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**TOWARDS A THEORY OF THE  
CONFIGURATION AND MANAGEMENT  
OF EXPORT-DEPENDENT LAND-BASED  
VALUE SYSTEMS:  
THE CASE OF NEW ZEALAND**

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**1997**

A thesis presented in partial fulfilment  
of the requirements for the degree of  
**Doctor of Philosophy in  
International Business**  
at  
The University of Auckland, New Zealand.

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## **ABSTRACT**

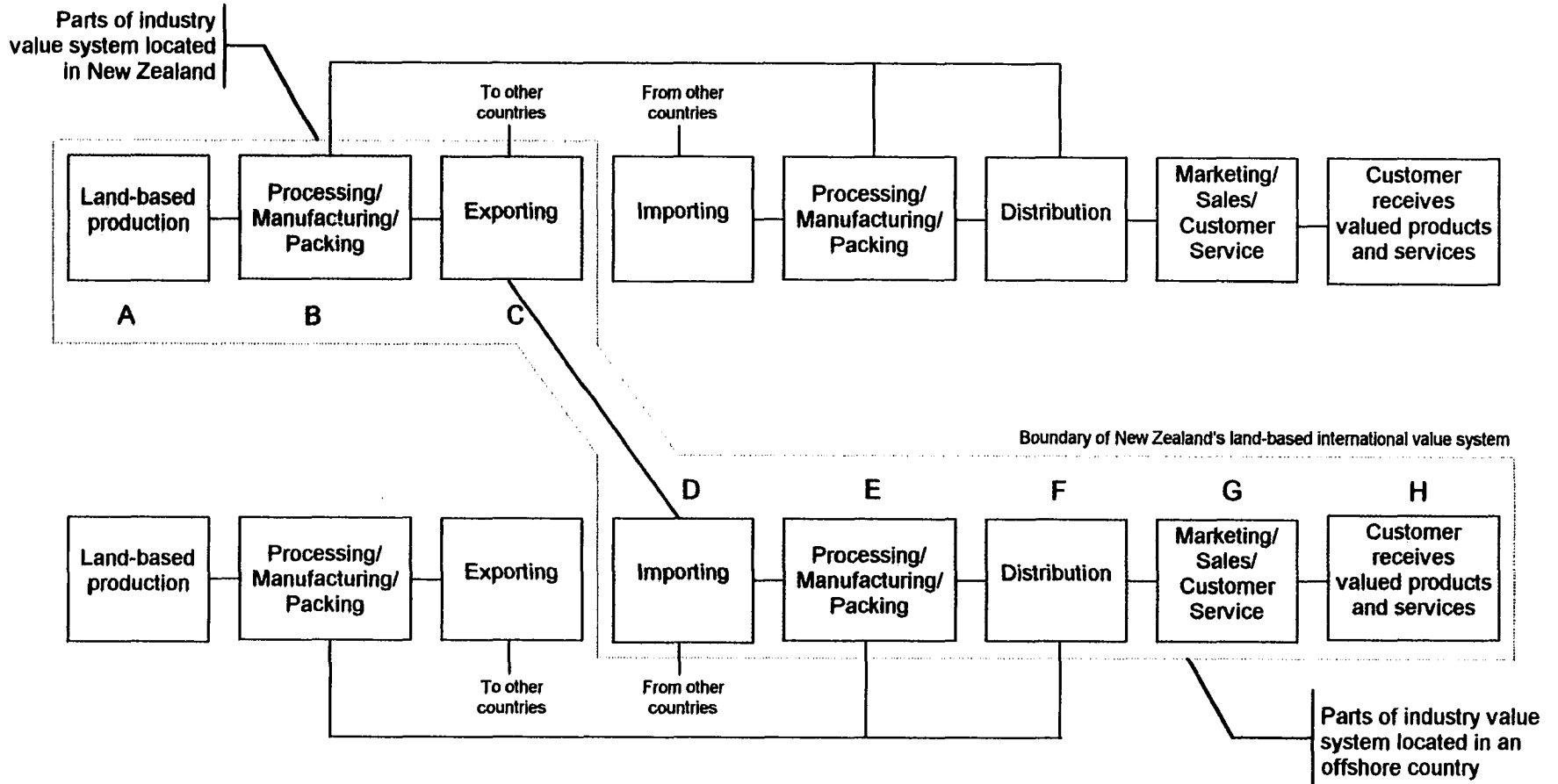
Land-based industries provide the majority of New Zealand's export earnings. The scale of production in the larger industries accounting for this trade creates significant dependency on export markets. The performance of these industries in the international location, therefore, has a marked influence on the country's prosperity.

The process of taking land-based products from pasture to plate encompasses a value system. A value system (depicted as the Z-form Model, overleaf) includes all sequentially aligned organisations through which product flows from the producer to the international consumer. Value systems also include the linkages between adjoining and non-adjoining organisations. The objective of the study was to develop a theory of the configuration and management of export-dependent land-based value systems, supported by case study material drawn from select New Zealand industries.

The Z-form Model constituted a framework from which both relevant contributions and shortcomings in the literature were identified. A conjoint approach to theory building, encompassing both theoretical and empirical contributions, was developed. Empirical evidence was then gathered through multiple case studies of the meat and pipfruit industries to augment theory building. Particular attention was paid to empirical processes relating to the generation of wealth and its subsequent distribution. Phenomena observed through case research were reduced into concepts, and the relationships between concepts identified. Concepts and relationships were then presented as an emergent theory in the form of a causal network. Some of the perspectives and behaviours of value systems were supported by the literature, however, many considerations were found to be unique.

A theory of the configuration and management of New Zealand's export-dependent value systems is presented. The theory encompasses empirically based value system strategies that serve to enhance wealth generation and wealth distribution. Normative value systems, based on the Z-form Model, that return wealth to organisations in the home-base location are provided. Further opportunities for wealth creation and repatriation are identified.

The Z-form Model of New Zealand's export dependent land-based value systems.



## ACKNOWLEDGMENTS

I wish to express my considerable gratitude to Professor R. W. Cartwright for his guidance during the conduct of this inquiry. Wayne's clarity of thought and vision of the end-product ensured that the otherwise tempting distractions amongst the business literature were, at best, minimised. Business commentators rarely consider the process of getting food to their table worthy of examination. This research is, however, about food, in particular our meat and pipfruit industries for which I make no apologies.

Frank Anderson, David Gray, Kevin Lowe, and Alan McRae have had an extraordinary influence on my thinking and understanding of agriculture over the last decade. There are few, if any, agriculturalists worldwide that can analyse, diagnose, synthesise, and prescribe as well as them. This work will further fuel the debate. Professor K. L. Casavant was instrumental in shaping the direction of this research while on sabbatical leave at Washington State University. Ken's passion for New Zealand ensured that the research did not suffer from a more reductionist perspective.

The empirical contribution to the study would not have been possible without the collaboration of many organisations in our meat and pipfruit industries. Most of them remain anonymous organisations responsible, in part, for the majority of New Zealand's export earnings. You attempted to convince me that your industries have nothing in common. Academics are lambasted for constructing artificial walls - don't throw stones in the glasshouse.

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## TABLE OF CONTENTS

TABLE OF CONTENTS .....	iv
TABLE OF TABLES.....	viii
TABLE OF FIGURES .....	ix
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1 MOTIVATION FOR THE STUDY.....	1
1.2 THEORIES OF INTERNATIONAL TRADE AND BUSINESS.....	3
<i>1.2.1 Application of the diamond theory to NZ's land-based industries</i> .....	8
1.3 DEVELOPMENT OF THE RESEARCH OBJECTIVE .....	15
<i>1.3.1 Research objective</i> .....	22
1.4 RESEARCH PHILOSOPHY .....	23
<i>1.4.1 Forms of research</i> .....	23
<i>1.4.2 A generic framework for middle-range theorising</i> .....	25
<i>1.4.2 Thesis outline</i> .....	28
<b>CHAPTER TWO: RELATED PARADIGMS.....</b>	<b>31</b>
2.1 INTRODUCTION.....	31
2.2 ATTRIBUTES OF NEW ZEALAND'S EXPORT-DEPENDENT LAND-BASED INDUSTRIES ..	33
<i>2.2.1 Contingent on upstream resources</i> .....	34
<i>2.2.2 Biological and climatic variability</i> .....	35
<i>2.2.3 Seasonal production</i> .....	37
<i>2.2.4 Price variation</i> .....	39
<i>2.2.5 Many producers and few first stage processors</i> .....	40
<i>2.2.6 Trade barriers</i> .....	41
<i>2.2.7 Perishable output</i> .....	42
<i>2.2.8 Coarse grading standards</i> .....	44
<i>2.2.9 Output requires processing</i> .....	45
<i>2.2.10 Production lag</i> .....	46
<i>2.2.11 Synthesis of implications</i> .....	47
2.3 COMMODITY SYSTEMS .....	48
<i>2.3.1 The value system</i> .....	50
<i>2.3.2 The Z-form Model</i> .....	54
<i>2.3.3 Systems thinking</i> .....	59
2.4 THEORIES OF THE FIRM PERTAINING TO THE Z-FORM MODEL.....	61
2.5 MANAGEMENT IN THE Z-FORM MODEL.....	69
<i>2.5.1 Strategic management</i> .....	70
<i>2.5.2 'Competitive advantage' and 'economic rent'</i> .....	72



2.6 LINKAGES BETWEEN ORGANISATIONS IN THE Z-FORM MODEL .....	75
2.7 THE INTERNATIONAL LINKAGE IN THE Z-FORM MODEL .....	79
2.8 PERSPECTIVES OF LAND-BASED INDUSTRY IN THE HOME-BASE LOCATION .....	80
2.8.1 <i>Farm management</i> .....	83
2.8.2 <i>Agricultural economics</i> .....	85
2.8.3 <i>Agribusiness</i> .....	86
2.9 SUMMARY .....	89
<b>CHAPTER THREE: POTENTIALLY APPLICABLE CONCEPTS AND THEORIES.....</b>	<b>92</b>
3.1 INTRODUCTION.....	92
3.2 MANAGERIAL ATTENTION AND OBJECTIVES.....	94
3.3 INTERNATIONAL LINKAGES.....	98
3.3.1 <i>The transnational solution</i> .....	104
3.4 COMPETITIVE LINKAGES BETWEEN ORGANISATIONS .....	108
3.4.1 <i>Bargaining power</i> .....	112
3.4.2 <i>Hypercompetition</i> .....	114
3.5 COLLABORATIVE LINKAGES BETWEEN ORGANISATIONS.....	119
3.5.1 <i>Value chains</i> .....	119
3.5.2 <i>Value constellations and value stars</i> .....	121
3.5.3 <i>Relationship marketing</i> .....	123
3.5.4 <i>Industrial networks</i> .....	127
Relationships in industrial networks .....	132
Strategic networks .....	135
3.6 BUSINESS STRATEGY.....	139
3.6.1 <i>Management</i> .....	144
3.6.2 <i>Strategic management</i> .....	146
‘New age’ strategic management.....	150
Strategy and change .....	153
3.6.3 <i>Global strategy</i> .....	156
3.7 GENERIC STRATEGIES .....	159
3.8 CONTRIBUTIONS FROM THE LITERATURE.....	164

<b>CHAPTER FOUR: THEORY CONSTRUCTION</b> .....	<b>170</b>
4.1 INTRODUCTION.....	170
4.2 THEORY BUILDING IN THE ORGANISATIONAL SCIENCES .....	170
4.2.1 <i>Middle-range theories</i> .....	171
4.2.2 <i>Deductive theory building</i> .....	175
4.2.3 <i>Inductive theory building: Grounded theory</i> .....	178
4.3 A CONJOINT APPROACH TO THEORY BUILDING .....	180
4.4 ADDITIONS TO THE Z-FORM MODEL .....	187
4.5 SUMMARY.....	193
<b>CHAPTER FIVE: EMPIRICAL EVIDENCE</b> .....	<b>195</b>
5.1 INTRODUCTION.....	195
5.2 CASE STUDY RESEARCH.....	196
5.3 TEMPORAL FACTORS AND INDUSTRY SELECTION.....	204
5.4 AN OVERVIEW OF THE CASE INDUSTRIES.....	209
5.4.1 <i>The pipfruit industry</i> .....	210
5.4.2 <i>The meat industry</i> .....	216
5.4.3 <i>Summary of the scope of case study research</i> .....	228
5.5 THE DATA GATHERING PROCESS.....	230
5.5.1 <i>Access to cases</i> .....	232
5.5.2 <i>Transcription and coding</i> .....	233
5.6 EMPIRICAL RESULTS.....	236
5.7 AN EMERGENT THEORY.....	264
<b>CHAPTER SIX: ELABORATION AND APPLICATION</b> .....	<b>271</b>
6.1 INTRODUCTION.....	271
6.2 SYNTHESIS OF THE THEORY .....	272
6.2.1 <i>Value system performance</i> .....	272
Focus on differentiation .....	272
Role of the spot-market.....	274
Interpretation of failure .....	276
6.2.2 <i>Significant behaviours</i> .....	278
Role of business relationships.....	279
Perception of end-user .....	280
Value system strategies.....	281
6.2.3 <i>Distributive and generative effects</i> .....	286
6.3. APPLICATION OF THE THEORY TO ALTERNATE VALUE SYSTEM CONFIGURATIONS.....	301
6.4 EXTENSIONS OF THE THEORY: NON-AGRARIAN.....	306

