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RESTRUCTURING IN THE NEW ZEALAND TEXTILE INDUSTRY

A THESIS PRESENTED IN PARTIAL
FULFILMENT OF THE REQUIREMENTS
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ABSTRACT

A structural approach is used to study the socio-economic and spatial implications of restructuring in New Zealand's textile industry. Government policy, specifically the textile plan, is analysed in an attempt to determine the industry's structural response to change in its operating environment.

Development of textile manufacturing, as well as market and technological environments effecting change are examined. These reveal contradictions inherent in capitalist production as well as emerging conflicts resulting from changes in production relations within the industry. It is found that changing relationships in product, company, employment, and spatial structures lead to socio-economic inequalities, expressed primarily in the textile industry's core-periphery structure.

Government policy appears to have hastened these processes without changing underlying relationships responsible for inequality. Government policy is thus seen to perpetuate the status quo. The analysis suggests the textile industry is increasing its concentration in core areas, thereby altering its traditional dispersed spatial pattern.

Policies to alleviate regional inequalities appear to be incompatible with restructuring. The study concludes that capitalist economic growth and social equity policy aims are contradictory, and that inequalities will inevitably widen if government promoted restructuring continues.

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LIST OF ABBREVIATIONS

In this study, the following abbreviations have been used: -

- IDC - Industries Development Commission
- TGMF - Textile and Garment Manufacturers'
Federation
- NBR - National Business Review
- LWR - Lane Walker Rudkin

CHAPTER 1

INTRODUCTION

1.1 PROBLEM DEFINITION

This study attempts to identify and analyse major changes that have occurred in New Zealand's textile manufacturing industry, along with their geographical ramifications and implications. The inquiry focusses on the socio-economic and spatial effects of deliberate government intervention in the industry, which took the form of the Textile Industry Development Plan (Industries Development Commission, IDC, 1979a), implemented on July 1, 1980. Developments preceding this event have also had a significant influence on the state of textile manufacturing in New Zealand. Accordingly, the study examines changes leading up to direct government action in a general context, and focusses particularly on changes that have resulted.

The methodology is structural in emphasis and, therefore, involves studying reality from the point of view of process and change (Peet and Lyons, 1981). The reason for this is that, as Harvey (1973) points out, society must be seen as a totality of inter-related and interconnecting structures. He defines a structure as a system of internal relationships in the process of being shaped by its own transformation rules. In other words, a structure is a set of relationships which are continually changing, thus effecting change in the structure itself. To understand society requires, therefore, an understanding of the basic processes by which structures are changed.

The nature of each relationship within a structure is of critical importance. Conventional analyses assume relationships to be complementary, separable, and if not in equilibrium, at least approaching it. Relationships in society, however, are constantly changing, cannot be considered in isolation, and are usually contradictory (Harvey, 1973). The relation between capital and labour, for instance, is fundamental to the system but in perpetual conflict. While capital is

produced by labour, any surplus accrues to capitalists as opposed to the workers. Similarly, the relationship between production and distribution is one of contradiction rather than complementarity, in that the benefits from increased societal production flow to an increasingly fewer number of private capitalists. This, in turn, generates conflicts within socio-economic and spatial structures, which can never be in equilibrium because the relationships making up the structure are diametrically opposed.

Peet and Lyons (1981) claim that a principal contradiction of capitalist production is the tendency to over-produce. Production for the market demands of consumers and production for profit are always in conflict and so, by definition, the interests of the parties involved, producers and consumers, must also be contradictory. Over-production may be alleviated, Peet and Lyons (1981) suggest, by the expansion of domestic and overseas markets and an associated territorial structure which promotes consumption. But the system will continue to produce more than the market demands, which opens up the possibility for new contradictions, leading eventually and inevitably to a state of crisis (see Harvey, 1975).

A structure integrates a set of relationships and as a result, is also continually changing in response to contradictions and tensions within the broader structure of society. The nature of the relationships involved ensure that each structure is inextricably tied to others. Harvey (1973) stresses that social processes and spatial structures cannot be separated, as they inter-relate in such a complex fashion that to isolate each for explicit consideration would unduly simplify any attempts at realistic explanation. Economic forces are dominant under capitalism, and as Peet and Lyons (1981) point out, these are expressed in spatial terms as locations of production, consumption, and exchange, by combinations of these, and by the persistence of spatial forms created by earlier structures. A socio-spatial structure may, therefore, be recognised, and is a spatial expression of changing social relationships, as well as an effector and inhibitor of change.

Figure 1 is a simplified representation of factors effecting change in New Zealand's textile industry. For this study, three major structures, or sets of relations effecting change, have been identified. These are the market environment (or socio-economic structure, which corresponds to factors one, two and four), the technological environment (factor three) and government (or the political structure, factor five).

Relationships within each environment are examined in an attempt to expose their contradictory nature, and to show how these contradictions both within and between the textile industry's employment, product, company, and spatial structures are eventually expressed in the industry's spatial organisation.

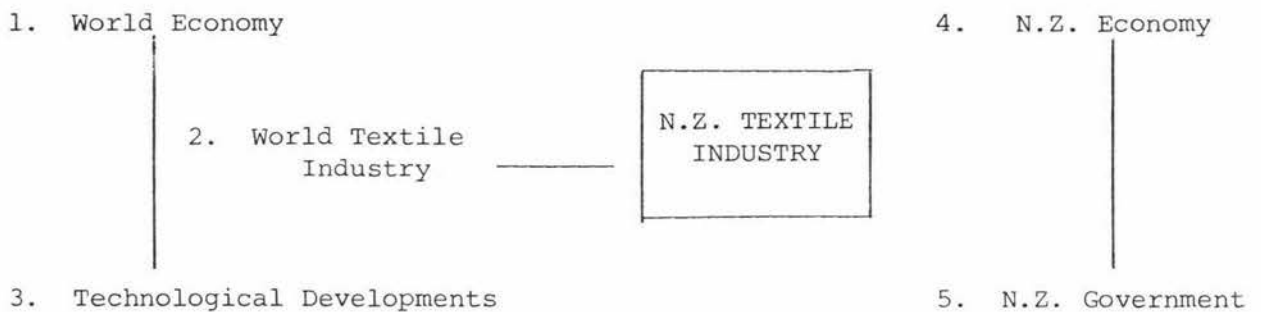


Figure 1: Factors influencing the development of New Zealand's Textile Industry

Considering the complexity and number of relationships involved, it is imperative that the methodology be organised to enable analysis of these as part of the broader socio-economic structure. A logical positive method depends on unduly reducing the relationships to a set of simplistic interactions, and by analysing them in isolation from the socio-economic structure, provides only a mechanistic understanding of the processes that bring about change. In addition, with the vast range of data on the textile industry, Slater (1977) would argue that there is a temptation to become pre-occupied with data interpretation, and simply describe spatial forms and patterns rather than examine the underlying processes that

explain them.

In contrast to logical positivism, a structural approach avoids an exclusively spatial account of the results of change, and focusses instead on an explanation of the particular socio-economic and spatial expressions which these changes produce. This study of New Zealand's textile industry aims, therefore, to examine relationships and structures relevant to the industry, and to investigate the changes in these, with particular emphasis on government's recent policy action.

1.2 RESTRUCTURING

In this study, restructuring, or the re-organisation of structure, is regarded as being synonymous with change. It usually entails a shift in resources in response to change in the environment, whether it be the operation of the market, developments in technology, or switches in government policy. As explained above, on-going transformation, or more simply change, is inevitable, and restructuring is an on-going process which forms an integral part of any industry's development.

The textile industry has been restructuring or changing in response to its operating environment ever since its inception. It is essential, therefore, that the concept of restructuring not be restricted to a narrowly based definition centred on government policy. In recent years, restructuring has become a 'catchword', describing a deliberate policy for New Zealand's economy in general, and for the manufacturing sector in particular. Government promoted restructuring aims to encourage industries to become internationally competitive so as to save foreign exchange and generate economic growth. This change takes place within the defined set of production relations making up New Zealand's economic structure. The textile industry is the first to be subject to deliberate restructuring by government. But as the industry has been

restructuring throughout its development, government's implementation of the textile plan represents no more than a change in the political environment, or a deliberate attempt to change the textile structure from within the political structure.

The role of the IDC and government is of particular importance in this study. By planning to adjust the textile industry to New Zealand's, and the world's, changing socio-economic structure, both the IDC and government attempted to promote the industry's growth; the advantages of which would supposedly 'trickle down' to benefit all of society. It appears, however, that the policy makers fell into the trap discussed by Olsson (1977), in which the methods used to bring about change were geared more towards the preservation of the status quo.

Olsson's principal argument is that because planners have failed to recognise the ideological basis of their methodology, they have contributed to the institutionalisation of a social and spatial organisation most likely to increase rather than decrease inequality. Analyses derived from descriptive social science have, therefore, been translated with few modifications into prescriptive social engineering, in the form of the textile plan. This approach preserves precisely the structures of inequality and contradictory relationships which the plan set out to resolve.

Peet (1977, 6) states that, '... there is no such thing as objective, value-free and politically neutral science, indeed all science, and especially social science, serves some political purpose.'

By emphasising economic growth, the textile plan was similarly designed to serve political purposes, particularly that of promoting current policy to enhance government's chances of remaining in power. But in adopting a methodology emphasising the attainment of an efficient set of economic solutions, government, perhaps inadvertently, neglected the textile policy's initial purpose of increasing the industry's

contribution to the economic and sociological well-being of the nation (IDC, 1979a). Thus, the execution of the textile plan became virtually an end in itself, and effectively became ideological in purpose. Although specific changes were made, government policy was consistent with long-held capitalist goals, and so has maintained, even exacerbated, the contradictory relations and structures of the status quo.

To avoid such a situation arising, a logical positivist methodology which falsely separates fact, value and ideology, must be rejected by both researchers and policy makers. Both the IDC and government adopted a positive approach, of which the very concept of restructuring is a part, but because there is no such thing as a politically neutral and objective science, and because the ideology in logical positivism is hidden (Slater, 1977), the textile plan has operated more to preserve the dominant economic power structures than to achieve widespread and beneficial changes.

In this particular study, the recency of restructuring and the fact that there are few studies of it, has meant that this analysis, and others like it, play an important and unavoidable part in the continued re-definition of restructuring. Thus, the attempt to analyse static relations cannot be retained. In short, it is impossible in this study either to isolate the research or the researcher from the restructuring process, or to presume that the analysis can be value-free in the logical positivist sense.

In their study of the British electrical engineering industry, Massey and Meegan (1978, 1979a) claim that restructuring should not be seen in isolation from changes in the economic environment. By analysing macro-, or national and international economic forces, together with micro- forces relevant to individual firms, they attempted to explain spatial patterns resulting from the industry's restructuring.

Similarly, restructuring in New Zealand's textile industry is a product of changes in its market, technological, and political environments. These changes generate a new set of operating conditions to which textile manufacturers respond, and these must be analysed to determine how and why they influence particular firm behaviour. Massey and Meegan (1979a) also point out that the re-organisation of production has a particular spatial component. Shifts in location occur not just because of changes in an industry's spatial structure, but also because of its response to changes in environmental factors. Consequently, as locational and production aspects are inter-woven, attention should not be focussed solely on locational considerations but rather on integrating the two structures.

Although they advocated a structural approach, it appears Massey and Meegan (1979a) were unable to develop an appropriate methodology to deal with process and change. Their analysis was largely descriptive and failed to show how contradictions in production and social relations produce change in the industry. By attempting to analyse spatial change predominantly *as a response to* non-spatial developments (Massey, 1979a), Massey and Meegan have in fact separated the spatial from the socio-economic structure, and have looked for spatial patterns in their own right rather than as expressions of an integrated socio-economic process. This was probably because of the great difficulties involved in abandoning the mechanistic conceptions derived from the recently popular systems approach.

This study is therefore very ambitious in its aim, but given the shortcomings and problems of existing approaches, a structural analysis would appear to offer the only realistic method to deal with process and change.

Two terms have been used frequently in both this study and the IDC report. The definitions below represent their particular interpretation in this study.

'Efficiency' is taken to mean the saving of costs. The term may be applied to all aspects of the production process and implies that a particular level of output is being produced with less effort, less waste, fewer resources, and therefore lower costs. Consequently, efficient textile production is seen to be advantageous, allows surplus capital from production to be circulated quickly and easily, and provides the opportunity to produce a greater level of output with no increase in costs.

'Rationalisation' is often associated with efficiency under the capitalist mode of production, but tends to be more specific in nature than efficiency because it often takes the form of centralisation in product, company, and spatial structures. Rationalising product operations, for instance, means that resources are being concentrated in fewer product areas to prevent the underutilisation of productive capacity. Similarly, if an industry is undergoing rationalisation, production is usually being concentrated in fewer companies and fewer locations. The aim of this is to eliminate the duplication of resources, and to ensure that maximum benefits can be gained from intensive resource use in the belief that more efficient operations will ensue.

It should be noted, however, that the means used to achieve efficiency or rationalisation may not be effective or complementary. The extent to which efficiency and rationalisation are synonymous with the production and just distribution of surplus is also open to question.

1.3 THE TEXTILE INDUSTRY DEFINITION

The textile industry is defined as including the processing of textile fibres to prepare them for spinning; the manufacture of yarn, woven and knitted fabrics, braids, carpets and rugs; the dyeing, printing, and finishing of yarn and fabric; and the manufacture of all kinds of made-up textile goods, including clothing (adapted from Department of Statistics, 1975). Textile manufacturing thus embraces a wide range of products, as defined

by the Standard Industrial Classification groups outlined in Appendix A.

Although textile and clothing production are separated into two discrete classes, the high degree of interdependence between them necessitates their being considered together. Subsequent reference to the textile industry includes, therefore, the manufacture of clothing unless otherwise stated. This definition is the same as that adopted by the IDC.

1.4 DATA BASE

By analysing a diverse industry on a national scale, and by emphasising events occurring as recently as July, 1980, data problems were inevitably encountered in this study. Changes in the Department of Statistics' industrial classifications and definitions led to difficulties in analysing developments in the textile industry over time. The replacement of the Industrial Production Statistics by the Census of Manufacturing in 1974-75, for example, incorporated new sector classifications not comparable with those previously used (see Appendix B for definitions under both systems).

Differences between government departments in the methods used for gathering data also caused problems. While the Statistics Department disaggregate the spinning, weaving, and finishing sector (see Appendix A), the Department of Labour does not. So the latter's employment statistics do not indicate differences between woollen production, synthetic production, and dyeing operations. Variations in employment figures provided by the two departments were common. Labour Department Statistics, however, include part-time workers who make up a significant proportion of the textile workforce, are more recent, and are spatially disaggregated into employment districts rather than the larger regions used by the Statistics Department (see Appendix C for maps of employment districts and regions). Labour Department employment figures have, therefore, been used more frequently for analyses in this study.

Difficulties in obtaining detailed spatial information proved a serious problem. Aggregation of data into regions and districts obscures the importance of textile manufacturing in the development of small communities in peripheral areas. Consequently, the employment impact of closures and/or retrenchment of textile factories in small townships was difficult to determine accurately. In alleviating this problem, both industry and union sources were used to provide valuable information.

The most significant data problem associated with this study was the recency of government policy. Much of the material required to compare the effects of government imposed restructuring with events immediately preceding it was not available in published form. This necessitated reference to a wide range of different information sources, generating further difficulties of compatibility. The recency of government policy has also meant that some effects of the textile plan's implementation have yet to be fully felt by the industry and consequently, may be underestimated in this study.

In summary, therefore, this study aims to explain the effects of restructuring in New Zealand's textile industry by examining changing relationships from within the broad socio-economic structure, with particular emphasis on government policy. Consequently, the study attempts to avoid the problems discussed above that arise from the ideology and methodology of a logical positivist analysis, and adopts a structural approach that focusses on process and change.

CHAPTER 2

GROWTH AND DEVELOPMENT

2.1 BACKGROUND

The manufacture of textiles and garments is one of New Zealand's oldest industries. The first textile mill, based on woollen production, was built in Otago in 1870 (Vickery, 1975). By 1920 most of New Zealand's presently existing mills had been established, located mainly in Canterbury and Otago. This was a reflection of the initial concentration of major markets, labour force, and raw material supplies in the South Island.

With the population movement and the concomitant shift of the national market and labour force to the North Island, subsequent growth in the textile industry was to be concentrated in the north. This significantly disadvantaged the South Island woollen industry because of increasing transport costs, particularly across Cook Strait. Nevertheless, its continued operation in the south indicates the importance of an adequate raw material supply, the retention of a not inconsiderable market and labour source, access to port facilities and the effect of locational inertia.

New Zealand's present day textile industry is dichotomised between woollen and synthetic (or man-made fibre), production. World consumption and production of textile fibres was revolutionised in the 1960s with the development of synthetics. Their wider range of properties are eminently suited to technological advances, cost-savings in production, labour substitution, fashion changes and consumer preferences for light, easy-care, and casual clothing. Continued expansion in the use of synthetics led to a relative decline in the demand for woollen textiles, which together with the general instability of wool prices in New Zealand, has generated some degree of uncertainty in the market for woollens (IDC, 1979a).

TABLE 1: REGIONAL DISTRIBUTION OF ESTABLISHMENTS & EMPLOYMENT IN THE TEXTILE INDUSTRY: 1960-61 TO 1978-79

Region	1960-61		1970-71		1978-79		Percentage Change 1960-61 - 1978-79	
	% Estab.	% Employ	% Estab.	% Employ	% Estab.	% Employ	Estab.	Employ
Northland	0.5	0.4	0.9	0.7	1.4	0.9	200.00	163.5
Central Auckland	38.8	36.4	44.5	37.6	42.6	38.7	13.0	24.9
South Auckland/Bay of Plenty	2.9	3.4	5.9	5.8	10.1	8.5	251.6	189.2
East Coast	1.0	0.8	0.7	0.7	0.6	0.8	-40.0	28.4
Hawkes Bay	2.9	2.0	2.5	3.0	2.9	3.5	3.3	105.4
Taranaki	1.9	2.3	1.4	1.3	1.7	1.9	-10.0	-1.6
Wellington	27.2	22.0	22.5	19.7	19.9	18.8	-24.8	0.4
North Island	75.2	67.2	78.4	68.8	78.9	73.0	8.2	27.6
Marlborough	0.4	0.5	0.3	0.6	0.5	0.5	25.0	66.4
Nelson	0.9	0.3	1.0	0.6	1.1	0.9	33.3	226.3
Westland	0.3	0.5	0.2	0.4	0.2	0.3	-33.3	-21.5
Canterbury	15.3	21.4	14.5	20.9	13.6	16.8	- 8.7	- 7.3
Otago	6.5	9.7	4.5	8.1	4.1	7.3	-35.3	-12.1
Southland	1.5	0.6	1.1	0.7	1.7	1.1	12.5	104.4
South Island	24.8	32.8	21.6	31.2	21.1	26.9	-12.6	- 3.6
New Zealand	100.0	100.0	100.0	100.0	100.0	100.0	3.0	17.4

Source: Department of Statistics (1963, 1973, 1981a)

Both the population move north and the advent of synthetics has encouraged location of textile manufacturing in the North Island, particularly in the Auckland area. Table 1 shows the regional distribution of establishments and employment between 1960-61 and 1978-79. The progressive increase in the proportion of establishments and employment in the North Island, especially in its northern regions, indicates the degree of northward movement by the textile industry. In contrast, the relative decline in textile activity in Canterbury and Otago reflects each region's locational disadvantage and the competition from synthetics. Wellington's reduction in the proportion of operating units and employment is further evidence of the industry's northward movement, even within the North Island.

This pattern points to Auckland's dominance in the textile industry's spatial structure, with about 40 percent of its overall activity. From 1960-61 to 1978-79, Auckland accounted for over 50 percent of the absolute growth in textile employment. The South Auckland/Bay of Plenty absorbed an additional 37 percent of this increase, so the textile industry appears to have become increasingly oriented towards the northern regions of the North Island, a pattern consistent with New Zealand's population distribution.

Thus, the spatial distribution of the textile industry may be seen to give one expression of certain aspects of social, economic and demographic changes in New Zealand, and is inextricably tied to such changes in terms of simultaneous cause and effect processes.

The textile industry is extremely diverse in terms of product types and company organisations. The IDC (1979a) claims, however, that there is a considerable degree of interdependence among the various components involved in textile manufacture. Change in one product area is, therefore, likely to have significant repercussions throughout the industry.

TABLE 2: EMPLOYMENT AND OPERATING UNITS IN THE TEXTILE INDUSTRY; BY SECTOR; 1978-79

SECTOR	Operating Units		Employment		Average Employment per Unit
	No	%	No	%	
Wool Scouring	33	2.8	966	2.6	29.5
Woollen Fibres	35	2.9	3900	10.7	111.4
Man-made Fibres	14	1.2	611	1.7	43.6
Dyeing & printing	16	1.3	320	0.9	20.0
Canvas Goods	87	7.3	1070	2.9	12.3
Made-up Textiles	90	7.5	1521	4.2	16.9
Knitting Mills	106	8.9	4765	13.1	44.9
Carpets & Rugs	29	2.4	2123	5.8	73.2
Textiles N.E.C.	33	2.8	697	1.9	21.1
Clothing	750	62.9	20520	56.2	27.4
Total	1193	100.0	36492	100.0	30.6

Source: Department of Statistics (1981a)

TABLE 3: TURNOVER, VALUE ADDED AND CAPITAL EXPENDITURE IN THE TEXTILE INDUSTRY; BY SECTOR; 1978-79

SECTOR	Turnover (\$000)	Turnover per Person (\$)	Value Added (\$000)	Value Added per Person (\$)	Capital Expenditure (\$000)	Capital Expenditure per Person (\$)
Wool Scouring	45631	47237	13699	14141	2392	2476
Woollen Fibres	140469	36017	36490	9356	6946	1781
Man-made Fibres	20760	33977	7847	12842	475	777
Dyeing & printing	9167	28646	3375	10564	658	2056
Canvas Goods	23092	21581	7877	7361	463	432
Made-up Textiles	42131	27699	13354	8779	1755	1153
Knitting Mills	124222	26075	43655	9163	5464	1146
Carpets & Rugs	92283	43468	21464	10110	8518	4012
Textiles N.E.C.	27801	39886	8372	12011	803	1152
Clothing	342681	16699	135627	6609	3781	184
Total	868237	23792	291760	7995	31255	856

Source: Department of Statistics (1981a)

Tables 2 and 3 show the component structure of New Zealand's textile industry in 1978-79, using the Census of Manufacturing classification system (for definitions, see Appendix B). This illustrates the diversity of textile manufacturing, as well as the wide range of activities it includes. The sheer size of the clothing sector in terms of employment, the number of operating units, turnover, and value added is significant, as it highlights the industry's dependence on clothing production as a market for the output of most other textile groups. Table 3, however, shows the clothing sector's very low comparative performance in terms of per person turnover, value added, and capital expenditure. This partly reflects the labour-intensive nature of clothing production, and its susceptibility to increasing labour costs and lower productivity.

