

**DUMPING, PROTECTIONISM
AND
FREE TRADE**

Ron Sheppard

Catherine Atkins

Views expressed in Agribusiness and Economics Research Unit
Discussion Papers are those of the author(s) and do not
necessarily reflect the views of the Director, other members
of staff, or members of the Management Committee

Discussion Paper No.140

September 1994

Agribusiness & Economics Research Unit
PO Box 84
Lincoln University
CANTERBURY

Telephone No: (64) (3) 325 2811
Fax No: (64) (3) 325 3847

ISSN 1170-7607
ISBN 0-909042-01-2

AGRIBUSINESS & ECONOMICS RESEARCH UNIT

LINCOLN UNIVERSITY CANTERBURY, NEW ZEALAND



The Agribusiness and Economics Research Unit (AERU) operates from Lincoln University providing research expertise for a wide range of organisations concerned with production, processing, distribution, finance and marketing.

The AERU operates as a semi-commercial research agency. Research contracts are carried out for clients on a commercial basis and University research is supported by the AERU through sponsorship of postgraduate research programmes. Research clients include Government Departments, both within New Zealand and from other countries, international agencies, New Zealand companies and organisations, individuals and farmers. Research results are presented through private client reports, where this is required, and through the publication system operated by the AERU. Two publication series are supported: Research Reports and Discussion Papers.

The AERU operates as a research co-ordinating body for the Economics and Marketing Department and the Department of Farm Management and Accounting and Valuation. This means that a total staff of approximately 50 professional people is potentially available to work on research projects. A wide diversity of expertise is therefore available for the AERU.

The major research areas supported by the AERU include trade policy, marketing (both institutional and consumer), accounting, finance, management, agricultural economics and rural sociology. In addition to the research activities, the AERU supports conferences and seminars on topical issues and AERU staff are involved in a wide range of professional and University related extension activities.

Founded as the Agricultural Economics Research Unit in 1962 from an annual grant provided by the Department of Scientific and Industrial Research (DSIR), the AERU has grown to become an independent, major source of business and economic research expertise. DSIR funding was discontinued in 1986 and from April 1987, in recognition of the development of a wider research activity in the agribusiness sector, the name of the organisation was changed to the Agribusiness and Economics Research Unit. An AERU Management Committee comprised of the Principal, the Professors of the three associate departments, and the AERU Director and Assistant Director administers the general Unit policy.

AERU MANAGEMENT COMMITTEE 1994

Professor A C Bywater, B.Sc., Ph.D.
(Professor of Farm Management)
Professor A C Zwart, B.Agr.Sc., M.Sc., Ph.D.
(Professor of Marketing)

R L Sheppard, B.Agr.Sc. (Hons), B.B.S.
(Assistant Director, AERU)

AERU STAFF 1994

Director
Professor AC Zwart, B.Agr.Sc., M.Sc., Ph.D.
Assistant Director
R L Sheppard, B.Agr.Sc. (Hons), B.B.S.
Senior Research Officer
J. R. Fairweather, B.Agr.Sc., B.A., M.A., Ph.D.

Research Officers
C. M. Scully, B.A.
G Greer, B.Agr.Sc. (Hons)
G. F. Thomson, B.Com.
Secretary
J Clark

Contents

LIST OF TABLES	(i)
LIST OF FIGURES	(i)
PREFACE	(iii)
1 INTRODUCTION	1
2 TRADE AND ECONOMIC WELFARE	3
3 PRICE DISCRIMINATION	8
4 DUMPING AND SUBSIDISATION	11
5 CERTAIN NON-LEATHER WOMEN'S FOOTWEAR FROM CHINA	14
5.1 Import Protection	15
5.2 The Footwear Industry Response	15
5.3 The Footwear Industry and Anti-Dumping	21
6 CONCLUSION	23
REFERENCES	24

List of Tables

1	Concentration Ratios in NZ Manufacturing	16
2	Summary of Anti-Dumping Actions	22

List of Figures

1	Domestic Supply and Demand	6
2	Foreign Supply and Import Demand	6
3	Price Discrimination in the Cinema	10
4	Domestic Supply and Demand	13
5	Foreign Supply and Demand	13
6	New Zealand Footwear Production	17
7	New Zealand Footwear Trade	18
8	NZ Imports of Footwear	19
9	NZ Footwear Exports	20

Preface

This Discussion Paper contains the text of an address delivered to the General Meeting / Seminar of the Importers Institute held in Auckland, New Zealand on 23 August 1994. The authors were asked to address the issue of anti-dumping actions and to present an evaluation of such measures in the context of the international liberalisation of trade, the recent General Agreement on Trade and Tariffs (GATT) negotiations with respect to anti-dumping and countervailing duty actions and the use by New Zealand of such actions on behalf of New Zealand producers / manufacturers.

The Paper presents a brief review of the theoretical basis for anti-dumping actions, examines the concept of discriminatory pricing, looks at the effect on the economy of anti-dumping actions and reviews a recent example of an anti-dumping action in New Zealand.

The Paper concludes by asserting that with rare exceptions, anti-dumping actions are protectionist, that countries have more to gain by accepting lower priced imports than by applying anti-dumping duties and that general economic welfare would be enhanced by redefining the basis for anti-dumping actions to include only those actions where predatory dumping is proven to be the reason for the "lower than normal" import prices.

Research on the actual effects of anti-dumping actions in terms of the change in economic welfare is continuing. Catherine Atkins is conducting a Masterate study on the welfare changes which have resulted from the imposition of import duties on imports of certain types of women's footwear from China. The results of this work will be published in due course.

The Agribusiness and Economics Research Unit (AERU) is publishing the current Paper in the interests of encouraging more discussion and analysis of the topic. New Zealand was one of the first countries in the world to adopt anti-dumping trade measures. It is appropriate in today's world of trade liberalisation and the achievement of the benefits of increased trade, that countries actively resist the potential incursion of trade restrictive measures. Anti-dumping and countervailing duty actions have the potential to become the "import licensing" of the 21st Century.

Ron Sheppard
Assistant Director

1. INTRODUCTION

The concept of Free Trade is one which has become very fashionable over the recent decade in New Zealand and has also been an expressed goal of many other countries. This topic always becomes more significant in an international sense when a GATT Round is underway and this has indeed been the case, especially in New Zealand with this just completed GATT Round focusing on agriculture. As a result of the apparent "success" of the Round, much euphoria with respect to the future prospects for New Zealand has been broadcast, especially by those actually involved in the negotiations and their political masters. However, it is important to reflect on what has actually been gained in the agricultural sector and take a somewhat more sober view of things than the politicians might like us to believe.

The GATT Round has been successful in exposing agricultural protectionism to international scrutiny and some reductions in "subsidies" have been achieved. However, these are to be brought into effect over a long period. The net impact on New Zealand will be positive but a bonanza will not be the result. Already, the expectation of improved returns for New Zealand agricultural products, particularly dairy products, is being built into the cost of the resources (mainly the land price but also the price of cows) and new entrants to the industry will be facing costs which effectively discount most of the benefits that might accrue.

From an international point of view, the perception that New Zealand is a major beneficiary of the GATT Round increases the attractiveness of investments in New Zealand. This increases the demand for the New Zealand dollar as investors move their money into New Zealand opportunities; the increased demand leads to a rise in the value of the New Zealand dollar which in turn reduces the gains made through the GATT Round.

The point of this Introduction to the topic of anti-dumping considerations is that New Zealand is now an "open economy" with few trade restrictions and an exchange rate which is subject to world demand and supply. As such, improvements in the New Zealand economy will lead to greater demand for the New Zealand currency, a higher exchange rate and less advantage for New Zealand's exports. On the other side of the trade relationship are imports. A rising New Zealand dollar will make imports more competitive with domestic products. In theory, free trade ensures that products from the most competitive international sources are available to consumers. In practice, there are a number of reasons why this might not be the case.

Although it has been given little publicity, the recent GATT Round included negotiations on another aspect of trade which has the potential to be more important than the agricultural sector discussions, especially given the limited outcome they enjoyed. This important aspect is the area of anti-dumping, subsidies and countervailing duties. While free trade is the objective of all responsible international traders, the concept of protectionism is alive and well and is establishing a position for itself within the anti-dumping / countervailing duties area, euphemistically called "Trade Remedies". While GATT is about trade liberalisation, the GATT process includes negotiations on how to restrict trade because of "unfair trading practices". The last GATT Round, while moving to reduce trade barriers, also strengthened the measures available for "Trade Remedies". It is expected that the use of such "Remedies" will increase in future as "normal" trade restrictions, such as tariffs and quotas, decline. The protectionist lobby is alive and well and receiving strong support from domestic industries. Anti-dumping and countervailing duty actions are the weapons the protectionists use; and use very effectively under the legitimisation provided by GATT endorsement of "Trade Remedy" practices.

Evidence of the protectionist stance such "Trade Remedies" provides is given in a paper published by the Agribusiness and Economics Research Unit (AERU) (Research Report 211; 1991) where the author (Dr David Stallings) describes the administration of protectionism in the United States during the 1980's. During periods of US dollar appreciation and a consequent increase in imports into the USA, the demand for trade protection increased significantly. "Many of these demands were satisfied via US anti-dumping and countervail regulations, yielding ad valorem tariffs well above the current average duties" (Stallings, 1991). In addition, Stallings demonstrated a close relationship between the granting of anti-dumping and countervailing relief for domestic industries and the political cycle in the US where a rise in such measures was closely associated with the Congressional election cycle.

This Paper demonstrates that trade inhibiting factors such as anti-dumping and countervailing duty measures are to the detriment of the country imposing such measures and that such measures should be considered in the same light as any tariff measure and not given any special treatment in legislation or within the GATT. Such attitudes, i.e. those which provide for special treatment in dumping and subsidised trade cases, reflect protectionist attitudes which are contrary to economic development objectives. If there is an understanding that trade leads to economic gain, then anti-dumping and countervailing duties which restrict trade, act against economic progress.

Dumping is defined as when a product is introduced into the commerce of another country at less than its normal value, usually defined as where the export price is less than the price in the country of origin. The GATT definition provides that, where there is no comparable price in the country of origin, the export price to the market concerned may be compared with a comparable price of a like product when exported to an appropriate third country, or with the cost of production in the country of origin.