<b>CHAPTER SEVEN: CONCLUSIONS.....</b>	<b>310</b>
7.1 INTRODUCTION.....	310
7.2 REVIEW OF METHODOLOGY .....	311
7.3 THE THEORY AND THE Z-FORM MODEL .....	313
7.4 CONTEXTUAL VARIABLES EXOGENOUS TO THE THEORY.....	319
7.5 DIRECTIONS FOR FUTURE RESEARCH .....	321
7.6 VALUE SYSTEM SUCCESS DRIVERS FOR PRACTITIONERS .....	323
<b>REFERENCES.....</b>	<b>327</b>
<b>APPENDIX ONE: RESEARCH PROTOCOL.....</b>	<b>381</b>
Introduction .....	381
Research personnel .....	383
Study concepts.....	383
Industry involvement.....	385
Summary .....	386
Questionnaire .....	387
<b>APPENDIX TWO: THE CASE STUDIES.....</b>	<b>390</b>
A2.1 VALUE SYSTEM OF HEAVY LAMBS TO THE US MARKET.....	390
A2.2 VALUE SYSTEM OF LAMB PRODUCTS TO GERMANY .....	394
<i>A2.2.1 Mutton to Asian distributors.....</i>	<i>396</i>
A2.3 INTEGRATED MEAT PROCESSING AND DISTRIBUTION VALUE SYSTEMS .....	399
<i>A2.3.1 Lamb products to France .....</i>	<i>399</i>
<i>A2.3.2 Venison products to France.....</i>	<i>403</i>
<i>A2.3.3 Lamb products to Denmark.....</i>	<i>405</i>
<i>A2.3.4 Lamb products to North America .....</i>	<i>405</i>
A2.4 NEW ZEALAND PIPFRUIT INDUSTRY'S VALUE SYSTEMS.....	409
<i>A1.4.1 Apples and pears to Singapore.....</i>	<i>414</i>
<i>A1.4.2 Apples and pears to North America.....</i>	<i>417</i>
<i>A1.4.3 Apples and pears to the UK.....</i>	<i>419</i>

## TABLE OF TABLES

<i>Table 1.1. The ranking of world export share (relative to other NZ domiciled industries) and the percentage of product consumed domestically from NZ land-based industries in 1992.....</i>	<i>10</i>
<i>Table 1.2. New Zealand's land-based industries contribution to annual GDP and export earnings (FOB), expressed as percentages for the period 1970 to 1994.....</i>	<i>16</i>
<i>Table 2.1. The advantages and disadvantages of vertical integration.....</i>	<i>65</i>
<i>Table 3.1. Important characteristics of network relationship elements.....</i>	<i>131</i>
<i>Table 3.2. An evolution of organisation forms depicting product-market strategy, structure and core activating and control mechanisms.....</i>	<i>135</i>
<i>Table 3.3. Global strategy: An organising framework.....</i>	<i>157</i>
<i>Table 4.1. The characteristics of general, middle range and minor theories.....</i>	<i>172</i>
<i>Table 4.2. A classification of sociological research.....</i>	<i>176</i>
<i>Table 4.3. A framework for evaluating theories.....</i>	<i>185</i>
<i>Table 5.1. Relevant situations for different research strategies.....</i>	<i>197</i>
<i>Table 5.2. The attributes of New Zealand's export-dependent land-based industries in terms of configuration, and product.....</i>	<i>209</i>
<i>Table 5.3. The New Zealand Apple and Pear Marketing Board's 1994 volumes, percentage of export crop, market share and value in key areas of sales activities.....</i>	<i>214</i>
<i>Table 5.4. Export value of meat and meat industry products (\$million at fob).....</i>	<i>221</i>
<i>Table 5.5. Explanatory effects matrix of first level categories from the meat industry case studies....</i>	<i>238</i>
<i>Table 5.6. Explanatory effects matrix of first level categories from the pipfruit industry case study..</i>	<i>247</i>
<i>Table 5.7. Classification of categories and concepts into antecedent, intervening, and outcome classes.....</i>	<i>259</i>
<i>Table 6.1. Financial performance of each stage in the New Zealand lamb carcass to UK market value system (1989 data).....</i>	<i>297</i>
<i>Table 6.2. Capacity of alternate forms of value system configurations to impose value system strategies.....</i>	<i>305</i>
<i>Table 7.1. Relative levels of producer subsidy equivalents in select countries and free trade blocks for 1993.....</i>	<i>319</i>

## TABLE OF FIGURES

<i>Figure 1.1 The complete system: The competitive advantage of nations.....</i>	<i>6</i>
<i>Figure 1.2. Einstein's model of thinking about science.....</i>	<i>27</i>
<i>Figure 2.1. Annual pastoral feed supply (kg/DM/ha/day) and feed demand (kg/DM/ha/day) on a Manawatu seasonal supply dairy farm.....</i>	<i>36</i>
<i>Figure 2.2. The relationship between output perishability and industry-wide alignment among producers and first stage processors.....</i>	<i>43</i>
<i>Figure 2.3. Dependency diagram of relationships between land-based production, output and industry structure.....</i>	<i>48</i>
<i>Figure 2.4. Representative land-based system value chains.....</i>	<i>51</i>
<i>Figure 2.5. Land-based value systems for home based and internationally manufactured products.....</i>	<i>52</i>
<i>Figure 2.6. New Zealand's export-dependent dairy industry's value system.....</i>	<i>53</i>
<i>Figure 2.7. The Z-form Model of New Zealand's export-dependent land-based value systems.....</i>	<i>55</i>
<i>Figure 2.8. The theoretical relationship between decreasing transaction costs and increasing management costs as the firm internalises transactions.....</i>	<i>64</i>
<i>Figure 3.1. Levels of managerial attention and perspectives, and associated business paradigms.....</i>	<i>95</i>
<i>Figure 3.2. The multinational organisation model.....</i>	<i>101</i>
<i>Figure 3.3. The global organisation model.....</i>	<i>102</i>
<i>Figure 3.4. The international organisation model.....</i>	<i>103</i>
<i>Figure 3.5. The transnational organisation model.....</i>	<i>106</i>
<i>Figure 3.6. Five forces driving industry competition.....</i>	<i>109</i>
<i>Figure 3.7. Entry barriers, exit barriers and their relationship to profitability.....</i>	<i>110</i>
<i>Figure 3.8. Potential competitive forces in the Z-form Model of New Zealand's land-based international value systems.....</i>	<i>113</i>
<i>Figure 3.9. The cycle of price-quality competition - moving up an escalation ladder.....</i>	<i>115</i>
<i>Figure 3.10. The generic value chain.....</i>	<i>119</i>
<i>Figure 3.11. Porter's value system.....</i>	<i>120</i>
<i>Figure 3.12. Value star depicting participants contributing to value creation.....</i>	<i>121</i>
<i>Figure 3.13. The environment of marketing channel dyads.....</i>	<i>124</i>
<i>Figure 3.14. Network transmission through connectedness between entities.....</i>	<i>129</i>
<i>Figure 3.15. Network transmission and multiple connectedness.....</i>	<i>130</i>
<i>Figure 3.16. Adaptation procedure developing from business relationships.....</i>	<i>133</i>
<i>Figure 3.17. Factors contributing to the development of strategic networks.....</i>	<i>134</i>
<i>Figure 3.18. Sources of strategy, plans and processes.....</i>	<i>141</i>
<i>Figure 3.19. The Design School model of business strategy.....</i>	<i>146</i>
<i>Figure 3.20. The quest for competitiveness.....</i>	<i>151</i>
<i>Figure 3.21. Change arena.....</i>	<i>153</i>

<i>Figure 3.22. Three generic strategies.....</i>	<i>159</i>
<i>Figure 3.23. The strategy clock: competitive strategy options.....</i>	<i>161</i>
<i>Figure 4.1. A process of middle range theory building incorporating induction from empirical evidence and deduction from general theory.....</i>	<i>182</i>
<i>Figure 4.2. Representation of the components of a theory.....</i>	<i>184</i>
<i>Figure 4.3. Simplified Z-form Model of a New Zealand export-dependent land-based international value system.....</i>	<i>187</i>
<i>Figure 4.4. Critical stages of ownership in the value system to mitigate characteristics of land-based production.....</i>	<i>188</i>
<i>Figure 4.5. The common effect of producer cooperatives on the Z-form Model.....</i>	<i>190</i>
<i>Figure 4.8. The multinational enterprise in the Z-form Model - internalising the international transaction.....</i>	<i>191</i>
<i>Figure 4.9. Potential collaborative relationships in the Z-form Model, in addition to those existing between adjoining stages.....</i>	<i>193</i>
<i>Figure 5.1. A conceptual model of the case study method.....</i>	<i>200</i>
<i>Figure 5.2. Disbursement of the New Zealand Apple and Pear Marketing Board's income (\$ per tray carton) in 1995.....</i>	<i>212</i>
<i>Figure 5.3. Meat industry exports from New Zealand for the period 1990-1995, and target for 2000.....</i>	<i>222</i>
<i>Figure 5.4. A schema depicting the categories contributing to the concept 'business relationship'....</i>	<i>255</i>
<i>Figure 5.5. A schema depicting the categories contributing to the concept 'organisation'.....</i>	<i>257</i>
<i>Figure 5.6. A schema depicting the categories contributing to the concept 'value system structure'..</i>	<i>258</i>
<i>Figure 5.7. Causal network of categories and concepts derived through case industry data reduction.....</i>	<i>262</i>
<i>Figure 5.8. Abridged causal network depicting critical value system concepts and relationships: Model of land-based value system strategy.....</i>	<i>269</i>
<i>Figure 6.1. End-user and structure as value system strategies in the Z-form Model.....</i>	<i>286</i>
<i>Figure 6.2. Relationship between distributive effects and generative effects in value systems where distributive effects are first resolved.....</i>	<i>294</i>
<i>Figure 6.3. Relationship between distributive effects and generative effects in the absence of ideological commitment to the distribution of wealth.....</i>	<i>295</i>
<i>Figure 7.1. Normative configuration of export-dependent land-based value systems: The Transnational Solution.....</i>	<i>316</i>
<i>Figure A1.1. The Z-form Model of a New Zealand land-based international value system.....</i>	<i>382</i>
<i>Figure A2.1. Z-form Model depicting a farmer-owned and controlled value system distributing heavy lambs in the US.....</i>	<i>393</i>
<i>Figure A2.2. Z-form Model depicting chilled and frozen lamb products exported to Germany.....</i>	<i>397</i>
<i>Figure A2.3. Z-form Model depicting mutton products exported to an Asian importer.....</i>	<i>398</i>
<i>Figure A2.4. Z-form Model depicting an integrated processor exporting lamb to France.....</i>	<i>402</i>
<i>Figure A2.5. Z-form Model depicting an integrated processor exporting venison to France.....</i>	<i>404</i>

<i>Figure A2.6. Z-form Model depicting an integrated processor distributing, and marketing frozen lamb in Denmark.....</i>	<i>406</i>
<i>Figure A2.7. Z-form Model depicting an integrated processor exporting chilled lamb into the US and Canada.....</i>	<i>408</i>
<i>Figure A2.8. Historical product flow and business relationships between upstream stages of the New Zealand pipfruit value system.....</i>	<i>411</i>
<i>Figure A2.9. Desired product flow and business relationships between upstream stages of the New Zealand pipfruit value system.....</i>	<i>412</i>
<i>Figure A2.10. Z-form Model depicting the pipfruit value system to Singapore.....</i>	<i>415</i>
<i>Figure A2.11. Z-form Model depicting the pipfruit value system to US and Canada.....</i>	<i>418</i>
<i>Figure A2.12. Z-form Model depicting the pipfruit value system to UK.....</i>	<i>421</i>

# CHAPTER ONE: INTRODUCTION

## MOTIVATION, RESEARCH APPROACH, AND PROBLEM STATEMENT

*It is a pure unadulterated country life. They get up early because they have so much to do and go to bed early because they have so little to think about.*

Oscar Wilde. (1891). *The Picture of Dorian Gray*.