Despite competition from synthetics, the woollen industry continues to occupy an important position in the textile structure, reflecting this country's comparative advantage in woollen production (IDC, 1979a). Woollen fibres and carpets are leading sectors in terms of turnover, value added, and capital expenditure, both absolutely and on a per capita basis, while the manufacture of woollen fibres (which includes carpet yarn), is also a very significant employer of labour. Carpet yarn and carpet production account for about 75 percent of New Zealand's total wool usage and make a major contribution to exports (IDC, 1979a). The woollen industry has thus benefitted considerably from the importance of carpet manufacture in New Zealand's economy.

2.2 GOVERNMENT PROTECTION

Government's application of import controls has been a major factor in facilitating the textile industry's growth. Import-licensing, designed primarily to conserve foreign exchange and provide for a full employment economy, has been applied to a wide range of textile products and machinery since 1938. The IDC (1979a) stressed that this has been vitally important in determining the direction and extent of investment, the range of products made, and the development of sectors in the industry.

Clothing manufacturers in particular, have had 98 percent of the domestic market protected for them each year since 1939 (IDC, 1979a). Consequently, they have not been forced to compete against imported products. This policy has led to the proliferation of small clothing units throughout New Zealand, producing mainly for the small domestic market.

Import restrictions have been of crucial importance in sectors concerned with synthetic manufacture. When the advantages to be gained from synthetics became apparent, government provided textile producers with direct encouragement to expand their use. In this context, the modification of the import-licensing system was significant, as it allowed entry of raw synthetic materials where they could not be produced locally, and textile machinery into New Zealand.

At the same time, restrictions on synthetic yarn imports facilitated the development of a domestic yarn extruding and texturising industry. Government appeared to favour the establishment of specialised plants, which given time, could develop large-scale operations that benefitted from economies in production. To this end, government provided a wide range of additional assistance measures, including regional development allowances, machinery replacement schemes, and transport subsidies.

By such means, government policy has promoted the growth of many synthetic operations that are grossly cost-inefficient in relation to international production. Incentives have also contributed to the spatial proliferation of textile factories in non-optimal locations with respect to both domestic and export markets, particularly in peripheral towns with a reliable supply of labour. The 'self-sufficiency' argument used partly for political purposes to justify government protection has, however, proven largely inappropriate and is in fact a contradiction. The textile industry remains heavily dependent on imported synthetic fibres, some yarns and fabrics to satisfy market demands for greater variety, as well as on overseas machinery and technology.

2.3 EMPLOYMENT STRUCTURE

The textile industry is characterised as being an extremely important employer of female labour, accounting for 30 percent of women engaged in manufacturing. (Department of Labour, unpublished statistics, 1980). A major reason for the establishment of small textile factories in outlying areas has been the availability of a reliable, and in the past, cheap supply of female labour. Manufacturers have sought to take advantage of this, together with the lack of organisation and militancy of the union movement in rural communities.

Of the 13,800 textile workers located outside metropolitan districts in 1980, 72 percent were female, which represented 32 percent of the total female manufacturing labour force in non-metropolitan areas. (Department of Labour, unpublished statistics, 1980). The textile industry's provision of employment in small regional centres has been very important for women, who may otherwise be restricted to work in the home because of the lack of alternative job opportunities. This has allowed manufacturers to benefit from females dependent on the industry as a source of income, and so unwilling to threaten their livelihood by being militant and demanding higher wages.

Tables 4 and 5 provide a sectoral breakdown of male and female employment, using the Department of Labour classification system (see Appendix A). Clothing production, made-up textiles, and knitting mills are the largest employers of women, which shows female labour to be particularly prevalent further along the processing chain towards the finished product. Spinning, weaving, and finishing textiles, and carpet production employ considerably fewer females than the industry average, an indication of their capital-intensive nature. These sectors still engage a higher proportion of females, however, than the average for manufacturing of 28 percent (Department of Labour, unpublished statistics, 1980).

TABLE 4: MALE AND FEMALE EMPLOYMENT IN THE TEXTILE INDUSTRY;
BY SEX AND SECTOR 1980

SECTOR	Total Employed			Proportions	
	Male	Female	Total	% Males	% Females
Spinning, weaving & finishing textiles	3496	1872	5368	65.1	34.9
Made-up textiles	798	1599	2397	33.3	66.7
Knitting Mills	1876	2904	4780	39.2	60.8
Carpets & Rugs	2159	1016	3175	68.0	32.0
Textiles N.E.C.	679	348	1027	66.1	33.9
Apparel	2886	18512	21398	13.5	86.5
Total	11894	26251	38145	31.2	68.8

Note: Throughout this study, Textiles N.E.C., and Cordage, Rope and twine have been aggregated into one sector - Textiles N.E.C.

Source: Department of Labour (unpublished statistics, 1980)

TABLE 5: PART-TIME EMPLOYMENT IN THE TEXTILE INDUSTRY; BY
SECTOR; 1980

SECTOR	Part-Time Employment			Proportions		Proportion Part-time to total Employment
	Male	Female	Total	% Males	% Females	
Spinning, weaving & finishing textiles	106	167	273	38.8	61.2	5.1
Made-up Textiles	28	189	217	12.9	87.1	9.1
Knitting Mills	38	260	298	12.8	87.2	6.2
Carpets & Rugs	10	69	79	12.7	87.3	2.5
Textiles N.E.C.	7	39	46	15.2	84.8	4.5
Apparel	88	1769	1857	4.7	95.3	8.7
Total	277	2493	2770	10.0	90.0	7.3

Source: Department of Labour (unpublished statistics, 1980)

Another feature of the textile industry shown in Table 5, is the significance of part-time employment. This has increased the industry's importance as a provider of job opportunities for females. For example, the proportion of females engaged in part-time manufacturing is 74 percent, considerably lower than the textile industry figure of 90 percent.

Many women have only been able to participate in the workforce on a part-time basis. Dominant societal attitudes have historically emphasised women's role in the household, and de-emphasised their importance as members of the labour force and as earners of income. In recent times, women have attempted to reduce their dependence on males as the major income source by seeking greater participation in the workforce. Part-time employment in the textile industry has thus provided many women with the opportunity to perform both their household commitments, and to join the labour force as an independent 'breadwinner'. Textile manufacturers have benefitted from this, as the number of females seeking part-time employment are in abundant supply. Consequently, these workers can easily be cast aside, or brought into production, according to the demands of producers as opposed to the needs of labour.

2.4 SPATIAL STRUCTURE

The spatial distribution of New Zealand's textile industry is the result of a number of locational factors, each exercising varying degrees of influence at particular stages of its development. The diversity of textile manufacturing, and the considerable variations in company structures and production processes ensure that many determinants enter into the location decision. Traditional factors, such as the availability of labour, raw material supplies, and market access have, and continue to be of significance.

Table 6 shows the district level of textile and manufacturing employment in 1980. The industry's spatial distribution throughout the country is particularly important. This reflects

TABLE 6: EMPLOYMENT IN TEXTILES AND MANUFACTURING;
BY DISTRICT. 1980

DISTRICT	Textile	Employ-	Manu-	Employ-	Textile % of manu- facturing	Quotient ²	
	N	ment %	facturing N	ment %		1	2
Whangarei	273	0.7	5212	1.7	5.2	0.41	0.06
Auckland ¹	15341	40.2	109179	35.7	14.1	1.13	3.22
Hamilton	1721	4.5	17161	5.6	10.0	0.08	0.36
Tauranga	594	1.6	4474	1.5	13.3	1.07	0.13
Rotorua	896	2.4	13917	4.5	6.4	0.53	0.19
Gisborne	317	0.8	3181	1.0	10.0	0.80	0.06
Napier/Hastings ¹	941	2.5	12642	4.1	7.4	0.61	0.20
New Plymouth	595	1.6	7751	2.5	7.7	0.64	0.13
Wanganui	890	2.3	5630	1.8	15.8	1.28	0.18
Palmerston North	2843	7.5	11939	3.9	23.8	1.92	0.60
Masterton	457	1.2	3866	1.3	11.8	0.92	0.10
Wellington ¹	3106	8.1	31994	10.5	9.7	0.77	0.65
North Island	27974	73.3	226946	74.1	12.3	0.99	-
Blenheim	229	0.6	2021	0.6	11.3	1.00	0.05
Nelson	187	0.5	4342	1.4	4.3	0.36	0.04
Greymouth	299	0.8	1984	0.6	15.1	1.33	0.06
Christchurch	5806	15.2	39487	12.9	14.7	1.18	1.22
Timaru	379	1.0	4443	1.5	8.5	0.67	0.08
Dunedin	2709	7.1	15528	5.1	17.4	1.39	0.57
Invercargill	562	1.5	11334	3.7	5.0	0.41	0.12
South Island	10171	26.7	79139	25.9	12.9	1.03	-
Total New Zealand	38145	100.0	306085	100.0	12.5	1.00	-

NOTE 1: In this study, Auckland and Manukau employment districts have been aggregated into one. The same applies for Napier and Hastings, as well as Wellington and Lower Hutt.

NOTE 2: Quotient 1 compares district's textile employment with district's manufacturing employment.

Quotient 2 compares district's textile employment with national average (12.5%).

SOURCE: Department of Labour (unpublished statistics, 1980).

the labour-intensive nature of textile manufacturing and, therefore, its dependence on the availability of a reliable workforce.

Quotient 2 (Table 6) emphasises Auckland's dominance, with a textile labour force more than three-times the national average. Christchurch is the only other district with an above average share of textile employment, although Palmerston North, Wellington and Dunedin have quotients much greater than those for the rest of New Zealand. This indicates the importance of urban markets.

Quotient 1 (Table 6) shows textile employment to be a particularly important part of manufacturing in Auckland, Tauranga, Wanganui, Palmerston North, Blenheim, Greymouth, Christchurch and Dunedin. Palmerston North (which includes Levin), has a very high percentage of its manufacturing workforce employed in textiles, which reflects the development of both Palmerston North and Levin as specialised knitting centres.

Textile manufacturing is more important to the South Island's industrial base than the North's. The Canterbury Regional Planning Authority (1977) claims that the concentration of growth in Christchurch has created a shortfall and narrowing range of job opportunities in other South Island districts. The textile industry's provision of employment in Blenheim, Greymouth and Dunedin is, therefore, of considerable importance in otherwise depressed regional economies. This argument is also applicable to Wanganui.

Excluding Auckland, every employment district has a larger first listed quotient than second. This implies that they possess a textile base more significant to the region *per se*, than to the industry's national employment structure. In peripheral locations, the number of people employed in textiles may be extremely small relative to the national textile labour force, but in terms of each district's local economy those few textile workers amount to a significant proportion of its manufacturing employment. Blenheim and

Greymouth, for instance, account for only 0.6 percent and 0.8 percent of national textile employment respectively, yet this represents 11.3 percent and 15.1 percent respectively of each district's manufacturing base.

Being dependent upon a reliable and skilled workforce, producers have been drawn to both metropolitan areas with a large pool of skilled, but costly labour, as well as peripheral areas with a reliable supply of cheap labour. Industrial militancy in metropolitan locations has also tended to increase the labour costs in such centres. These contradictory forces have contributed to the concentration of textile activity in metropolitan centres, together with the location of many units in peripheral areas performing an important role in the development of many regional economies.

Proximity to raw materials has been a major factor in the location of textile activity (Vickery, 1975). Access to a reliable supply of wool led to the industry's initial development and continued importance in Canterbury and Otago. Examples here include the location of Alliance, and before their collapses, Mosgiel and Kaiapoi in Dunedin, Timaru and Christchurch. Most synthetic materials, however, are imported, so firms processing these have tended to concentrate in metropolitan centres with international air and shipping links. This has encouraged manufacturers further along the processing chain to locate in these areas, to take advantage of cost-savings associated with an assured and cheap supply of inputs.

Metropolitan centres such as Auckland and Christchurch also provide a large local market, and good access to overseas markets. Textile firms derive considerable benefits from a market location, particularly through reduced uncertainty, and minimal distribution and transport costs.

Morrill (1974) has defined agglomeration as the grouping of people or activities for their mutual benefit, which often leads to the development of profitable linkages between them.

As Richardson (1978) argues, firms generally prefer to locate in large urban centres, and as this tendency is reinforced, agglomeration economies become a major factor promoting spatial concentration.

Textile producers gain significant cost advantages from a wide range of business services available in large market centres. Linkages, both internal and external to the industry, are extremely profitable for participating firms as a means to attain economies of scale in production. These may include ready access to sources of capital, forward and backward linkages with other textile firms, and proximity to specialised services unavailable elsewhere. The concentration of these facilities in urban centres attracts the establishment and expansion of textile companies, creates a locational advantage, and reinforces the tendency to agglomeration.

Keeble (1969) argues that the development of industrial linkages and generation of external economies has been a principal factor promoting the growth of specialised industrial centres. This largely explains the emergence of Palmerston North and Levin as highly specialised knitting centres. After the initial establishment of textile operations in both towns, their growth facilitated the development of specific skills in the workforce, which in turn, encouraged prospective textile manufacturers to locate there. Consequently, linkages amongst textile firms in Levin and Palmerston North led to the expansion of activity in the district, as indicated by its high level of textile employment in Table 6.

To summarise, the spatial distribution of New Zealand's textile industry reflects the interaction of many conflicting locational factors. The need for a reliable labour supply has encouraged manufacturers to locate in peripheral areas, while metropolitan centres have attracted operations requiring specialised skills. Proximity to raw materials has typically necessitated a peripheral location for woollen producers, and conversely a core location for synthetic producers. Market access has clearly favoured metropolitan centres, although small local markets are available for manufacturers in

regional towns. Finally, the availability of linkages has encouraged the expansion of activity in core locations, while also facilitating the growth of specialised textile centres.

The textile industry's spatial structure is an expression of the integration of these contradictory relationships, together with historical factors such as a firm's initial location and the subsequent development of industrial inertia. This has led to the emergence of a core-periphery structure, itself effecting change in production and social relations relevant to the industry. Thus, it may be concluded that continuing transformations and relationships in the textile structure have integrated spatial factors such as labour, markets, and raw materials, with aspatial factors such as government protection and product type. This process has been expressed in the wider socio-economic structure as it affects textile manufacturing in New Zealand.

CHAPTER 3

MARKET ENVIRONMENT

The operation of the market exchange system is basic to the capitalist mode of production. By co-ordinating the production and consumption activities of many individuals acting independently, the market is essentially the outcome of a vast number of decentralised decisions. It functions to drive the socio-economic structure, and creates the conditions about which the space economy is organised.

Change, or restructuring, via market forces is not based on premeditated, overt action. Only by co-ordinating the activities and decisions of many actors in the economy does the market establish conditions to which those same actors must respond and adapt. The development of New Zealand's economy reflects its association with the capitalist system, and its technologies and institutions (Franklin, 1978). The market in New Zealand is, therefore, a product of many decisions occurring in the economic, technological, and political environments.

The capitalist market is characterised by many imperfections. A few individuals and institutions may exercise sufficient economic or political power to influence the production and allocation of scarce resources. Consequently, the market distributes resources so as to perpetuate dominant capitalist motivations, which are typically directed towards increasing production and promoting economic growth regardless of consumption or demand (Harvey, 1973).

New Zealand's textile industry has developed in response to changing market conditions, and reflects this pre-occupation with growth in which producers are motivated to increase profits and accumulate capital. Import-licensing has generated intense competition on the domestic market, which has increased the pressure on textile manufacturers to cut costs and raise productivity. Between 1960 and 1980, the

textile industry increased production volume almost two-fold and in value terms, there was a 500 percent rise in turnover, from 1960-61 to 1978-79.

The market environment has, therefore, been one of change and uncertainty, which has been of central importance in determining the textile industry's development.

3.1 PRODUCT STRUCTURE

The advent of synthetics in the 1960s has had a major impact on the textile industry's product structure. The substantial advantages synthetics have over wool in terms of fashion and market demands, lower prices, greater versatility, and suitability to improvements in knitting technology led to an expansion in synthetic production. As a consequence, the textile industry's overall growth in response to market demand has largely been associated with synthetic rather than woollen products.

Figure 2 shows the volume of production by the textile industry between 1960 and 1970, using the 1960 level of output as a base figure. In this period total textile production increased by 113 percent. Woollen manufacturing (excluding carpets), however, rose by only 40 percent, much lower than the comparative figure for synthetics of 145 percent. The enormous increase in hosiery was a major factor in this result, reflecting the surge in demand for women's pantihose after its successful introduction onto the market in the 1960s.

Woollen carpet and carpet yarn production was the main exception to growth in textiles being dominated by synthetics. From the graph, both carpets and woollen yarn were prominent in terms of the volume of output achieved. Reference to Table 3 also shows the carpet sector to have a relatively high turnover and value added, and it is the leading investor in capital equipment. In terms of its export contribution, the carpet sector accounted for 34 percent of the total FOB (free-

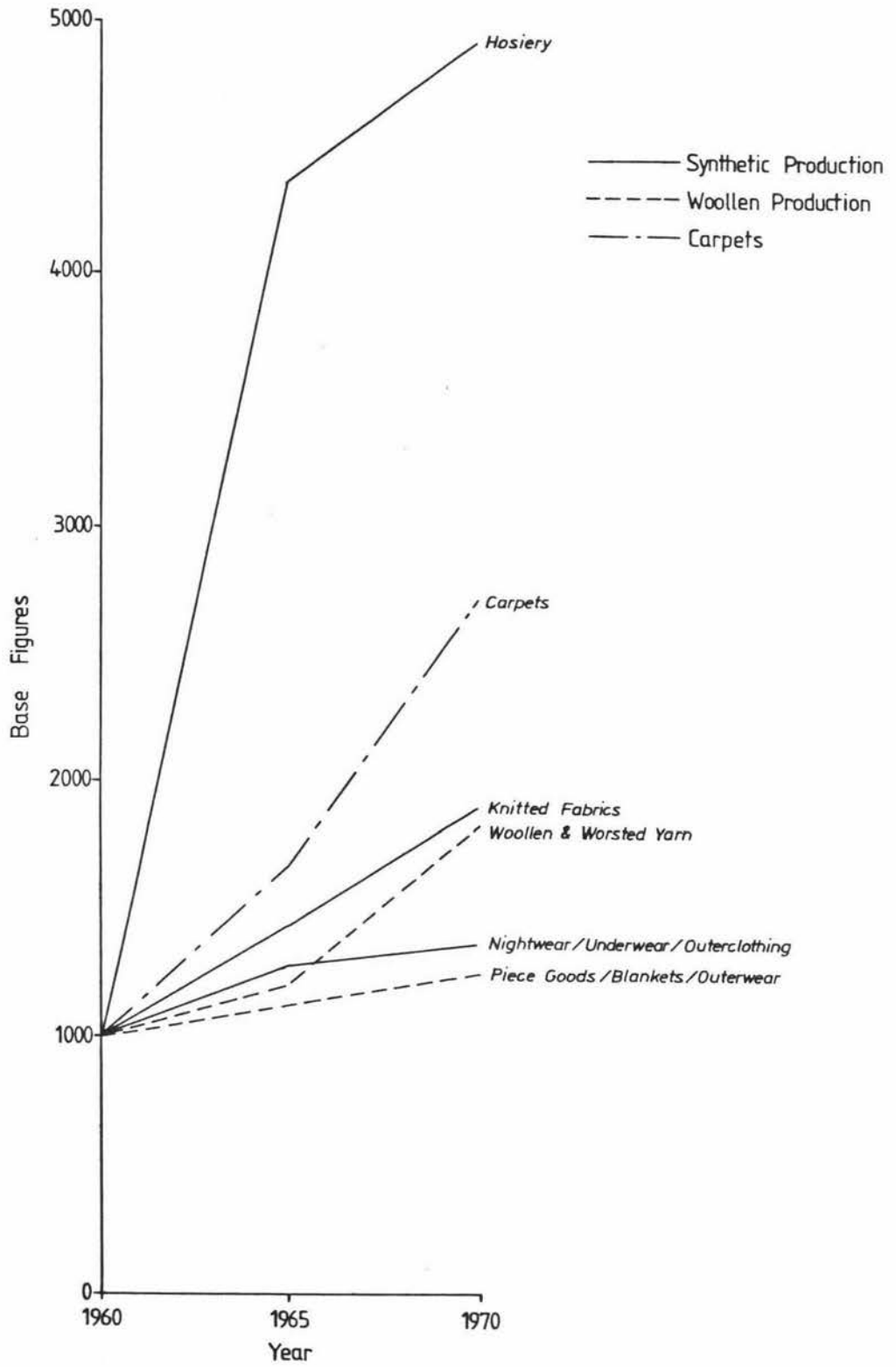


Figure 2 : Volume of Textile Production 1960-1970.