It is contended that, given the definition of dumping as the charging of different prices in different markets, dumping is a practice which is aspired to by all profit maximising firms, is a function of all firms operating in a normal sense and, if such activity is not desirable, then such activities of all profit maximising firms are not desirable, whether they are operating solely within one country or over many countries. However, clearly "dumping" within an economy is not considered undesirable and in all but very rare cases, examinations of international anti-dumping actions have concluded that the country which loses most from the anti-dumping action is the country which imposes it.

There is however one area where even economists can be expected to agree on there being a justification for anti-dumping actions. This is in the situation where predatory pricing can be proven to be present. The concept of predatory pricing proposes that business owners find it in their interests to sell products so cheaply that competitors are forced out of business. As a result, the firm which lowered the price will then have a monopoly and can raise prices to yield extraordinary profits which will more than offset the losses during the low price period. Consumers will benefit during the low price period but will lose in the long run. In circumstances where such activity can be proven, the use of anti-dumping actions can be defended as in the wider public interest.

However, analysis of business activity has found it very difficult to find examples of predatory pricing. The circumstances under which such pricing can occur are very limited and the rationality behind predatory pricing is flawed. Where the environment exists that might allow predatory pricing, it is almost always in the interests of the participants to collude in their pricing behaviour or for one firm to purchase the "predators" victim rather than conduct a price war. Only a very

few examples of predatory pricing have ever been identified over the last century (Hindley, 1991). However, between 1980 and 1986, for example, 750 affirmative findings of dumping were made in the US, EC, Canada and Australia (Hindley, 1991).

Predatory pricing is characterised by the charging of different prices in different markets and can be characterised by charging prices which, at the time, are lower than the current cost of production. However, it is not true to say that because these circumstances exist, then it follows that predatory pricing is in fact occurring. While in the early 1900's some evidence of predatory pricing by US manufacturers in exports of machinery to Canada, New Zealand and Australia, resulted in the first anti-dumping laws in 1904 in Canada, 1905 in New Zealand and 1906 in Australia (Viner, 1923), this does not provide justification for the continued use of such measures in current cases.

"There is an economic rationale for anti-dumping action, but its scope is tiny compared with the current range of anti-dumping cases. It is possible to justify on economic grounds action against exports sold at below their cost of production by industries that are highly concentrated at the global level" (Hindley, 1991). Clearly, this definition of when anti-dumping action might be justified is much more restrictive than the definition currently in use. Price discrimination is not seen as grounds for anti-dumping action; it is only when it is practised to the extent that the price is below the cost of production and when it is practised by industries in which there are very few firms, that conditions might exist which mean that the actions could be predatory.

Effectively, no general economic justification of current anti-dumping actions can be responsibly advanced. Anti-dumping actions are therefore seen as the domain of protectionism and restricted trade. The real problem is the acceptance of dumping as a trade problem which is used as a justification of trade remedies. In fact, from an economic growth point of view, dumping should be seen as a desirable activity which should be encouraged amongst overseas suppliers - dumping leads to higher levels of economic growth within the "dumped on" economy. The real issue for an economy is the impact of import competition on income distribution within the economy. Adjustment of the income distribution effects may be considered to be desirable over the short term; these effects should be handled directly, not through "hamstringing" the economy via the use of "trade remedy" actions.

The next Section of this paper reviews the relationship between trade and economic welfare, Section Three analyses the conditions where discriminatory pricing (dumping) arises, Section Four links this activity to the trade model, Section Five provides some evidence from a recent anti-dumping action in New Zealand and Section Six contains the Conclusion.

2. TRADE AND ECONOMIC WELFARE

For many years, those involved in the analysis of international trade have been convinced of and have demonstrated, the benefits to a country of free trade. Where a product can be produced in one country with the use of less resources than in another country, there is an advantage to be gained from trade between the two countries. The basis of this advantage is the concept of liberating resources in the importing country from production of the importable item, for use in production of another item which is exportable. Even where a country may be a higher cost producer of all goods, it will still benefit from trade as long as it can "find some good which it can produce at a lower relative cost disadvantage (starting from the initial opening of trade) than other goods" (Kindleberger and Lindert, 1978). This is Ricardo's Law of Comparative Advantage. This

Paper does not address this issue; the concept was developed as long ago as 1776 when Adam Smith ridiculed the fear of trade (*An Inquiry into the Nature and Causes of the Wealth of Nations*, 1776) and was further conceptualised by David Ricardo in his publication *Principles of Political Economy and Taxation* (early 19th Century). Since that time, there has been no serious challenge to the concept that benefits accrue to nations that are involved in international trading activities.

However, although the overall concept, of there being benefits from international trade, has never been refuted, there have been repeated challenges to the "freedom" of such trade. Protectionist elements exist in every economy and from a sectoral viewpoint, trade (especially free trade) can be of considerable damage to particular sectors. In the absence of trade, especially where such absence is caused by protectionist measures, domestic industries can develop which are not competitive in an international sense. Removing the protection can expose such industries to international competition, i.e. imports. The natural reaction to such an exposure is to seek to have protection reinstated in the (claimed) "national interest" of protecting investment and the jobs of local people. In an environment where the provision of general protection has been designated undesirable because of the economic damage caused by such protection, import replacement industries will seek to justify specific reasons for continued protection from the world at large. Over recent times, the justification for such protection has been seen to be in the restriction of imports where "dumping" or "producer subsidy" has been "proven" to be present.

First, let us consider the gains which are available from trade versus a non-trade environment and then look at the effect of "dumping" and "producer subsidies" on the national benefit gained from trade.

The familiar trade diagram is usually presented as in Figure 1. Within a country, there is a particular demand for a good which varies according to the price. As the price falls, the quantity demanded increases. This is shown as the "Demand Curve" - D_{NZ} . On the supply side, producers faced with "normal" production circumstances will experience a rise in the per unit cost of production (the marginal cost) as they increase the number of units produced. The most efficient point of production is where the cost of the last unit produced is equalled by the marginal revenue received for that unit. Where there are many firms in a market, it is unusual for any one firm to be able to affect the overall market price. In this case, the marginal revenue received, i.e. the revenue received for the last unit sold, will be equal to the price.

The relationship between the marginal cost of production and the quantity produced is shown as the "Supply Curve" - S_{NZ} . Given that the producers will seek to produce as much as they can at a profit, the tendency will be for them to produce at the point where the supply curve crosses the demand curve. In Figure 1, this is at the point where 50 items are being produced at a price of \$8 each.

An analysis of the potential benefits of international trade requires an understanding of the concepts of consumer surplus and producer surplus. As all the items in the market shown by Figure 1 are being sold at a price of \$8 each, there is a large quantity of production which would have been purchased at a price higher than \$8, i.e. all 49 items before the 50th one. This means that those consumers who would have bought the item at a price greater than \$8 have been able to gain a "surplus" equivalent to the difference between the price they would have paid and the market price of \$8. Within the total economy, the consumer surplus in this example is therefore given by the triangle shown by the area "B". At the same time, a producer surplus is also being generated. Again, as all the products are being sold at the price of \$8 each, there are a large number of products, i.e. 49, which would have been produced and sold at a lower price than \$8. All the

preceding 49 products therefore generate a producer surplus, shown by the area "A + C".

Both the consumer surplus and the producer surplus are often referred to as the consumer and producer economic rent. The respective areas represent the expenditure which consumers would have been prepared to make (the consumer surplus) and the income which producers would have been prepared to forgo (the producer surplus) for product purchases and supplies at a point less than the equilibrium point.

The gains and losses from international trade are measured in terms of the changes in the total level of these surpluses. In the without trade situation, the total economic surplus is given by "A + C" plus "B".

Into this stable internal equilibrium situation, an external supplier is introduced. By whatever means, it becomes known that a foreign supplier has the ability to supply the product in question at lower prices than those being charged by the domestic industry and that this supply will occur without the extra demand having any effect on the international price, i.e. the extra demand is small compared to the international level of production. Domestic consumers will be interested in this development and imports will begin at the foreign supplier price level. In the example given (Figure 2) the foreign supply curve crosses the demand curve for imports at a price of \$4 per unit and a consequent foreign supply of 60 units. At a price of \$4 per unit, the domestic industry can only profitably sell 20 units. The effect of this is an increase in the number of units sold on the domestic market from 50 to 80 with 60 of these items being from the foreign supplier and 20 from the domestic supplier. In order to judge whether New Zealand is better off as a result of this change it is necessary to examine the change in the producer and consumer surplus under the new supply situation. As a result of the imports and the reduction in NZ supply, the producer surplus has declined from the Area "A + C" to the Area "C". However, the consumer surplus has grown from the Area "B" to take in the Area "A" and the two new areas "D" and "E". A new Area "F" has also been created. This is the producer surplus which accrues to the foreign supplier as a result of the product being exported to New Zealand.