### 1.1 MOTIVATION FOR THE STUDY

Land-based industries are important to the standard of living in many developed countries. Industries such as agriculture, forestry, and horticulture make a significant contribution to export earnings (greater than 15%) in New Zealand, Australia, Denmark, The Netherlands, Spain, France, and the United States of America. For example, in New Zealand the current contribution from the land-based sector is \$10.3 billion, representing 51% of total export receipts (Ministry of Agriculture & Fisheries (MAF), 1996). The significance of the land-base sector is further heightened with export-dependency, when the domestic economy is simply too small to consume all of the land-based production. New Zealand, Australia and Denmark, and to a lesser degree Spain, France and the United States are all developed countries where the success of the land-based sector is dependent on export markets.

The performance of land-based industries in these countries has declined for several decades. For example, New Zealand's terms of trade - the average price of exports divided by the average price of inputs (Dalziel & Lattimore, 1991) - have declined steadily since the 1950s (New Zealand Trade Development Board (NZTDB), 1990). As the terms of trade has declined New Zealand has had to increase the volume of exports to pay for the same quantity of imports. However, the "adverse change in relative prices can [only] be overcome if a country can increase its export volume by a larger proportion" (Chatterjee, 1992, p. 236). Crocombe, Enright, and Porter (1991) correctly observed that exporting greater volumes in



response to declining terms of trade was *forcing* New Zealand into the position of having to increase export volumes to maintain a desirable standard of living; a position that does not appear sustainable in the long term.

New Zealand's "vulnerability to adverse terms of trade movements is a reflection of the large size of the commodity, price taking component, of foreign exchange earnings" (NZTDB, 1990, p. 10). The economies of other developed countries suffer the same fate to the adverse terms of trade facing the land-based sector but New Zealand remains particularly vulnerable. In general terms, the motivation of this thesis is to better understand the strategic initiatives required to improve the performance of export-dependent land-based industries. Improvements to the performance of these industries will then result in improvements to the standard of living in these economies. The intention is to develop from the New Zealand case a theory of performance improvement in these industries, that can be generalised to other countries.

The production of land-based goods meeting international consumers' specifications requires the involvement of several organisations. These organisations will be located both on- and offshore. Numerous academic disciplines appear to contribute to the processes pursued by these various organisations, yet no *single* theory has emerged to benefit academics, researchers and practitioners. Therefore, a further aim of the study is to develop a theory of the configuration and management of export-dependent land-based value systems which can be applied to consider the creation and distribution of wealth

New Zealand's land-based industries have been the subject of a multitude of reviews during the last two decades. Many of those studies have been completed by supply-side economists who ignore issues such as the unique attributes of land-based industries and their export dependency. Therefore, there is a need to develop and present a holistic view of these value systems.

Chapter One presents a discussion of motivation for the study. The core literature on international trade and international competitiveness is introduced and attributes of these trade theories are briefly reviewed in Section 1.2. Section 1.3 provides a discussion of the development of the research objective from first principles. The research objective is then

presented. The research philosophy and research approach adopted for this study are described in the following section. The thesis outline is presented as the conclusion to the chapter.

Intrinsically New Zealand's land-based industries are international traders. The modern history of New Zealand, The Great War and World War II aside, is inseparable from the development of international trade in land-based commodities. The performance of these industries is often explained using theories of international trade (see Enders & Lapan, 1987), and more recently, theories of international competitiveness. Motivation for the study was first provided by the recognition of deficiencies in such theories. Attributes of the theories of comparative and competitive advantage are now discussed.

## 1.2 THEORIES OF INTERNATIONAL TRADE AND BUSINESS

**T**HE CLASSICAL THEORIES OF SMITH AND RICARDO and the Heckscher-Ohlin theory of international trade are reviewed briefly in this section. The product life cycle approach to international trade, attributed to Vernon (1966) (see Wells, 1972), is then briefly introduced. Porter's (1990) theory of a nation's competitive advantage is described and his contribution to international trade theory identified.

The forces of supply and demand in a free market are capable of selecting an equilibrium price and an equilibrium quantity toward which "actual price and quantity may gravitate" (Baumol & Blinder, 1985, p. 56). The availability of resources, the efficiencies of production, and the prices of related outputs will influence the supply of a good within a country (Enders & Lapan, 1987). The demand for a good will depend on the good's price, population size, consumers' income, tastes, and the prices of substitute and complementary goods (Baumol & Blinder). Enders and Lapan stated that "trade takes place because of price differences between countries" (p. 7). Therefore, in the absence of trade prices of a good will differ between countries.

Smith (1776/1981), Ricardo (1821/1971), and Heckscher and Ohlin (Ohlin, 1933) proposed general theories of international trade. The respective theories are absolute

advantage, comparative advantage and factor endowment. The theories of trade commonly use a two good, two country model to describe autarky conditions and prices, the effects of specialisation, the direction of trade, and post-trade conditions and prices.

Absolute advantage may arise because of differences in natural resources, labour, capital, technology and entrepreneurship (Smith, 1776/1981). The theory of absolute advantage states that under free trade each country should specialise in producing those goods that it can produce most efficiently. Some of the goods would then be exported to pay for goods produced elsewhere, in doing so Smith showed that nations would benefit from trade. Ricardo (1821/1971) developed Smith's model further proposing that trade will occur even when a nation holds an absolute advantage in the production of both goods. Ricardo's theory of comparative advantage states that each country will specialise in the good with the lowest opportunity cost. Therefore, countries will specialise in the production of goods in which they have a comparative advantage. A country's comparative advantage is the result of relative differences in the opportunity cost of factor endowments. New Zealand's comparative advantage may be succinctly described as plant growth.

The cost differences resulting from relative differences in factor endowments are explained, in part, by the Heckscher-Ohlin Theory (Ohlin, 1933). This theory attempts to explain the reasons for differences in autarkic prices (Enders & Lapan, 1987). For example, products from New Zealand's land-based industries are often less expensive than those from other countries because the costs of production are considerably less. The theories of trade; absolute advantage, comparative advantage, and relative factor endowment historically explain the likely direction of a country's trade.

The product life cycle approach to trade (Vernon, 1966) places "less emphasis upon comparative cost doctrine and more upon the timing of innovation, the effects of scale economies, and the roles of ignorance and uncertainty in influencing trade patterns" (p. 190). The theory attempts to explain the source of new products, the rationale for standardising products and the eventual maturing of products. Unlike the classical theories of international trade the product life cycle approach was developed at business schools. Wells (1972)

suggests that “researchers in business schools<sup>1</sup> were interested in developing useful tools for policy formulation” (p. 5) by the firm, industry or government.

The product life cycle approach provides useful insight to both the multinational enterprise (Dunning, 1981, 1993) as a vehicle for international trade and Porter’s (1990) more recent postulate - the competitive advantage of nations. For example, all three theories suggest that innovation is more likely to occur near markets with strong demand; that home demand, rather than foreign demand, is a necessary pre-requisite for risk capital; and that producers located near to the market have lower costs in transferring market knowledge.

The traditional theories of international trade consider trade from industries within a common geographic base. Because trade is considered at an aggregate (industry) level the behaviour of individual firm’s is ignored. The product life cycle approach shifted the focus of international trade from factors of production to product attributes. The contribution firms make to international trade was at last being considered. However, the industry’s configuration, and the linkages between firms within an industry were disregarded. For example, the creation of synergy in an industry through mutual collaboration or competition between firms was ignored. Porter (1990) recognised that the traditional theories of comparative advantage - focused on relative costs of production - were no longer adequate to describe the direction and patterns of trade. Dunning (1993) has also suggested that the two-factor model of resource allocation should be widened to embrace all assets. Porter sought to explain the relationships (linkages) between firms within an industry in the form of a diamond. He described successful trade in terms of national competitive advantage identifying four broad conditions necessary for the competitive advantage of a nation. Collectively these sources were postulated to shape the environment in which the nation’s firms either succeed or fail. Porter stressed that competitive advantage depends on all parts of the diamond and not the presence, or otherwise, of a single source.

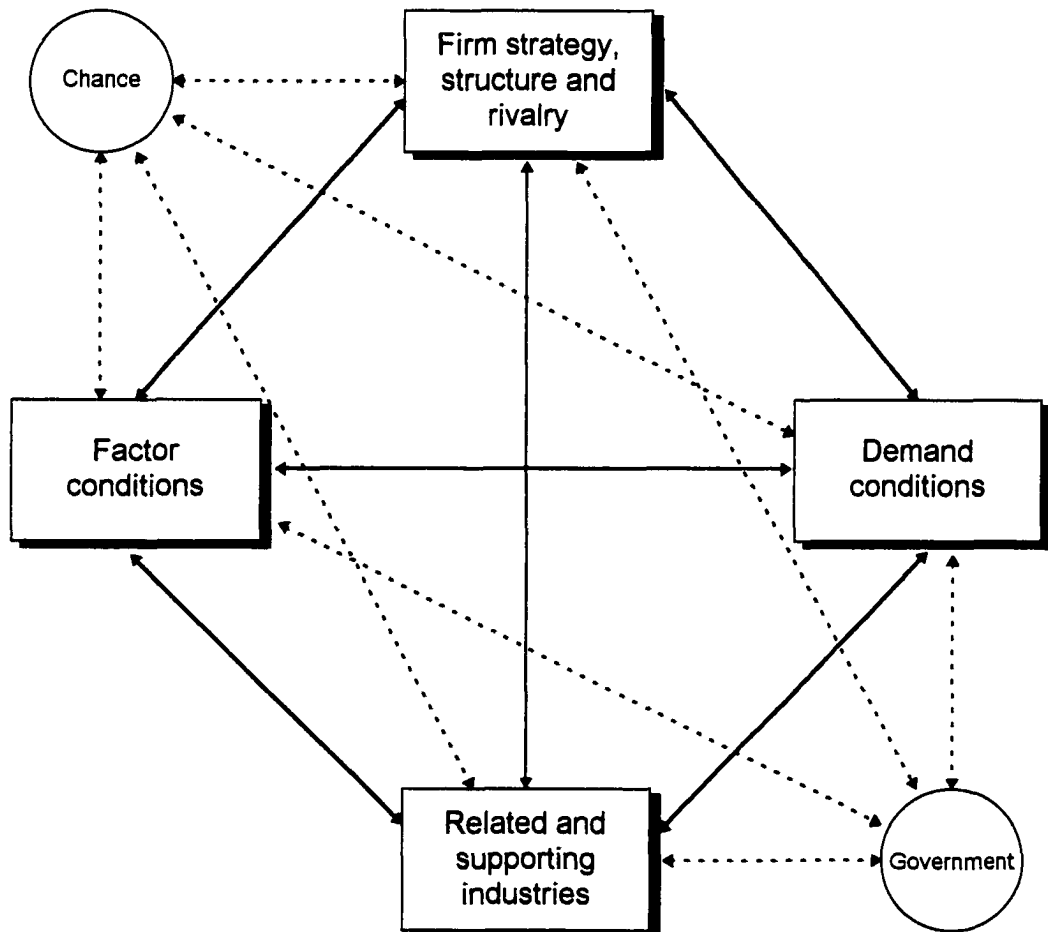
While competitive advantage is not an absolute requirement for international trade it appears a desirable position for the host nation to achieve. Porter’s (1990) diamond model is

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<sup>1</sup> Sadly Selvarajah and Cutbush-Sabine (1991) observed that many business schools in Australia and New Zealand claim to teach international business yet they “continue to emphasise the study of international trade and economics” (p. xxii).

presented in Figure 1.1. Porter identifies the four sources of a nation's competitive advantage as factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry depicted as the diamond's corners. Two additional variables are identified as government and chance depicted with their supposedly less important interactions outside the diamond.

Figure 1.1. The complete system: The competitive advantage of nations.



*Note.* From *The Competitive Advantage of Nations* (p. 127), by M. E. Porter, 1990, New York: Free Press.

The host nation's firms are claimed to operate within industry groupings (Porter, 1990). Interactions between firms within an industry are likely to occur through either competitive or collaborative linkages (Hamel, Doz, & Prahalad, 1989). Porter's *diamond theory*, therefore, provides an alternative view to the theories of Vernon, Heckscher and Ohlin, Ricardo, and Smith; all of whom considered output from an

industry in isolation from the firm. The diamond theory identifies the role of linkages between firms in an industry and attempts to predict the optimum industry configuration.

The first source for competitive advantage is factor conditions. Factor conditions are described as factor endowment (basic factors such as labour, land and natural resources and advanced factors such as capital, knowledge and infrastructure), the hierarchy between factors, factor creation and selective factor disadvantage (Porter, 1990). Factor endowments are those largely considered by the Heckscher-Ohlin theory. However, Porter suggested that “the most important factors to competitive advantage in most industries, especially the industries most vital to productivity growth in advance economies, are not inherited but are created within a nation” (p. 74).