Source : Department of Statistics
(1971)

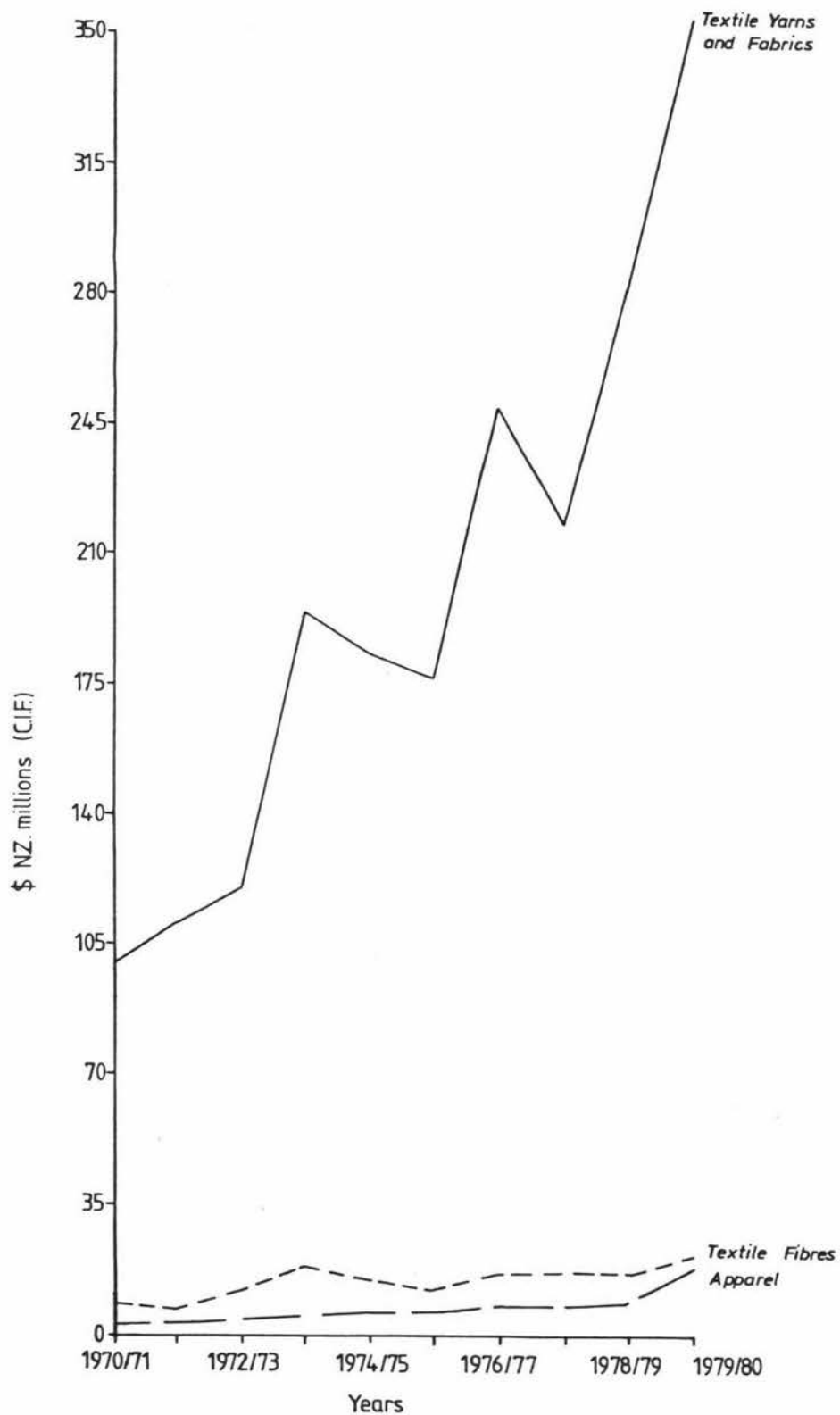


Figure 3 : Value of Textile Imports 1970/71 - 1979/80.
\$ NZ C.I.F.

Source : Department of Statistics
(External Trade Bulletin,
Imports, 1971-1980)

on-board), value of textile and apparel exports in 1979-80 (see Figure 5, below). Carpet production has, therefore, assumed major significance in New Zealand's textile industry, reflecting its connection with the agricultural sector, and its importance to the national economy.

New Zealand's textile industry is greatly dependent on overseas supplies of synthetic yarns and fabrics (IDC, 1979a). Figure 3 shows the CIF (cost-in-freight), value of textile imports between 1970-71 and 1979-80. Throughout the 1970s, the level of imports on New Zealand's market has been dominated by yarns and fabrics, which has provided domestic knitters and clothing producers with the bulk of their raw material inputs. This has lowered the domestic content of New Zealand's textile production and the real foreign-exchange value of textile exports. Similarly, textile fibre imports (also predominantly synthetic), have been extremely important in supplying the synthetic yarn and fabric industry with raw materials.

Apparel imports have formed a relatively insignificant amount of the total, a product of government's continued protection of 98 percent of New Zealand's clothing market. So while clothing manufacturers have been able to supply domestic market demands, they remain largely dependent for their raw materials on imported synthetics.

The textile industry's fashion and seasonal nature has led to producers compiling a wide range of goods to insure themselves against highly fluctuating demand patterns. Yet by continuing to produce many different products, textile manufacturers have effectively created and perpetuated variable demand conditions, which they have then found difficulty adapting to. This contradicts producers' aims to attain economies of scale in volume production and higher profits. Instead, by transforming market demands for greater textile output into greater variety output, manufacturers have themselves created a fundamental conflict between production and demand. This has led to the predominance of short-run textile production for the domestic market, which has greatly complicated the manufacturing process and prevented the attainment of economies of scale.

In the opinion of the IDC (1979a), short-run production is an economic weakness, because of the underutilisation of productive capacity. Although a few large companies have developed a degree of vertical integration to adopt longer runs, the vast majority of small firms have not. They remain dependent on managerial knowledge of the market and their ability to anticipate sudden changes in demand. Consequently, small-scale operators have tended to specialise in short-run production.

This situation illustrates the conflict between large-scale and small-scale production in the textile industry. While big firms have benefitted from economies of scale in volume production, they are relatively inflexible in product terms and have sometimes found it difficult to adapt to market fluctuations. On the other hand, small firms have not benefited from the cost-savings associated with long-run production, but they have gained significant advantages by being flexible and adaptable to variations in demand. Returns to scale have not, therefore, always favoured big size, particularly when producing for New Zealand's small and volatile market.

3.2 COMPANY STRUCTURE

Uncertainty and abrupt changes characteristic of the market structure have generated considerable pressure for change. To maintain competitiveness and profitability levels, textile manufacturers have had to adapt to varying market conditions or else face depressed sales volumes, and the possibility of either severe retrenchment, closure, or take-over.

The introduction of synthetics caused considerable organisational change in the woollen industry during the 1960s. Declining demand for woollen goods led a number of companies to undertake a series of take-overs and mergers to increase the depth of their operations, and raise cost-efficiency levels to those competitive with synthetic producers. Vickery (1975) claimed that this facilitated the development of large-scale integrated companies in the woollen industry, principal among them being

Alliance and Mosgiel.

To reduce the risks and uncertainty characteristic of the competitive market, individual firms will attempt to monopolise the market to increase their economic security (Galbraith, 1970). This explains why Mosgiel and Alliance adopted deliberate policies of acquisition to increase their respective sales volumes and reduce competition.

In the depressed market conditions prevailing, however, both companies tended to purchase units that were facing closure, scattered throughout the country, and producing a wide range of products (National Business Review, NBR, 1980). By allowing these to continue operating independently rather than rationalising them within their respective groups, Mosgiel and Alliance failed to improve their efficiency and profitability levels. In this case, large-scale production, as mentioned above, did not necessarily imply large returns. The two companies simply became progressively larger until Mosgiel's collapse in July 1980.

Rationalisation has also occurred in the carpet industry recently. Feltex's acquisition of Steven-Bremner's Foxton carpet factory, and Alliance's take-over of Holeproof's Auckland plant, both in 1980, has created the present situation in which nine companies control New Zealand's total wool and carpet production, and four produce the country's total carpet output. The IDC (1979a) cites six of the nine woollen yarn manufacturers as having integrated their operations to some degree, while three of the four carpet producers, Feltex, UEB and Alliance, are fully integrated, operating from the greasy wool stage right through to carpet manufacture.

Considering the contribution these two sectors make to the textile industry's production and export levels, the dominance by a small number of large companies assumes greater significance. In 1978-79, carpet and wool yarn production accounted for 27 percent of the industry's turnover, and 60 percent of the value of exports in 1979-80 (see Figure 5 below).

Similar trends towards large, vertically-integrated, multi-plant firms have emerged in synthetic manufacture. Lane Walker Rudkin (LWR), and Bonds have each developed a strong, cost-efficient operation, which has placed them in an advantageous position relative to other producers. At the beginning of 1980, LWR had a network of plants throughout New Zealand, ranging from the manufacture of synthetic yarns and fabrics to clothing production. While more technical yarn, fabric, and dyeing facilities were concentrated in Auckland and Christchurch, LWR had established garment factories in Greytown, Blenheim, Nelson, Westport, Greymouth, Reefton, Hokitika, Temuka, Waimate, Rangiora, and Gore. This was part of a long-term policy to remove labour-intensive sewing operations from major cities, and take advantage of the stability of labour in smaller towns (LWR, 1975). By keeping all processing units within its central structure, LWR has saved on production and transfer costs.

Bonds has also built a vertically-integrated operation, consisting of eleven product divisions located together in a four-hectare complex in Auckland, as well as a large hosiery plant in Porirua. Like LWR, integration has enabled Bonds to derive significant economies of scale in volume production, and achieve higher profits than small-scale producers.

While the development of vertically-integrated companies may have contributed to the textile industry's growth, the economic benefits associated with this have accrued to a progressively smaller number of firms. The market for woollen yarn and carpets is now controlled by a few major companies, while LWR, Bonds, and Holeproof have become market leaders in apparel and hosiery production. This has contributed to the growth of these firms and enabled them to reduce the level of competition from small producers.

Despite being oriented towards large-scale, inflexible production, big firms have been able to adapt to changing market conditions. A loss in one or two product areas, for instance, can be sustained as these companies have capital

support in other activities. Should losses continue, multi-plant firms tend to cease production in unprofitable product divisions, and direct resources to more lucrative operations.

Yet despite the versatility of short-run production, small firms tend to be more susceptible to market fluctuations. Clothing manufacturers, for instance, lack the operational depth to abruptly switch production to other products such as fabrics. If the demand for clothing was to suddenly fall, these firms would immediately become unadaptable producers of short-runs, and would be forced to either cut back production, close, or be taken over.

Contradictory production relationships within and between large-scale and small-scale firms have, therefore, led to the emergence of a textile industry characterised by a few, large, vertically-integrated companies, together with a huge number of small firms specialising in one-line production.

3.3 CURRENT ECONOMIC SITUATION

Since the 1973 oil crisis, there has been a significant recession in the domestic economy, with a prolonged period of rapid inflation, falling investment, high interest-rates, rising unemployment, and increasing transport costs. These conditions have depressed the level of consumer demand and contributed to a stagnant domestic market experiencing slow or negative economic growth (New Zealand Planning Council, 1981). The economic environment currently prevailing in New Zealand is thus characterised by a high degree of instability and uncertainty.

In recent times, the textile industry has, therefore, had to operate under very difficult market conditions. Figure 4 shows the volume of textile production between 1970 and 1980, which decreased overall by five percent. The rate of decline increased later in the decade as the volume of production fell by eleven percent from 1975 to 1980. This reflects the considerable reduction in consumer demand for textile products

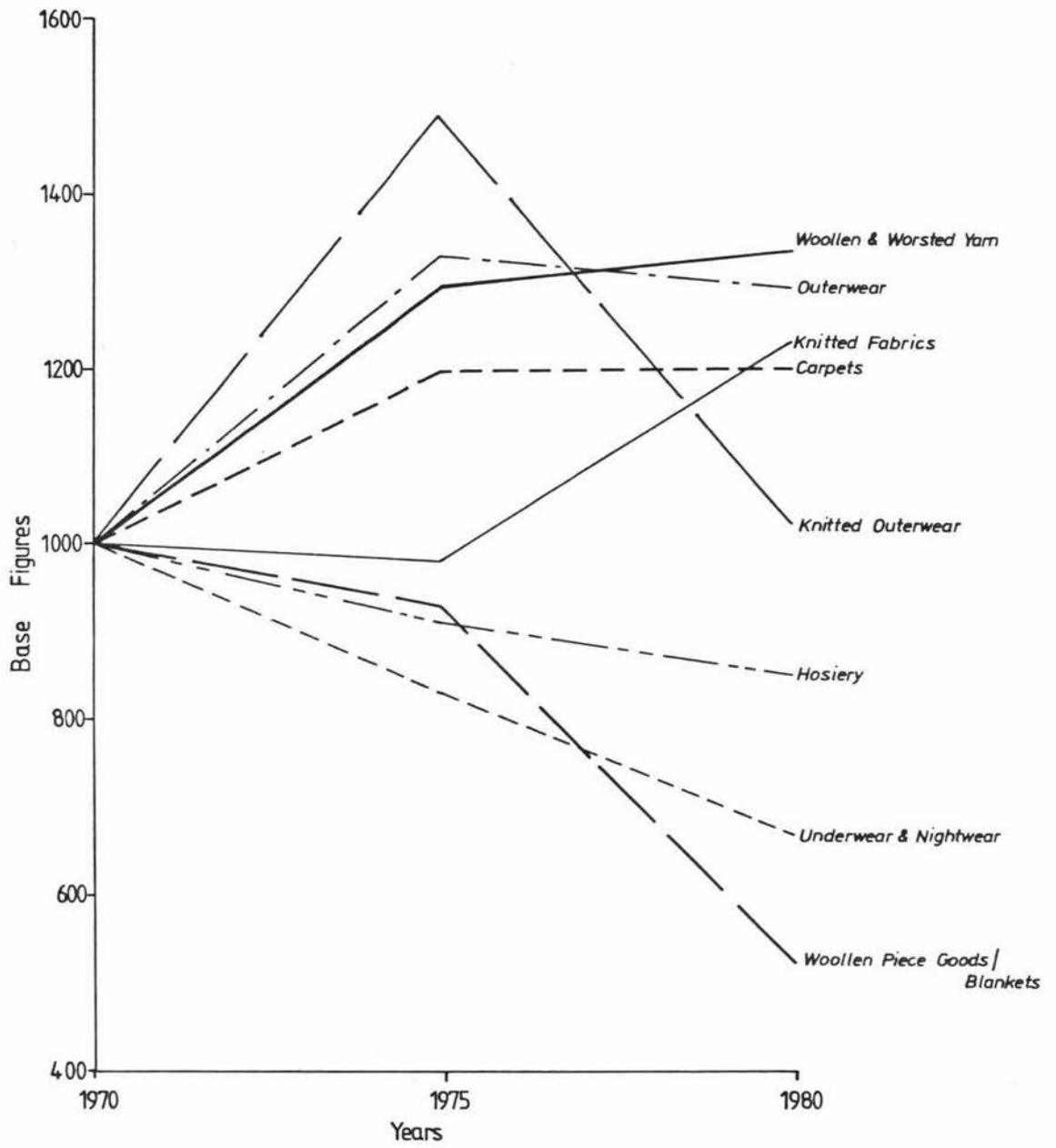


Figure 4 : Volume of Textile Production 1970-1980.

Source : Department of Statistics
(1981 b)

since New Zealand's economy went into recession. Between 1973-74 and 1980-81, for instance, apparel sales as a proportion of total retail turnover declined from a peak of nine percent to seven percent, while from 1977 to 1980, annual spending on apparel decreased by an average of 26 percent if the level of inflation is taken into account (Deanes, 1981).

Table 7 shows the progressive decline in textile employment between 1974 and 1980, which was largely a result of the difficult market conditions prevailing, but also partly due to the impact of technology. The employment decline has been particularly significant in spinning, weaving, and finishing operations, knitting mills, and clothing manufacture; sectors with the greatest labour input. The carpet sector's slight employment rise can be attributed to its growth in recent years (see Figure 4). Textiles NEC was the only sector to experience a large increase in labour, but in numerical terms this was relatively insignificant to the industry total.

TABLE 7: EMPLOYMENT CHANGE IN THE TEXTILE INDUSTRY, BY SECTOR. 1974-1980.

Sector	April 1974	February 1980	Change 1974-1980	
			N	%
Spinning, weaving & finishing textiles	7,024	5,368	-1656	-23.6
Made-up textiles	2,670	2,397	- 273	-10.6
Knitting mills	6,504	4,780	-1724	-26.5
Carpets	3,060	3,175	+ 115	+ 3.8
Textiles NEC	845	1,027	+ 182	+21.5
Clothing	23,675	21,398	-2277	- 9.6
Total	43,778	38,145	-5633	-12.9

Note: In 1980, the Department of Labour changed the half-yearly April/October survey, to a quarterly based one, with February being the only full coverage account.

Source: Department of Labour (unpublished statistics, 1974-1980).

By 1978, employment in the textile industry had fallen to 36,604. This was caused by re-negotiations in the New Zealand and Australia Free Trade Agreement (NAFTA), in 1977, when controls were placed on New Zealand apparel exports to Australia after having had unrestricted access in previous years. Although New Zealand's preferential advantage in Australia was preserved, the new arrangement gave Australian products greater access to the New Zealand market. Consequently, many small clothing producers were forced to close, while a number of large firms laid off staff in garment divisions as the domestic market for these products became increasingly competitive. LWR reduced its labour force by 833, or 25 percent in 1977-78, for instance, and as with the closures of small firms, regional areas were the worst affected by employment losses (LWR, 1978).

Despite a slight increase in textile employment between 1979-80, the domestic market for textile products has remained depressed. Producers unable to maintain competitiveness have been faced with either closure or retrenchment. According to the Textile and Garment Manufacturers' Federation (TGMF, 1980), over 50 clothing units closed during 1979-80, while from 1978 to 1980, 20 knitwear specialists shut down. In the Canterbury, Westland, Nelson and Marlborough area, sixteen textile factories closed between 1977 and 1980, causing 305 redundancies, while seven other companies laid off 348 textile workers (Canterbury Clothing Union, pers comm, 1981)¹.

A few large, integrated textile companies have adapted to uncertainty in the market by introducing their own internal restructuring programmes. In most cases, unprofitable operations have been phased out so that resources can be concentrated in product areas where the market offers opportunities for growth.

Holeproof (formerly Prestige-Holeproof), for instance, closed a lingerie and knitwear unit in Stratford in 1978, leased its Shannon and Wellington yarn producing plants to Fibremakers, and sold units in Frankton and Te Awamutu in

1979. Two Auckland divisions were also closed as they were proving costly to the company. As a result, Holeproof has concentrated operations in its Auckland head-office location, with one large branch-plant located in Palmerston North.

LWR closed two Wellington plants in 1976, rationalising these with a unit in Auckland, and in 1978 sold its Ashburton factory to Mosgiel, laid off thirty workers in Nelson, and closed a large plant in Whangarei. In the latter two cases, LWR's action was mainly responsible for the decline in textile employment experienced by Nelson and Whangarei, as shown below in Table 8.

LWR's major restructuring programme, however, was not initiated until late 1980, largely in anticipation of government's policy action. The details of this will be left for Chapter Five. Similar programmes have been pursued by other large textile firms, including Alliance, Feltex, Bing Harris, Bonds, and Deanes.

The number of unemployed textile workers these firms created through both closures and redundancies was considerable. As most of these occurred in peripherally located branch-plants, individual company restructuring has tended to reinforce the metropolitan concentration of textile activity, particularly in Auckland and Christchurch.

So the contradictions inherent in capitalist growth have also characterised the restructuring process. To increase production, metropolitan based, multi-plant companies initially established branches in peripheral areas to benefit from the advantages these locations offered. With the decline in domestic demand, however, production in these plants has been stopped and concentrated in units located in major market centres. In the depressed market environment, therefore, conflicting production relationships have again been expressed in the textile industry's core-periphery spatial structure.

With the domestic market for textile products in decline, in order to grow and accumulate a surplus, firms have had to extend their market via the export trade. The TGMF (1980, 1981) have repeatedly stressed that exports are the key to growth in textile manufacturing, and a few producers have responded by increasing export production.

To export successfully requires firms to primarily save costs. So proximity to major urban centres with international transport links has been especially important. But this has necessitated a location away from peripheral areas where labour has been a cost-saving. It would appear that the advantages of having access to overseas markets are greater than the benefits from low cost peripheral labour, which has led a few textile producers to abandon production in peripheral locations to concentrate on producing for exports in metropolitan areas.

Figure 5 illustrates the growth in the value of textile and apparel exports between 1970-71 and 1979-80. Exports have risen substantially, especially since 1974-75, when it first became apparent that the domestic market offered little opportunity for growth. The new NAFTA conditions led to a reduction in the value of apparel exports in 1976-77 and as a result, a decline in the rate of increase in total export production. In the year since 1978-79, however, textile exports rose by 30 percent. The textile industry now ranks as the third most important manufacturing exporter behind aluminium and forest products (IDC, 1979a).

New Zealand textile producers have to be efficient in terms of the international economic order to be competitive on overseas markets. This has required the adoption of long-run production, so firms can derive economies of scale and increase productivity through a more efficient use of resources. Yet the level of these economies has largely been dictated by overseas demand, which is often contradictory to domestic requirements. Large, exporting firms face, therefore, conflicting market demand situations, and have often found difficulty adjusting production levels to cater for both.

