564	0.00%	0.12%	0.08%	0.18%	0.15%
Embroidery	6565	0.07%	0.01%	0.30%	0.21%	0.13%
Felt	6571	0.06%	0.00%	0.05%	0.10%	0.07%
Non-wovens, whether or not impregnated, coated, covered or laminated, n.e	6572	0.02%	0.01%	0.94%	1.86%	1.25%

Continued

Commodity	SITC Code	1990	1995	2000	2002	2004
Coated,imprgtd txtls.nes	6573	0.10%	0.02%	0.65%	1.08%	1.95%
Twine,cordage,etc.prdcts	6575	0.05%	0.45%	1.06%	0.96%	1.15%
Hat-shapes,forms,bodies	6576	1.04%	0.22%	0.11%	0.04%	0.01%
Wadding,etc.machine use	6577	0.04%	4.30%	1.24%	1.41%	1.30%
Rubbr,txtl.yarn,cord etc	6578	0.00%	0.02%	0.02%	0.04%	0.06%
Special textile products	6579	0.01%	0.00%	0.02%	0.00%	0.02%
Sacks,bags,txtl.material	6581	4.83%	9.56%	7.14%	5.46%	5.25%
Tarpaulins,sails,awnings	6582	0.42%	2.27%	7.60%	6.04%	8.47%
Blankets,travelling rugs	6583	1.80%	1.98%	3.49%	6.36%	5.77%
Household linens	6584	27.56%	26.02%	29.45%	33.21%	31.83%
Curtains,oth.furnishings	6585	0.95%	3.26%	3.90%	5.47%	7.21%
Made-up articls,txtl.nes	6589	0.50%	2.16%	4.88%	5.02%	7.02%
Linoleum etc.	6591	0.00%	0.00%	0.00%		0.02%
Carpets etc.knotted	6592	0.35%	0.05%	0.19%	0.10%	0.04%
"Kelem", "Schumacks", "Karamanie" and similar hand-woven rugs	6593	0.01%	0.01%	0.00%	0.00%	0.00%
Carpets etc.tufted	6594	0.34%	0.26%	0.38%	0.62%	1.14%
Carpets,etc.woven	6595	0.56%	0.76%	0.47%	0.84%	1.14%
Carpets,etc.nes	6596		0.01%	0.03%	0.01%	0.31%

Source: Based on data from UN Commodity Trade database.