Land-based production and processing organisations in New Zealand attempt to exploit foreign basic factors and create advanced factors perhaps having recognised that the advantages from basic factors are often exceedingly fleeting (Porter, 1990). The New Zealand Dairy Board, the New Zealand Apple and Pear Marketing Board (NZAPMB) and the Asian New Zealand Meat Company (ANZCO) source farm products from overseas producers. To avoid EC trade barriers the NZDB purchases milk solids from EC producers for aerosol cream products sold in Europe (NZDB, 1992c). Similarly, the NZAPMB has entered into a joint investment with the Chilean fruit company Zeus SA to market fruit sourced from Chile to “better service customers and return profits to New Zealand” (NZAPMB, 1992, p. 9).

Demand conditions are the second source for competitive advantage. Demand conditions refer to the structure of demand, home demand composition, demand size and pattern of growth, and the internationalisation of demand conditions (Porter, 1990). The internationalisation of domestic demand is a function of the mobility or multinationality of local buyers and the influences of foreign needs. Porter’s demand conditions are largely located in the home nation, the internationalisation of domestic demand is reported to *pull* demand offshore. Porter describes the internationalisation of demand as a passive process which provides a marked contrast to the behaviour of multinational, global, international and transnational organisations (Bartlett & Ghoshal, 1989). Demand conditions, centred on the home nation, provide little recognition of sources of foreign demand or export dependency.

Porter's (1990) third source necessary for competitive advantage is internationally competitive related and supporting industries. Related and supporting industries have inputs, technologies, activities and customers in common, typically forming an industry *cluster* (Porter). While related and supporting industries are required to be internationally competitive they too are described as being home based.

The fourth and final source for competitive advantage is firm strategy and structure. Firm strategy and structure describes the forces influencing the creation of companies, their organisation and management, and the level of domestic rivalry (Porter, 1990). The strategy and structure of firms is a function of managers' goals, firms' goals, the influence of national prestige and the importance of sustained commitment.

Government and chance also influence the performance of the nation. Porter (1990) described government's role as a catalyst and challenger. Chance events such as inventions, discontinuities such as discoveries of mineral deposits or floods, and war can shift competitive position. Porter's diamond theory of competitive advantage is a useful development from the somewhat abstract theories of comparative advantage and factor endowment. The theory, developed from industry-wide case research in ten countries, has been used to describe a nation's trade (see Crocombe et al., 1991). However, Cartwright (1993b) correctly states that the theory is yet to be validated. Notwithstanding the criticism, Porter (1990) made two significant contributions to the theory of international trade. Firstly, he identified the importance of linkages between firms within an industry; firm strategy structure and rivalry. Secondly, he directed analysis at industries and industry clusters, proposing that competition and collaboration between firms within an industry is likely to be a potential source of competitive advantage hitherto ignored.

### **1.2.1 Application of the diamond theory to NZ's land-based industries**

In 1990 TRADENZ commissioned Porter to study New Zealand's competitive advantage. The aim of the study was to evaluate the performance of New Zealand's industries using Porter's (1990) diamond theory. The New Zealand study, known as the *Porter Project*, was published in 1991 (Crocombe et al., 1991). The project involved 25 industry studies of which four (dairy, forestry, electric-fencing, and software) were published.

Crocombe et al. (1991) criticised New Zealand's industries for failing to add value. The structure of many of New Zealand's land-based industries was reported as being non-competitive and, therefore, detrimental to the pursuit of competitive advantage. Furthermore, the lack of participation in higher education and the reliance on the state by much of the population was correctly damned. However, by Porter's own admission, the method used in the study should be considered suspect. In his original ten country study Porter avoided industries highly dependent on natural resources. Porter (1990, p. 28) claimed that "such industries do not form the backbone of advanced economies, and the capacity to compete in them is more explicable using classical theory". New Zealand, and to a lesser extent Australia, provide an obvious paradox to this claim. Both Kuwait and Brunei, two newly developed countries largely dependent on the extraction and exportation of petroleum products, also provide other less obvious but equal examples. The percentage of products exported by New Zealand's land-based industries is presented in Table 1.1 (overleaf).

The data in Table 1.1 establish the *dependency* of New Zealand's land-based industries on export markets. For example, some 92% of kiwifruit grown and 74% of apples grown in New Zealand are exported. New Zealanders, already with one of the highest consumptions of fruit per capita in the world (E. A. Cameron, personal communication, July, 1996), would need to consume an additional 227kg of fruit per capita per annum to alleviate the need for exporting apples and kiwifruit.

Porter's (1990) dismissal of industries largely dependent on natural resources in his original study appears to be appropriate where products are sold in an undifferentiated, substantially raw form. One can only postulate that perhaps New Zealand's dairy and forestry industries had sufficiently reduced raw materials' contribution to warrant their inclusion in the Porter Project. However, the majority (94%) of income from New Zealand's pipfruit industry (an unpublished study) is derived from the sale of fresh fruit (NZAPMB, 1992); an industry highly dependent on the sale of raw material. The inclusion of land-based industries and, therefore, the appropriateness of the diamond to explain New Zealand's [lack of] competitive advantage was unexplained.



Table 1.1. The ranking of world export share (relative to other NZ domiciled industries) and the percentage of product consumed domestically from NZ land-based industries.

Industry	Rank	Export (%)	Industry	Rank	Export (%)
Kiwifruit	1	92	Skim milk powder	14	92
Sheepmeat	2	76	Tallow	15	
Scoured wool	3		Fish fillets	16	
Chemical wood pulp	4	90	Apples	17	74
Sheep pelts	5		Mechanical wood pulp	18	90
Inedible offal	6		Racehorses	19	
Whole milk powder	7	93	Wood	20	55
Boneless beef	8	66	Aluminium	21	96
Greasy wool	9	70	Woollen yarn	22	
Sausage casings	10		Frozen fish	23	40
Butter	11	60	Venison	24	57
Casein	12	97	Cheese	25	62
Edible offal	13				

*Note.* The data is from *Upgrading New Zealand's Competitive Advantage* (p. 204), by G. T. Crocombe, M. J. Enright, and M. E. Porter, 1991, Auckland: Oxford University Press; "Multiple Linked 'Diamonds' and the International Competitiveness of Export-Dependent Industries: The New Zealand Experience," by R. W. Cartwright, 1993, *Management International Review*, 33 (Special Issue), p. 61; *New Zealand Official Yearbook*, by Statistics New Zealand, 1993, Wellington: Author; *Strategic Plan 1993-2000*, by New Zealand Meat Producers Board, 1993, Wellington: Author.

Porter's (1990) home country diamond theory was reviewed by authors contributing to a special issue of *Management International Review*. Rugman (1993) stated emphatically that "all of the papers advocate modifications" (p. 5) to the diamond. Rugman and Cruz (1993) and Hodgetts (1993) offered *double-diamonds* in an attempt to explain Canada's and Mexico's international competitiveness respectively. In both cases the second diamond depicts US home country forces. International borders identifying home country commercial activities between Canada and the US, and Mexico and the US have been eroded under the North American Free Trade Agreement. Bellak and Weiss (1993) argued that Austria's application for EC membership similarly reduces

the importance of the home country forces identified by Porter's diamond. Cartwright (1993b) identified several weaknesses in using Porter's diamond to predict or prescribe improvements to competitive advantage in his study of the international competitiveness of New Zealand's export-dependent industries. Cartwright described the diamond theory as:

[a] home-base model of international competitiveness. The theory specifies that the controllable variables that determine the competitiveness of the firms in international markets are all located in the domestic market environment. The customer requirements and competitive pressures faced by firms at home are held to be the principal reason for offshore success. (p. 60)

Cartwright (1993b) found that New Zealand land-based industries with insignificant home-markets relative to international markets; industries dependent on basic factors as important inputs; industries where domestic rivalry is suppressed by legislation; and industries that pursue offshore investment and a sustained presence in international markets appear to have achieved positions of competitive advantage. Cartwright's results were the antithesis of that found by Crocombe et al. (1991).

Porter's (1990) diamond theory may be a powerful explanatory tool in the appropriate environment, for example, the United States of America. However, its application to export-dependent land-based industries in a small, geographically isolated country without modification, is inappropriate. Cartwright (1993b) proposed that the home country's diamond, the foreign country's diamond, and the linkages between them provide the sources of competitive advantage. Dunning (1993) summarised the significant contribution made by Porter's (1990) diamond to the theory of international business. Dunning stated that:

the way the various parts of the diamond are put together and interact with each other is determined by the macro-economic and macro-organisational systems pursued by the country in question; and, however much, in their policies and strategies, governments may be influenced by international events, it is they, and they alone, which have the sovereign jurisdiction over the control of assets within

their jurisdiction.... In the final analysis, it is the domestic organisation of the ingredients of competitive advantage which will determine how many and what kind of assets are generated and how they are used. It will no less influence the 'where' of added value. (p. 13)

Competitive advantage "grows fundamentally out of value a firm is able to create for its buyers that exceeds the firm's cost of creating it" (Porter, 1985, p. 3). As observed by Cartwright (1993b) it is unfortunate that Crocombe et al. (1991) did not undertake "fieldwork in export markets or offshore investment sites" (p. 58). Whether or not New Zealand's export-dependent land-based industries have reached a position of competitive advantage can only be determined by the empirical examination of their performance in overseas markets.

Cartwright (1993b) also raised concerns with respect to the industry selection criteria used by both Porter (1990) and Crocombe et al. (1991). Cartwright suggested that industries would be defined better using "competitor-based definitions" (p. 58) rather than Porter's modified form of SITC classification. The difficulty of industry classification is, however, far from new.

Publication of the Porter Project has been the catalyst for the renewed public debate of New Zealand's land-based industries. Much of this debate focused on industry configuration rather than the pursuit of added value strategies, the capture of wealth by New Zealand participants (processors and producers), and the subsequent increase in the country's wealth (GDP). In doing so the debate largely continues the free market arguments pursued by New Zealand and Australian agricultural economists over the last twenty years (e.g., Campbell, 1973; McCann & Lattimore, 1990; Nicholson, 1990).

For several decades before 1984 successive New Zealand Governments pursued protection and exchange rate policies designed to benefit the agricultural sector. A range of assistance measures evolved, including subsidies on farm inputs and outputs, and agricultural services. These policies had side effects which were in turn countered by the introduction of further measures. A maze of assistance programmes were in operation by the mid-1980s, of which the combined effects were complex (OECD, 1987). Market

prices - of which 40% was from subsidies (Prebble, R., 1996) - and returns were distorted and resources were moved from competitive to protected sectors of the economy. Resource shifts led to sub-optimal investment decisions. From 1984 government began addressing resource allocation distortions exacerbated by prevailing policy. Government's policy, as presented in the Budget document of 1984, was to quickly remove assistance across all activities in a progressive and predictable manner (Douglas, 1984; Moyle, 1984) in conjunction with privatisation and the establishment of autonomous government agencies (see Parker & Hartley (1991) for analysis of the British experience). This policy has been largely maintained to date<sup>2</sup>.

Producer boards were evaluated by Treasury, and those concerned purely with the local market phased out (Sandrey, 1991). The export-orientated boards, namely the New Zealand Apple and Pear Marketing Board, the New Zealand Dairy Board, the New Zealand Meat Producers Board and the New Zealand Wool Board (NZWB) were reviewed and remained virtually unchanged despite recommendations for loss of some powers (Whitty, 1988; Crocombe et al., 1991; Hussey, 1992). More recently government declined to absolve the New Zealand Kiwifruit Marketing Board (NZKMB) of their statutory obligations (Clifton, 1993) granted in 1989 (Zwart & Moore, 1990). However, in January 1994 the NZAPMB lost its domestic control of the pipfruit industry ("Bill transforming apple industry", 1993), a move promoted by the Board with majority support from growers. Concurrently, potential pipfruit exporters can now apply to the NZAPMB for an export license, yet there still remains strong support for the single desk selling operation ("Single desk", 1993).

Few authors have presented balanced views of New Zealand's land-based value adding systems. Most studies simply pursue deregulation, largely for deregulation's sake (e.g., Findlayson, 1993; Scrimgeour, 1993). In many cases deregulation is seen as the end rather than a means of achieving better output. To date the most thorough and plausible arguments for further deregulation, albeit largely of the supply side economics doctrine, have been provided by the Business Roundtable (see Hussey, 1992, 1993). The

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<sup>2</sup> The Wine Industry Assistance Package (Fraser, 1989) and the establishment of the New Zealand Kiwifruit Marketing Board, a statutory marketing board (Honeybone, 1988) are notable exceptions to Government policy.