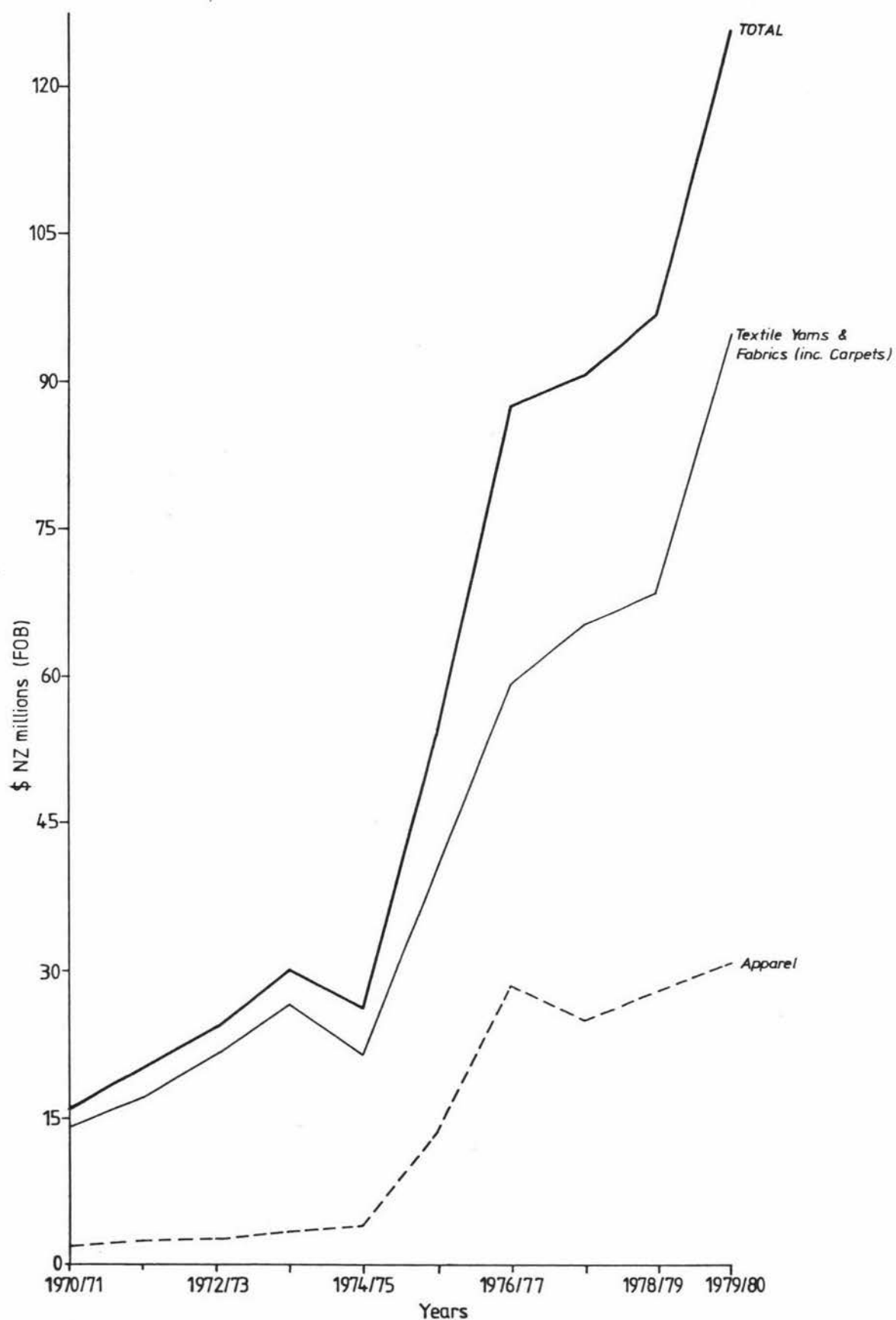


Figure 5 : Value of Textile Exports 1970/71 to 1979/80
\$ NZ FOB.

Source: Department of Statistics
(External Trade Bulletin, Exports,
1971-80)

Scott (1980) claims that during times of economic recession, the difficulties encountered by producers in regional development areas are greatly increased. Small textile firms in peripheral locations have few alternatives but to continue producing for a stagnant domestic market. But large, integrated companies have been able to reconstruct operations towards more profitable product areas and export markets, and in so doing have gained considerable advantages over smaller competitors. Consequently, the capital benefits associated with increased textile production have tended to be concentrated in the hands of a few. This has widened inequalities between large and small textile firms, which Harvey (1975) argues will be reflected by growing inequalities between core and peripheral regions.

3.4 SPATIAL STRUCTURE

Uncertainty in the market environment, together with the need to manufacture a wide range of products for the domestic market, has encouraged the spatial concentration of textile activity in the major metropolitan centres of locational advantage. Auckland in particular has provided a favourable environment for industrial growth, with a large pool of specialised labour, an assured domestic market, ready access to export markets, low cost distribution, and linkage facilities. As a result, textile firms have generally preferred to locate there to take advantage of the cost-savings associated with the agglomeration of economic activity.

Table 8 indicates the effects that the depressed market conditions between 1974 and 1980 have had on the textile industry's spatial distribution. During this time, the South Island experienced a reduction in textile employment six-times greater than that in the North Island. Christchurch, Timaru, and Dunedin lost a total of 2631 textile workers, representing a significant decline in each district's employment base. This reflected the concentration of the woollen milling industry in these areas, which owing to the competition from synthetics, and continued use of outdated plant, has been

TABLE 8: EMPLOYMENT CHANGE IN THE TEXTILE INDUSTRY: BY DISTRICT
1975-1980

DISTRICT	1975		1980		Change 1975-80	
	N	%	N	%	N	%
Whangarei	461	1.1	273	0.7	- 188	-40.8
Auckland	15,199	37.1	15,341	40.2	+ 142	+ 0.9
Hamilton	1,638	4.1	1,721	4.5	+ 83	+ 5.1
Tauranga	537	1.3	594	1.6	+ 57	+10.6
Rotorua	940	2.3	896	2.4	- 44	- 4.7
Gisborne	292	0.7	317	0.8	+ 25	+ 8.6
Napier/ Hastings	972	2.4	941	2.5	- 31	- 3.2
New Plymouth	682	1.7	595	1.6	- 87	-12.8
Wanganui	1,141	2.8	890	2.3	- 251	-22.0
Palmerston North	2,832	6.9	2,843	7.5	+ 11	+ 0.4
Masterton	447	1.1	457	1.2	+ 10	+ 2.2
Wellington	3,243	7.9	3,106	8.1	- 137	- 4.2
North Island	28,384	69.2	27,974	73.3	- 410	- 1.4
Blenheim	227	0.6	229	0.6	+ 2	+ 0.9
Nelson	222	0.5	187	0.5	- 35	-15.8
Greymouth	253	0.6	299	0.8	+ 46	+18.2
Christchurch	7,381	18.0	5,806	15.2	-1575	-21.3
Timaru	790	1.9	379	1.0	- 411	-52.0
Dunedin	3,354	8.2	2,709	7.1	- 645	-19.2
Invercargill	404	1.0	562	1.5	+ 158	+39.1
South Island	12,631	30.8	10,171	26.7	-2460	-19.5
Total N.Z.	41,015	100.0	38,145	100.0	-2870	- 7.0

Source: Department of Labour, (unpublished statistics, 1975-1980).

most affected by reduced market demand. Also, the South Island in general has been worst hit by the economic recession, and has lacked investment funds to improve its operating environment.

As the North Island had a much smaller reduction, an increased proportion of the textile labour force is now located there. The growth in Auckland, Hamilton, and Tauranga was significant, particularly during a period in which the industry as a whole suffered a decline. Auckland's three percent rise in the proportion of textile employment has reaffirmed its dominance in the industry's spatial structure, and the continued agglomeration of textile activity there is indicative of the advantages to be gained from a metropolitan location. Although Wellington's decrease would appear to contradict this claim, it nevertheless increased its share of the country's textile workforce.

Christchurch, however, experienced a proportional loss in the industry's total employment. This partly reflected the closure of two large woollen milling companies, Kaiapoi and Millers, which caused the redundancies of large numbers of textile workers. Again, this shows that big size alone is not a guarantee of success. As with the Kaiapoi case, a significant amount of Christchurch district's employment loss can be attributed to closures and redundancies in small towns outside the metropolitan area. The city itself has remained an attractive location for textile firms because of its market functions, as indicated by Christchurch's continued importance in national terms and dominance in the South Island.

With the exception of metropolitan Christchurch, districts with a large percentage loss in textile employment are generally depressed areas in which there are few alternative job opportunities. Whangarei, New Plymouth, Wanganui, Nelson, Timaru, and Dunedin are each characterised by a relatively stagnant manufacturing base, and textile workers (particularly female), made redundant in these districts face the prospect

of a prolonged period of unemployment. In her study of the Mosgiel collapse, for instance, Hancox (1981) found that in one Dunedin-based knitwear division, 65 percent of her sample of women laid off were unable to obtain work. She claimed that the widespread lack of jobs in Dunedin had forced many women back into their homes, while a considerable number of older women had been pushed into involuntary retirement.

As the textile industry has often been a large employer of labour in depressed regional areas, the effects of textile unemployment may hasten the decline of their local economies. The loss of community spending power, for instance, may cause a significant fall in demand for a wide range of goods and services, leading to further unemployment and capital loss from the local area. This may encourage young people in particular, to migrate to other centres in search of work, thus creating problems of an ageing population unable to generate economic growth. Textile unemployment in peripheral areas may, therefore, widen inequalities between them and metropolitan locations.

In the past, to minimise uncertainty personal factors have also been important in the location decision (Richardson, 1978). Small textile producers in particular, have generally preferred to establish operations in their familiar local area, where they could rely on local capital and labour sources, business acquaintances, and the availability of cheap land. This has been a major factor in the location of many textile firms away from the main market centres.

During the 1970s, however, these producers have incurred significant disadvantages. The implementation of equal pay increased production costs considerably in the industry, owing to the high female labour component. By paying equal wages, textile producers in peripheral areas lost the locational advantage associated with a reliable supply of low cost female labour. This has increased the attraction of a metropolitan location, although inertia has prevented many firms from relocating.

With further increases in fuel prices since the 1973 oil crisis, transport costs have become extremely important. Transport subsidies available to firms in regional development areas have generally been insufficient to counter the high costs of distribution. For South Island and peripherally located textile producers in particular, transport costs have escalated, and now represent a major problem. With more fuel cost increases likely in the near future, the disparities between core and peripheral areas will probably widen. Firms in outlying districts will, therefore, be less able to compete with those in market centres, and may be forced to either relocate to these centres themselves, or close down.

Increasing transport costs have thus led to the emergence of a contradictory relationship between production and location. Initially, improvements in transport facilities allowed textile manufacturers to set up factories in regional locations to take advantage of a cheap supply of female labour. But with equal pay and increases in transport costs, producers have been encouraged to locate in core areas. Yet for many firms this move is impossible, which may perpetuate conflicting core-periphery relationships and lead to widening spatial disparities.

To summarise, uncertainty and change in the market structure have generated a set of contradictory relationships of which the textile industry's spatial structure is an expression. Depressed economic conditions have made short-run production for the domestic market difficult, and together with rising labour and transport costs in peripheral areas, have increased the advantages to be gained from a metropolitan location. As small firms have generally lacked capital to adjust product operations and/or relocate, their locational response has tended to take the form of closures or severe retrenchment. This is indicated by the decreased level of textile employment in peripheral areas, shown in Table 8.

Large, multi-plant companies have contributed to this pattern, by closing or reducing operations in regional locations *as a means to grow*. These firms have responded to the depressed domestic market by concentrating production in metropolitan Auckland and Christchurch in an attempt to capitalise on expanded export markets. As a result, these firms have tended to accumulate more capital and increase their market power at the expense of smaller competitors.

The emergence of a contradiction between production for the domestic market and production for export markets has, therefore, reinforced the concentration of textile manufacturing in metropolitan market centres and caused a decline in peripheral regions. As Harvey (1975) would have it, the contradiction between the spatial concentration of production and the geographical expansion of production, has been expressed in spatial terms by a developing core-periphery structure in the textile industry.

CHAPTER 4

TECHNOLOGICAL ENVIRONMENT

The widespread adoption of technology has become a central feature of modern economic development. Galbraith (1974) has defined technology as the systematic application of scientific and other organised knowledge to practical tasks, and claimed its most important consequence is to force the division of any task into component parts. This has shaped modern production processes and provided the basis for industrial growth.

The technological environment affecting the textile industry has been one of progressive and rapid change. Over the past twenty years, textile machinery has become increasingly advanced, which has played a decisive part in the industry's growth. For exporting firms effective use of the latest textile technology has been essential to increase productivity and achieve international competitiveness.

The small size of New Zealand manufacturing relative to international standards, however, has generated weaknesses in quality, technology, and management, and has led to a dependence on foreign technological developments for industrialisation and growth (Stuart, 1980). Textile producers, particularly of synthetics, must purchase expensive machinery from overseas suppliers. This has increased the dependence of New Zealand's textile industry on imported technology and encouraged the location of activity in metropolitan areas with international transport links and technical expertise.

4.1 PRODUCT STRUCTURE

Technological application changes the conditions of production faced by an industry, and necessitates a re-organisation of operations towards particular product areas (Massey and Meegan, 1979a). The growth in synthetic textiles was largely a result of their suitability to technological developments. These have significantly reduced the costs of synthetic production, which has led to the pre-eminence of synthetics on the market

for textile products.

Versatile synthetic materials have also increased the adaptability of textile technology to the short-run nature of New Zealand textile production. Sophisticated machinery is now capable of both substantially raising productivity, while also producing a wide range of products to cater for variations in market demand. But as such equipment is costly, and provides most benefits when operating at full capacity, producers using machinery have tended to orient production towards relatively inflexible long runs. The conflict between small-scale and large-scale production has, therefore, persisted despite the introduction of technology.

Table 9 shows the average amount of capital expenditure per unit in the textile industry from 1973-74 to 1978-79, and the level of value added per unit in 1978-79. Substantial increases in per unit capital investment occurred in most product sectors, while the industry as a whole raised its absolute level of expenditure by \$19.6 million (168 percent). Textiles NEC was the only sector to reduce its per unit investment, and clothing producers (which excludes garment divisions of knitting firms), had a slight increase, well below the industry average.

Sectors investing large amounts in capital equipment have also achieved high levels of value added per unit. Woollen products, specifically carpets, woollen fibres, and wool scouring, are ranked highly on both variables, reflecting New Zealand's pre-eminence in the application of wool technology. The IDC (1979a) claims that recent developments in woollen production have allowed New Zealand producers to become highly competitive on overseas markets. Large capital investment in carpet and carpet yarn manufacture has been a major factor in increasing output levels for both domestic and export markets.

TABLE 9: AVERAGE CAPITAL EXPENDITURE PER UNIT IN THE TEXTILE INDUSTRY; 1973-74 TO 1978-79.

SECTOR	Capital Expenditure per unit \$ 1973-74 Rank		Capital Expenditure per unit \$ 1978-79 Rank		Value Added per unit \$ 1978-79 Rank	
	Wool Scouring	19,130	5	72,480	3	415,120
Woollen Fibres	77,440	1	198,460	2	1,042,570	1
Man-made fibres	18,200	6	33,930	6	560,500	3
Dyeing & finishing	3,500	9	41,120	5	210,940	7
Canvas goods	1,760	10	5,320	9	90,540	10
Made-up textiles	5,320	7	19,500	8	148,380	9
Knitting Mills	24,010	4	51,550	4	411,840	5
Carpets & Rugs	64,610	2	293,720	1	740,140	2
Textiles NEC	26,110	3	24,330	7	253,700	6
Clothing	4,620	8	5,040	10	180,840	8
Total	11,100		26,200		244,560	

Source: Department of Statistics (Census of Manufacturing, 1979a, 1979b, 1981a).

Technological developments in synthetic production have been particularly significant in those product areas characterised by longer production runs. Table 9 indicates that knitting mills, dyeing and finishing operations, and man-made fibre production each operate on a capital-intensive basis, which has contributed to the attainment of higher levels of value added per unit.

The knitting industry installs a wide range of machinery, with an on-going programme of plant replacement bringing in the latest of overseas technology (IDC, 1979d). Electronically controlled knitting machines in particular, have improved pattern designs and increased production speeds.

LWR (1980), for instance, recently installed one of the most modern knitwear machines in the Southern Hemisphere, capable of knitting twelve garments at a time, and producing 200 dozen garments a week. Bonds regularly introduces new machinery

into its yarn processing, knitting, and dyeing divisions. This has enabled the company to incorporate the latest garment ideas and overseas production trends very quickly. In 1979, Bonds installed newly developed French equipment that simultaneously prints and laminates knitted fabrics and in 1981, jet dyers capable of handling a variety of materials were introduced. Bonds (1981) claimed that this was the first step towards a fully automated dyeing operation based on computer match systems, which has greatly increased the quality of its knitted fabric output. Plant modernisation in Bonds' hosiery division has also transformed a previously unprofitable operation to one that is highly competitive on both domestic and overseas markets. By applying the latest textile technology, knitters have significantly lowered costs, increased productivity, and improved the quality of production. Thus, the knitting sector has become one of the strongest and efficient in the textile industry, providing an excellent service to both local and export markets (IDC, 1979d).

Although the man-made fibre sector has relatively high levels of capital expenditure and value added per unit, the small size of New Zealand's market has constrained producers from attaining optimal use of machinery. Synthetic yarn extruders and texturisers have operated at levels well below the capacity of their equipment, which has substantially raised the costs associated with short-run production.

This highlights the conflict between small-scale and large-scale production discussed above. Producers of synthetic yarn have adopted technological processes, but because domestic demand has been insufficient for long-run production, the potential advantages to be gained have not materialised. This has been a major factor preventing this sector from competing successfully on overseas markets. Prices for New Zealand-produced synthetic yarn, for instance, range from 40-200 percent higher (depending on the yarn type), than their imported equivalents (IDC, 1979a). Yet ironically, exports offer the only solution (albeit temporary), to this conflict between technological, large-scale production and low domestic demand.

4.2 COMPANY STRUCTURE

Difficult market conditions have intensified the pressure for textile producers to keep up with the latest technological innovations. To expand production and increase competitiveness, capital investment in textile equipment has become imperative. This has generated a trend towards large-scale integrated companies with the capital to afford technology, and thereby gain superior control over its application.

Technologically-oriented firms tend to be more adaptable to rapid changes in market demand, but only if they can attain optimal use of textile machinery. When the market for garments became extremely competitive after the re-negotiation of the NAFTA agreement in 1977, for instance, LWR adapted by shifting its emphasis from garment to fabric production where there was a high demand. By investing in a wide range of knitting plant and operating this at full capacity, LWR was able to lower production costs and raise the competitiveness of both its fabric and garment output.

Small textile firms, however, have tended to specialise in producing a variety of fashion goods within the same basic product category. They have adopted processing techniques generally unsuited to technological change at present and as a result, have been unable to produce large volumes at lower unit costs. This has made small firms less competitive relative to large textile companies, except for a few exceptional cases, where a firm specialises in high value products for a very small part of the market.

Despite low domestic demand, textile manufacturers have continued to push up production through the use of technology. To prevent an over-supply on the domestic market, therefore, market expansion via exports has become essential for textile companies adopting technology. Conversely, the use of technology has become vital if firms are to be competitive on overseas markets.

To export successfully, it has been estimated that a textile firm must spend between one million to two million dollars a year on the latest machinery to provide the variety and price structures that are internationally competitive (Green, 1980). In 1980, LWR invested \$1.2 million on capital equipment and increased this to \$2.5 million in 1981 (LWR, 1980-81). Bonds spent \$1 million on new machinery and \$2 million to consolidate knitting plant in 1980, and in 1981 invested \$2.1 million on new equipment (Bonds, 1980-81).

The TGMF (pers. comm., 1981)² claim that this type of machinery usually takes about ten months to pay back in terms of productivity gains. Only large companies have, therefore, been able to risk such high levels of capital investment. In New Zealand's uncertain economy, small firms have neither the resources, nor the incentive to purchase expensive equipment. Consequently, they have been further disadvantaged by limited access to technological resources and inability to export.

Technological advances in textile machinery tend to be extremely rapid, and so require constant re-examination and appraisal. To keep up with the speed of change, large companies like LWR and Bonds have regularly sent research and development (R & D) personnel overseas to determine the latest trends in both international production and market demand. This has become particularly important for companies competing on export markets, and has placed a priority on effective R & D, marketing, and management techniques.

The principal reasons for the Mosgiel collapse, for instance, were the lack of management and marketing skills, and the continued use of obsolete machinery. Apparently, the company was paying out a much greater amount in wages and salaries than the revenue it was earning and, therefore, could not afford to modernise its capital equipment. Without any technological input, Mosgiel kept operating at high costs, was unable to export, became progressively less competitive on the domestic market, and was eventually forced into receivership.

Maxwell (1977) has argued that the majority of textile firms in New Zealand are more production oriented than marketing oriented. Protection meant there was little need for manufacturers to emphasise management, marketing, and R & D skills. Instead, these have been confined mainly to larger exporting companies requiring continual replacement and modernisation of textile machinery in response to market and technological developments. LWR, Bonds, Feltex and Alliance have each put a priority on marketing and R & D resources to promote export production, which has also given them advantages on the local market. Small firms, however, are accustomed to having the domestic market protected for them, and have not developed the marketing and technical skills to compete overseas, or against New Zealand's large-scale exporting companies.

Expanding company size has, therefore, been of central importance for the effective use of advanced textile technology. Large firms can afford to invest in expensive machinery, and so increase the scale of production and accumulate more capital. To achieve this, however, has required success on export markets and also the employment of high cost management, marketing and R & D expertise. Both these factors have encouraged a metropolitan location. Core areas have also been more favourable to technological firms as the diffusion of innovation to the periphery is often slow.

On the other hand, small-scale producers unable to export have fewer opportunities to use technology and as a result, have become less competitive on the domestic market against large firms. Again, this is an indication of the conflict between domestic and export production. While technology provides the means for small firms to both increase competitiveness on the domestic market and produce for export markets, because the control of technological investment and the benefits from its application are concentrated in a small number of large textile companies, they have been unable to do so. This has contributed to the decline of textile activity in peripheral areas, despite an abundant supply of low cost labour.