Appendix E

Share of Clothing Imports from China: 4 Digit SITC Categories

Commodity	SITC Code	1990	1995	2000	2002	2004
Overcoats,outerwear,etc.	8411	0.85%	2.12%	1.59%	1.92%	2.01%
Suits and ensembles	8412	0.01%	0.12%	0.16%	0.11%	0.33%
Jackets and blazers, men's or boys', of textile materials, not knitted or	8413	1.53%	1.32%	0.64%	0.75%	0.86%
Trousers, bib and brace overalls, breeches and shorts, men's or boys', of	8414	7.33%	6.70%	8.48%	7.96%	6.95%
Shirts	8415	1.45%	7.97%	3.96%	3.88%	4.07%
Underwear,nightwear etc.	8416	2.84%	2.19%	1.24%	1.34%	1.12%
Overcoats,oth.coats etc.	8421	2.27%	1.60%	1.18%	1.70%	2.41%
Suits and ensembles	8422	0.50%	0.04%	0.09%	0.09%	0.12%
Jackets and blazers, women's or girls', of textile materials, not knitted	8423	0.76%	0.72%	1.21%	1.39%	1.45%
Dresses, women's or girls', of textile materials, not knitted or crochete	8424	0.72%	1.95%	0.66%	0.51%	0.68%
Skirts and divided skirts, women's or girls', of textile materials, not k	8425	0.59%	1.04%	1.36%	2.68%	2.61%
Trousers, bib and brace overalls, breeches and shorts, women's or girls',	8426	5.96%	4.25%	10.27%	10.30%	10.75%
Blouses, shirts and shirt-blouses, women's or girls', of textile material	8427	0.52%	2.82%	2.90%	3.36%	2.56%
Underwear,nightwear etc.	8428	1.24%	1.59%	1.88%	1.63%	1.73%
Overcoats, car coats, capes, cloaks, anoraks (including ski jackets), win	8431	0.00%	0.09%	0.37%	0.39%	0.36%
Suits,jackts,trousrs.etc	8432	0.62%	2.19%	1.00%	1.10%	0.87%
Shirts,mens boys,knit	8437	1.96%	3.64%	3.47%	2.77%	2.24%
Underwear,nightwear etc.	8438	1.66%	1.88%	1.59%	1.50%	1.34%
Overcoats, car coats, capes, cloaks, anoraks (including ski jackets), win	8441	0.00%	0.08%	1.45%	1.27%	1.18%
Suits,dresses skirts etc	8442	5.58%	5.27%	3.52%	2.46%	3.16%
Blouses, shirts and shirt-blouses, women's or girls', knitted or crochete	8447	0.43%	1.31%	1.81%	1.65%	1.87%
Underwear, nightwear etc	8448	3.14%	2.98%	5.00%	4.76%	4.69%
Babies'garmnts,clths acc	8451	23.15%	6.29%	5.36%	4.71%	4.88%
Garment,felt,txtl fabric	8452	0.00%	0.13%	0.31%	1.03%	0.40%
Jerseys, pullovers, cardigans, waistcoats and similar articles, knitted	8453	4.34%	11.92%	11.62%	11.62%	9.14%
T-shirts, singlets and other vests, knitted or crocheted	8454	8.01%	9.82%	9.38%	10.11%	11.35%
Brassieres,corsets,etc.	8455	0.25%	1.73%	5.95%	4.92%	5.07%
Swimwear	8456	0.20%	0.80%	1.24%	1.35%	1.39%
Oth.garments,not knitted	8458	0.39%	2.29%	1.10%	1.16%	1.45%
Other garments knitted	8459	4.83%	8.26%	5.62%	4.89%	5.35%
Accessories,notknitted	8461	5.36%	0.95%	0.55%	0.74%	0.71%
Hosiery,etc.knitted	8462	0.53%	0.42%	0.91%	1.13%	1.56%
Oth.made-up cloth.access	8469	1.37%	0.57%	0.30%	0.45%	0.56%
Leather apparel,accessrs	8481	4.68%	1.03%	0.56%	0.79%	0.78%
Plastc,rubbr,apparel,etc	8482	2.05%	1.42%	0.92%	1.14%	1.33%
Articles,accessories.fur	8483	0.43%	0.25%	0.20%	0.22%	0.33%
Headgear,fittings,nes	8484	4.40%	2.27%	2.13%	2.20%	2.37%

Source: Based on data from UN Commodity Trade database.

Appendix F

Firm List

Company	Location
Textiles Firms	
Manukau Knitting Mills Limited	Auckland
Levana Textile Limited	Levin
Leotards and Rhinestones	New Plymouth
Pacific Wool Dyers Ltd	Clive
Textile Products Ltd	Auckland
Masterweave Textiles Ltd	Masterton
Clothing Firms	
Uniform Brokers Ltd	Auckland
Lenco Sport N.Z. Ltd	Auckland
Somerset Apparel Ltd	Auckland
Silkbody	Waikouaiti
Pumpkin Patch Ltd	Auckland
Cambridge Clothing Co Ltd	Auckland
Footwear Firms	
Kumfs New Zealand Shoes Ltd	Auckland
C.A.Craigie & Co. Ltd	Auckland
McKinlays Footwear Ltd	Dunedin

Appendix G

Notes to Interviewees

Q1: General information about your firm.

Q2: What are the key determinants of the competitiveness of your business?

Q3: What are the main constraints to improve competitiveness?

Q4: What will be the potential impact of a bilateral free trade agreement with China on you business?

Strengths, weakness, opportunities and threats of your business in the context of the NZ-China FTA.

Q5: How will you respond to the situation?

Current strategies concerning the New Zealand's tariff reduction?

What adjustment or rationalisation will you make in respond to an FTA with China? For example:

- Narrowing the product range;
- Improve productivity;
- Contracting out manufacturing production to lower cost countries;
- Merge with other firms;
- Focus on niche markets
- Others;

Appendix H

List of Selected New Zealand's TCF Industries Organisations

New Zealand Footwear Industry Association

http://www.nzfootwear.org.nz/

Textiles New Zealand

http://www.textilesnz.org.nz/sitedocs/home/index.aspx

New Zealand Trade & Enterprise

http://www.nzte.govt.nz/

Fashion Industry of New Zealand (FINZ)

http://www.nzte.govt.nz/

Leather & Shoe Research Association (LASRA)

http://www.lasra.co.nz/

Outdoor Fabric Products Association of New Zealand (OFPANZ)

http://www.ofpanz.co.nz/index.php

Apparel & Textile Industry Training Organisation

http://www.atito.org.nz

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