Director of the Ministry of Agriculture and Fisheries summarised the *Hussey Report* for the Minister of Agriculture in November, 1992 (Ballard). Ballard agreed with Hussey's recommendation<sup>3</sup> to remove all regulations with some minor exceptions that "are preventing competition and choice in agricultural processing and marketing; and to corporatise all the statutory marketing boards, issue the shares to producers and allow the shares to be traded freely" (p. 3). Consequently, MAF Policy developed a programme of industry studies (Jeffery, 1993). However, Jeffery suspects that the economic costs to New Zealand of the current processing and marketing arrangements are not as great as that claimed.

Much of the current public debate focuses on the welfare of New Zealand consumers with little attention paid to that of producers or processors. However, the domestic market and the subject of national interest in domestic consumers' welfare, is of only minor importance to New Zealand's export-dependent land-based industries (Shirtcliffe, 1988). For example, Furniss (1992) discussed both domestic and international demand conditions in his study of New Zealand's blueberry industry. However, he accepted Porter's (1990) hypothesis that only the rivalry of domestic firms' influenced competitive advantage, despite acknowledging that the majority of product was exported. Studies of New Zealand's export-dependent land-based industries, therefore, need to encompass the entire industry system. The system boundaries will *not* coincide with the host nation's geographic boundary.

No holistic studies of the configuration or management of New Zealand's export-dependent land-based industries have yet been undertaken. Aspects of contributing disciplines are currently being used to foster specific interests. There is a tendency to select particular attributes from the theory of the firm. Douglas and Burgess (1992), for example, identified the weaknesses postulated by principal-agent theory in their report damning the NZKMB (Barber, 1992). Cartwright (1993a) noted in his rebuttal that transaction cost theory, one explanation for vertical integration, had been ignored.

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<sup>3</sup> The New Zealand Business Roundtable employed ACIL, an Australian consultancy firm, to complete a study of New Zealand's producer boards (see Hussey, 1992). Progress on the study's recommendations were reviewed by Hussey (1993) twelve months later.

### 1.3 DEVELOPMENT OF THE RESEARCH OBJECTIVE

**A** SERIES OF QUESTIONS ARE NOW POSED to provide direction to the development and subsequent refinement of the research objective. Those questions that are regarded to be worth answering are then considered in terms of the feasibility of exploring them. If questions have already been appropriately answered results are reported. If questions have been answered from a select view attention is drawn to the bias, or vested interest being pursued. If a question has not been answered, or has not been answered appropriately, a priority is then assigned for research. Questions are derived from first principles, in as much as no knowledge is taken for granted. The purpose of the section is to describe the development of the research objective.

Production from New Zealand's land-based industries has increased markedly over the last three decades (Enterprise New Zealand (ENZ), 1992a, 1992b, 1992c, 1993), the only exception from this trend being production from the sheep industry (ENZ, 1992c). However, increases in volumes have not kept up with declining real prices at the farm gate (Bruhn & Lockhart, 1993; Reynolds & Moore, 1990), ex factory or FOB. Therefore, value added "gets squeezed out" (NZTDB, 1990, p. 10). The NZTDB (1990) attributed the decline of export's value added to the stagnation of growth in GDP. New Zealand's land-based industries contribute some 17 - 18% of New Zealand's GDP (Dalziel & Lattimore, 1991; MAF, 1993; Narayan, 1991; TRADENZ, 1993). While their importance to the economy has declined since the 1960s they still account for the majority of export receipts, and 10.8% of the country's employment (Statistics New Zealand, 1995, p. 140).

Successive New Zealand governments during the 1980s systematically cultivated a belief amongst New Zealanders that land-based industries held little importance to the country's future (see Young, 1988; Yerex, 1992). The annual percentage contribution to New Zealand's GDP and export earnings (FOB) from land-based industries for the period 1970-1996 is presented in Table 1.2. New Zealand's land-based industries create significant wealth as measured by either GDP or foreign exchange earnings.

The important contribution to New Zealand's standard of living made by exports is the proportion of value added domestically (NZTDB, 1990). Value added "represents the

difference between the sale value of products from an industry and the materials used up producing those products” (Johnson, R. W. M., 1992, p. 61). The value added component is a measure of processing industries’ contribution to the value of exports. TRADENZ (1993) acknowledged that over the last four decades the “profile and direction” (p. 17) of New Zealand’s exports has changed significantly<sup>4</sup>. Unfortunately, the recent major diversification of markets (Ministry of Foreign Affairs and Trade (MFAT), 1993) is still yet to be translated into sustained real export growth.

Table 1.2. New Zealand’s land-based industries<sup>†</sup> contribution to annual GDP and export earnings (FOB), expressed as percentages for the period 1970 to 1996.

Year	GDP from agriculture (%)	GDP from forestry (%)	Agricultural exports (FOB) (%)	Forestry exports (FOB) (%)
1970	8.1	0.8	95	2.6
1973	10.1	0.3	96	2.0
1976	8.8	0.3	89	5.0
1979	7.7	0.4	93	4.4
1982	6.3	0.4	92	5.2
1985	7.1	1.2	65	4.0
1988	7.7	1.6	63	5.0
1991	6.7	1.9	50	10.3
1994	5.5	2.0	62	12.5
1996	5.0	2.2	51	12.0

<sup>†</sup>Does not include contribution from leather, food, beverages and tobacco and excludes the manufacture of wood products.

Note. From editions of *New Zealand Official Yearbook*, by Department of Statistics, 1972, 1976, 1978, 1982, 1983, 1987, 1988, 1989, 1993, 1995, 1996, Wellington: Author.

The value added component of New Zealand’s exports declined between the 1960s and 1990s. In 1966 the value added ratio was 0.4, by 1987 the value added ratio had declined to 0.35 (NZTDB, 1990). However, consideration of value added from the processing sector alone underestimates the contribution from activities in the home-base location. The value added ratio on-farm from the sheep and beef industries from 1986 to 1992 was 0.53 - 0.56 (MAF, 1986, 1988, 1990, 1993). Therefore, the inclusion of the on-

<sup>4</sup> Historically New Zealand exported undifferentiated agricultural products to Great Britain.

farm contribution to value added, being less dependent on imports than the processing sector, enhances this measure of industry performance.

Value added should be recognised as the product of all firms participating in the value system (Porter, 1985). However, few authors have attempted to analyse the entire value adding process from producer to international consumer. R. Davis's (1993) integrated conceptual model describing the creation of added value in the New Zealand wool industry is one notable exception. Davis applied Porter's concept of value chain analysis to New Zealand's wool industry, from the producer (using NZWB field officers as de facto producer respondents) to the domestic first stage textile processor. Davis concluded that the New Zealand wool industry's value chain was inherently weak and most participants were earning less than competitive returns on investment.

Most commentators recognise the importance of New Zealand pursuing value added strategies. The NZTDB (1990) suggested that "the expansion and development of existing forex earning industries with a sustainable competitive advantage" should be encouraged. The NZTDB more specifically stated that "value added strategies should be pursued" (p. 13) (see also MFAT, 1993; TRADENZ, 1993, 1994). Their recommendations were not dissimilar to those of Crocombe et al. (1991). However, Crocombe et al. did not regard land-based industries as a primary source of forex growth. Yet those same industries - as described by participants such as Betts (1993), Harrison (1993), and Lucas (1993) - are actively pursuing value added strategies. For example, the New Zealand Dairy Board's (NZDB) marketing strategy may be summarised as adding value to products at every opportunity (NZDB, 1992a).

Adding value to land-based products differentiates them, at least partially, in the market place. By definition adding value reduces the proportional contribution from raw materials to the value of the final product. Therefore, while at first glance raw materials from land-based industries have commodity status, opportunities exist and to a limited extent are being pursued, to differentiate these products by adding value. One benefit of adding value is to reduce the commodity, price-taking status of land-based products thereby reducing price risk. For example, both portion controlled venison mid-loins, marketed under the Cervena brand or vacuum packed lamb noisettes, marketed under the brand New Zealand Lamb are



sold in chilled form. These products bear little resemblance to the traditional commodity meat trade which solely comprised frozen carcasses. Nonetheless, the primary objective of adding value strategies is to create competitive advantage, that will result in increased net revenue. The danger to be avoided is that processes of adding value add greater cost. Value added is recommended as a firm's strategy (Harrigan, 1983; Porter, 1985; TRADENZ, 1992) and is claimed to increase wealth by contributing to GDP. However, over the past three decades the value added contribution to GDP from New Zealand's land-based industries has declined (NZTDB, 1990). Therefore, there appear to have been either impediments to the creation of wealth or little incentive to do so. In attempting to explain this result, many studies have focused on industry configuration, particularly of those industries dominated by producer boards (see Douglas & Burgess, 1992; Findlayson, 1993; Hussey, 1992, 1993; Scrimgeour, 1993), rather than the value strategies they pursue (e.g., Betts, 1993; Davis, R., 1993; Furniss, 1992; Harrison, 1993; Lucas, 1993).

One important decision that managers of land-based value systems must make regularly and frequently is whether to distribute income (return to suppliers, shareholders and stakeholders) or invest income, enabling the further pursuit of value added strategies. Distribution will benefit participants in the short term while investment is to benefit both participants and New Zealand residents in the longer term. The managers of land-based value systems are expected to be confronted with investment problems and opportunities typical of other international businesses (see Daniels, J. L. & Daniels, N. C., 1993). One difficulty likely to be encountered when examining value added strategies is that internal transfer prices may not resemble market prices (Hergert & Morris, 1989). Transfer prices may be suppressed entirely where sequential stages of processing occur within the same organisation.

Organisations involved in international business (Bartlett & Ghoshal, 1989) often require substantial investments in foreign countries. These investments are designed to either source relatively inexpensive raw materials, add value to products or position finished goods in the host country's marketplace. Organisational structures involving headquarters in the home-base location, and subsidiaries in host countries have emerged (Dunning, 1981; Franko, 1976; Wilkins, 1970, 1974). Firms with headquarters-subsidiary relationships are confronted with unique management problems and opportunities (Doz, Bartlett, & Prahalad, 1981; Hedlund, 1981; Otterbeck, 1981b; Prahalad & Doz, 1981). For example, the NZDB's value

added strategy has resulted in investment, control and eventual ownership of some 120 foreign subsidiaries. This strategy may ensure the long-term profitability of New Zealand's cooperative dairy industry. In the short-term wealth is likely to be accrued by the foreign country, with the expectation that wealth in the longer term is captured by New Zealand residents.

Value added strategies only increase New Zealand's wealth (GDP) when the benefits are captured by New Zealand residents. The returns from foreign direct investment (Connor, 1981) must be captured by New Zealand residents in the long term if national wealth is to be increased. Note, however, that foreign investment is accounted for in a country's balance of payments (Enders & Lapan, 1987) but its productivity is not attributed directly to GDP. International participants may be better equipped to develop sources of competitive advantage. In such value systems New Zealand participants must enhance, rather than detract from that advantage. New Zealand's export-dependent land-based industries must, therefore, be viewed as geographically domiciled with tentacles extending into foreign markets. Those linkages with foreign markets appear to provide the added source for differentiation as well as a mechanism to return market rents to New Zealand.

Given that New Zealand's export-dependent land-based industries create wealth, or have the opportunity to do so, their unique attributes now need to be considered. At first glance land-based industries appear to have several unique features. First, production is both variable and seasonal. Variability from production processes and seasonality of production are seldom encountered in manufacturing industries. Secondly, raw materials are produced by a large number of relatively small scale producers. In manufacturing industries particular components are rarely sourced from any more than one supplier. Third, land-based producers are not mobile, they are geographically fixed in a fashion akin to that found in extraction industries such as oil and mining. However, undifferentiated products can be sourced from outside the host country. For example, ANZCO purchases Australian grain-fed beef, the NZDB purchases milk in Britain and the NZAPMB purchases Granny Smith apples from Chile. In each case the purchaser is *leveraging-off* the New Zealand domiciled asset.

Land-based industries are seldom the subject of management and international business research. Some researchers display an interest in the downstream activities of food

and fibre industries (i.e., Rutenberg, 1982), however, only those from production based backgrounds appear to recognise the importance of the value system from the perspective of the producer (McRae, 1991; Cartwright, 1991, 1993c; Davis, R., 1993) or input supply. Nevertheless, much of the theory already developed from business schools for manufacturing and service industries is expected to be appropriate to this study.

The problems and opportunities confronting a small country supplying world markets with goods from export-dependent land-based value systems need to be identified. However, the size of the resource base does not necessarily preclude industries from entering markets beyond the supply capacity of the host nation. The host nation's industries can source product internationally, particularly when the origin of products is difficult to distinguish such as apples (NZAPMB, 1992) or the raw material's contribution to the final product is of little real consequence, for example, raw milk in aerosol whipped cream products (NZDB, 1992c).