4.3 EMPLOYMENT STRUCTURE

Technological developments have had a major impact on what has traditionally been a labour-intensive textile industry. As Vickery (1975) claims, the type of machinery being installed in many plants is changing the industry to one based increasingly on capital-intensive operations. The use of automated, computer-controlled machinery capable of substantially raising production with a much smaller labour input has been particularly significant. Companies using this type of equipment have released large numbers of semi-skilled and unskilled process workers, and have at the same time accumulated greater profits through increased productivity.

Figure 6 shows the average number of employees per establishment over the past two decades, and illustrates the effects of technology on the textile industry's employment patterns. Between 1960-61 and 1970-71, while the number of factories decreased, the number of employees per factory rose from 30 to 39, indicating larger operating units, particularly in sectors characterised by high levels of capital expenditure.

During the 1970s there was a dramatic reversal of this trend, when the average number of workers per unit fell considerably. This was largely a result of the progressive introduction of automated machinery, but partly due to the general decline in employment that occurred in the 1970s, as shown in Table 7.

Textile manufacturers have been encouraged to use capital-intensive machinery because of the high labour cost component in textiles. Yarn and fabric producers in particular, have experienced increasing mechanisation in recent years, which has led to the redundancy of large numbers of unskilled workers, especially females. Reference to Table 7 shows that between 1974 and 1980, the decline in female employment in spinning, weaving and finishing was 32 percent compared to 18 percent for males, while in the knitting sector, females made up for 68 percent of the total job loss. This also relates to producers laying off female labour with the introduction of equal pay.

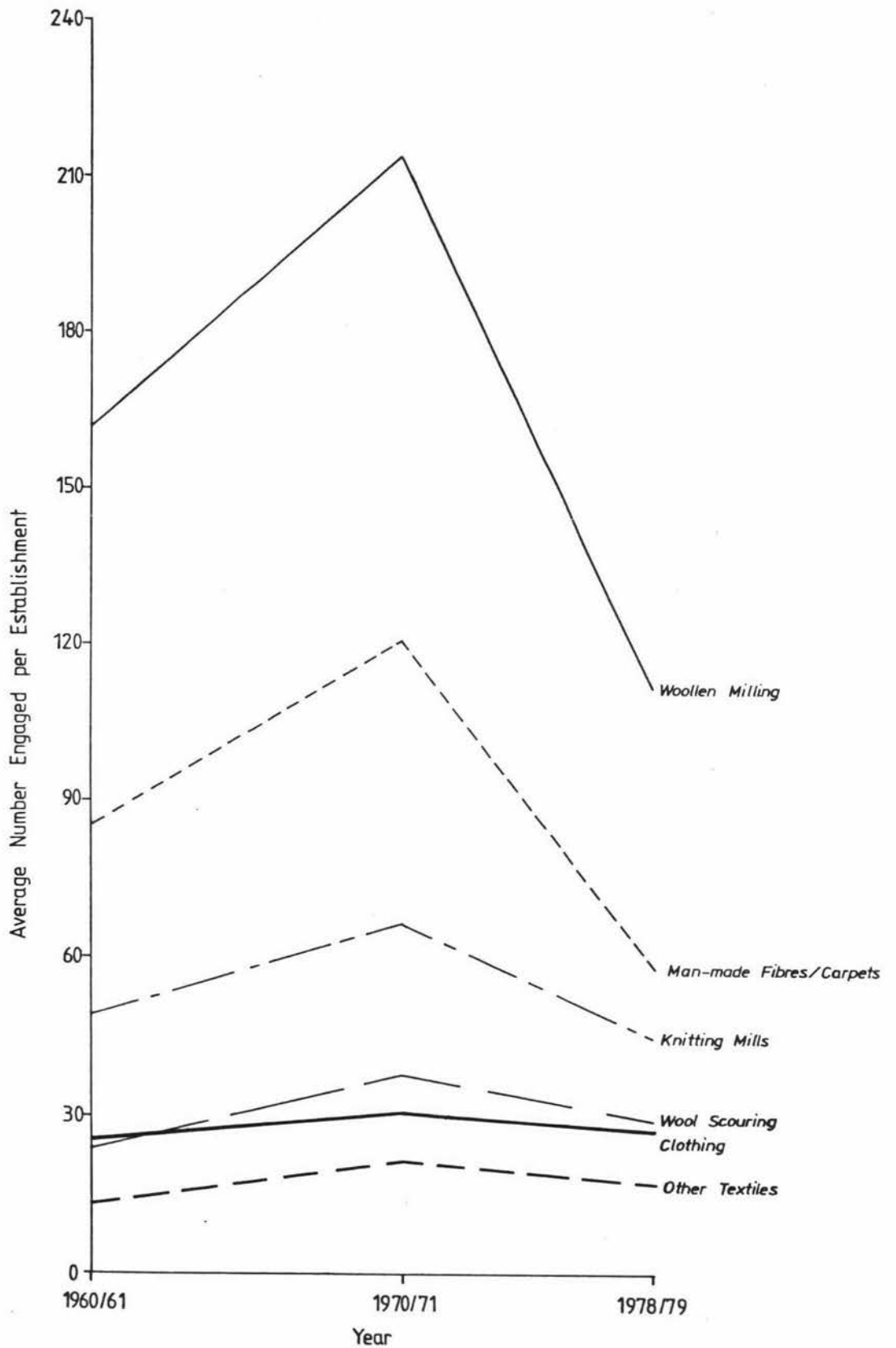


Figure 6 : Average Employment per Textile Establishment
1960/61-1978/79.

Source: Department of Statistics
(1963, 1973, 1981a)

But while producers have adopted technology to reduce labour costs, they have also had to employ a greater number of highly paid skilled workers, particularly knitting technicians and machine operators. The establishment of a textile training school in Auckland aimed to provide the industry with the expertise needed to make full use of productive machinery. This has encouraged manufacturers introducing capital-intensive operations to locate in Auckland, to take advantage of the specialised labour skills available, but where labour is better organised and likely to demand regular increases in wages. Consequently, the use of technology has again reduced the need for unskilled, low cost labour in peripheral areas, precisely the type of labour that had allowed textile producers to save on costs in the past.

Although technology has increased textile production, by also increasing unemployment textile producers have effectively reduced consumer demand at a time when demand needs to be high to absorb the additional output. This illustrates a fundamental contradiction between production for profit and production for the market. Manufacturers using technological machinery could very well over-supply the market demand for textiles, which would lead to price reductions and lower profits, even though this technology was initially introduced to increase profits. With higher textile unemployment, furthermore, the benefits from increased labour productivity through technology is likely to flow to a few producers, thereby widening socio-economic inequalities.

4.4 SPATIAL STRUCTURE

To keep up with the latest technological developments, textile producers have tended to concentrate in metropolitan areas. Auckland in particular, has served as the industry's centre for innovation, managerial and technical expertise, and 'port of entry' for the latest overseas technology and ideas. By providing a favourable environment for technological change and, in the opinion of Taylor and Le Heron (1977), a

disproportionate share of New Zealand's inventive and innovative activity, Auckland offers many advantages for textile firms located there. This has yet again encouraged the growth of large-scale integrated companies in the Auckland area.

The ability of technology to break down the productive process into component parts has also facilitated the spatial dispersal of production. Operations based on unskilled or semi-skilled labour have, in the past, located in peripheral areas with a large supply of low cost female workers ideally suited to unsophisticated processing techniques. Conflicting production relations in the technological environment have, therefore, contributed to the concentration of textile activity in metropolitan locations together with the proliferation of many units in peripheral regions.

Technological developments in the textile industry have led to its spatial structure approximating what Massey and Meegan (1979a) have identified as a locational hierarchy. This has resulted from changes in labour skill requirements, the need to expand productive capacity, and the concentration of R & D facilities in a few large-scale enterprises, all of which have been a product of the re-organisation of production processes associated with the application of textile technology. A locational hierarchy reflects, therefore, the conditions of production inherent in the spatial division of labour prevailing at a particular time.

Inequalities are a characteristic feature of this division of labour (Massey, 1979b). Large textile companies using the latest technology and machinery have generally preferred a metropolitan location where the technical labour skills needed are available. Ready access to R & D personnel, skilled machinists, and knitting operators have allowed firms to obtain optimal use from textile equipment and achieve considerable cost-savings as a result. On the other hand, small-scale clothing operations based on a semi-skilled workforce and thus lower wages, have often located in peripheral areas where such labour (particularly female), is in good supply.

Expanding company size has increased the feasibility of separate locations for different production stages, which has also led to the establishment of locational hierarchies. Multi-plant firms have tended to locate control and R & D functions in major urban centres with a concentration of managerial and research personnel. Processing operations, however, have often been located in peripheral regions to take advantage of a reliable source of low cost labour and the availability of cheap land. This explains the operation, first by Holeproof, and then Fibremakers (both based in Auckland), of a synthetic yarn plant in Shannon. Alliance and Mosgiel (before it collapsed), have each located large branches in Oamaru, Milton, Ashburton, and Mosgiel. As mentioned above, LWR has also operated units in as many as eleven different areas outside its Christchurch and Auckland locations, where control functions and technologically based activities are concentrated. Increasing use of textile machinery has, therefore, facilitated the spatial separation of different production processes, and led to the development of locational hierarchies based on varying labour requirements.

But as Smith (1977) points out, the spatial spread of production has not necessarily been associated with the dispersal of control. Within a locational hierarchy, capital gains and investment are more likely to be directed to its 'top-end' where managerial, R & D, and technological activities are concentrated in core locations. Mention has been made of multi-plant firms closing peripheral units in response to changing market conditions. This has inevitably led to the concentration of production in fewer, technologically oriented plants in metropolitan areas. Fibremakers' decision to close its Shannon factory in favour of its Auckland location in July 1980, for instance, was a result of the company's control and R & D functions being localised in Auckland.

To summarise, the concentration of technological facilities, skilled labour, and control functions in metropolitan centres has reinforced the agglomeration of textile production in

Auckland, and to a lesser degree Christchurch. But in using technology, manufacturers have located where labour costs are high, and where competition for both technological and labour resources has increased the costs of production. Conversely, production has been abandoned in peripheral areas where a large supply of low cost labour and land is available to reduce production costs. This has contributed to the higher incidence of closure amongst peripherally located textile factories, both branch-plants and independent units, which has created many difficulties for small towns dependent on them for employment.

So changing production relationships associated with technological developments in the textile industry have once again been expressed in a core-periphery spatial structure, that has inevitably led to increasing spatial inequalities.

CHAPTER 5

POLITICAL ENVIRONMENT

5.1 GOVERNMENT POLICY

The functions and organisation of the State have evolved through the development of the capitalist mode of production (Clark, 1980). Government policy decisions usually complement capitalist objectives for economic growth, and may have a significant bearing on the conditions for continued production faced by an industry. Mention has been made of government protection, and how this has been extremely important in the textile industry's development. As the IDC (1979a) states, import-licensing has led to the growth of a local industry which has provided substantial employment for a wide cross-section of the community, has saved overseas funds, and become an important exporter.

The political environment affecting textile manufacturing was fundamentally changed in 1980, with the National government's adoption of a new industrial policy. This was based on an assumption that significant structural economic changes are required to strengthen New Zealand's economy (Gallacher, 1980). Import-substitution industries are now considered to be costly and inefficient if needing protection, and so government has placed greater emphasis on assisting industries oriented towards export production. By exposing the manufacturing sector to 'freer', that is international, market forces, government hopes to re-allocate resources to exporting activities which earn foreign exchange, rather than import-substitution activities that save foreign exchange. This will supposedly ease New Zealand's balance-of-payments deficit, stimulate domestic demand, expand employment, and promote economic growth (New Zealand Planning Council, 1981).

Government restructuring of the economy towards export production, however, has led to a strategy emphasising rapid industrial development, with little regard for the social and economic consequences. The proposed energy projects, for instance,

require massive amounts of capital in the form of overseas investment and technological skills, and eventually a considerable foreign exchange input through the appropriation of profits away from New Zealand. This would appear to increase, rather than reduce, New Zealand's dependence on the international economic order, and in proportion to the level of overseas investment, almost certainly defeats the purpose of foreign exchange savings or creation.

Government has claimed that the policy changes will increase the number of jobs available to benefit the entire country (Department of Labour, 1981). This argument seems to be based largely on supposition rather than reliable information. The emphasis on large-scale industrial development puts a priority on capital investment requiring a relatively small input of labour. Consequently, labour-intensive activities such as the textile industry will find it difficult to compete for investment funds, and may be forced to cut back production. Yet as these industries make up the bulk of New Zealand manufacturing, it appears highly unlikely that industrial growth on the lines proposed by government will significantly reduce unemployment.

Government has based its policy on the assumption that full employment is both a possible and desirable goal. Considering the conflicting factors of New Zealand's current unemployment figure of 60,860 (Department of Statistics, 1981c), rapid growth of the labour force, and the increasing use of labour-saving technologies by employers, the attainment of full employment would appear unrealistic. Unemployment in the textile industry discussed above, for instance, reflects these same conflicting socio-economic relations.

While full employment is a desirable goal for labour under the present system of production and distribution, because technology provides the means to achieve economic growth with less labour power, it is not desirable for producers. Instead, they prefer to have a surplus pool of labour to bring into production or take out of production as required. This conflict contributes to the unlikelihood of New Zealand reaching a state of full employment equilibrium. Thus, intervention policies

may be seen to represent the contradiction between achieving economic objectives such as growth and social objectives such as full employment. The attainment of both goals would seem impossible, since in the textile industry the best way to cut costs is to lay off staff, which conflicts with social objectives and intensifies the conflicting relationship between labour and the distribution of capital.

5.2 THE TEXTILE PLAN

The textile plan was introduced on July 1, 1980. This defined a completely new set of operating conditions for the industry's future development, as recommended by the IDC, and adopted largely in full by government.

The IDC was initially requested to carry out its study of New Zealand's textile industry in September, 1976. After a series of public hearings with textile producers, government officials, and union representatives in 1978, the IDC finally released the textile report in September, 1979. So a period of three years had elapsed since the study was begun, significantly reducing the ten-year time span planned for the industry's restructuring to 1986.

The lack of detailed information regarding specific changes in licensing and tariff procedures was a source of much uncertainty and concern for textile producers (TGMF, 1980). Further submissions were made by manufacturers' representatives to clarify certain issues, but these were mainly rejected by government, which did not release final details until February 1980. At a time of declining consumer demand, government indecision added to problems faced by textile producers. This proved especially costly for firms needing to re-direct resources into new product areas as a result of the proposed policy changes (TGMF, 1980).

In the plan, the textile industry was found to be highly protected, inefficient in its use of resources, and heavily dependent on imported synthetic materials and textile technology.

Particular emphasis was placed on the costs associated with forty years of continued protection. The IDC (1979a) estimated that New Zealand provides an annual level of assistance of over three thousand dollars per employee in textile production, based on the assumption that prices of domestically produced textiles average 40 percent higher than overseas equivalents. This reflects the use of very low paid labour in developing countries.

It was nevertheless considered that the textile industry should be encouraged to develop as it conferred significant benefits on the community, but without high levels of assistance. In line with government's emphasis on international market forces, the plan recommended a significant reduction in protection, and argued that exposure to overseas competition would force the industry to employ resources more efficiently, and concentrate on production for export.

While the emphasis is on greater market exposure, there still remains a strong element of planned development (Gallacher, 1980). The IDC (1979a) identified the production of wool-based products (yarns, fabrics and carpets), together with the knitting and apparel sectors as having the most export potential, and the main thrust of the plan aims to encourage these areas.

Five million dollars was made available for rationalising the woollen milling industry, of which one million dollars was quickly spent on assisting Alliance in its acquisition of Mosgiel. It was not specified how or where the rest of the money would be spent. A bounty to be paid to woollen producers until 1984, and a 'drawback equivalent' scheme which subsidises exports of woollen fabrics and clothing, were also introduced.

Woollen manufacturers expressed some concern over the 'predominant fibre rule'. This allows licence-free entry of fabrics with less than 50 percent wool content, which has effectively removed the protection previously given woollen milling from imports of synthetics. As a result, producers of woollen fabrics face a much higher level of competition on the

domestic market.

The IDC (1979a) argued, however, that this would encourage knitting and clothing manufacturers by providing them with a greater range of cheaper raw materials. Additional assistance to the knitting sector included a 'material replacement' (MR) scheme, which together with a modified tariff structure has increased the protection given knitters. Although garment producers were exposed to a slight increase in imported competition, it was claimed that this would encourage them to raise efficiency, particularly with access to lower input costs.

Protection was completely removed from household textiles (sheets and towels), and infant clothing. In the plan it was argued that these product areas did not justify support as they led to consumers paying higher prices than they would for imports. Consequently, producers of household and infant textiles have been subjected to imports coming in at very low duty rates, which they have found extremely difficult to compete against.

Departing from its free market philosophy, the IDC (1979a) recommended that the extruding and texturising of synthetic yarn should continue to receive assistance. Although this sector operates at a substantial cost disadvantage to overseas products, it was argued that the knitting and clothing industries benefitted by having ready access to a domestic supply of synthetic yarn. In line with the plan's objective of encouraging these two sectors, it was proposed that bounties be applied to domestic synthetic yarn.

This recommendation was rejected by government, however, who decided instead to lift import controls on synthetic yarns to provide knitters with cheaper inputs. This was the major area of difference between the textile report and government's implementation of it, and has caused considerable organisational change and dislocation in the synthetic yarn industry. The NBR (1980) claims that the consequences of this have largely been disregarded by government, which is indicative of its desire to pursue its restructuring plans.

The encouragement given the woollen industry is to make full use of New Zealand's comparative advantage in wool production. This was also based on the plan's objective of increasing the domestic content of textile products, thus reducing the industry's dependence on foreign inputs. At the same time, the removal of restrictions on synthetic yarn aims to provide knitters and garment manufacturers with cheaper raw materials, enabling them to become more competitive on overseas markets.

The measures used to bring about these changes, however, are at times contradictory, and in conflict with the plan's objectives. The removal of protection, for instance, still retains New Zealand's dependence on overseas textile inputs. If domestic producers of synthetic yarns go out of business because they cannot compete with imports, knitting and clothing manufacturers will be totally reliant on foreign supplies of synthetic materials. This situation fundamentally contradicts government's aim of increasing the domestic content of textile production.

By allowing synthetic materials free entry into New Zealand, government has also significantly increased the competition faced by the woollen industry, an area designated for special encouragement. Woollen producers must now compete with cheap synthetic imports to supply the domestic knitting and clothing industries. As knitters and garment manufacturers are more likely to use low cost synthetics in preference to relatively expensive woollen yarn, some woollen producers may go out of business. Again, this conflicts with the plan's objective to increase the domestic content of textiles and to support the woollen industry.

Direct assistance measures to producers of wool, such as bounties, the drawback equivalent scheme, and the rationalisation fund, however, are in conflict with government's endorsement of free market forces. The woollen industry is now dependent on government to artificially cheapen woollen production. The emphasis on 'indicative' planning, involving the establishment of a conducive environment for activities designated as

growth areas (IDC, 1981b), has, therefore, been waived at government's convenience.

Textile manufacturers now face a fundamentally changed operating environment as a result of government restructuring, in which they are expected to adjust quickly to international market forces. Yet it is highly unlikely that the domestic industry could become competitive overseas while it competes against barriers imposed by most other countries to protect their own textile industries, and tries to remain effective at home. Harvey (1973) would argue that the attempt to create a free market situation ignores the realities of the socio-economic structure, in which there are no free markets. Throughout the world markets are dominated by large, powerful enterprises. Government's adoption of a free trade position has left New Zealand vulnerable to this influence by increasing its dependence on imported supplies of textile materials and technology. If these were to become unavailable, domestic producers would simply not be able to produce synthetic textiles. Alternatively, if prices of synthetic material and textile machinery were to rise significantly, New Zealand manufacturers would have to absorb the added costs, and thereby become less competitive on international markets.

The Speed of Change

An issue of major importance is the speed with which change has been forced on the textile industry. Government introduced its policy only four months after it was officially announced, which is not long to set in place a new rule book for one of New Zealand's biggest industries (Green, 1980). The hastiness and all-pervasive nature of the removal of protection has meant that textile producers were expected both to make comprehensive adjustments to their operations, and to carry these out virtually instantaneously.

In the depressed and uncertain economic environment prevailing, the difficulties associated with adjustment are heightened. Rapid restructuring could, therefore, cause severe problems for the textile industry. Although change is inevitable if

resources are to be used more efficiently, it is imperative that sufficient time be allowed for adjustment to be made to avoid excessive dislocation and unnecessary waste of human and capital resources. It appears, however, that government has paid little attention to this factor.

The closure of Fibremakers' synthetic yarn plant in Shannon, for example, came immediately after the plan's implementation. Apparently the company had hoped that protection would be continued, or progressively reduced while adjustment assistance was provided, to turn Shannon into a profitable operation (NBR, 1980). Government's speedy policy prevented any planned changes being made, however, and effectively forced the Shannon closure.

Information Base

Government's decision to restructure the textile industry has been based on inadequate information. The IDC (1979a) used a very limited data set and placed a great deal of reliance on statistics provided by industry sources. It is unlikely that these were entirely accurate, as manufacturers are generally reluctant to disclose information in fear of competitors. The lack of data on small-scale operators in peripheral areas was a particularly important shortcoming. The number and variety of operations involved, together with their geographic dispersal, has made it virtually impossible to obtain reliable information on a comprehensive basis. Also, it is far from clear what sort of information would have been required anyway.

Furthermore, the effects of change in the textile industry have not been adequately codified in the past to permit a realistic assessment of the likely economic and social implications of the policy. With the exception of the protection issue, the IDC (1979a) only thought it necessary to outline the state of textile manufacturing in 1976, without giving full regard to its historical development. The industry's importance as an employer of labour, particularly female, as well as its role in the socio-economic development of many small towns, was given only passing mention. So both

the IDC and government have made highly significant decisions for the textile industry's future, without careful examination and consideration of all the relevant facts.