Figure 1
Domestic Supply & Demand

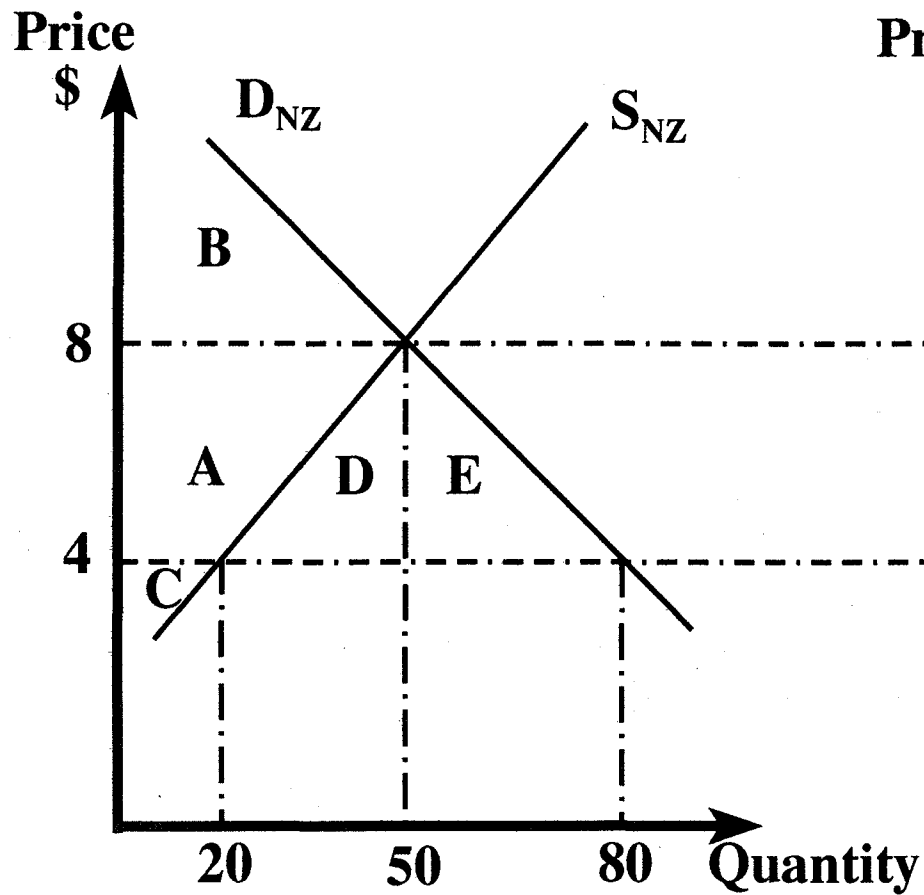
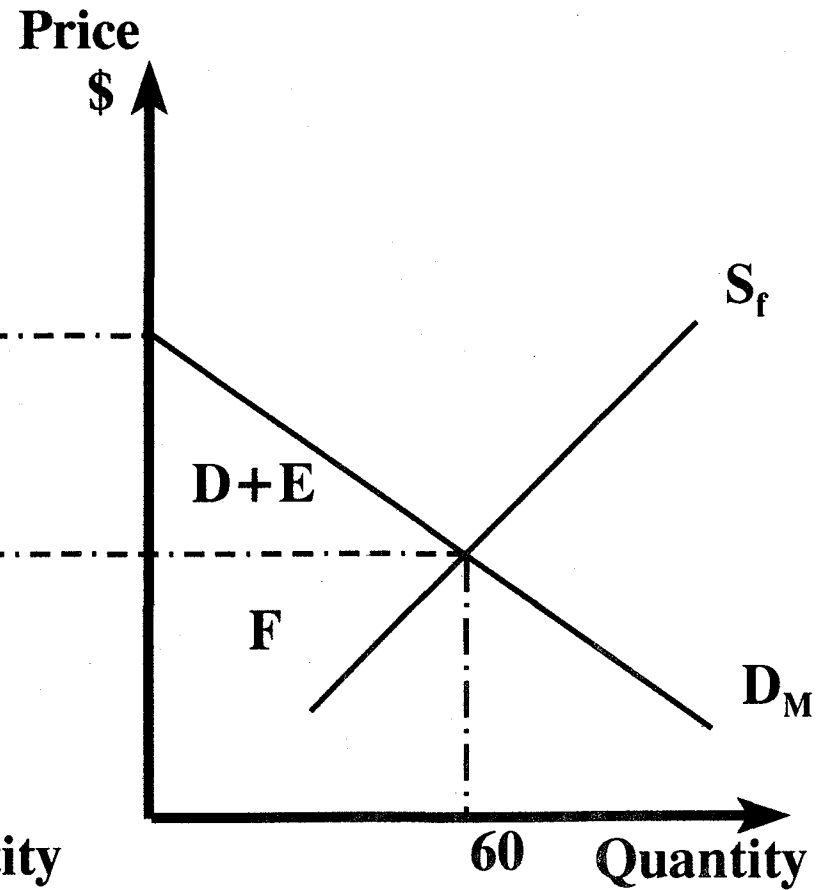


Figure 2
Foreign Supply & Import Demand



For New Zealand, the situation is therefore summarised as follows:

	Without Trade	With Trade	Net Gain
NZ Consumers	B	B + A + D + E	A + D + E
NZ Producers	A + C	C	-A
	-----	-----	-----
	B + A + C	B + A + D + E + C	D + E

The foreign gain from trade is the Area "F", therefore the international gain is "D + E + F".

Apart from there being net gains attributable to trade, there has been a major shift of "economic rent" or surplus from the domestic producers to the domestic consumers. This shift has meant that domestic consumers now have more economic resources available to them than they had before while at the same time they are able to consume more of the good than under the previous situation. On the numbers used in the example, the pre-trade situation meant that consumers spent \$400 on purchasing 50 units whereas with trade, they only spend \$320 on 80 units. Consumers therefore benefit from having more units and from them costing less money than before. The difference (\$80) is available to spend on other goods and services.

While the above analysis indicates the strong benefits of international trade, those opposed to such results indicate the loss of resource employment associated with the decline in domestic production from the 50 unit level to the 20 unit level. While such a loss does occur in the short term, the long term benefits gained from the introduction of trade more than offset such losses. The problem is not one of judging whether there are benefits from trade, it is one of distribution of income. The resources which move out of employment in this sector will be re-employed in a variety of ways. The firms which have had their market taken over by imports may modify their production processes and so win back part of the market they previously had by now being more efficient. They may modify the product they used to produce so that it now has more and better features than the imported product and so is able to sustain a higher price, i.e. it moves into a slightly different market with a different demand curve. To some extent, there will be resources which are not re-employed in the affected production system. These resources will be employed in other competitive sectors, perhaps at lower rewards than they were able to attract previously but more efficiently from an overall economic point of view. If society thinks it has done members of an affected industry a disservice in allowing trade to commence, it may be in the interests of society to share some of the extra consumer surplus it has acquired from the change, to provide short-term compensation to the resources displaced by the change. In the long term, society will always be better off following an alternative course of action to restricting trade.

In all cases, there is no justification for restrictions being placed on trade for the purpose of providing employment for local resources.

3. PRICE DISCRIMINATION

In spite of the clear evidence that trade liberalisation provides for greater economic benefits, the domestic industry which is affected by the competition from imports can be expected to mount a strong campaign against such imports. While the national benefit is enhanced by trade, the affected industry is not enhanced and will lose significantly with the introduction of trade if it does not take steps to change its form of operation. In this situation, it is completely understandable that there should be resistance to the introduction of trade. The resistance is argued along the lines of the need for protection of the industry in order for jobs to be provided and for the nation to have a secure supply of the products in question - from a domestic source.

As politicians and their advisors have learned that protection of domestic industries from international competition leads to a decline in economic "well-being", so the proponents of protection have sought new ways to combat imports. This has resulted in an enhancement of interest in dumping and subsidisation. While imported product costs are lower than domestic costs, reasons for this, apart from greater off-shore efficiency, lower resource costs, greater throughput volumes, etc. have been sought by domestic manufacturers in an attempt to protect their domestic position. They have been able to convince the politicians and their official advisors that where a foreign firm sells its products at different prices in different markets it indicates that the firm is pricing unfairly and/or it is receiving subsidies from its Government. Both of these reasons are considered to be sufficient for domestic industries to receive protection from the foreign supply where it can be shown that material injury has been caused to domestic suppliers.

In order to understand why this sort of reasoning is incorrect, it is necessary to examine the way in which firms set their prices.

In all business management and marketing texts and advisory systems, setting a price at the level the market will bear is seen as a major objective. Based on the price able to be set, production is planned. The key element is that the price able to be set must generate enough revenue to cover the cost of the last item produced. In economic terms, the revenue generated by the last item sold is known as the marginal revenue and this must at least equal the marginal cost. If the cost of the last item is greater than the marginal revenue, then a loss will be made on that item. As the marginal cost usually increases as the number of items produced increases, expansion of production will occur until it reaches the level where marginal cost is just offset by the marginal revenue.

In a competitive environment, it is considered that the price facing any individual firm is fixed, i.e. is not able to be altered by the actions of the firm. Therefore, the production decision is reasonably simple for any firm - produce up to the level where the marginal cost equals the price which is the same as the marginal revenue.

However, in many industries, the assumption of so-called perfect competition does not hold. In these industries there may be a limited number of suppliers of the goods or services and the actions of any one of those suppliers can have an effect on the price. In this case, the marginal revenue does not equal the price - every time production is increased, the price will decrease. This means that the marginal revenue is less than the price. Firms will still optimise their profitability if they produce at the point where the marginal revenue equals the marginal cost. However, in a situation where the market is not perfectly competitive, the price able to be charged can be greater than the marginal revenue. This allows firms which are in monopoly, oligopoly or monopolistic competition circumstances to set prices which differ from their marginal revenue and also differ according to the market which they are operating in. In other words, they are able to price discriminate between

markets and still be operating at a point of maximum profitability.

A simple example of this is the charging of a lower price for children to attend a movie compared to that charged adults. The product / service is identical for the children and the adults; however, the demand curves being faced by the supplier may be different for children compared adults and therefore different pricing is appropriate for the different markets. This can be illustrated as in Figure 3.