A second difficulty confronting small countries is the omnipresent capital constraint. Several of New Zealand's leading dairy cooperatives have sought greater capital contributions from suppliers. It is argued that equity capital is a common constraint of cooperative structures, however, credit capacity of individual farmers may be enhanced under vertically coordinated production (Featherstone & Sherrick, 1992). The public company provides a structure to raise equity capital readily but it tends to distribute wealth to shareholders rather than suppliers. This is the case with the acquisition of Watties by Heinz in 1992; wealth is no longer captured by New Zealand participants but is being distributed to (largely) American shareholders in the form of dividends.

How then are export-dependent land-based value systems best configured to create wealth for New Zealand residents? There are few instances where the value system, from the production of raw material to the consumer, is the exclusive domain of a single firm. Value systems, therefore, encompass the value adding chains of a number of firms (Porter, 1985). The configuration of value systems in New Zealand's export-dependent land-based industries appears to be determined by historical legislation, the collective demands of producers, quasi-industry groups, market forces, and strategic management. The preponderance of industry strategic plans suggests that some form of industry coordination produces greater rewards than those created by the complete lack of intervention.

Configurement describes the type of linkages between the firms participating in the value system. The extreme forms of configurement in New Zealand are, on the one hand, vertical integration from the producer to wholesale and reliance on the market for each linkage between producer, processor(s), marketers, distributors and wholesalers on the other. The capture of legislation by various interest groups, particularly producers, however, has created various forms of complete vertical integration.

Government configurement largely takes the form of producer boards exercising their right of compulsory acquisition for export (e.g., NZDB, NZAPMB, NZKMB). This industry form has been under continual debate, notably during the last decade, by the New Zealand Business Roundtable and *free-market* economists. Quasi-industry configurement by voluntary industry groups such as the Wine Institute of New Zealand (WINZ) and the New Zealand Meat Industry Association (NZMIA) attempts to enhance the value system by proposing formal mechanisms for coordination. Quasi-industry organisations are often supported by Government, for example, the NZMIA and the NZMPB, or WINZ and the New Zealand Wine Guild of which the latter is a TRADENZ Joint Action Group (JAG). Government and quasi-industry organisations attempt to configure the value system, either formally or informally, for the benefit of New Zealand participants. Industry groups do not attempt to manage the value system but rather configure the value system to the advantage of key participants.

Vertical coordination appears to be the preferred configurement of value systems, vertical integration (Harrigan, 1983, 1984) being the extreme form. The majority of suppliers endorse the fully integrated coordination mechanisms in place in the dairy, kiwifruit and pipfruit industries. This study does not attempt to review producer boards. Coordination mechanisms in land-based industries are an important aspect of value systems particularly as this is where interorganisational transactions occur. In most cases vertical integration suppresses potential market forces and the associated price information (e.g., McRae & Lynch, 1991; Lockhart & Cartwright, 1994). Research into the configurement of value systems, if motivated by market demand, is likely to identify the necessity, or otherwise, for aggregate supply mechanisms.

Providing issues of configuration can be resolved how are export-dependent land-based value systems best managed to create wealth for New Zealand residents? The value system, once configured, must be appropriately managed or it will fragment, losing the inherent advantages of vertical coordination. There appear to be several opportunities to manage a value system. First, the value system may be *managed* by one firm pursuing and maintaining a dominant position in the system's value adding chain (Porter, 1985). For example, R. Davis (1993) identified exporter processors as having the dominant position in the New Zealand wool industry value system. Second, the value system may be managed by a group of firms with strategic alliances between the producer and processor, the processor and distributor, and the distributor and foreign retailer. One such example appears to be the lamb system that extends from farmers through Progressive Meats, exported by Davmet to the international distributor (NZMPB, 1993a). Third, the value system may be managed by one firm vertically integrating the entire length of the value adding chain, for example, the New Zealand dairy industry. The management of value adding chains encompassing several firms may be studied using either a governance structure framework, which embodies Porter's (1985) value system, or some form of strategic alliance framework.

Analysis of the value system may be more difficult where a single firm has vertically integrated from one end to the other. Where vertical integration is complete value adding results from intraorganisational transactions. These transactions are unlikely to be transparent, that is, transfer prices are not market prices. However, some of the procedures for this analysis have been developed elsewhere (Johnston, H. R., & Carrico, 1988; MacDonald, 1991; Skyrme, 1990). Where interorganisational transactions are completed, costs and values are likely to be more easily identifiable.

### **1.3.1 Research objective**

Previous studies of New Zealand's agricultural industries have not been completed from a holistic view. The significance of off-shore markets, for example, was not given prominence by contributors to the Porter Project. While supply-side economics is currently the prevailing *modus operandi* of New Zealand society the relevance of this theoretical doctrine remains unchallenged. Further, existing models of international trade and

international competitiveness have, in this context, been found to be deficient. Therefore, the research objective is:

to develop a theory of the configuration and management  
of export-dependent land-based value systems.

The theory will be developed using New Zealand as the case nation, the intention being to develop a generalisable theory that may also be applied to land-based industries in other countries.

## **1.4 RESEARCH PHILOSOPHY**

**T**HE DEVELOPMENT OF A THEORY of the configuration and management of export-dependent land-based value systems will necessarily include both theoretical and empirical contributions. However, the breadth of issues and resource constraints restrict empirical research. Comparative analysis is also restricted by the lack of domestic competition in some of New Zealand's land-based industries. It is expected that some of the critical issues have already been addressed and reported in literature from a wide range of disciplines. The aim of this section is to describe the research approach adopted for the study. This description is developed in the context of a brief review of alternative approaches to research and theory development. The purpose of this development is to ensure readers are aware of the rationale for the adopted approach.

### **1.4.1 Forms of research**

Kuhn (1970) identified three forms of factual scientific investigations in normal science. G. L. Johnson (1986), a renowned agricultural economist, also made similar distinctions between the three. The three forms of research are listed as disciplinary research, subject-matter research and problem-solving research. Johnson stated that "very different kinds of information are acquired in doing each, and acquisition of the information requires different methods" (p. 11).

Disciplinary research is designed to improve a discipline, consisting of research to develop and improve theory, quantitative techniques and measurement (Johnson, 1986; Kuhn 1962, 1970). Subject-matter research is “research on a subject of interest to a set of decision makers facing a set of practical problems” (p. 12). Problem-solving research employs methods to solve specific problems of interest to decision makers, organised forms of knowledge are only introduced when the problem requires them (Boud, 1985). Both Kuhn (1970) and Johnson recognised that the three forms of research were not necessarily exclusive. The three kinds of research represent a broad spectrum and research efforts are likely to mix the three types.

G. L. Johnson (1986) noted that the relatively narrow disciplinary orientation of economists (see also Popper, 1970; “Philosopher Popper”, 1994) has resulted in the neglect of subject-matter and problem-solving research, resulting in the often strained relationship between economists and business administration/management researchers. Similar views have been expressed by both Cartwright (1993c) and Buckley (1994). Cartwright commented that there “is a propensity for two groups... to talk past each other” (p. 25). Buckley recognised that the paradigms had aspects in common but described them as being “both complementary and competitive” (p. 95) because they are “drawn from somewhat different disciplinary bases”.

G. L. Johnson (1986) suggested that the “practical problems of real-world decision makers respect neither the organisational charts of universities and research institutions nor the academic disciplines around which universities and organisations are organised” (p. 13). Both problem-solving research and subject-matter research are likely to require multidisciplinary (Gabb, Atkinson, & Shaharudin, 1986) or transdisciplinary research methods. Each researcher contributes their disciplinary perspective to the study, supposedly without the “deliberate cooperation and continuous activity” (Haning, 1981, p. 10) required for interdisciplinary research. Boud (1985) stated that problems cross existing boundaries between disciplines, hence the requirement for a transdisciplinary approach to problem-solving research. Therefore, practical research will require a transdisciplinary rather than an adisciplinary (Gabb et al.) approach.

G. L. Johnson (1986) stated that subject-matter research “emerges out of rather general issues facing society at a given time” (p. 13) - issues identified in the previous sections. Subject-matter research, however, “does not produce all the knowledge required to solve all the problems in the relevant set; instead it generates a body of multidisciplinary knowledge useful in solving the problems in the set” (p. 21). Subject-matter research, therefore, provides a body of information for a group of decision makers confronted with a number of problems. Decision makers, having been provided with the information generated from subject-matter research, can then solve their own problems (Johnson). Therefore, one output from subject-matter research must include a methodological framework<sup>5</sup> in which decision makers and researchers can solve associated problems.

Bourgeois (1979) offered a theoretical and empirical methodology as a method of middle-range theorising. The author defined the relationship between theory and empirical validation, which other authors seemingly leave to chance (e.g., Weick, 1989). Middle ground (Merton, 1968) eclectic approaches to research are recommended as a useful and productive alternative to empiricism on one hand, and general theory building on the other. A generic framework for middle-range<sup>6</sup> theorising, based on Bourgeois’s contribution, is introduced in this section. Departures between this framework and that adopted for the study are identified and explained. The thesis outline is then presented.

#### **1.4.2 A generic framework for middle-range theorising**

The research method used in this thesis is modified from that offered by Bourgeois (1979) and incorporates Einstein’s essential elements of research (Holton, G., 1979). The seven step generic model provides a rigorous structure that may be applied to subject-matter theory building research. The model may also be used to incorporate the critical elements of case study research design identified by Yin (1989a).

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<sup>5</sup> See Oldroyd (1986) or O’Hear (1989) for a review of the philosophy of science. Ackerman (1965), Gale (1970), and Gumesson (1991) provide commentary on Twentieth Century hypothetico-deductive science (Dessauer cited in Holton, G., 1965).

<sup>6</sup> Theories of the middle range “lie between the minor but necessary working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory that will explain all the observed uniformities of social behaviour, social organisation and social change” (Merton, 1968, p. 39).

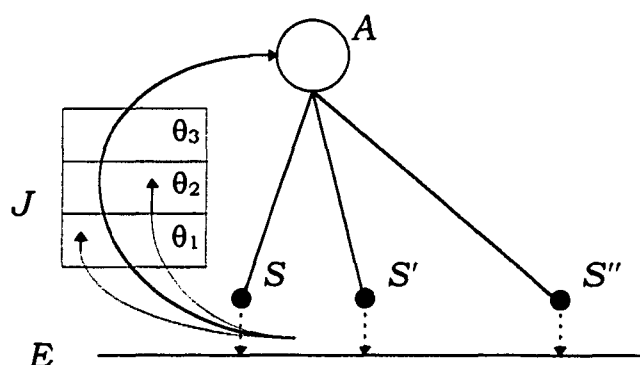


1. Problem statement
2. Partitioning of the theory under investigation
3. Literature review
4. Model of theory construction
5. Referral of the theory to observations
6. Metaphysical elaboration
7. Conclusions

Theory building of broader scope than day-to-day hypotheses will cross paradigm boundaries (Kuhn, 1970). While only one paradigm is likely to reflect the researcher's background other paradigms will contribute to the topic. Both the paradigm's domain and procedural (methodological) contributions should be stated, and used where appropriate. Therefore, contributions from theories relevant to the topic in question must be partitioned into paradigms. Each of the paradigms must then in turn be examined for useful contributions. While the literature review is presented as step three, Bourgeois (1979) recommends that it is not completed in isolation of steps one, two, and four. The literature review reflects the various paradigms being used for the study and the concepts and propositions developed in step four. The literature review, therefore, guides and channels (Bourgeois) some of the propositions developed between the concepts. Differences between the theory being developed and the literature must be identified. In some cases the theory may need to be modified, in other cases these differences are critical parts worthy of empirical investigation.

Axioms are then derived from the problem statement in step one. The axioms should contain constructs and the relationship between constructs should be presented, preferably in a graphical form (Bourgeois, 1979). Critical parts of the theory, identified in step four, are then referred to empirical evidence (Holton, G., 1979), the need for either statistical significance or structural robustness must be reconciled. Einstein resolved this inductive-deductive dilemma by providing a sketch depicting his interpretation of thinking: the iterative relationship between experience and theory (presented as Figure 1.2). Holton (1979) described the sketch as having "great power and simplicity", concentrating in a "few lines a wealth of information" (p. 112). Consequently, Einstein's model is used as the basis for theory construction.

Figure 1.2. Einstein's model of thinking about science.



Note: From "Einstein's Model of Constructing a Scientific Theory," (p. 133), by G. Holton, 1979, in P. C. Aichelburg and R. U. Sexl (Eds.), *Albert Einstein: His Influence on Physics, Philosophy and Politics*, Braunschweig, Germany: Friedr. Vieweg.