Statistics

It is difficult to isolate events directly attributable to government policy from those occurring in the market and technological environments. Employment figures for the year February 1980 to February 1981 have been used in this chapter, and it is assumed that these are a result mainly of government policy, though not totally. Since 1974, for instance, the textile industry has experienced a decline in employment of over 10,000. Any reduction between 1980 and 1981 must, therefore, be partly a product of the market and technology.

The recency of the textile policy ensures that the full impact of government policy has not yet been felt by the industry. The employment figures cover the period only seven months after the plan's implementation. It is assumed figures from the preceding five months reflect the uncertainty surrounding the new proposals, and in anticipation of government's adoption of them.

5.3 EMPLOYMENT STRUCTURE

Given the labour-intensive nature of textile manufacturing, it could be expected that government's removal of protection would cause unemployment. It appears, however, that the employment issue was given little emphasis by the policy makers, despite their support of the desirability of full employment. The IDC (1979a) acknowledged that its recommendations would lead to some unemployment, but argued this would only be temporary, and that it would be alleviated by greater export production.

The reliance on increased production, through exports, to provide additional jobs in competitive sectors of the industry, however, is ill-founded. Textile exports have increased significantly in recent years, yet this has not led to a rise in employment. As shown above, between 1974-75 and 1979-80,

the FOB value of textile and apparel exports increased by \$94.9 million, or 403 percent at a time when job numbers in the industry fell by 5634, or 13 percent. The benefits of increased export production have not, therefore, 'trickled down' to the textile labour force.

Table 10 shows employment change in the textile industry during 1980-81 as a result of government policy. Over 4500 textile workers, or almost 12 percent of the industry's workforce have been made redundant in the past year. The degree of this loss may be put into perspective by comparing it with trends before the policy change, when employment decreased by an average annual rate of 2.2 percent between 1974 and 1980. So government restructuring has dramatically increased both the rate and level of unemployment in the textile industry.

Every product group experienced a significant loss in labour. This contradicts government's argument that sectors designated as growth areas would absorb displaced workers from other product areas. Its statement (Department of Labour, 1981, 14) that, 'While job opportunities in textiles have dropped overall, jobs have been retained and expanded in parts of the industry able to secure cheaper raw materials,'

is simply not true. The manufacture of carpets and rugs, knitted fabrics, and clothing, for instance, have all undergone large declines in employment despite government assistance to increase production.

A ratio was calculated comparing each sector's proportion of the total employment loss with each sector's share of total textile employment in 1980. This indicates whether an individual sector has suffered a disproportionate loss of jobs (ratio greater than one), relative to its expected representation if unemployment had been evenly distributed throughout the industry.

This shows that the spinning, weaving, and finishing sector experienced a much greater reduction in employment than the industry average. By exposing domestic synthetic and woollen

TABLE 10: EMPLOYMENT CHANGE IN THE TEXTILE INDUSTRY: BY SECTOR 1980-81

SECTOR	1980	1981	1980-81		Sector percent of 1980		Ratio
			N	%	Employment	Loss	
Spinning, weaving & finishing	5,368	4,101	-1267	-23.6	14.1	28.0	1.99
Made-up Textiles	2,397	2,187	- 210	- 8.8	6.3	4.6	0.73
Knitting Mills	4,780	4,367	- 413	- 8.6	12.5	9.1	0.73
Carpets & Rugs	3,175	2,867	- 308	- 9.7	8.3	6.8	0.82
Textiles NEC	1,027	957	- 70	- 6.8	2.7	1.5	0.56
Apparel	21,398	19,143	-2255	-10.5	56.1	49.9	0.89
Total	38,145	33,622	-4523	-11.9	100.0	100.0	1.00

Source: Department of Labour (unpublished statistics, 1980, 1981)

yarn producers to overseas competition without allowing them sufficient time to adjust, government must assume responsibility for causing widespread unemployment in raw material processing. This could also produce some uncertainty as to the reliability of domestic supplies of textile yarn. Consequently, knitters, carpet producers, and clothing manufacturers, all sectors designated for special encouragement, could also encounter difficulties, which would lead to them shedding more labour to cut production costs.

Table 11 provides a breakdown of the decline in textile employment by sex, while Table 12 expresses this as a ratio, comparing the proportional loss within each sector of males and females, with the male and female representation in that sector. Both male and female job numbers have decreased considerably, although the absolute decline of female employment in clothing is particularly significant, as it accounted for 48 percent of the total job loss throughout the textile industry.

TABLE 11: EMPLOYMENT CHANGE BY SEX IN THE TEXTILE INDUSTRY. 1980-81

SECTOR	Feb. 1980		Feb. 1981		Change 1980-81			
	Male	Female	Male	Female	Male	%	Female	%
Spinning, weaving & finishing	3,496	1,872	2,734	1,367	- 762	-21.8	- 505	-27.0
Made-up Textiles	798	1,599	766	1,421	- 32	- 4.0	- 178	-11.1
Knitting Mills	1,876	2,904	1,709	2,658	- 167	- 8.9	- 246	- 8.5
Carpets & Rugs	2,159	1,016	1,953	914	- 206	- 9.5	- 102	-10.0
Textiles NEC	679	348	652	305	- 27	- 4.0	- 43	-12.4
Apparel	2,886	18,512	2,786	16,357	- 100	- 3.5	-2155	-11.6
Total	11,894	26,251	10,600	23,022	-1294	-10.9	-3229	-12.3

Source: Department of Labour (unpublished statistics, 1980, 1981)

TABLE 12: RATIO OF MALE AND FEMALE EMPLOYMENT CHANGE IN THE TEXTILE INDUSTRY, 1980-81.

SECTOR	Percent of Feb. 1980 Employment		Percent of 1980-81 loss		Ratio	
	Male	Female	Male	Female	Male	Female
Spinning, weaving & finishing	65.1	34.9	60.1	39.9	0.92	1.14
Made-up Textiles	33.3	66.7	15.2	84.8	0.46	1.27
Knitting Mills	39.2	60.8	40.4	59.6	1.03	0.98
Carpets & rugs	68.0	32.0	66.9	33.1	0.98	1.03
Textiles NEC	66.1	33.9	38.6	61.4	0.58	1.81
Apparel	13.5	86.5	4.4	95.6	0.33	1.11
Total	31.2	68.8	28.6	71.4	0.92	1.04

Source: Department of Labour (unpublished statistics, 1980, 1981).

The ratio in Table 12 indicates that in times of employment decline, women are more likely to lose their jobs than males. With the exception of knitting, every sector shows a female ratio greater than one. For textiles NEC and made-up textiles, the reduction in female labour is much larger than their representation would suggest. Government restructuring has, therefore, led to a higher incidence of female unemployment in textiles, precisely at a time of greater female participation in the workforce (New Zealand Planning Council, 1981).

The tendency for more women to lose jobs than men reflects the predominantly semi-skilled nature of their work, and the relative concentration of females in labour-intensive product areas. Also, because women are not regarded by society as major household 'breadwinners', the importance attached to female unemployment is not as great as it is for males.

Table 13 provides further evidence of this. In all but five districts the proportion of female unemployment in textiles has been greater than the average 68 percent of females employed throughout the country. In Hamilton, Tauranga, Nelson, and Timaru, females accounted for the entire decline in textile employment.

Hancox (1981) claims that in New Zealand's present employment situation, there is a severe lack of job opportunities for women with few skills. Female textile workers made redundant often face a long period without work and a substantial loss of income. This applies particularly in peripheral areas, which from Table 13 appear to have had their overall job loss dominated by females. Wanganui, Blenheim, Nelson, Greymouth, Timaru and Invercargill, for instance, offer little employment for women. For those households in which a second income source is vital for continued family welfare, the costs associated with textile unemployment in these areas could be very high.

Government has introduced a special assistance package for displaced textile employees. Originally designated for the

TABLE 13: DISTRICT EMPLOYMENT CHANGE BY SEX IN THE TEXTILE INDUSTRY. 1980-81.

DISTRICT	1980		1981		1980-81				Female Percent of Total Loss
	Male	Female	Male	Female	Male	%	Female	%	
Whangarei	33	240	31	286	- 2	- 6.1	+ 46	+19.2	-
Auckland	4,864	10,477	4,553	9,717	-311	- 6.4	-760	- 7.3	70.9
Hamilton	190	1,531	228	1,224	+ 38	+20.0	-307	-20.1	>100.0
Tauranga	74	520	74	475	0	-	- 45	- 8.7	100.0
Rotorua	85	811	80	649	- 5	- 5.9	-162	-20.0	97.0
Gisborne	89	228	74	224	- 15	-16.9	- 4	- 2.2	26.3
Napier/ Hastings	396	545	373	498	- 23	- 5.8	- 47	- 8.6	67.1
New Plymouth	72	523	63	495	- 9	-12.5	- 28	- 5.4	75.7
Wanganui	219	671	206	486	- 13	- 7.4	-185	-27.6	93.4
Palmerston North	1,210	1,633	1,121	1,536	- 89	- 7.3	- 97	- 5.9	52.2
Masterton	65	392	62	374	- 3	- 4.6	- 18	- 4.6	85.7
Wellington	908	2,198	831	1,867	- 77	- 8.5	-331	-15.1	81.1
North Island	8,250	19,769	7,696	17,831	-509	- 6.2	-1938	- 9.8	79.2
Blenheim	25	204	15	106	- 10	-40.0	- 98	-48.0	90.7
Nelson	37	150	42	142	+ 5	+13.5	- 8	- 5.3	>100.0
Greymouth	27	272	17	179	- 10	-37.0	- 93	-34.2	90.3
Christchurch	2,173	3,683	1,843	3,199	-280	-13.2	-484	-13.1	63.4
Timaru	152	227	173	118	+ 21	+13.8	-109	-48.0	>100.0
Dunedin	1,137	1,572	627	1,089	-510	-44.9	-474	-30.2	47.7
Invercargill	188	374	187	358	- 1	- 0.5	- 16	- 4.3	94.1
South Island	3,689	6,482	2,904	5,191	-785	-21.3	-1291	-19.9	62.2
New Zealand	11,894	26,251	10,600	23,022	-1294	-10.9	-3229	-12.3	73.4

Source: Department of Labour (unpublished statistics, 1980, 1981).

synthetic yarn sector only, it was extended to include the woollen industry after the dislocation caused by the Mosgiel collapse. The package aims to help local and distant job search, retraining, and relocation in other centres if necessary. Although it may have alleviated some hardship associated with unemployment, it is a short-term palliative measure which has done nothing to counter the substantial loss of jobs occurring in response to government restructuring. It is also dependent on redundant textile workers being aware it exists, and that they qualify for it. Hancox (1981) found in the Mosgiel case, that very little information was provided on government's employment scheme and as a result, many workers did not receive assistance.

It is doubtful whether the package has been at all effective in re-deploying the large numbers of displaced textile workers. Government has argued that structural change in the economy is likely to require greater geographic mobility by the workforce (Department of Labour, 1981). But for the considerable proportion of married female textile workers made redundant, relocation has often been impossible as household commitments have enforced them to remain in the local area. It appears that government has under-estimated the enormous social and economic costs involved in moving to another centre to find employment, particularly if there is no guarantee of a job, or accommodation, being available at the destination.

Government policy aimed to promote growth in the textile industry to create new jobs, yet the plan has caused substantial unemployment in all product sectors and throughout the country. This illustrates the contradiction discussed above between the desirability attached to full employment, and the methods used to attain it. By emphasising growth, or alternatively reduced production costs, government policy has increased the dis-use of unskilled, low cost female labour in peripheral areas. At the same time, the special assistance package for unemployed textile workers in the periphery has encouraged relocation to core areas, where it

has been assumed that jobs are available. Not only may this assumption be false, as Table 13 indicates, but the policy operates to increase the labour surplus in metropolitan centres and so raise unemployment.

5.4 PRODUCT STRUCTURE

By allowing textile imports greater access to the domestic market, and discouraging some sectors in favour of others, government policy has had a significant impact on the industry's product structure. Products emphasised have been those in which New Zealand has an international advantage, and this has necessitated quick changes by both woollen and synthetic producers used to producing for the domestic market.

The withdrawal of protection has led to a considerable decline in domestically produced synthetic yarns. Fibremakers shut down New Zealand's sole yarn extruding operation in Shannon, together with a yarn processing plant in Wellington as a result of government's rejection of the IDC's bounty proposals. Recently, the company announced its intention to cease operations entirely by closing its Auckland head-office plant in May, 1982. Bonds have similarly encountered difficulties in its yarn processing division. The company has stopped producing polyester yarn, and although it continues to texturise nylon, the future of this is uncertain (Bonds, 1981).

International manufacturers have supplied New Zealand's market with synthetic yarn at prices 40 percent lower than domestic equivalents (NBR, 1980). While this forced Fibremakers' closure, it has nevertheless provided significant cost advantages to knitting and clothing producers.

Table 14 shows production trends in the textile industry over the last two years, in which it is assumed the 1981 figures are a result of output levels from the first two quarters being maintained throughout the year. During 1979-80, man-made yarn production decreased by 9 percent. If the 1981 figure is correct, and it is likely this may be over-

TABLE 14: PRODUCTION IN THE TEXTILE INDUSTRY 1979-1981

PRODUCT	1979	1980	1981 ¹	NOTES
Woollen yarn (tonnes)	16,579	17,288	16,628 ²	1. Assumed figures on basis of constant quarterly data.
Man-made yarn (tonnes)	1,540	1,408	1,184 ²	
Piece goods (000 sq m)	2,724	2,837	2,790 ²	2. Derived from 2 quarters, Jan - June (inclusive)
Knitted fabrics (tonnes)	4,610	5,308	6,210 ²	
Hosiery (000 prs)	18,088	17,689	13,236 ³	3. Derived from 1 quarter, Jan - March (inclusive)
Apparel (000s)	28,628	27,468	-	
Carpets (000 sq m)	9,157	9,136	7,962 ³	

Source: Department of Statistics (1981b)

TABLE 15: VALUE OF TEXTILE IMPORTS 1978-79 TO 1980-81 (JUNE YEARS) \$NZ(000) CIF

PRODUCT	1978-79	1979-80	1980-81
Silk	17	3	-
Cotton	572	726	532
Jute	611	640	165
Vegetable Fibres	2,532	4,761	2,697
Synthetic Fibres	4,769	6,659	8,754
Other Man-made Fibres	4,856	3,979	5,064
Wool & Other Animal Hair	3,224	4,226	5,744
Old Clothing & Other Textiles	106	96	83
Textile Yarn	46,090	54,336	55,016
Cotton Fabrics	67,585	90,014	66,210
Man-made Fabrics	86,254	99,316	88,015
Other Fabrics	12,609	17,848	14,253
Knitted Fabrics	17,933	24,005	23,136
Tulle, lace etc	6,144	6,024	5,559
Special Textile Fabrics	26,510	34,848	43,251
Made-up Textiles	13,598	21,553	33,627
Floor Coverings	6,395	6,332	7,423
Apparel & Clothing Accessories	9,339	17,772	17,673
Total	309,144	393,138	377,202

Source: Department of Statistics (External Trade Bulletin, Imports, 1979-1981).

estimated as imports become progressively more important relative to domestic products, then the output of synthetic yarn would have declined by 224 tonnes, or 16 percent during 1980-1981, a total decrease of 23 percent in two years. Knitted fabric production, however, has increased by 35 percent since 1979.

Table 15 shows that overseas imports of synthetic materials have increased with government's lifting of import controls. Between July 1980 and June 1981 (inclusive), the CIF value of synthetic and man-made fibres entering this country rose by 30 percent, while imports of textile yarn (mostly synthetic), increased by almost 20 percent since 1978-79. Consequently, New Zealand fabric producers are largely dependent on foreign suppliers of synthetic raw materials, now possessing the market power to raise prices considerably. If price increases do eventuate, they could effectively negate any advantages domestic knitters and clothing manufacturers have on export markets.

The removal of protection on household textiles and infant clothing has also caused a substantial increase in the foreign supply of these products on the domestic market. Table 15 shows that imports of made-up textiles, which includes household and infant products, rose by 56 percent during 1980-81. Many small units manufacturing household and infant textiles have closed since the plan's release, as they cannot compete with these low cost overseas products.

As intended, government restructuring has lowered domestic production in those product sectors designated as costly and inefficient. While this has benefitted consumers, it has increased New Zealand's dependence on imported supplies of these goods, thus contradicting government's stated policy aims.

Access to a greater variety of inexpensive overseas yarns has allowed knitters to expand production, and provide clothing manufacturers with a domestic supply of high quality knitted fabrics. Garment producers, however, have generally been worst

affected by the uncertainty surrounding government policy.

In its proposal to allocate 10 percent of the domestic market to imports, government did not specify whether this was to be in volume or value terms. Yet 10 percent in value would represent nearly 30 percent of the market in volume if these imports were sourced from developing countries (TGMF, 1980). A domestic market loss of this magnitude would have caused significant dislocation in the clothing industry. Although government eventually clarified the situation by expressing the 10 percent in volume terms, the costs associated with its initial indecision were considerable. Many clothing operations in the South Island, for instance, chose to close down or lay off staff in anticipation of the policy change.

Nonetheless, 10 percent of imports represents a domestic market loss of 8 percent for manufacturers, as under previous protection policies 98 percent of the market was reserved for them. For many small-scale operators specialising in domestic fashion production, the competition from cheap overseas products of this nature is too great for them to retain their market share and stay in business.

So to increase the international competitiveness of New Zealand textile production, government has adopted a policy of greater market exposure. This has increased the level of competition on the domestic market, and led to factory closures and many redundancies mainly in peripheral areas. Although prices to the consumer have been lowered, the proportion of locally produced textiles supplying the domestic market has declined, thus increasing New Zealand's vulnerability to international price rises.

The relationship between imports and exports is of central importance to the aims of the textile plan. While imports decreased by 4 percent in 1980 (Table 15), this followed a 27 percent increase the previous year. Government's objective of reducing textile imports would appear unlikely to be achieved, especially as restrictions have been removed from a number of important product areas. The drive to raise export

production also requires considerable expenditure on overseas technology, which will increase the textile industry's dependence on high value imports.

Regarding exports, domestic manufacturers have faced intense competition with the glut of synthetic textiles on overseas markets. The collapse of the NAFTA apparel agreement in August 1980 increased export problems for the industry. New Zealand clothing entering Australia is now subject to higher duty rates, and although domestic producers still have a preferential advantage, their products have become less competitive against Australian produced equivalents.

Despite this, New Zealand has raised its exports to Australia, mainly because this country is a strong producer of knitwear products. Table 16 shows that the value of apparel exports increased by \$34.5 million during 1980-81, of which \$27.2 million or 79 percent was sent to Australia. In previous years, Australia had accounted for 65-70 percent of New Zealand clothing exports. Also, the NAFTA arrangements for textiles and carpets are still intact, which in 1980-81 amounted to \$14.4 million and \$29.6 million respectively in export income for the textile industry.

Excluding the export of textile fibres (which is dominated by wool, and not usually included as part of the industry's export performance), Table 16 shows that textile manufacturers have continued to raise export production, despite difficult trading conditions on overseas markets. In 1980-81, the value of exports (excluding fibres), increased by \$12.0 million, or 10 percent, after an increase in the previous year of \$29.3 million, or 30 percent.

When comparing the value of exports with that of imports in Table 15, however, there are only three product areas - wool, floor coverings (including carpets), and clothing, - in which the industry has a surplus. Yet this is no change from patterns in previous years. By singling out these sectors for encouragement, government has not created new opportunities

TABLE 16: VALUE OF TEXTILE EXPORTS 1978-79 TO 1980-81
(JUNE YEARS). \$NZ(000) FOB

Product	1978-79	1979-80	1980-81
Cotton	5	4	4
Jute	-	-	22
Vegetable Textile Fibres	270	-	33
Synthetic Fibres	298	160	135
Other Man-made Fibres	144	47	36
Wool	684,514	931,626	892,876
Old Clothing & Other Textiles	656	1,061	767
Total Textile Fibres	685,887	932,898	893,873
Textile Yarn	26,488	40,194	45,790
Cotton Fabrics	283	207	623
Man-made Fabrics	618	675	687
Other Fabrics	293	331	1,065
Knitted Fabrics	2,546	2,649	3,484
Tulle, lace etc	643	433	392
Special Textile Fabrics	3,129	3,099	3,509
Made-up Textiles	4,258	4,622	7,069
Floor Coverings	27,863	43,035	41,100
Apparel	28,110	31,120	34,489
Total Textiles & Apparel	97,002	126,256	138,207

Source: Department of Statistics. (External Trade Bulletin Exports, 1979-1981).

for export development. Instead, it is propping up established exporting operations and allowing the industry to continue producing as it has done in the past.

In spite of government assistance to producers of woollen textiles, Table 14 suggests that woollen yarn and carpet production may decrease during 1981, while Table 15 shows a decline in the value of carpet exports. As woollen products (including carpets), are generally two-to-three-times more expensive than synthetic equivalents, domestic producers have found it particularly difficult to compete against synthetics on international volume markets. The woollen industry must aim, therefore, at high quality, specialist markets, which are typically small, unstable, and not as profitable in the long-run.

Exposure to international market competition has effectively removed any advantages New Zealand producers had with respect to short-run production. The domestic textile industry is now forced to concentrate on longer production runs, a technique which foreign producers have developed to a much higher level of profitability, because of their large domestic markets.

Government policy has, therefore, both emphasised the contradiction between domestic and export production, and introduced a new set of conflicting relationships in the textile structure. Producers are not only expected to compete on overseas markets necessitating long-run volume production, but also cater for variable domestic demand. At the same time, synthetic producers are now dependent on overseas suppliers of raw materials and technology with the market power to prevent domestic production from becoming internationally competitive. Similarly, woollen manufacturers must adopt long-production runs to compete on export markets. Yet in catering for specialised, high value segments of these markets, short-run production would seem to be more suitable.

Considering these conflicting production relationships, it is highly unlikely that New Zealand textile production will be able to compete on international terms without prolonged government support. This appears to fundamentally contradict government's policy aims for a free market, or alternatively non-intervention, situation.