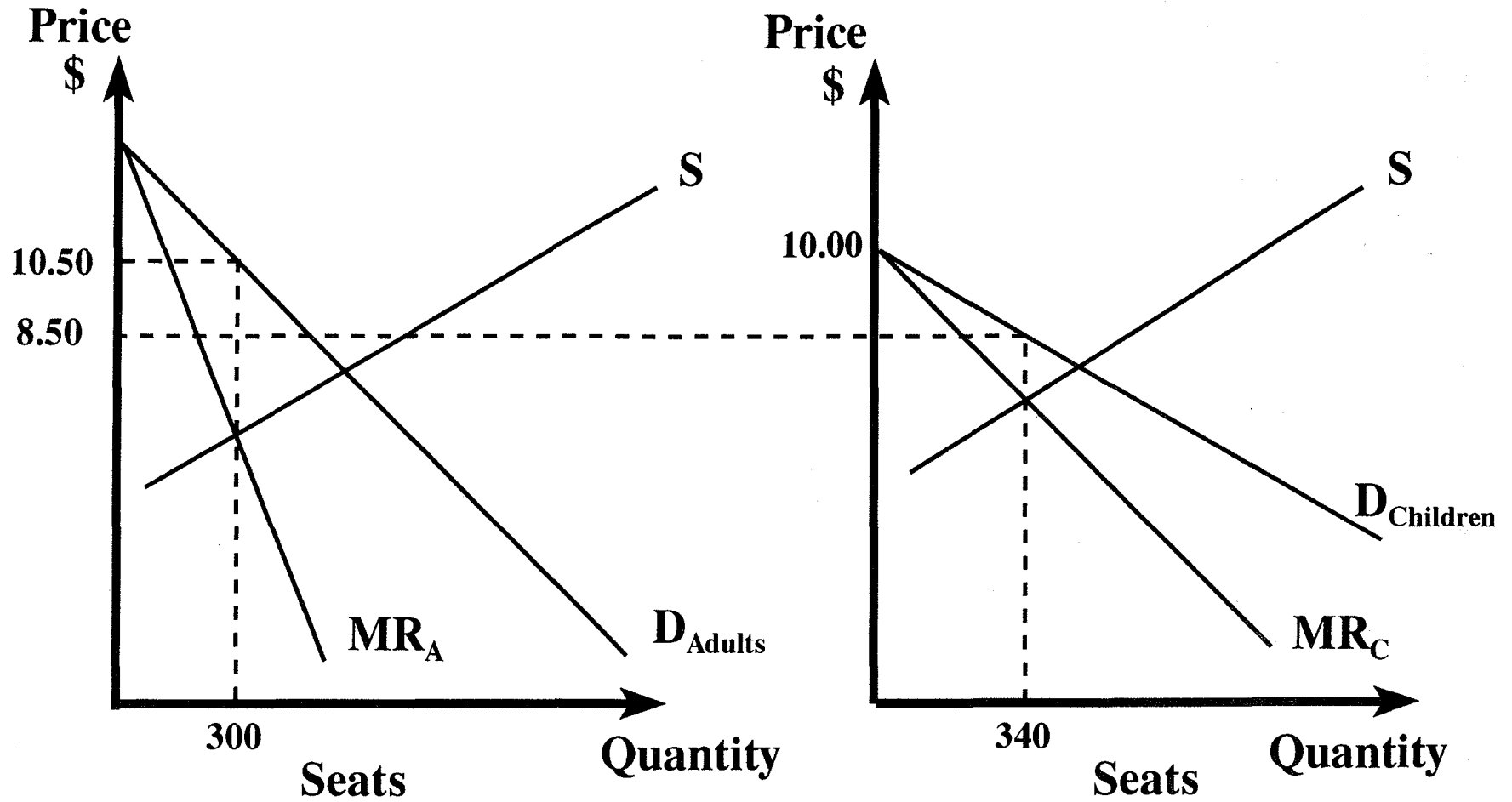
In the adults' market, the cinema owner will gain maximum profitability by charging a price of \$10.50 per seat. This would result in 300 seats being sold. However, if this price was charged to children, no seats would be sold to them. The different demand function indicates that the profit maximising position with respect to the children's market is at a price of \$8.50 per seat. At this price, 340 seats could be sold to children. The effect of this price discrimination is a potential increase in the cinema revenue by \$2,890 per showing. It is acknowledged that in reality, some extra costs might be associated with the extra children, however, the practice of price discrimination clearly provides the potential for greater profitability.

Given different demand curves in the two different markets, different prices can be set for the same product according to whether the consumer is an adult or a child. Setting different prices, i.e. price discrimination, allows the supplier to maximise the profits from the showing of the film. In effect, the supplier, because of its market dominating position, is able to capture some of the consumer surplus from charging a higher price than that which would be available under conditions of perfect competition.

The creation of the type of situation shown in Figure 3 and described above is the goal of marketing and business activity which is directed toward profit maximisation.

Figure 3

Price Discrimination In The Cinema



4. DUMPING AND SUBSIDISATION

Dumping is defined as setting a price in an export market which is different (usually lower) to the price in another market, usually the home market, and thereby causing injury to the domestic producers in the export market. Where dumping is "proven", retaliatory action is usually taken to provide protection to the domestic suppliers in the export market.

This position can be applied to the example shown in Figure 3. The cinemas which show movies to adults and children can be seen to be operating in two markets - the adult market and the children market - and charging different prices in the two markets. The adult market could be seen as the "home" or "domestic" market and the children market seen as the "export" market - the lower priced, but still profitable, extra market. However, in this "export" market, another cinema also operates which specialises in showing movies to children. For a wide range of reasons, this cinema may have different costs to the other cinema and therefore has a different (for the sake of the example, higher) marginal cost curve. It therefore wishes to charge children a higher price for attendance. What can this cinema do? Under the dumping rules, it can claim that the price being set for the showing of movies in its market is lower than in the home market of the "exporter", the lower price is causing them damage (children are going to the movies in the other cinema) and therefore some protective action is required. Under current rules, this would result in a tariff / tax being placed on the sale of tickets to children going to the other cinema in order to bring the child's ticket price up to the same level as the domestic supplier in the "export market". In other words, the children's cinemas would be protected from competition from the adult / children's cinemas. If "the authorities" were to take the protection to the extent that the children's cinemas would probably desire, the tariff / tax would be sufficient to raise the price of the "exported" product to the same level as in the exporter's home market. This would exclude them completely from the children's cinema market as at that price, there would be no demand from children.

A further example of price discrimination might be found in the market for, say, home air conditioning units. A firm in Auckland could be producing such units and selling them for \$1,500 each in the Auckland market. There may be a small market for such appliances in Invercargill, but at a lower price, given the different demand profile which is likely to exist in the cooler climate. The Auckland company could explore this market and decide to supply the units, perhaps under a different brand name, at a lower price than in Auckland, as long as the price still exceeded the marginal cost of production. It therefore price discriminates between Auckland and Invercargill and is able to generate additional profit by doing this. Such price discrimination is considered perfectly acceptable in a normal business sense.

At the same time, there may be a firm in Djakarta, Indonesia, producing home air conditioning units for the large market for such appliances in that area. Such a company might decide to explore the opportunities in Auckland and find that a market exists but at a lower volume and lower price than available in its home market. However, the Auckland price level may still be profitable for the Indonesian company and it therefore decides to supply the Auckland market. By doing this the Indonesian company practices price discrimination. To the extent that this market entrant is able to compete effectively with the Auckland supplier, there will be an incentive for the Auckland supplier to seek ways to "protect" itself. The price differences would lead the Auckland producer to lay a dumping complaint with the Ministry of Commerce. As the price of the Indonesian product is lower in Auckland than in Indonesia, price discrimination, i.e. "dumping", can be "proven" to be occurring. As the imported product is competing effectively with the Auckland product, damage is occurring to the Auckland producer. It is almost inevitable that the outcome will be an anti-dumping duty - all because of price discrimination. The result is protection for the

Auckland supplier and higher costs for consumers than would otherwise have been the case. Under current "rules", the price discrimination between Auckland and Invercargill (in the example) would have been an acceptable business practice; however, between countries, it is not. This is clearly a case of protectionism hiding under the cloak of "trade remedies".

These examples have demonstrated the effect of an anti-dumping action in a situation of normal business practice, something which business people are encouraged to pursue and run their businesses in order to attempt to achieve. If we consider that price discrimination is an objectionable practice, then we ought to take action against any element of price discrimination, whether it be related to within an economy or outside it.

A similar situation exists where a subsidy is available to a firm exporting to the international market. The effect of the subsidy is to reduce the level of the marginal cost curve. Some of the production expenses are taken up by taxpayers in the exporting country in order to lower the cost of production and the cost of exports. It is considered by import competing industries that this behaviour is unfair and that they ought to be protected against such behaviour. Therefore, where the provision of subsidies is able to be proven, importing countries tend to apply countervailing duties in order to offset the effect of the subsidy, i.e. raise the price of the imported good in the importing country. While this action provides support and protection to the import competing industry, it is done at the cost of the rest of the economy.

The effect of an additional duty, whether it is imposed as a result of an anti-dumping investigation or a countervailing duty, is the same. The effects are demonstrated in Figures 4 and 5. In our original analysis of the gains available from trade, the foreign supply curve was established at S_F . Complaints from import competing firms have led to the establishment of a case of dumping / subsidisation and a duty is being imposed as a result. The effect of the duty is to raise the foreign supply curve from S_F to S_D , i.e. supply including a duty. The duty raises the price of the foreign goods and so leads to a reduction in the volume demanded by the export market. In the diagram, the reduction is from 60 units to 40 units. The higher import price also allows for more production in the export market (import competing production) and this supply rises from 20 units to 30 units. The total supplied to the market is now 70 units, a net reduction of 10 units from the free trade situation of 80 units, and a higher price at \$5 per unit compared to \$4 per unit under free trade. The total consumer expenditure on this item is now \$350 compared to \$320 under free trade.

Figure 4
Domestic Supply & Demand
(restricted trade)