The line, marked *E*, is "an infinite plane on which the separate and diverse sense experiences or observations that clamour for our attention are laid out" (Holton, G., 1979, p. 112). *E* represents the totality of empirical facts. Rising from the plane is an arc, labelled *J*, that reaches to the top of the schema. At the top of the schema is a "well-delimited entity" representing a system of axioms, labelled *A* (p. 113). Einstein, cited in Holton, stated that "psychologically the *A* are based upon *E*. There is however no logical path from *E* to *A*, but only an intuitive connection, which is always subject to revocation" (p. 113)<sup>7</sup>. Despite that Einstein provided rules and constraints, subsequently interpreted by G. Holton, for the construction of axioms, seemingly alleviating the complete reliance on intuitive methods. By way of summary, Holton stated that "the license implied in the *J* process is the freedom to *make* a leap, not the freedom to make *any* leap at random" (p. 131). Hence Holton modified *J* to include the influence of thematic presuppositions, as superimposed in Figure 1.2<sup>8</sup>.

<sup>7</sup> G. Holton (1979) identifies two discontinuities in Einstein's arch, *J*. First, that there is no certainty that concepts have a necessary connection with corresponding experiences: hence the small gap between the line *E* and the arc *J*. The second discontinuity concerns the relation of concepts to one another, the "justification for which lies only in the pragmatic success of the scheme being built up" (p. 116). The discontinuities give rise to Einstein's insistence that "there is no logical path to these elementary laws; only intuition, supported by being sympathetically in touch with experience" (p. 116).

<sup>8</sup> Holton's themata filter the number of arcs from *E* to *A*, suggesting that the process is far from being entirely intuitive. Bourgeois's (1979) insistence for a discussion of *theory construction* (the *J* process) is, therefore, valid. The process of theory construction in this study is described in Chapter Four.

The nature of the empirical examination required will determine what sort of data gathering techniques are employed. In some instances an indepth case study (Yin, 1989a) may be required, in other instances a survey, census, or some other form of data collection should be considered (Sieber, 1972). The appropriate testing procedure must be drawn from the *parent* paradigm. Bourgeois (1979) provides the metaphysical elaboration step as a receptacle for recording the intuitions and insights experienced by the researcher. Ideas and deductions that are unable to be empirically tested, because they are speculative, should be recorded and discussed. This step is an opportunity for the researcher to share philosophical intuition developed during the course of study. Conclusions are then drawn and recommendations made. The research methodology, both theory building and empirical testing, should also be reviewed. Recommendations for further research and the study's implications for practitioners should then be presented.

This study is, however, may need to be more *grounded* than that implied by Bourgeois's (1979) generic framework. For example, anticipated shortcomings with the industrial networks approach, and the difficulty of quantifying bargaining power is expected to reduce the value of these potential contributions. The study also differs significantly by degrees of *groundedness* from Glaser and Strauss's (1967) approach in that the development of a generic value system model is presented in Chapter Two. A structured process of creative thinking is adopted for this research. Data sources include extant literature and empirical evidence. Evaluation is undertaken within the available data.

### **1.4.2 Thesis outline**

The thesis outline, derived from the seven step problem-solving research process, is described in this section. The thesis is presented in a serial form, however, the development and completion of each chapter is acknowledged as being far from discrete. Bourgeois (1979) stated that one conflict for a theoretical researcher is reconciling the order of the literature review, construction of theory and referral of the theory to observations. Of more importance appears to be the iterative nature of the process (Merton, 1968; Blalock, 1969; Kuhn, 1970). Therefore, the final work does not represent the iterative nature of the study in its raw form.

The topic under investigation has been identified and defined as New Zealand's export-dependent land-based value systems. The unique attributes of New Zealand's land-based value-systems are identified and discussed. The topic is then delineated having first developed a simple model; presented in Chapter Two. Likely contributions are identified from transaction cost economics, international business, interfirm relationships, strategic management, and agribusiness.

Chapter Three provides an orderly review of the literature as it relates to the simple model developed in Chapter Two. The Chapter is presented as two interrelated themes: linkages between organisations and the management of organisations. Continuities and discontinuities in the literature are identified.

The processes of theory building in the organisational sciences are reviewed in Chapter Four. Theory building in the middle-range is introduced, and the procedure used for theory building in this study is developed. The simple model presented in Chapter Two is then complicated with the addition of important variables and concepts identified in Chapter Three. A set of axioms and theorems are developed, although this set is regarded as being incomplete.

Chapter Five presents a discussion of the attributes of common data gathering techniques. These techniques are contrasted and the case study research method is reviewed. Case work focuses on sourcing data for critical parts of the theory. Case reports are presented, and core categories (Strauss & Corbin, 1990) then identified and defined. This Chapter marks a significant departure from Bourgeois's (1979) theory building procedure. The study is more grounded - creative - than that prescribed by Bourgeois, therefore, observations are used to supplement rather than validate theory building.

Glaser and Strauss (1967) recommended that intuition and data-based theorising go hand in hand. In support, Bourgeois (1979) recognised the similarities between Pirsig's (1974) romantic mode<sup>9</sup> and the scope of a metaphysical elaboration. The author offers

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<sup>9</sup> Referring to Robert Pirsig's (1974) inquiry into values presented as his novels, *Zen and the Art of Motorcycle Maintenance* and *Lila* (1991).

elaboration, inspiration, creation, and intuition on more than the facts observed in Chapter Six. The theory is then used to assess the capability of alternate configurations to deliver wealth.

Conclusions are presented in terms of the methodology used and the theory developed in Chapter Seven. The theory presents the basis of an acceptable paradigm for value system configuration and management of a small country's export-dependent land-based industries. A discussion of the iterative, eclectic and dynamic nature of the research methodology is provided. The role and scope for further education and research is reviewed.

## CHAPTER TWO: RELATED PARADIGMS

### PARTITIONING OF THE TOPIC (FIELD) UNDER INVESTIGATION

*He [Major Major's father] was a long-limbed farmer, a God-fearing, freedom-loving, law-abiding rugged individualist who held that federal aid to anyone but farmers was creeping socialism.*

Joseph Heller. (1961). *Catch-22*.

#### 2.1 INTRODUCTION

**M**ANAGEMENT RESEARCH poses several dilemmas to the researcher. First, useful research is unlikely to be confined to one paradigm and second, the target audience appears to influence the research approach adopted. Gioia and Pitre (1990) proposed that “traditional approaches to theory building are not entirely consistent with the assumptions of alternative research paradigms that are now assuming more prominence in organisational study” (p. 584). They recognised that specific paradigms approach theory building in subtly, but importantly different ways. Because different paradigms have different assumptions, they produce “markedly different ways” (p. 585) of theory building. The paradigmatic basis of theory building has also been criticised by Burrell and Morgan (1979), Doz and Prahalad (1991), and Frost (1980).

Gioia and Pitre (1990) defined the organisational paradigm, developed from the generic definitions offered by Kuhn (1970) and Lincoln (1985), as “a general perspective or way of thinking that reflects fundamental beliefs and assumptions about the nature of organisations” (p. 585). The significant development from Kuhn is that a general way of thinking is now recognised as the basis of a paradigm, rather than simply adherence to the “same rules and standards” (Kuhn, p. 11). Burrell and Morgan (1979) described different approaches to organisational research in terms of two dimensions; first, subjective on one

hand and objective on the other, and second, the nature of society: regulation versus radical change. The four quarters of the two by two matrix (nature of science × nature of society) represent the current spectrum of paradigms in organisational study.

Most organisational science is guided “by the assumption that the nature of organisations is a basically objective one that is ‘out there’ awaiting impartial exploration and discovery” (Gioia & Pitre, 1990, p. 586). Consequently, much theory building in the organisational sciences has been confined to the functionalist paradigm resulting in detailed descriptions of organisations and their behaviour. The radical structuralist paradigm “involves the rethinking of data in light of [alternate] viewpoints” (p. 590) and recasting, what amount to be contextually bound concepts, into a broader context of people and “their power to produce and maintain a social formation” (Benson, 1977, p. 1). Heydebrand (1983) considered “organization as a form of praxis” (p. 306)<sup>10</sup>. This contention appears particularly relevant in the context of this study. Unfortunately, social dimensions such as power and conflict are not easily measured objectively.

Of the four organisational paradigms recognised by Burrell and Morgan (1979) two; functionalist, and radical-structuralist appear relevant to the study. The functionalist paradigm provides an objective view of organisation’s configuration and management within the value system. The radical-structuralist paradigm is also relevant as it provides the opportunity to consider change from an objectivist basis determined using the functionalist view, that is, the assumption is held that improvements to the value system can be made.

The objective of Chapter Two is to identify and delineate paradigms likely to contribute to the study. First, the author’s paradigmatic perspective<sup>11</sup> is offered in the discussion of the unique attributes of New Zealand’s export-dependent land-based values systems, Section 2.2. Cartwright (1994) drew attention to some of these attributes in his introductory work on value systems. The attributes are subsequently used to screen

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<sup>10</sup> For example, Heydebrand (1993) stated that “organizational praxis can be said to transform a given social-historical organisational formation and, conversely, that a change from one to another does not occur unless there is innovative change at the level of self-organisation” (p. 307).

<sup>11</sup> Only one paradigm reflects the researcher’s background, however, other paradigms that will contribute to the topic are identified (Bourgeois, 1979). The researcher was a Senior Lecturer in Farm Management at Massey University, New Zealand. He has also completed graduate studies in econometrics, international economics, marketing, and agricultural policy.

relevant concepts and variables drawn from the literature review (Chapter Three). A discussion of the development of the Z-form Model of New Zealand's export-dependent value systems is then presented. The model's origins are evident in Davis and Goldberg's (1957) description of commodity systems and introduction to agribusiness. During the discourse two recurring concepts are identified - firms and the linkages between them. The discussion, analysis, and synthesis of firms and linkages between adjoining firms is common to both economics and management. Two linkages identified as critical to the value system in question are those between land-based producer and first stage processor, and the international linkage between the home-base and offshore locations.

The theory of the firm is introduced in Section 2.4 and the relatively narrow contribution from transaction cost economics is identified. The role of participants in the value system is found to be commonly explained by the strategic management literature, itself inclusive of several paradigms. The significance of interfirm linkages are identified in Section 2.6 and reported to be the subject of economics and management, including international economics and international business. The difference between these perspectives are discussed and contributions identified. Alternative perspectives of land-based industries are then identified and very briefly reviewed in Section 2.8.

## **2.2 ATTRIBUTES OF NEW ZEALAND'S EXPORT-DEPENDENT LAND-BASED INDUSTRIES**

**L**AND-BASED AGRICULTURAL INDUSTRIES throughout the world exhibit a suite of unique attributes. These attributes serve to distinguish the agriculture sector amidst other product and service sectors. Agriculture in New Zealand is no exception. In fact, the nationwide dependence on pastoral grazing systems and the lack of livestock housing on a large scale are rarely found elsewhere (the only notable exceptions include Australia and parts of South America). The distinguishing attributes result from the dependence on biological production systems, characteristics of land-based output, and industry structure in the agricultural sector.



The unique attributes of New Zealand's land-based agricultural industries are now identified. Each of the attributes are briefly described and common examples provided. The implications of these attributes on New Zealand participants in export-dependent land-based value systems are then drawn.

### **2.2.1 Contingent on upstream resources**

Land-based value systems are contingent on upstream resources. These resources are typically described as a nation's natural factor endowment which, in some cases, gives rise to a nation's comparative advantage - retreating for a moment to the traditional view of trade. That these particular resources are geographically fixed is obvious, that these resources have few alternate uses is less obvious.

A distinction needs to be recognised between two decisions affecting the employment of the land resource: land-use decisions and, enterprise-choice decisions. Land-use decisions are of a strategic nature whereas enterprise choice decisions may, depending on the specific enterprise, range from tactical to strategic importance. Once land is committed to say forest, pasture or orchard land use change is seldom economically feasible (rapid technological change occasionally alters the economic balance between alternate land uses).

It is appealing to suggest that enterprise-choice decisions are contemplated only after land-use decisions are made. Enterprise-choice decisions will include, for example, the variety of forestry species to plant, and the intended end use; or, the animal enterprise to farm, or combination thereof (sheep, beef, deer and dairy). That the two decisions are distinct is more apparent on arable land. Farmers on arable land are confronted with a choice first, between alternate land uses such as pastoral farming or orcharding and second, between alternate enterprise choices such as plant species and the plant varieties. However, despite supposed alternate land uses and enterprise choices confronting farmers the cost of land, soil type, topography, climate, accessibility of inputs and services in addition to their goals and those of their families will importantly influence enterprise selection. The combined result of these variables is that in New Zealand the land resource seldom has alternate uses. Therefore, land-owners are most often only confronted with enterprise mix decisions (i.e., the combination of sheep and cattle to carry or the combination of pipfruit varieties to grow).

Only arable land offers farmers a multitude of land-use and enterprise-choice decisions. Unfortunately, this land represents a small fraction of the country's land mass.