5.5 COMPANY STRUCTURE

By emphasising increased production and economic growth, government restructuring has favoured large textile firms with the productive resources to achieve the policy objectives. In consultations with the industry, the IDC heard submissions mostly from representatives of more prominent companies. The views and needs of small operators, however, were given only token consideration. Instead, the IDC (1979a) argued that although small firms are highly efficient producers of short-runs, are significant employers of labour (particularly female), help overcome the over-concentration of the industry in metropolitan areas, and specialise in low bulk, high value production that benefits many peripheral areas, they must be 'encouraged to become efficient' in line with international market forces.

The textile plan has had a major effect in changing organisational structures, both within the industry and within individual companies. Producers of raw materials, woollen and synthetic, have been adversely affected by the removal of protection. On the other hand, firms producing knitted textiles, clothing and carpets have benefitted from government assistance.

Substantial organisational change occurred in the woollen yarn industry in 1980 with the collapse of Mosgiel and its acquisition by Alliance. In attaining Mosgiel's previous market share of 45 percent, Alliance now controls 85 percent of the domestic market for woollen yarn, with 15 percent divided between four other companies (NBR, 1980). Alliance (1980) states that this was a major step in the rationalisation

of the woollen industry. As the company intends to build up a larger export base on the additional resources provided by the take-over, government policy has been favourable. Hancox (1981) claimed that Alliance was given four million dollars in government aid to purchase Mosgiel, which was already being offered at an extremely low price. The Development Finance Corporation also contributed to the rationalisation effort with a two million dollar interest-free loan, which could be converted to a grant should Alliance fulfill a pre-determined export target.

Government has directly assisted in establishing Alliance as a market leader in the manufacture of woollen textiles. With 85 percent of the market, the company is now in a position where it could take over remaining competitors and have total control. Yet this situation would appear to contradict government aims to cheapen woollen production, since Alliance now has sufficient market power to dictate yarn prices. As with the creation of an overseas monopoly in synthetic yarn supply, knitters and garment producers are now largely dependent for the costs of their raw materials on the virtual local monopoly exercised by Alliance.

Government encouragement to knitters, clothing, and carpet producers has mainly been restricted to exporting companies. Large-scale, multi-plant firms have experienced major organisational changes as a result of the textile plan. The encouragement to concentrate on profitable product areas for export has generated a pattern, exemplified by LWR, Bonds, Holeproof and Feltex, in which resources have been re-organised into independent units within each company's central structure. As each unit produces for a specific segment of the market, this has allowed a concentrated production and marketing effort in product areas with potential for growth.

Large producers pursuing internal restructuring programmes in anticipation of government intervention have shown similar patterns of development. Operations have been centralised, product type specialised, and branch-plants re-organised to

reduce production costs and improve efficiency. These adjustments have led companies to lay off many textile workers in non-productive and costly divisions, many of which are located in peripheral areas. It is unlikely these people will be re-employed, even though successfully adapted firms are producing more. During 1980-81, for instance, LWR laid off 434 staff, mainly in regional units, while increasing its profit by 25 percent, exports by 48 percent, and capital investment by 110 percent (LWR, 1981). It would appear that any surplus capital has been invested into technological rather than human resources, concentrated in metropolitan locations.

Government assistance to knitters, clothing, and carpet producers has, therefore, been more specific, favouring larger and more powerful companies in each sector. This illustrates a contradiction in which government appears to have attacked domestic production to promote exports. The rapid introduction of a free market situation has meant that many small textile companies producing for the domestic market, and using low cost labour in peripheral areas, have suddenly been designated as inefficient simply because of their inability to export. Instead, government has encouraged production in metropolitan centres using high cost labour and technology for export markets. As mentioned above, however, this may not satisfy domestic demands for variety production.

It appears that government has forced, rather than encouraged, domestic producers to become internationally competitive, with little time to adjust and with little assistance. In contrast, assistance has been forthcoming for exporting firms. LWR, for instance, created a reconstruction reserve of five million dollars, which government allowed it to write off as a tax exemption. This incidentally included redundancy and closure costs of a number of factories.

The textile plan has also provided manufacturers with a 40 percent investment allowance for new plant or machinery bought or leased after April 1, 1980, together with the remission of sales tax on equipment bought after September 1,

1980. This was designed primarily to increase the use of textile machinery and raise output levels for export. Large-scale firms with capital have, therefore, re-organised operations, purchased machinery, and benefitted from greater productivity of new plant, while also writing off these adjustment costs for tax purposes.

Export incentives have perhaps provided the greatest capital benefits. For companies exporting a significant proportion of their output, these have made an important contribution to profits. During 1980-81, LWR received \$868,000 in export incentives, which added to the \$138,000 in investment allowances, allowed it to reduce its tax bill by 55 percent (LWR, 1981).

So capital subsidies made available to the textile industry by government have tended to favour large exporting companies with capital-intensive operations. Small firms, however, generally do not have capital to put aside for reconstruction or machinery investment, and have been reliant on producing for the domestic market. Consequently, they have not qualified for these lucrative capital allowances, which has been a further competitive disadvantage against larger producers.

Non-export garment producers located in peripheral areas have experienced extreme trading difficulties since the textile plan was introduced, as cheaper imports have taken away their share of the internal market. With high domestic inflation, cost disadvantages associated with short-run production, and increasing transport charges, small-scale clothing producers have not been able to lower costs sufficiently to satisfy customers. Instead, client investment has been directed towards cheap imports, or alternatively to large companies offering lower-priced domestic products.

This has forced the closure of many small factories in the periphery, while others have continued operating at a reduced level of activity (TGMF, 1981). But as Fibremakers discovered to their disadvantage, retrenchment often necessitates price cuts and higher costs which worsens a firm's market standing.

In this situation, it may be compelled to close to avoid continual losses or, as Massey and Meegan (1979a) suggest, be taken over by a larger firm endeavouring to reinforce its market strength.

To summarise, by fundamentally changing the market environment in a very short time, government has failed to allow the vast majority of small textile producers sufficient time or assistance to adjust. Small peripheral firms generally do not have the capital backing to cushion themselves against such rapid fluctuations in operating conditions, which has contributed to their higher incidence of closure.

Large integrated firms, however, with a sizeable share of the domestic market and greater control over the means of production, have made the necessary adjustments quickly and at comparatively little cost. By exporting they have not only benefitted from higher returns, but have also received additional government assistance. Government restructuring has, therefore, allowed large textile companies usually located in core areas to gain significant advantages over smaller competitors in the periphery.

5.6 SPATIAL STRUCTURE

Scott (1980, 16) states that: -

"... major moves to rationalise the structure of industry in New Zealand, and to subject industries to greater competitive pressures from other countries will have significance for the existing spatial distribution of industrial development".

Government restructuring of the textile industry has primarily been concerned with attaining as high a rate of export-led growth as possible, and in so doing has tended to ignore the spatial and distributional effects of its policy action. Although this neglect was probably inadvertent, it has nevertheless been a major shortcoming, particularly in an industry such as textiles with the dispersal of many units in regional areas. Government's a spatial perspective has,

TABLE 17: SPATIAL EMPLOYMENT CHANGE IN THE TEXTILE INDUSTRY 1980-1981

DISTRICT	1980		1981		1980-81		Textile Percent of Manufacturing	
	N	%	N	%	N	%	1980	1981
Whangarei	273	0.7	317	0.9	+ 44	+16.1	5.2	5.8
Auckland	15,341	40.2	14,270	42.4	-1071	- 7.0	14.1	13.6
Hamilton	1,721	4.5	1,452	4.3	- 269	-15.6	10.0	8.8
Tauranga	594	1.6	549	1.6	- 45	- 7.6	13.3	12.0
Rotorua	896	2.4	729	2.2	- 167	-18.6	6.4	5.2
Gisborne	317	0.8	298	0.9	- 19	- 6.3	10.0	9.8
Napier/ Hastings	941	2.5	871	2.6	- 70	- 7.4	7.4	6.8
New Plymouth	595	1.6	558	1.7	- 37	- 6.2	7.7	7.2
Wanganui	890	2.3	692	2.1	- 198	-22.2	15.8	12.1
Palmerston North	2,843	7.5	2,657	7.9	- 186	- 6.5	23.8	23.5
Masterton	457	1.2	436	1.3	- 21	- 4.6	11.8	11.9
Wellington	3,106	8.1	2,698	8.0	- 408	-13.1	9.7	8.9
North Island	27,974	73.3	25,527	75.9	-2447	- 8.7	12.3	11.6
Blenheim	229	0.6	121	0.4	- 108	-47.2	11.3	6.5
Nelson	187	0.5	184	0.5	- 3	- 1.6	4.3	4.6
Greymouth	299	0.8	196	0.6	- 103	-34.4	15.1	9.7
Christchurch	5,806	15.2	5,042	15.0	- 764	-13.2	14.7	13.4
Timaru	379	1.0	291	0.9	- 88	-23.2	8.5	6.7
Dunedin	2,709	7.1	1,716	5.1	- 993	-36.7	17.4	12.3
Invercargill	562	1.5	545	1.6	- 17	- 3.0	5.0	4.8
South Island	10,171	26.7	8,095	24.1	-2076	-20.4	12.9	10.8
New Zealand	38,145	100.00	33,622	100.0	-4523	-11.6	12.5	11.4

Source: Department of Labour (unpublished statistics, 1980, 1981)

therefore, serious implications for the industry's future development, as well as the livelihood of people and towns dependent on it.

Table 17 shows the spatial distribution of employment change in the textile industry as a result of government intervention. Every district except Whangarei experienced a reduction in textile employment during 1980-81. This decline, however, has not been distributed evenly throughout the country. As seen in the 1970s, the South Island had a much greater proportional loss than the North in response to the plan, losing one-fifth of its textile labour force in only a year.

Blenheim, Greymouth, Christchurch, Timaru and Dunedin have each experienced large percentage reductions. In absolute terms, their total loss accounted for 99 percent of the South Island decrease, and 45 percent of the national decrease. Government's removal of restrictions on synthetic yarns was a major factor in this result, causing high unemployment in woollen yarn production in Christchurch, Timaru and Dunedin. This has significant implications for the future viability of woollen manufacturing in the South.

North Island districts have also had major declines in textile labour, particularly Hamilton, Rotorua, Wanganui and Wellington. Textile unemployment in the North Island, however, has generally been more evenly distributed and not as severe as in the South. This has reinforced the industry's orientation towards northern areas, and has effectively increased its concentration in Auckland. Although Auckland also experienced an absolute reduction in textile employment, it increased its relative share of the national textile workforce.

Christchurch has similarly retained its share of the industry's total labour force, despite losing a significant number of textile workers. So although government restructuring has caused substantial unemployment in the textile industry throughout the country, the relative significance of Auckland and Christchurch has yet again been reinforced.

As Massey and Meegan (1978) suggest, during times of locational change in an industry, there may still be a concentration of production at a number of major plants in medium towns. This explains the continued importance of textile employment in the Palmerston North district. Levin and Palmerston North are both specialised knitting centres, so government's encouragement to the knitting sector has favoured firms located there, and allowed them to consolidate and expand operations. The availability of a skilled textile labour force in the Palmerston North district has proved a major advantage, by encouraging multi-plant firms with branches in this area to continue production, rather than rationalising into metropolitan head-office locations.

Most of Palmerston North's decline in textile employment can be attributed to Fibremakers' closure in Shannon. Government policy has, therefore, caused unemployment in a peripheral town in this district, but at the same time, has strengthened this location in the industry's national spatial structure. This is indicated by Palmerston North's increased share of the textile labour force.

Government has, perhaps unintentionally, neglected the grave community problems caused by closures and redundancies resulting from the textile plan (Green, 1980). Table 17 shows that the policy has led to a considerable contraction in manufacturing employment in Wanganui, Blenheim, Greymouth and Dunedin. As this has occurred in such a short time, it could have severe socio-economic effects on each area's development.

Fibremakers' closure in Shannon, for instance, caused 120 people to lose their jobs, which represented 30 percent of the town's total labour force of 400 (Evening Standard, 11.6.80).³ As Shannon had very little alternative employment, the closure of its major industry led to a significant loss of capital, which when multiplied through the local economy, threatened to stagnate the town's development.

Government eventually intervened by designating Shannon as a slow-growth area for regional development assistance. This led to the establishment of a large tanning factory in Shannon, which government hoped would employ workers displaced by Fibremakers' closure and prevent the economic decline of the town. At the time of writing, however, the tannery was not in full operation. The preceding seventeen months has been a long period of uncertainty for Shannon, in which there has been continued unemployment and some out-migration, increasing the leakage of capital from the area.

As with the introduction of the textile plan, government assistance in Shannon was provided mainly for political purposes. This is indicative of the conflicts between government's varied political objectives. The Shannon closure was an immediate result of the plan's introduction, but the Horowhenua electoral district in which the town is located, was at the time a marginal seat. One of the consequences of the perhaps unforeseen effects of restructuring has, therefore, been the need for a policy of assistance, the aims of which contradict government's broad political objective to reduce the costs of industrial development borne by society.

This may explain why such assistance was not made available for textile workers displaced at Mosgiel. Yet as Hancox (1981) found, even in an urban centre such as Dunedin, the chances of finding alternative employment are very limited. Its regional economy is already depressed, and the considerable decrease in textile employment experienced in 1980-81 (Table 17) is likely to accentuate this problem, particularly as the textile industry has historically performed an important role in Dunedin's economy.

The dominance of leading firms in core regions often leads to a syphoning of capital from lesser developed regions to more prosperous ones (Holland, 1976b). By increasing the pressure on textile manufacturers to increase production, government restructuring has yet again encouraged large integrated firms to lay off workers and close plants in peripheral locations.

Several company examples illustrate this pattern, in which operations have been increasingly rationalised in metropolitan centres in response to the textile plan.

LWR is perhaps the leading knitting and apparel producer in the industry at present, with a turnover in excess of \$62.0 million, export sales of \$5.3 million, and over 2000 staff (LWR, 1981). LWR's internal reconstruction programme was launched largely in anticipation of government intervention, and in recognition of the need to export if it were to increase profits. Since 1980, LWR's reconstruction has involved the following closures: LWR Hokitika, Marlborough Lingerie in Blenheim, LWR Waimate, and LWR Gore. A costly product division in LWR's Christchurch location was also closed. During 1980-81, the company laid off 434 staff, a decline of 16.5 percent (LWR, 1981). The factories discontinued were all located in peripheral regions, which is a major reversal of LWR's stated policy up to 1979, of establishing plants in regional areas to take advantage of a reliable supply of labour. In Blenheim and Gore, the closures were directly responsible for the significant reduction in each district's manufacturing base shown in Table 17.

LWR's reconstruction has accelerated the concentration of production in Christchurch where control and marketing functions are centralised, and Auckland where it operates a highly profitable knitting mill and two of the country's most modern dyehouses. So while metropolitan centres have benefitted from LWR's considerable growth in export production and profitability, some small regional towns have been adversely affected by LWR's withdrawal of investment. As discussed above, the capital leakage from areas such as Gore and Blenheim in wages and salaries alone is significant. When multiplied through the local economy, this capital loss, together with the employment loss, would be substantial, and have a severely depressing effect on each area's development.

Holeproof has continued its re-organisation programme to concentrate on specialised, long-run production. Since 1980, the company has discontinued operations in a Wanganui plant when it was destroyed by fire, subsequently transferring this division to Auckland. Holeproof also closed a hosiery division in its Auckland head-office location, sold a separate shirt factory in Auckland, and sold its spinning and weaving division to Alliance because these units were considered to be unprofitable. With the exception of a successful knitting plant in Palmerston North (Jacquard Textiles), Holeproof has progressively rationalised production in Auckland, and is at present building a new head-office factory there, to be completed in December, 1981.

Bing Harris closed its Wanganui factory in 1980, putting 83 people out of work, and in 1981 shut down plants in New Plymouth and Christchurch. During 1979-80 the company laid off 276 textile workers, 200 of these outside the Auckland area where its control functions are based. Bing Harris Sargood (a division within the company group), reduced its staff by 165, or 48 percent in 1980. As a result, operations are now mainly centred in Auckland, with two large plants located in Palmerston North and Levin.

Mention has been made of Fibremakers who ceased operations in Shannon and Wellington in favour of its Auckland head-office location. Bonds and Feltex are also based in Auckland, concentrating capital investment in units located there.

Government policy has, therefore, hastened the concentration of capital within leading firms in Auckland and Christchurch. Although these firms have also closed unprofitable divisions in core locations, and so caused some unemployment there, the major effect has been to withdraw investment and lay off large numbers of workers in peripheral areas. As Massey (1977) asserts, the aspatial concentration of capital in large companies has had its spatial manifestation in the agglomeration of production in metropolitan areas. In this way, government policy in the textile industry has again led to widening spatial inequalities between core and peripheral areas.

Criticism has been made regarding the speed of change forced upon the industry by the textile plan. Table 18 compares the annual rate of employment change between 1974 and 1980, with the percentage change in the 1980-81 year. Government intervention appears to have hastened employment decline in every area, except Whangarei. Throughout the country, the rate of unemployment in textiles has increased five-fold, while in some districts, notably Rotorua, Wanganui, Blenheim, Greymouth, and Dunedin, the extent of dislocation has been much greater than that experienced in previous years. Furthermore, having increased their levels of textile employment between 1974 and 1980, a number of areas have undergone a sudden reversal since the plan was made public. If this rate of unemployment were to continue, textile manufacturing in this country would be completely run down by 1988, and would have ceased to exist in the South Island by 1985.

It seems unlikely that this would happen, however. Given that large firms, such as LWR, Bonds, Holeproof, Feltex and Alliance, have the capital power to use the market to their own advantage, they are likely to continue textile production and accumulate greater profits. So the speed of government policy has favoured powerful textile companies in Auckland and Christchurch. Small producers located there have closed, as the use of high cost labour in the core has meant they cannot compete against large companies. But in general peripheral areas have been worst hit, as many small firms and branch-plants of metropolitan based firms have been closed in response to government policy.

In the case of government restructuring, national policy goals have assumed pre-eminence (Scott, 1980). Government has adopted a policy for the textile industry at the national scale, yet the effects of this policy have been felt at the regional level. Restructuring conflicts with regional development policy by making some viable textile manufacturing in peripheral areas inefficient by suddenly changing the industry's operating conditions.

TABLE 18: RATE OF DISTRICT EMPLOYMENT CHANGE IN THE TEXTILE INDUSTRY. 1974-80 AND 1980-81

District	1974-80		Annual Percent Change 1974-80	Percent Change 1980-81
	N	%		
Whangarei	- 186	-40.5	- 6.8	+16.1
Auckland	-1285	- 7.7	- 1.3	- 7.0
Hamilton	+ 96	+ 5.9	+ 1.0	-15.6
Tauranga	+ 41	+ 7.4	+ 1.2	- 7.6
Rotorua	- 24	- 2.6	- 0.4	-18.6
Gisborne	+ 22	+ 7.5	+ 1.3	- 6.3
Napier/Hastings	- 153	-14.0	- 2.3	- 7.4
New Plymouth	- 30	- 4.8	- 0.8	- 6.2
Wanganui	- 248	-21.8	- 3.6	-22.2
Palmerston North	- 350	-11.0	- 1.8	- 6.5
Masterton	- 41	- 8.2	- 1.4	- 4.6
Wellington	- 510	-14.1	- 2.4	-13.1
North Island	-2668	- 8.7	- 1.5	- 8.7
Blenheim	- 16	- 6.5	- 1.1	-47.2
Nelson	- 9	- 4.6	- 0.8	- 1.6
Greymouth	+ 40	+15.4	+ 2.6	-34.4
Christchurch	-2177	-27.3	- 4.6	-13.2
Timaru	- 340	-47.3	- 7.9	-23.2
Dunedin	- 778	-22.3	- 3.7	-36.7
Invercargill	+ 314	+124.6	+21.1	- 3.0
South Island	-2966	-22.6	- 3.8	-20.4
New Zealand	-5634	-12.9	- 2.2	-11.6

Source: Department of Labour (unpublished statistics, 1974-1981).

The higher incidence of closure of textile plants located in the periphery has significantly reduced employment opportunities in many regional towns. As discussed above, Wanganui, Blenheim, Greymouth, Timaru and Dunedin have each had a large decline in the importance of textiles to manufacturing (Table 17). Yet all these districts have been recognised under government's regional development policy as slow-growth areas in need of greater economic and social opportunities. As the textile industry has historically been a substantial employer of labour and an important catalyst of socio-economic development in these peripheral locations, it appears that government's textile policy has fundamentally contradicted its regional development objectives.

The process of accumulation usually entails a spatial structure in which centre-periphery relations in production are important (Harvey, 1975). Government policy has accelerated the flow of capital up the textile industry's locational hierarchy, and reinforced the concentration of textile activity in core areas. Conversely, the textile plan has adversely affected peripheral areas most in need of economic development. So government restructuring has failed to increase the industry's contribution to the national economy, and has instead supported the status quo situation of greater metropolitan concentration of textile activity. Yet again, this has led to widening socio-economic and spatial inequalities in the industry's core-periphery spatial structure.

CHAPTER 6

CONCLUSION

Throughout its development, the textile industry has been modified by a wide range of contradictory and conflicting relationships. Although these have taken various forms and have come about as a result of different circumstances, it appears that these contradictions have nevertheless been expressed within common spatial, social, and economic structures and processes. Events occurring in the textile industry's market, technological, and political environments have, therefore, tended to produce similar patterns, particularly the emergence of socio-economic and spatial inequalities associated with capital concentration.

In a very short time, government restructuring has changed the environment in which the textile industry operates. By exposing manufacturers to international market forces, government has attempted to increase the overseas competitiveness of New Zealand's textile production and to raise exports. This geographical expansion of the market structure has introduced a new set of contradictory production relationships requiring major responses from the textile industry, one expression of which is changes in its core-periphery spatial structure.