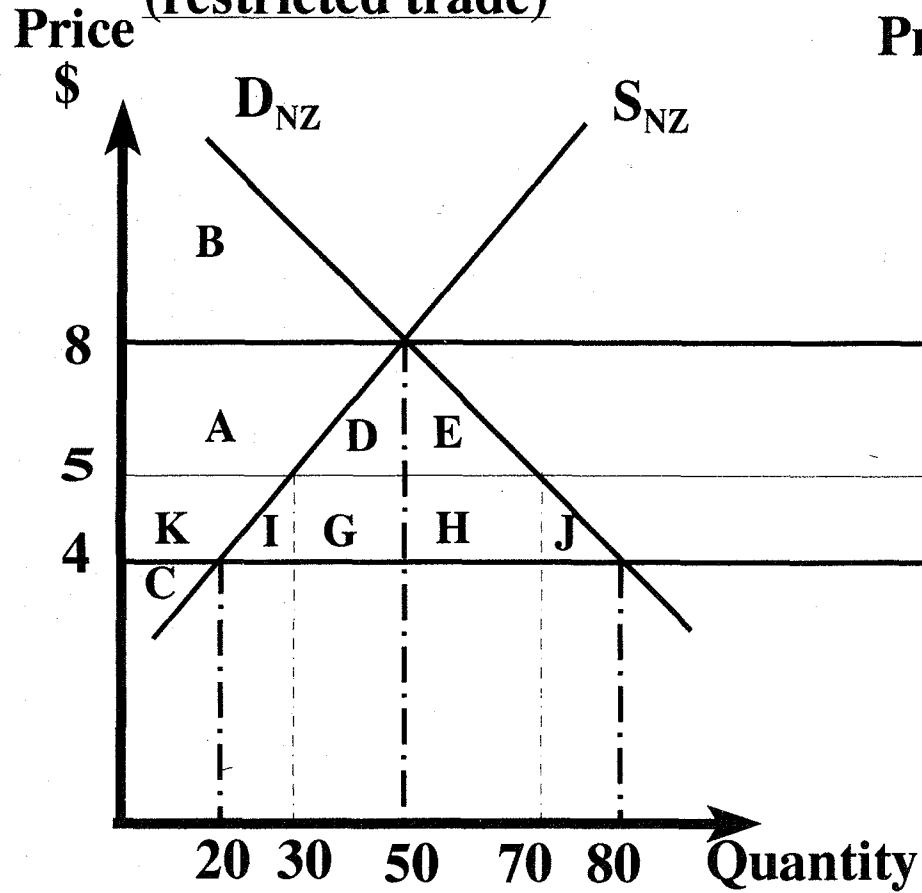
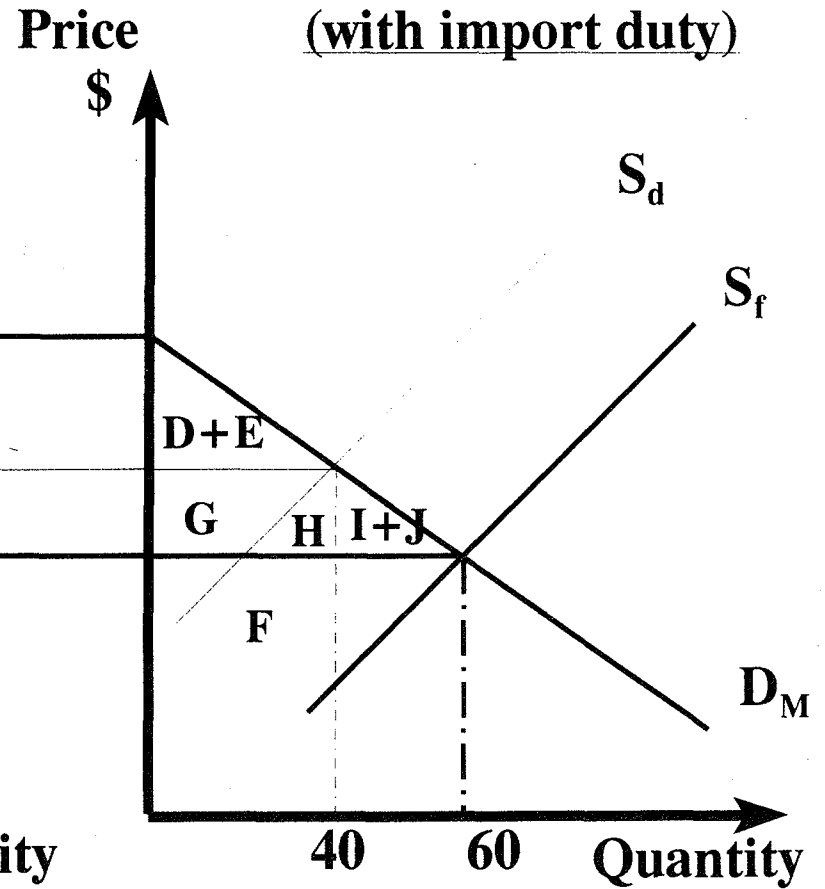


Figure 5
Foreign Supply & Import Demand
(with import duty)



The important element to consider is the change in the producer and consumer surplus as these are the measures of economic gain or loss. Moving from free trade to an import duty restricted trade involves a loss of consumer surplus equivalent to the areas $K + I + G + H + J$, the producer surplus increases by the area K and the government collects revenue equivalent to the areas $G + H$. The net national loss is therefore the areas $I + J$ and the foreign loss (of producer surplus) is the area $F - G$.

Changes With Trade Restriction			
Consumers Lose	$K + I + G + H + J$		
Producers Gain	K		
Government Collects	$G + H$		
Net National Loss	$I + J$	Foreign Loss	$F - G$

5. CERTAIN NON-LEATHER WOMEN'S FOOTWEAR FROM CHINA

In September 1992, the Trade Remedies Group of the Ministry of Commerce released its final report on a Dumping Complaint lodged by two New Zealand firms with respect to "certain non-leather women's footwear from China" (Ministry of Commerce, 1992). The conclusion of the report was that the items concerned were being dumped in the New Zealand market, i.e. were being exported to New Zealand at prices less than those prevailing in the home market (the "home market value/price" having been constructed from the price of similar shoes made in Indonesia) and that the dumping had caused material injury to the New Zealand industry. As a result, it was recommended that an anti-dumping duty be imposed on the imports using specified amounts for each type of shoe.

A review of the case indicates that, given the rules which define dumping, it was almost inevitable that a case of dumping would be established. Where a product is sourced from a low production cost country (in this case, also centrally planned economy with a shortage of foreign exchange) it is an almost inevitable outcome that dumping will be proven, i.e. the import cost will be below the "normal" value compared to other higher production cost countries and is almost certain to be below the cost of production when assessed using more developed economy production methods as a base.

Also, given that the importation of these products is almost certain to be classified as a dumping action with lower than "normal" prices, the "proof" of injury to the domestic industry is also a foregone conclusion. Therefore, the anti-dumping action was almost "certain" to succeed. This is a "normal" result compared to the US situation where over 70 per cent of accepted cases result in a positive duty determination (Stallings, 1991). The problem with the situation is not the process of investigation and its almost inevitable outcome, it is the definition of the problem in the first place. The importation of the shoes referred to in this example should have been seen as beneficial to the economy and, if anything, should have been encouraged. The imposition of an anti-dumping duty is blatant protection for the firms which have not adjusted to the new trade environment and the duty is equivalent to the imposition of a tax on those people who would have purchased such shoes. Given that these shoes were/are at the lower end of the market spectrum, the effect of the anti-dumping duty is a tax on the lower income sector of New Zealand society and an income transfer from those people to those involved in the local manufacture of uncompetitive shoes.

The following sets out some of the factors involved in this case.

5.1 Import Protection

New Zealand policy with respect to imports during the 20th century has fluctuated between periods of relative import freedom, to strict import controls with the objective of, firstly, protecting the balance of payments position and more latterly, encouraging the development of local manufacturing industries. The most recent thrust in this direction was the increased protection provided via import licensing during the 1960's following the National Development Conference held in 1960. Increased opportunities for employment were sought by the Government and the protection of local manufacturers, mainly through import licensing, was seen as the way of providing for this. Also, during the 1960's, measures were put in place to encourage the export sector, particularly agriculture and later, the provision of export incentives to encourage exports from the manufacturing sector. By the 1980's it was beginning to be recognised that New Zealand could not afford the massive intervention in the economy that was required to sustain such policies and in 1984, the Labour Government was elected which set about dismantling the protective and supportive structures which had been introduced.

The New Zealand footwear industry was one which had "benefitted" from the protection system through the provision of import licensing protection. A gauge of the degree of protection available can be seen by the applications for import licences for 88,818 pairs of shoes in 1979 when import licences for only 18,415 pairs were issued (NZ Footwear Industry Review, 1980). As a result of the protection, a large number of small, believed to be inefficient, footwear manufacturing firms had become established in New Zealand. The Review (1980) concluded that the performance of the industry would be enhanced by movements to encourage rationalisation through increased competition. It was also concluded that the import licensing had restricted the supply of higher quality shoes to the NZ market while the NZ manufacturers could in fact be competitive in this market segment. Therefore it was recommended that extra licences be made available for higher quality shoes. In 1985, this aspect was again emphasised when it was suggested that the import licensing system should change from a volume to a value base in order to encourage more imports of lower valued shoes and the local production of higher valued items where the NZ industry was seen to be competitive. Therefore, the industry plan recognised that the NZ industry was not likely to be competitive at the lower value end of the market, more imports in this area were to be provided for and the NZ industry was therefore encouraged to move towards higher value products.

Licensing based on value was introduced in 1987 and the quantity of licence available for tender was to be increased annually. The general tariff applicable to shoes was to fall from 45 per cent in 1986 to 37 per cent in July 1990. On July 1, 1991, import licensing was abolished; tariffs were temporarily increased to 55 per cent to "soften the blow" and were reduced to 45 per cent in 1992.

5.2 The Footwear Industry Response

An important characteristic of the footwear industry in New Zealand is that production is concentrated among a small group of manufacturers. Table 1 shows various 1984 concentration ratios for the footwear industry. These ratios give the share of total output, employment and value-added contributed by the largest four firms in the industry. Table 1 shows that in 1984, 32 per cent of all persons engaged in the footwear industry were employed by these few firms. Similarly, these manufacturers accounted for 30 per cent, or a third of the value added, in the industry and contributed approximately a third of all sales in the industry.

Table 1
Concentration Ratios in NZ Manufacturing

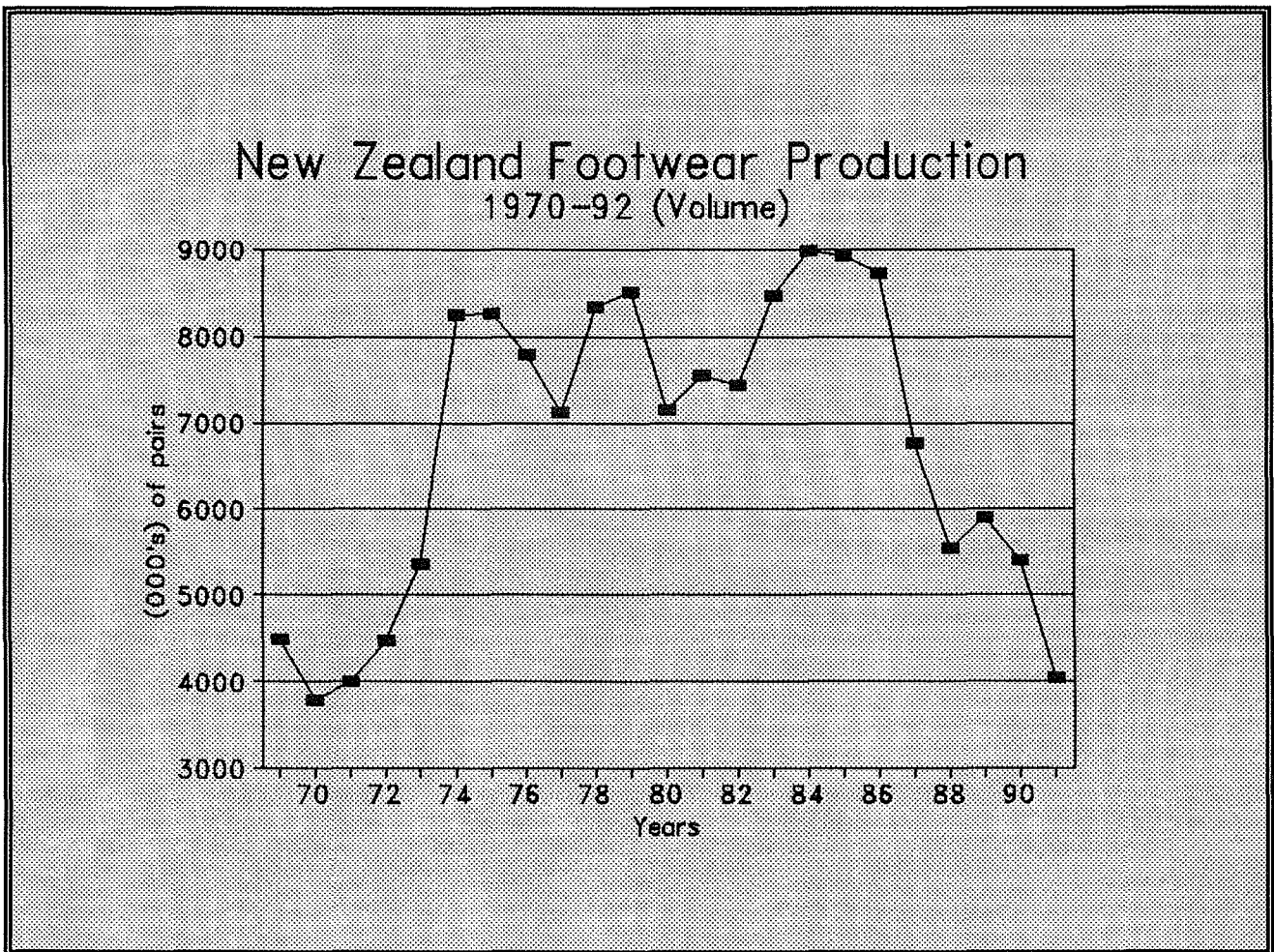
NZ's Concentration Ratios 1984 (percentage contribution of four largest firms)			
Industry	Persons Engaged (% of industry)	Value Added (% of industry)	Sales (% of industry)
Food	27.42	26.12	23.95
Clothing	13.63	17.55	20.63
Leather	29.36	33.81	42.71
Footwear	32.21	30.59	30.08
Rubber Products	75.23	74.71	73.98
Plastic Products	27.46	29.43	31.67
Machinery	12.18	11.35	13.78

Source: Birks, S "The Structure of the New Zealand Manufacturing Sector"

Employment within the industry peaked in 1963 at 5370 (McCombe, 1989) and remained at a similar level through to 1978. From 1978 to 1988, the number employed in the industry fell significantly; from 5198 in 1978 to 3003 in 1988. Since 1978 there has also been a significant fall in the number of medium size firms with the number of establishments employing between 20 and 49 people falling from 31 in 1978 to 17 in 1983. In 1988, the number of such establishments declined further to 13. While a reduction in medium sized firms has occurred there has been an increase in small scale operations. In 1978 there were only fifteen firms employing less than five workers. In 1988 this figure reached 42. There has also been a significant fall in employment in the larger firms. These general reductions in employment levels are not surprising as firms attempted to rationalise their plant sizes in view of the increase in competition from imports.

Figure 6 shows the production of footwear in New Zealand between 1970 and 1992.

Figure 6
New Zealand Footwear Production



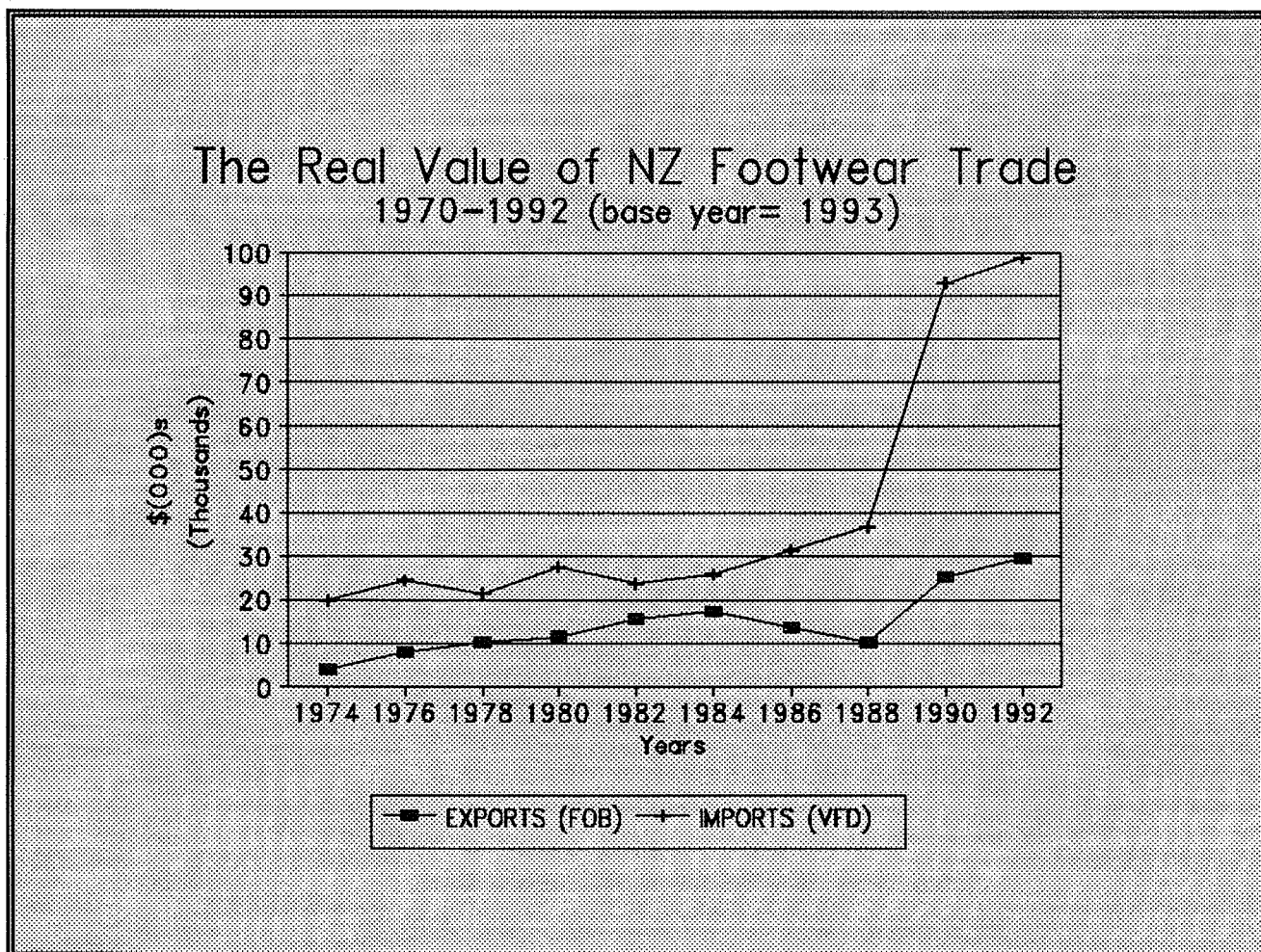
Source: Department of Statistics

Figure 6 shows the variability in the production of shoes particularly in the 1970's. This variability can partly be attributed to New Zealand's vulnerability to changes in demand and external influences, as the result of the size of its footwear industry. The low levels of production in the early 1970's corresponds to the reductions in the effective rates of protection which occurred at that time. As restrictions on imports tightened during the early 1980's, the level of production increased, until peaking in 1986. Import licensing encouraged increasing levels of investment in the industry. The combined effect of the reduction in licensing and the change from volume to value has had a significant impact of the footwear industry, resulting in a reduction in production to levels that existed in the early 1970's.

While there has been a significant drop in the level of production, as would be expected from a

relaxation of import controls, Figure 7 shows the real value of imports has increased throughout the period 1970-1992. In particular, there has been a dramatic increase in the value of imports following the change in import licensing from a volume to a value base in 1988 and the subsequent lowering of tariffs.

Figure 7
New Zealand Footwear Trade



Source: Department of Statistics

The change from volume to value also had a significant impact on the origin of footwear as shown in Figure 8. In the mid 1970's, a major source of imported shoes was the United Kingdom. Throughout the 1980's, the importance of this source declined as other countries such as Taiwan and China began to dominate. The significant increase from 1988 to 1990 can be attributed to the change in the import licence basis from volume to value. This policy change encouraged the importation of cheaper footwear, in which many low cost production countries such as Thailand, Taiwan and China dominate.