Government policy change was intended to promote a re-organisation of the existing production system, and as such was not intended to change the fundamental nature of that system. Before the textile plan was introduced, for instance, a few textile producers had expanded their market via exports in an attempt to increase production and accumulate more capital. So the type of adaptations required by government policy have not changed and nor have the broad socio-economic and spatial implications. The textile plan's only major influence has been to hasten the pace at which these adjustments were made.

Government's removal of protection has not given the majority of firms producing for the domestic market sufficient time to adapt. This has led to many closures and rapid unemployment throughout the industry, but particularly in product sectors concerned with raw material processing. Government's strategy to increase the textile industry's export production has, therefore, reduced domestic production in some products and increased rather than lowered New Zealand's dependence on imported supplies of textile materials and technology. This contradicts government's objective of raising the domestic content of New Zealand's textile production.

Government has, perhaps inadvertently, neglected the wider employment implications of its policy. Whether unemployment resulting from the textile plan is short-term and temporary, as claimed by the IDC (1979a), must be seriously questioned considering New Zealand's current unemployment situation. Government has also claimed that export growth will create more jobs, but in recent years, the relationship between exports and employment appears to have changed. Despite increasing export production during the 1970s and in 1980-81, textile producers have continued to lay off labour in all product areas, so concentrating the flow of capital to a few large producers in metropolitan centres, and decreasing the industry's dependence on labour.

Government has also adopted an aspatial perspective in implementing the textile plan. As had occurred in the industry's market and technological environments, closures and unemployment resulting from the policy change have been felt most in peripheral townships despite a reliable supply of low cost labour. Many of these towns are dependent on the industry as a source of employment and income. For female labour in particular, there is a lack of alternative job opportunities, which may cause severe problems for households dependent on a second source of income. As a result, government restructuring has adversely affected the socio-economic development of many small communities in the periphery, fundamentally contradicting its regional development policy goals.

Consequently, government policy has increased the spatial concentration of textile manufacturing in Auckland, and to a lesser degree Christchurch, accelerating a process that was initially established in the market and technological structures. The speed and nature of change required has favoured large, exporting firms in core locations, who accumulate larger amounts of capital and increase their market power, at the expense of small labour-intensive, non-exporting firms in peripheral locations.

This situation has resulted from the conflict between domestic and export production. Rapid expansion of the market to include overseas competition has effectively made small-scale textile production for the domestic market inefficient, forcing the closure of many small firms in peripheral areas. Multi-plant companies that had exported successfully before government policy, however, have been able to adjust to the new market conditions. As these firms are usually based in metropolitan centres where access to skilled labour and technology provides a locational advantage, there is no commitment to continue operating in peripheral locations. Large textile companies producing for export markets, such as LWR, have withdrawn capital from regional branch-plants and concentrated production in core areas.

So in only one year, the textile plan has: -

1. caused high unemployment, and
2. accelerated trends towards socio-economic and spatial monopoly inherent in the market structure.

Firstly, the dramatic increase in textile unemployment highlights a number of contradictions emerging from government policy. These had also been apparent in the industry's market and technological structures, but not on such a large scale nor in such a short time. The decrease in consumer purchasing power through unemployment and capital concentration, may eventually lead to a significant market loss for textile producers. The effects of declining demand, consequent over-supply on the domestic market, and decline in company profits

was seen in the 1970s, and by accelerating this process, government policy is likely to create more unemployment, increase the concentration of capital, and decrease consumer demand still further. In this situation, textile producers would find it extremely difficult to increase production without an assured domestic market.

In addition, government support of exports allows those companies most able to adjust to these circumstances to pay very little tax. This increases the tax burden on individual consumers, but if he/she is unemployed, government will receive considerably less tax revenue. As unemployment increases and capital becomes even more concentrated, government will be unable to afford its incentive policies without substantially changing the system of tax distribution.

In New Zealand's economy, the textile industry is presently only one of several sectors contributing to this sort of situation arising. But if unemployment continues to increase, and if plans to restructure other industries have similar employment effects to that of the textile industry, then government policy does have serious socio-economic implications.

Secondly, government's decision to expose the textile industry to 'freer' market forces has neglected the contradiction of the capitalist system in which all markets are dominated by large, powerful producers. The support given to increase textile production has favoured firms such as LWR, Bonds, Holeproof, Feltex and Alliance as they have greater control over the factors of production and, therefore, the distribution of wealth. With developments in technology, it is in the interests of these firms to disemploy labour and use their market advantage to eliminate competition. So by supporting capitalist motivations to increase production, government policy has encouraged the status quo situation of increasing capitalist concentration, as expressed by widening socio-economic and spatial inequalities.

Government's emphasis on exports has placed a priority on the use of cost-and labour-saving technologies. New micro-

technology, for instance, has significant implications for the future of textile manufacturing in New Zealand. Like the most recent advances in textile machinery, micro-electronics are more flexible, replace existing production processes rather than create new ones, both control and carry out job systems, and so require much less labour. The new technologies are also eminently suited to short-run production, enabling enormous productivity increases in a wide range of products.

Already, computer-controlled matching systems, and electronic knitting and cutting machines for quality production at much greater speeds are being used by leading textile companies. The increasing use of micro-technology in the textile industry is likely to intensify the conflict between over-production and the distribution of social benefits associated with economic growth. While producers benefit from reduced labour costs, higher productivity, and improved quality of output, unemployment will probably increase even further, and so too will the concentration of capital. As discussed above, greater unemployment and capital concentration will contribute to a decrease in societal purchasing power and a lower market demand. Consequently, textile producers using micro-technology may not be able to sell their products, leading to a crisis situation in the capitalist market.

The problems and conflicts emerging from government restructuring of the textile industry beg the question of what might be done to avoid them. Government injected capital into Shannon, for example, by subsidising the establishment of a large tannery there. But as in this case, capital subsidies tend to be taken up by large companies based outside the local area. The major gains from the company's operation, therefore, flow outside the town, which benefits only from the employment impact. The area also remains vulnerable to the possibility of closure for non-local reasons. So it would appear that capital injections provide only a short-term, partial solution to the problem of economic and spatial disparities.

In the market situation imposed by government, it might seem feasible to separate domestic from export production to prevent the higher incidence of closure amongst small textile firms in the periphery. This, however, would simply create two separate market structures operating at different scales. In the absence of intervention, firms producing for the domestic market would compete against each other until one eventually had monopoly control. On export markets a similar competitive situation would arise, but as New Zealand exporters would have no domestic market to fall back upon, they would risk being monopolised by more powerful overseas producers. In any event, textile production and capital would be concentrated in fewer firms and fewer locations.

If successfully introduced by government, policies such as those described above may temporarily alleviate economic and spatial disparities associated with the textile plan. But by failing to strike at the basic socio-economic structure from which the problems emerge, these liberal policies will be ineffective in the long run. Under the capitalist mode of production, the tendency to over-produce ensures that textile producers will continue to increase output, even though this may be more than the market demands. In this light, the textile plan could be seen as being successful in promoting growth, but by merely re-adjusting production relationships via market expansion, the policy has inevitably opened the way for new contradictions to emerge between production, distribution, employment, and location. Although liberal policies may temporarily alleviate these conflicts, they are unlikely to meet either the efficiency goals of the IDC, or the goals of government's social equity policies, such as full employment and regional development. A set of liberal policies may lead to different factors effecting change in the socio-economic structure, but the relationships between these factors will continue to be conflicting and contradictory, and so perpetuate the status quo situation of widening inequalities.

In any case, policies designed to solve problems resulting from the textile industry's restructuring are essentially

contradictory, as government has to act to alleviate the perhaps unexpected effects of its past action. Government's intervention in Shannon provides an example of this. Yet this policy has not basically changed Shannon's situation, as it remains heavily dependent on one industry controlled from outside the local area, and thereby vulnerable to closure for non-local reasons.

So government faces a policy dilemma. The textile plan's objective of economic growth is more likely to be realised if a few large firms located in metropolitan areas control New Zealand's textile production. But in achieving this objective, government has inevitably run into conflicts with its full employment and regional development policy aims. Government's attempt to apply the textile plan on a national scale so that increased textile production would benefit all of society neglects the fact that those who control production also control the distribution of wealth from production. As a result, the spatial concentration of production will very likely lead to the spatial concentration of the benefits of production, thus increasing socio-economic and spatial inequalities. By choosing national policy goals of efficiency without recognition of their regional implications, therefore, government restructuring has inevitably accelerated unemployment and capital concentration in the textile industry's core-periphery spatial structure.

In addition, as textile producers will have to adopt the new micro-technologies to be internationally competitive, the flow of capital will probably continue to concentrate in leading firms while more and more workers are laid off. Such technological advancement will lead to profound changes throughout society and not just in one sector, and will also require fundamental changes in societal attitudes, particularly regarding work. Moves towards a shorter working week is one aspect of society's response to date on the inevitability of substantial unemployment with the new technology, but as this still maintains the emphasis on the desirability of work, it will be ineffective in the face of a series of technological advances. Yet technological growth itself provides the

opportunity to reduce the importance attached to work under the present mode of production.

It has been suggested that a divorce of work from income, whereby the increased profits from technology accrue to the State which then pays everyone a living wage, would prevent the growth of socio-economic inequalities associated with increasing unemployment (for example, see Jenkins and Sherman, 1979). In this way, society as a whole would benefit from the use of micro-technology so individuals could lead fulfilling lives without needing to work, but with more leisure time. The conflict between the desirability and attainment of employment could, therefore, be removed, and replaced by a complementary relationship between the desirability and attainment of leisure.

Clearly, considerable change is required to prevent the emergence of problems and crisis situations inherent in the capitalist production system. The policy changes proposed by government certainly appear at present to be ineffective in removing inequalities. If the status quo situation perpetuates, the textile industry may ultimately be dominated by one or two large enterprises with sufficient market power to undermine any policy directed against them. Although this would be a major change in an industry once characterised as a substantial employer of labour, and by a proliferation of units in peripheral areas, it would simply represent the socio-economic and spatial culmination of the capitalist market structure, that of monopoly concentration.

In conclusion, while research such as the IDC's textile plan is carried out within the constraints of trying to achieve both economic growth goals and social objectives such as full employment and regional development, the contradictions and problems this study have revealed will inevitably continue. The conflicts between these policy aims ensure that solutions to socio-economic and spatial inequalities arising from government restructuring of the textile industry, indeed any industry, will never be achieved. Even if restructuring were

to be slowed down, or if liberal policies were introduced to counter the effects of restructuring, the same results would ensue. In the present socio-economic structure, it would appear that the only way for government to free itself from these constraints would be to adopt one or other of its policy objectives, and not both because they are contradictory, and beyond compromise. The textile industry development plan would then be based on either economic growth criteria or socially just criteria, and would, therefore, have to be assessed on one or other of these bases.

NOTES

1. Canterbury Clothing Union, (1981). Personal communication.
2. The Textile and Garment Manufacturers' Federation, (1981). Personal Communication.
3. Evening Standard Newspaper. Issued on the 11th of June, 1980.

APPENDIX A

MAJOR GROUP 321: MANUFACTURE OF TEXTILES:

3211 - Spinning, Weaving, and Finishing Textiles: - Preparing fibres for spinning, such as wool scouring, carding, combing; spinning, weaving, bleaching and dyeing, printing and finishing of yarns and fabrics. Includes phornium flax, linen flax, and man-made fibre mills. The manufacture of woven narrow fabrics and other small wares, braids and other primary textiles are also included.

Includes: 32111 - Wool Scouring. 32112 - Woollen Fibres, spinning and weaving. 32114 - Linen Flax Mills. 32115 - Man-made Fibres, spinning and weaving. 32117 - Dyeing, printing and finishing textiles. 32119 - Textiles NEC.

3212 - Manufacture of Made-up Textile Goods, except Clothing: - Establishments not engaged in weaving which are primarily engaged in making up from purchased materials, home furnishings such as curtains, draperies, sheets, pillow cases, napkins, table cloths, blankets, bed-spreads, pillows, laundry-bags and slip covers, textile bags, canvas products (tents, tarpulins, etc), trimmings of fabrics, embroideries, banners, flags and pennants.

Includes: 32121 - Canvas goods. 32129 - Other made-up Textile goods.

3213 - Knitting Mills: - Establishments such as hosiery and knitting mills primarily engaged in producing hosiery, outerwear, underwear, nightwear, other knitted apparel, and knitted fabrics and lace from natural and synthetic fibres. Included are the bleaching, dyeing and finishing knitted products. Excluded is the manufacture of knitted apparel from purchased knitted fabrics (in 3221).

- 3214 - Carpets and Rugs: - The manufacture of woven, tufted, or braided carpets and rugs of any textile fibre or yarn, and materials or mattings of twisted paper, grass, coir, sisal, jute, or rags.
- 3215 - Cordage, Rope and Twine: - The manufacture of rope, cable, cordage, twine, net, and related products from manila, sisal, hemp, cotton, paper, jute, flax, man-made fibres, and other fibres.
- 3219 - Textiles Not Elsewhere Classified: - The manufacture of linoleum and other hand-surfaced floor coverings (except cork, rubber, plastic); oil cloth, artificial leather, and other impregnated and coated fabrics except rubberised; felt; padding; wadding and upholstery filling; processed waste and recovered fibres; car upholstery.

MAJOR GROUP 322: MANUFACTURE OF CLOTHING EXCEPT FOOTWEAR:

- 3221 - Clothing: - The manufacture of clothing etc, by cutting and sewing fabrics, leather, fur, and other materials, and the making of hat bodies, hats and millinery, and of corsetry. Excludes manufacture of footwear, knitted wear, and hosiery.

Source: Department of Statistics (1975)

APPENDIX B

DEFINITIONS UNDER INDUSTRIAL PRODUCTION AND CENSUS OF
MANUFACTURING CLASSIFICATIONS1) INDUSTRIAL PRODUCTION CLASSIFICATION:

Industry 250 - Wool Scouring: Comprises establishments primarily engaged in scouring wool. Does not include operations of woollen mills, which normally scour a considerable quantity of wool for their own use.

Industry 251 - Wollen Milling: Comprises establishments primarily engaged in the manufacture of woollen and worsted yarns and fabrics. Excluded are spinning activities of carpet mills (shown in Industry 254 - Other Spinning and Weaving Mills).

Industry 254 - Other Spinning and Weaving Mills: Comprises establishments engaged in spinning and/or weaving textile fibres, apart from woollen and hosiery and knitting mills. Important products include carpets and rugs.

Industry 260 - Hosiery and Other Knitting Mills: Comprises establishments primarily engaged in production of hosiery, knitted apparel, and knitted fabrics. Also includes manufacture of garments in knitting mills, but making up of garments from knitted fabrics other than in knitting mills is classified in clothing industries No's. 272-279.

Industry 262 - Phormium Flax: Comprises establishments engaged in processing of green flax to fibre stage.

Industry 263 - Linen Flax: Comprises one establishment engaged in processing linen flax to fibre stage.

Industry 269 - Textiles N.E.I.: Comprises establishments primarily engaged in the manufacture of textile goods, not elsewhere included. (includes tufted carpet).

Industries 272-279 - Clothing Industry: Comprises establishments engaged in the manufacture of all branches of clothing.

Industry 286 - Canvas Goods: Comprises establishments primarily engaged in the manufacture of tents, tarpaulins, and other canvas goods.

Industry 289 - Made-up Textiles (other than wearing apparel): Comprises establishments primarily engaged in making up house furnishings, calico and hessian bags, meatwraps, sanitary towels, embroideries, and pennants.

2) CENSUS OF MANUFACTURING CLASSIFICATION:

Industry 3211 - Wool Scouring: Comprises establishments primarily engaged in scouring of raw wool. (Direct link with 250).

Industry 32112 - Woollen Fibres, Spinning and Weaving: Comprises establishments primarily engaged in the manufacture of yarns and broadwoven fabrics (Direct link with 251).

Industry 32114 - Linen Flax Mills: Industry 32150 - Cordage, Rope and Twine: Industry 32190 - Textiles N.E.C.: Comprise establishments primarily engaged in manufacture of miscellaneous textiles (Link with 263 and 269).

Industry 32115 - Man-made Fibres, Spinning and Weaving: Comprises establishments engaged in the manufacture of yarns and narrow fabrics of man-made fibres.

Industry 32117 - Dyeing, Printing and Finishing Yarns and Textiles: Comprises establishments primarily engaged in the dyeing and printing of yarns and textiles.

Industry 32121 - Canvas Goods and Similar Articles of Other Fabrics: Comprises establishments primarily engaged in the manufacture of made-up goods from canvas and other fabrics (Link with 286).

Industry 32129 - Other Made-up Textile Goods Except Clothing: Comprises establishments primarily engaged in the manufacture of made-up textile goods, other than canvas goods and clothing (Link with 289).

Industry 32130 - Knitting Mills: Comprises establishments primarily engaged in the manufacture of hosiery, knitted apparel, and knitted fabrics (Link with 260).

Industry 32140 - Carpets & Rugs: Comprises establishments primarily engaged in the manufacture of carpets and rugs.

Industry 32219 - Clothing Other Than Leather & Fur: Comprises establishments primarily engaged in manufacture of clothing from broadwoven and knitted fabrics (Link with 272-279).

DEFINITION OF TERMS USED UNDER STANDARD INDUSTRIAL CLASSIFICATION:

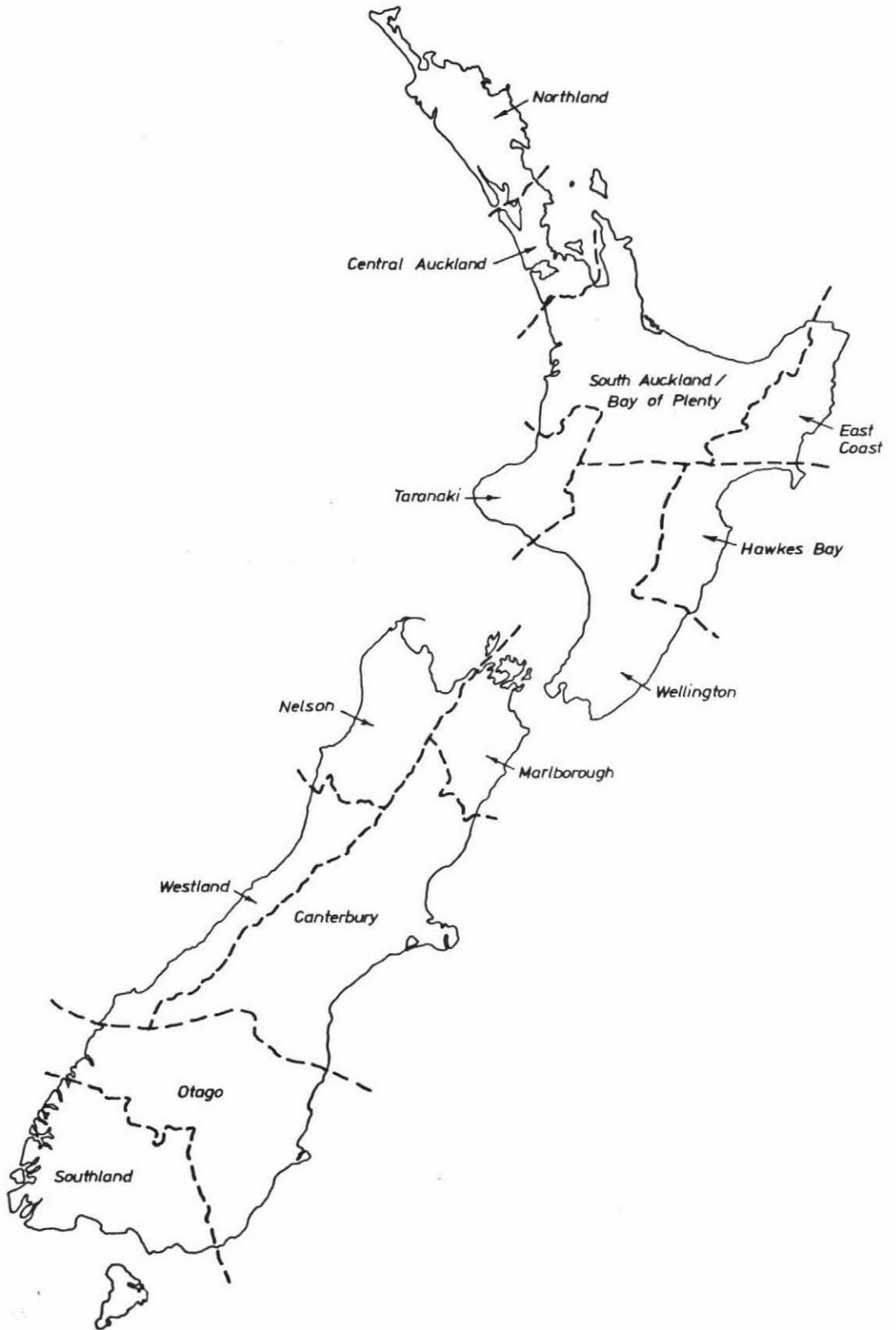
- Establishments: - Productive units, usually a factory, engaged predominantly in manufacturing operations.
- Ancillaries: - Servicing units, usually head offices, laboratories, workshops, etc, engaged predominantly in servicing manufacturing establishments.
- Turnover: - The total of all sales and other income except interest, dividends, royalties, patent fees, and insurance claims received, plus the value of capital work done by own employees and any government subsidies received.
- Value Added: - The industry and sector contribution to G.D.P. comprising the sum of salaries and wages paid, employer contribution to

super schemes, operating surplus or loss, depreciation, and indirect taxes less subsidies received.

Capital Expenditure: - The sum of the amount spent by establishments and ancillary units on the purchase, less the proceeds received from the sale of the following types of fixed assets: -

- a) Land
- b) Buildings and other construction
- c) Road vehicles, ships and aircraft
- d) Plant, machinery and equipment
- e) Other, such as artefacts

Source: Department of Statistics (1963, 1979a, 1979b).



Appendix C : Map of Regions

Source : Local Government
Commission (1973)



Appendix C : Map of Employment Districts

Source: Local Government Commission (1973)

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