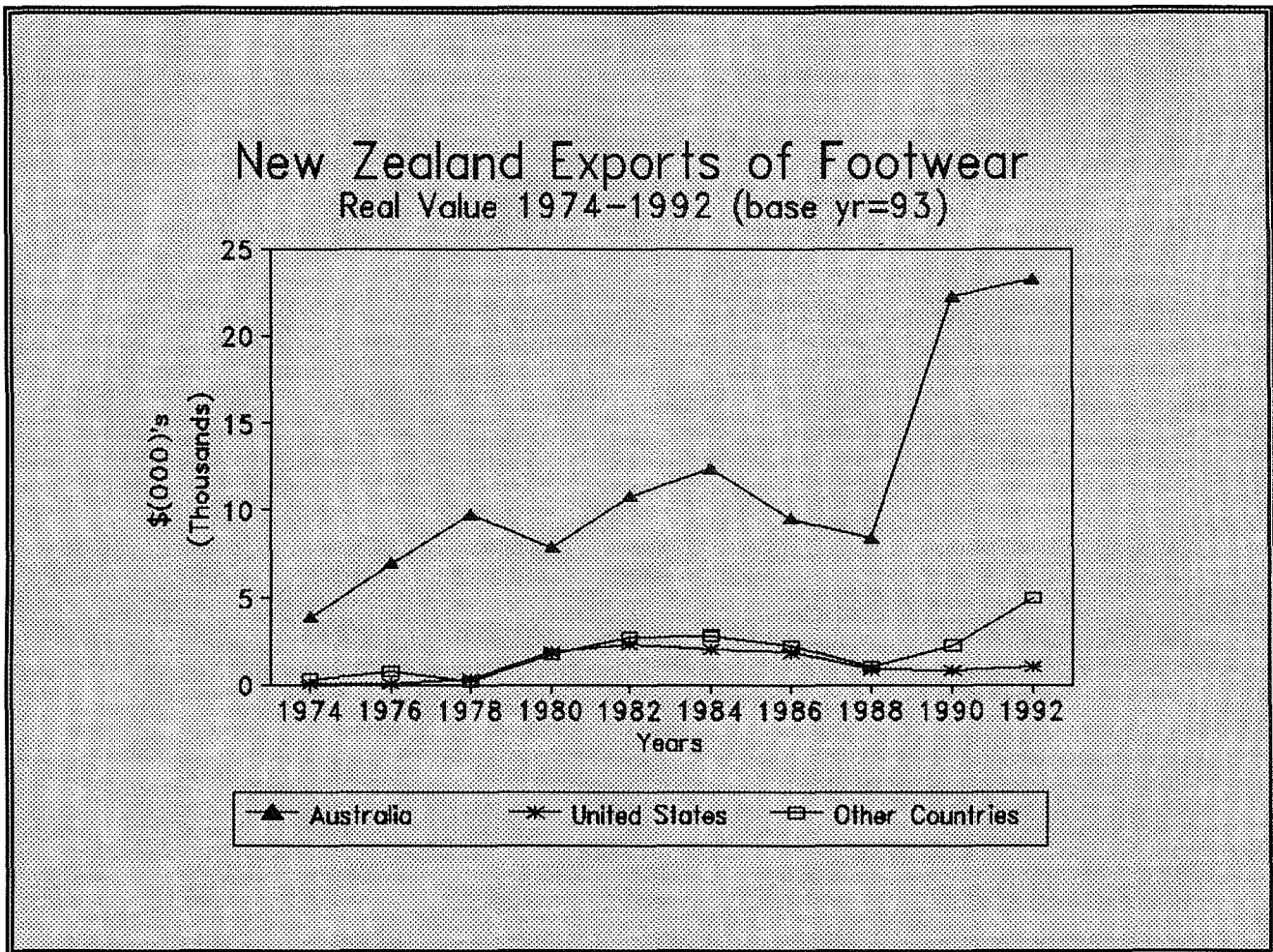
Figure 8
NZ Imports of Footwear



Source: Census on Manufacturing

New Zealand's ability to export is hindered firstly by size and secondly by distance from major footwear markets. Small production lines in New Zealand have led to high average costs and New Zealand's distance from markets generally results in higher freight costs. Both of these factors reduce New Zealand manufacturers' cost competitiveness. Figure 7 shows, however, that the real value of NZ exports has increased since 1974, firstly "on the back" of export incentives during the late 1970's and early 1980's and secondly since 1988, following the restructuring activity in the industry and the advent of the CER arrangement with Australia. With respect to export destinations (Figure 9), the pattern across all markets was reasonably similar until 1988 when the increased development of the Australian market and "other" markets occurred, again reflecting the CER situation and the new industry focus.

Figure 9
NZ Footwear Exports



Source: Department of Statistics

The purpose of restructuring was to encourage footwear manufacturer's to become more competitive and move to high valued footwear production. McCombe (1989) conducted a survey of 59 firms (61 per cent of the national total) and concluded that all but seven per cent had undergone major transformations throughout the period of restructuring. One of the most significant changes that occurred was that 35 per cent of the labour used in the manufacturing process had been shed. This loss of employment resulted mainly from a combination of firm closures, plant closures, redundancies due to loss in market share and adoption of new technologies. One of the features of the reform identified by McCombe (1989) is that 50 per cent of manufacturers identified the adoption of new technologies. One innovative approach is commonly known as "the modular approach", the purpose of which is to obtain efficiency in production through the layout of machines used in the production process. This approach is aimed at reducing product handling and work in progress and allows for increased productivity as all components of the shoe are assembled together.

Further to this, McCombe's study showed that 24 per cent of the sample in 1990 experimented with "Just In Time" and "Quality Response" systems. These two approaches, while consistent with the Modular approach, focus on the relationship between the manufacturer and retailer.

"Just In time" is concerned with coping with fluctuations in demand and the ability to respond. It is a means by which domestic manufacturers can maintain competitiveness over importers who generally are slower to respond to market changes.

"Quick Response" is an approach which aims at improving the communication between the retailer and the manufacturer by forming a partnership and initiating improved communication channels. "Quick Response" also requires investment on the part of manufacturers in the distribution and selling process. Graham Butlin, Director of the British Shoe and Allied Trades Research Association, suggested that "Quick Response" was the key to improving the competitiveness of footwear manufacturers and reducing restocking time for retailers (The Merchant, 1989).

From 1983 to 1991, 15 companies closed as the result of the restructuring. An editorial in the New Zealand Herald (1991) suggested that "those who remain now generally produce a higher quality product at a more competitive price than before, the result of greater competition." Those firms that have succeeded have adapted in a variety of ways.

The President of the New Zealand Footwear Manufacturers Federation, Bryan Vinnel, owner of Vinnel Shoes, a company which has been in existence for over 40 years, sees the future profitability of the industry in exporting. Vinnel Shoes is a company which began 40 years ago at a time when imports were near nonexistent. It has remained in business by adapting to a three point strategy through which the company anchors around one single product, ensuring the highest levels of efficiency through advances in technology and improving the information flow between the various distribution channels (de Lacy & R Bromby, 1990).

Other manufacturers such as Murray Begg, owner of the "The Last Footwear Company" focused their production at the high value market by manufacturing handmade leather footwear of the highest quality (New Zealand Business, 1990). Recently the company expanded into new premises and employed further advances in technology.

Other manufacturers have moved to importing rather than manufacturing. One such firm, Accent, a Dunedin based footwear manufacturer, has moved from manufacturing to importing completed, or partially completed, shoes. In particular, the company takes advantage of the Closer Economic Relations Agreement with Australia, as a market to which they can re-export finished goods.

5.3 The Footwear Industry and Anti-Dumping

In an international sense, anti-dumping actions have been in place for many years. New Zealand was one of the first countries to impose anti-dumping actions - in 1905, but Canada had already been involved by that time. Finger (1991) suggests that New Zealand mirrored the actions in Canada where anti-dumping measures were taken in order to provide selective protection. GATT has, since 1947 (Barcello, 1991), taken an interest in dumping and during the recent GATT Round, the anti-dumping measures contained in the GATT were strengthened. New Zealand became a signatory to the GATT in 1986 but was already working under legislation (enacted in 1979) along GATT lines following the GATT Tokyo Round. The GATT Rounds have addressed rules which apply to the use of anti-dumping measures. The Tokyo Round relaxed some of those (related to damage causality and restrictive business practices) and the Uruguay Round has tightened up on some definitions. It is considered by the Ministry of Commerce (1994) that only minor changes will be needed to the current New Zealand Act (1988) to bring it into line with the GATT requirements.

The major users of anti-dumping actions have been the USA, Canada, the European Union and Australia and these countries have had the major influence over the drafting of the GATT anti-dumping rules (there are 25 signatories to the GATT anti-dumping agreement). Table 2 provides a review of the imposition of definitive duties under anti-dumping actions by the four main countries for 1981 to 1990.

Table 2
Summary of Anti-Dumping Actions

	USA	EU	Canada	Australia
1981	4	5	15	-
1982	47	5	8	-
1983	7	8	37	39
1984	33	10	13	32
1985	28	7	16	15
1986	25	7	25	20
1987	38	7	8	3
1988	22	4	18	5
1989	29	3	4	8
1990	64	12	69	-
Total	297	68	213	122
Average/year	30	7	21	12

Since 1982, there have been 48 anti-dumping cases brought in New Zealand with 31 of those resulting in determination of an anti-dumping duty, a success rate of 65 per cent. In the US, the success rate has been even higher. Between 1980 and 1989, 92 per cent of the cases brought resulted in the imposition of an anti-dumping duty (Stallings, 1991).

Against this background, the Ministry of Commerce was asked to investigate a case of dumping which was brought by the NZ Footwear Manufacturers Federation on behalf of two footwear manufacturers against some items of women's footwear imported from China. Given the pricing structures used in China and the production methods and costs, it was not surprising that a case of dumping was proven given the way in which the system of analysis operates and the definition of a case of dumping.

It remained for the Ministry of Commerce to determine whether injury had occurred to the NZ manufacturers as a result of the "dumped" goods. Given the restructuring that had taken place within the NZ footwear industry and the growth of imports that had resulted from the relaxation of the import controls, the determination of injury which related to a specific cause, such as particular imports from China, would have been very difficult. Evidence was provided to the Ministry by other footwear manufacturers and importers which suggested that the problems the two companies found themselves in were a result of their reluctance to change their production methods and products. However, the Ministry was able to find that injury had been caused and the case of

dumping requiring the imposition of anti-dumping duties was considered to be proven. As a consequence very high levels of duty were imposed against these particular items.

6. CONCLUSION

Government policy in relaxing import constraints was/is directly targeted at allowing more imports of low cost shoes and the importation of these items from China were a result of that policy. The anti-dumping measures act directly against that policy and the effect of them is to provide new protection for the NZ manufacturers who continue to operate in a sector of the market where NZ manufacturers are not able to be competitive. Within the economy, the effect is a redistribution of income from lower income consumers to inefficient shoe manufacturers and a general reduction in economic welfare / consumer surplus.

However, the real issue is not necessarily the administration of the anti-dumping legislation. Most cases of dumping can be proven under the current rules as is evidenced by the high level of success enjoyed by anti-dumping petitions. Given the rules which govern such investigations and the ways in which dumping is defined, success in proving dumping and material injury is very likely to be achieved. In the footwear case, strong evidence of the changes taking place in the footwear sector was provided by other members of the industry. In spite of this, the Ministry was still able to establish the injury to the industry had resulted from the "dumped" goods.

The operation of the anti-dumping rules is a clear protectionist measure. As long as lower than "normal" pricing remains the way in which dumping is defined, many cases involving imported goods will be able to be defined as dumping. Where imported prices are below national prices in the importing country, which is the usual case where imports become successful, then injury can be declared. Therefore the result will be the imposition of an anti-dumping duty which will be to the detriment of the country as a whole and will result in an inequitable redistribution of income.

Economic theory indicates that trade restrictions impose costs on the country imposing the restrictions while acting to achieve redistribution of income. In addition, trade restrictions reduce the trade benefits which might be available to exporting countries. Anti-dumping measures act to restrict trade while they impose costs on the importing country. Further research is being undertaken which is designed to identify the level of the welfare costs imposed on New Zealand by the anti-dumping measures taken in the "Chinese shoes" case.

In order to improve the overall situation, the anti-dumping legislation should be repealed and trade flows allowed to develop in a free trade situation. Research in a number of countries has proven that real cases of predatory, i.e. damaging, dumping are extremely rare (Hindley, 1991). The presence of anti-dumping measures and their application represent a real cost to society and they should be disposed of.

References

- Barcello, J J (1991); A History of GATT Unfair Trade Remedy Law - Confusion of Purposes; World Economy, Volume 14, Number 3.
- Birks, S (1988); The Structure of the New Zealand Manufacturing Sector; in Birks, S and S Chatterjee, "New Zealand Economy Issues and Policies", Dunmore Press Ltd, Palmerston North, New Zealand.
- Centre for Asia/Pacific Law and Business (1992); Dumping: A Seminar on New Zealand Experience and Practice in the International Context. Seminar Papers, 27 November 1992, Victoria University of Wellington, New Zealand.
- De Lacy and R Bromby (1990); "Footing It"; NZ Business, Pp 24-28.
- Department of Trade and Industry (1987); Tariff Working Party Report to the Minister of Trade, Wellington, New Zealand.
- Finger, J M (1991); The Origins and Evolution of Anti-Dumping Regulation; Country Economics Department, World Bank, Washington DC, USA.
- Hindley, B (1991); The Economics of Dumping and Anti-Dumping Action: Is there a baby in the bathwater?; in Policy Implications of Anti-Dumping Measures, P. K. M. Tharakan (Editor); Elsevier Science Publishers B.V. (North Holland), 1991.
- Kindleberger, C P and P H Lindert (1978); International Economics (6th Edition); Richard D. Irwin, Inc., Homewood, Illinois 60430, USA.
- Marketing Magazine (1987); Can New Zealand Foot it with the Imports; February Issue 6(1), Pages 16-22.
- McCombe, G (1989); Firm Responses to Industrial Restructuring within New Zealand; MA Thesis, Department of Geography, University of Auckland, New Zealand.
- Ministry of Commerce (1988); Dumping and Countervailing Duties Act, 1988, No. 158. Wellington, New Zealand.
- Ministry of Commerce (1992); Certain Non-Leather Women's Footwear from China. Final Report - Dumping Complaint. Trade Remedies Group, Ministry of Commerce, Wellington, New Zealand.
- Ministry of Commerce (1994); Trade Remedies and the GATT; The Outcome of the Uruguay Round. Trade Remedies Group, Ministry of Commerce, Wellington, New Zealand.
- Ministry of Foreign Affairs and Trade (1994); Trading Ahead. The GATT Uruguay Round: Results for New Zealand. Wellington, New Zealand.

New Zealand Footwear Industry Review (1980); Ministry of Commerce, Wellington, New Zealand.

Stallings, D A (1991); Administered Protection in the United States During the 1980's. Research Report No. 211, Agribusiness and Economics Research Unit, Lincoln University, Canterbury, New Zealand.

The Merchant (1989); Rapid Restocking of Shoes; September, Page 34.

The Merchant (1989); Pressure of Footwear Imports Leads to Industry Plan Review; October, Page 9.

RESEARCH REPORTS

- 197 **Demand for Wool by Grade**
A. C. Zwart, T. P. Grundy, November 1988
- 198 **Financial Market Liberalisation in New Zealand: an Overview**, R. L. St Hill, December 1988.
- 199 **An Economic Evaluation of Coppice Fuelwood Production for Canterbury**, J. R. Fairweather, A. A. MacIntyre, April 1989
- 200 **An Economic Evaluation of Biological Control of Rose-Grain Aphid in New Zealand**, T.P. Grundy, May 1989
- 201 **An Economic Evaluation of Biological Control of Sweet Brier**, T. P. Grundy, November 1989
- 202 **An Economic Evaluation of Biological Control of Hieracium**, T. P. Grundy, November 1989
- 203 **An Economic Evaluation of the Benefits of Research into Biological Control of Clematis Vitalba**, G. Greer, R. L. Sheppard, 1990.
- 204 **The Q Method and Subjective Perceptives of Food in the 1990s**, J. R. Fairweather 1990
- 205 **Management Styles of Canterbury Farmers: a study of goals and success from the farmers' point of view**. J. R. Fairweather, N. C. Keating, 1990
- 206 **Tax Shields: their implications for farm project investment, risk and return**. P. R. McCrea, T. P. Grundy, D. C. Hay, 1990
- 207 **Public Drinking and Social Organisation in Methven and Mt Somers**. J. R. Fairweather and H. Campbell, 1990.
- 208 **Generations in Farm Families: Transfer of the Family Farm in New Zealand**. N. C. Keating, H. M. Little, 1991
- 209 **Determination of Farmland Values in New Zealand: the Significance of Financial Leverage**, G. A. Anderson, G. A. G. Frengley, B. D. Ward, 1991.
- 210 **Attitudes to Pests and Pest Control Methods** R. L. Sheppard, L. M. Urquhart, 1991.
- 211 **Administered Protection in the United States During the 1980's: Exchange Rates and Institutions**, D. A. Stallings, 1991
- 212 **The New Zealand Consumer Market For Cut Flowers in the 90s**, C. G. Lamb, D. J. Farr, P. J. McCartin, 1992
- 213 **Agrarian Restructuring in New Zealand**, J. R. Fairweather, 1992.
- 214 **Actual and Potential Computer Use by a Group of Primary Producers**, P. L. Nuthall, 1992.
- 215 **A Tree Model for Hawkes Bay Farmers' Tree Planting Decisions**, J. R. Fairweather, 1992.
- 216 **History of the New Zealand Milk Board**, S. Gilmour, 1992.
- 217 **Changing Export Markets for New Zealand Sheepmeat: 1983-1991**, L. Storey, 1992.
- 218 **An Economic Evaluation of Changes in the Allocation of Water for irrigation from the Ashburton River**, G. Greer, G. Rae, 1992.
- 219 **Farming in Hurunui and Clutha Counties: current attitudes and practices compared to survey results in 1986**, J. R. Fairweather, S. S. F. Gilmour, 1993.
- 220 **Intending Smallholder's and Existing Smallholder's Perceptions of the Rural Lifestyle around Christchurch, New Zealand**, J. R. Fairweather, 1993.
- 221 **Contingent Valuation of Improved Water Quality in the Lower Waimakariri River**, R. Sheppard, G. Kerr, R. Cullen, T. Ferguson, 1993.
- 222 **Social Organisation of Large Herd Dairy Farms in New Zealand**, J. R. Fairweather, 1994.
- 223 **A Forecasting Model of New Zealand's Lamb Exports**, G. F. Thomson, 1994.
- 224 **Preferences for Land Use Options in the Mackenzie/Waitaki Basin**, J. R. Fairweather, S. Swaffield, 1994.
- 225 **Feed Management and Computer Practices on a Sample of New Zealand Farms**, P. L. Nuthall, G. J. Bishop-Hurley, 1994.
- 226 **An Expert System for Weaning Lambs**, G. Bishop-Hurley, P. L. Nuthall, 1994.
- 227 **An Expert System for Sheep Drenching**, G. J. Bishop-Hurley, P. L. Nuthall, 1994.
- 228 **An Expert System for Surplus Feed Allocation**, G. J. Bishop-Hurley, P. L. Nuthall, 1994.

DISCUSSION PAPERS

- 123 **Do our Experts Hold the Key to Improved Farm Management?** P. L. Nuthall, May 1989
- 124 **Some Recent Changes in Rural Society in New Zealand**, J. R. Fairweather, July 1989
- 125 **Papers Presented at the Fourteenth Annual Conference of the N.Z. Branch of the Australian Agricultural Economics Society**, Volumes 1 and 2, October 1989
- 126 **Marketing Boards and Anti-Trust Policy**, E. McCann, R. G. Lattimore, 1990.
- 127 **Marketing of Agricultural and Horticultural Products — selected examples**, K. B. Nicholson, 1990
- 128 **Methven and Mt. Somers: Report on Socio-Economic History and Current Social Structure**. H. R. Campbell, J. R. Fairweather, 1991
- 129 **Proceedings of the Rural Economy and Society Section of the Sociological Association of Aotearoa (NZ)**, April 1991
- 130 **Evolutionary Bargaining Games**
J. K. D. Wright, May 1991
- 131 **Papers Presented at the Sixteenth Annual Conference of the N.Z. Branch of the Australian Agricultural Economics Society**, August 1991
- 132 **Topics for Rural Social Research**, J. R. Fairweather, 1992.
- 133 **Papers Presented at the Seventeenth Annual Conference of the NZ Branch of the Australian Agricultural Economics Society**, August 1992.
- 134 **Capital Budgeting and Policy Evaluation using Option Pricing Theory**, P. Seed, November 1992.
- 135 **New Zealand Agricultural Policy Change: Some Effects**, R. L. Sheppard, July 1993.
- 136 **Papers Presented at the Eighteenth Annual Conference of the N.Z. Branch of the Australian Agricultural Economics Society**, July 1993.
- 137 **Competing in the Global Marketplace: Issues, Trends and Challenges Facing New Zealand's Sheepmeat Industry**, R. M. Nayga, D. B. Waggoner, January 1994.
- 138 **Ownership and Control of Maori Land: Some Lessons for South Africa**, M. Lyne, January 1994.
- 139 **Classifying New Zealand's Export Markets: A Behavioural Approach**, G. Thomson, R. Lattimore, March 1994.