Two technological changes in New Zealand's recent past have resulted in significant changes in land use. Firstly, planting horticultural crops on better pastoral land. The striking example is the development of kiwifruit orchards in Northland, Bay of Plenty, Wanganui, and Karamea districts during the late 1970s and early 1980s: farmers' response to the successful commercialisation of a new orchard crop. On a smaller scale, the trend to kiwifruit was followed by the establishment of vineyards in Marlborough, Hawkes Bay, and Central Otago. Secondly, the current planting of pastoral land in exotic forest is farmers' response to an expected international demand for soft woods in the face of declining terms of exchange for sheep (MAF, 1996; NZMPB, 1993b), and more recently beef products. One significant technological change that has affected enterprise choice during the last two decades was the commercial development of bull beef farming. Rearing bull calves from the dairy industry for the North American manufacturing beef market, some 750,000 annually, is attributed to the development of bull beef systems at Massey University during the mid-1970s.

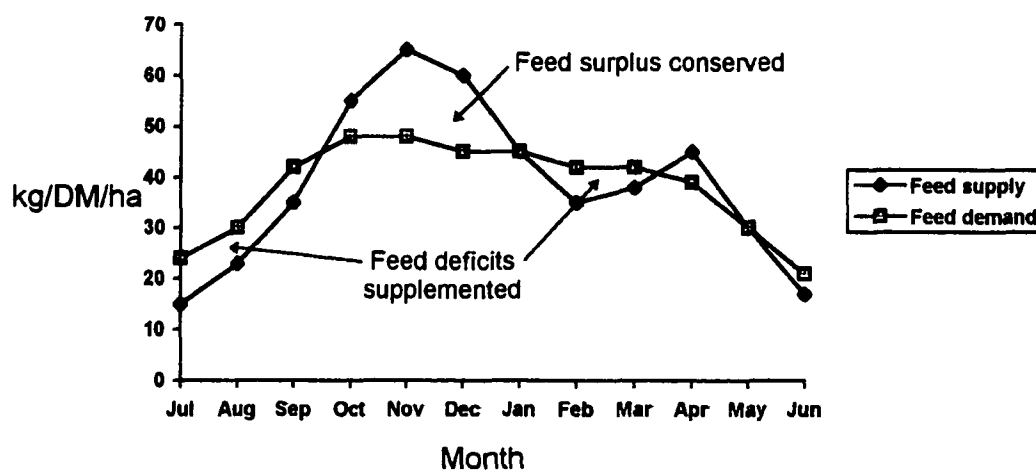
Farmers on Taranaki dairy farms, Taihape sheep and beef farms, and Hawkes Bay pipfruit orchards, for example, are confronted with few land-use decisions. Opportunities motivated by current economies and rare changes in technology seldom exist to alter land use and enterprise mix. However, if change is contemplated output response time will vary from 1-25 years depending on the nature of change (i.e., sheep to beef, or pasture to forest). In the intervening period the farm family will likely face a decrease in short-term income in anticipation of increased future income. Therefore, only over decades is output from New Zealand's agricultural sector less than enduring. New Zealand is in the business of producing land-based outputs, and the composition of those outputs is only expected to change in the medium to long term.

### **2.2.2 Biological and climatic variability**

The natural resource base is influenced by biological and climatic variability, more so in New Zealand than in Europe or North America. Livestock systems in New Zealand are pasture based and animals are kept outdoors all year round, exceptions include the pork and

poultry industry from which near all output is consumed domestically. Livestock farming systems are managed so that peak feed demand, such as occurs during early lactation, coincides with spring pasture growth. But because pasture growth rates are dependent on prevailing weather conditions livestock farmers are confronted with a variable, as well as seasonal feed supply. A graph of pastoral feed supply and feed demand on a representative Manawatu seasonal supply dairy farm is presented in Figure 2.1. The graph depicts daily pasture growth and feed consumption. The spring feed surplus is conserved as silage and hay which is then used to meet the feed deficits which typically occur in the late-summer and winter. Similar graphs could be used to represent the relationship between feed demand and feed supply on other pastoral livestock enterprises.

Figure 2.1. Annual pastoral feed supply (kg/DM/ha/day<sup>12</sup>) and feed demand (kg/DM/ha/day) on a Manawatu seasonal supply dairy farm.



Hail, flooding, and snow also contribute to variability in output volume. For example, horticulturists can suffer total crop failure from comparatively infrequent but severe flooding and hail storms. South Island farmers can face severe livestock losses from spring snow.

Livestock farmers can anticipate variations in feed supply from that planned but they are seldom entirely able to mitigate the effects of biological variability. Orchardists also attempt to reduce output variability induced by annual variations in sunshine hours and, to a

<sup>12</sup> Kilograms of drymatter per hectare per day is the metric measure of daily pasture growth rates and feed demand. Pasture is typically 15% drymatter, however, drymatter content varies with rainfall and growing conditions.

lesser extent, rainfall by managing crop load. Therefore, output volumes from land-based systems at best fluctuate around expected levels. The magnitude of fluctuations varies between enterprises, for example, horticulturists may experience total crop failure whereas dairy farmers are seldom likely to experience fluctuations greater than 10 - 15 percent.

Absolute output volumes from New Zealand's agricultural sector cannot be guaranteed. Further, the quality dimensions of output are also variable. Output specifications such as kilograms per carcass<sup>13</sup>, average fruit size and their distributions will vary annually. Therefore, exporting producer boards and large scale processors cannot commit the total expected crop volume for fear of later failing to meet obligations downstream.

Given variability of output volume and quality there appear to be five selling options available to New Zealand participants. First, New Zealand participants could, simply, sell all land-based output on the international spot-market. Second, they could under-contract output volume and use spot markets to absorb production variability, in terms of quality and quantity above that which can be successfully planned. Third, participants can enter short-term supply agreements once output volume and quality is known. Fourth, they can enter longer-term supply agreements with purchasers who can accommodate variability in volume and quality. Finally, New Zealand participants may source product elsewhere, for example, on the international spot-market to supplement supply shortfalls. These selling options are not necessarily mutually exclusive. Large scale exporters may implement combinations of these selling options to provide customers value. The particular strategy implemented is expected to be influenced by the desired or emerging relationship between the New Zealand participant and the international customer.

### **2.2.3 Seasonal production**

Output from pasture based livestock and orchard systems is largely seasonal. The farmer enhances the natural biological system by attempting to maximise reproductive performance, controlling mating and plant fertilisation, and optimising subsequent growth.

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<sup>13</sup> For example, the national lamb slaughter weight from 1991 to 1996 averaged  $14.7 \pm .40\text{kg}$  (MAF, 1993, 1996). Variations also occur monthly. A meat processors' average monthly lamb slaughter weight for 1992/1993 averaged  $15.7 \pm .5\text{kg}$ .

Nevertheless, by and large, lambs and calves are born in the spring and orchard crops are harvested in the summer and fall. Farmers can shift lambing and calving dates, generally at some cost to output volume, in an effort to capture out-of-season premiums. To minimise the costs of production, while land-based livestock systems remain dependent on pasture, feed demand *must* coincide with pasture production. Orchardists appear to have even less flexibility in altering their crop cycles. Artificial sprays can be applied to concentrate flowering and, therefore, produce slightly earlier crops by say 10 - 14 days. However, harvest dates remain largely dependent on varietal choice, a long term decision which belies the importance of enterprise selection discussed earlier.

Seasonality of production ensures that industry processing capacity must meet peak output volumes. The option of simply failing to provide this seasonal capacity is unavailable at the industry level. The statutory controlled producer boards in the dairy, pipfruit and kiwifruit industry have an obligation to accept all output that meets their standards. Large scale processors in the meat industry have also geared their plants around seasonal peak kill to maximise throughput, more so in the South Island which has a shorter killing season than the North. Participants may respond by offering incentives to farmers to shift production away from seasonal peaks. For example, Tui Milk Products Ltd (TMPL; once the Southern North Island cooperative dairy company prior to merging with Kiwi Cooperative Dairies in Hawera) paid dairy farmers shoulder milk premiums in an endeavour to *flatten* the seasonal peak which occurs in October and November (TMPL, 1995). In doing so the dairy company can reduce fixed costs and seasonal finance, extend production to meet their customers' demands, and provide longer periods of employment to factory labour.

The international consumer is not concerned with seasonality of output demanding food and fibre products 365 days of the year. Seasonality of demand is, however, expected during religious, cultural and ethnic festivals such as Thanksgiving, Christmas, and the Hajj. There are a range of responses available to New Zealand participants. First, they can enter and exit the market on a seasonal basis, competing against suppliers from other southern hemisphere countries. Secondly, and at increased expense, they can provide output from New Zealand year-round with some combination of coolstorage, freezing, and out-of-season supply. And third, they can augment supply from New Zealand by sourcing product elsewhere. These selling strategies, like those discussed previously, are not necessarily

mutually exclusive. All of them are expected to be employed in an industry. Individual exporters may use one particular strategy or some combination of all three to meet international customers' demands.

#### **2.2.4 Price variation**

Land-based output suffers from price variation. Only small quantities of global production in land-based commodities are traded. Most countries use foreign markets to absorb production beyond that destined for domestic consumption. Therefore, "the prices that clear international commodity markets" are in response to the disproportionately "large volume variations induced by supply surpluses and demand deficits in countries that are large producers" (Cartwright, 1994, p. 11). These supply surpluses are further exacerbated by price support schemes and input subsidies prevalent in many industrialised nations and trading blocks such as the United States of America and the European Community.

Farmers invariably receive a residual income from the sale of their land-based output as intermediate participants pass on variability in market prices. Farmers show a remarkable ability to absorb these price fluctuations. They can quickly reduce discretionary farm expenditure, commonly fertiliser, and will freeze uncommitted personal drawings in the face of declining output prices. Conversely, during periods of high output prices they will increase farm expenditure, commonly fertiliser, development, and drawings - notably expenditure on vehicles and home improvements.

Pluralistic goals (Whittington, 1993) are particularly evident amongst farm families. But Haines (1982) suggests that profitability weighs heavily in the final choice of farm goals. However, as the farmer is commonly the company director, works manager, foreman and labourer stakeholder values may be difficult to assess, that is farmer behaviour is the result of all stakeholder perspectives. Giles and Stansfield (1980) state that it is unlikely that farmers or any other businessmen are in business for the sole reason of profit. Farmers' goals include succession, effectiveness (Giles & Stansfield), and increasing equity (Lockhart, 1990). Squire and Delahunty (1982) include farm goals as being self-employed, and the *way of life*, alongside traditional goals such as production, trading, financing, labour and family. Makeham and Malcolm (1981) state that common farming goals in Australia include leaving

the farm more aesthetic, increasing fertility, having a reasonable but not profligate standard of living, minimising income tax and death duties, and providing a sound education for children. Boehlje and Eidman (1984) identify US farmers' goals as avoiding low returns, reducing borrowing needs, increasing family living, increasing leisure time and providing community service. The National Research Council (1989) states that the common goal of farmers practising alternative agriculture is the deliberate integration of naturally occurring beneficial practices. Commentators of farm management do not, therefore, ascribe to the notion of profit maximisation. Far from it: because succession, education, self-employment, and aesthetics are stated as typical goals farmers are prepared to withstand marked reductions of income in the short-term.

Producers, supported by government legislation, have for decades attempted to stabilise output prices. The NZWB, for example, used to stockpile wool on farmers behalf to maintain prices within an acceptable band. As international prices recovered the Board sold-down their stocks. Producer Boards have also attempted to minimise price variation by maintaining income stabilisation accounts on their suppliers' behalf. For example, the NZAPMB during the 1970s and 1980s split *profit* equally between farmers and the stabilisation account for use in years of a trading deficit. The stabilisation fund was disbanded in 1988 when the majority of producers decided that income stabilisation was an individual's responsibility (NZAPMB, 1988). Variations in output prices may also be reduced by differentiating products in the market, that is removing their commodity status. New Zealand participants have invested in processing, packaging, distribution, and marketing downstream as a means of adding value and differentiating land-based products from those of competitors.

### **2.2.5 Many producers and few first stage processors**

Most land-based industries, and in New Zealand this includes forestry, are characterised by having many producers and comparatively few first stage processes. For example, there are some 12,500 dairy farmers; 36,000 sheep and beef farmers; 1,600 pipfruit growers; and, hundreds of forest owners. Large scale producers account for an increasing percentage by volume of farmgate output, a symptom of the structural problem commonly used to identify a collection of issues relating to land tenure, the size, and the distribution of farms. Notwithstanding the increasingly bimodal distribution of farm size (Yerex, 1992) -

part-time farms on the one hand and large scale units on the other - the individual farmer faces the classic horizontal demand curve in which the producer is unable to influence product price irrespective of output volume. Irrespective of the industry, there are rarely more than three or four first stage processors on a regional basis available to the farmer. Farmers are, therefore, confronted with a small numbers bargaining problem in that they have few choices available to them for the sale of their output.

Producers have sought the sanctuary offered by legislation in efforts to alleviate opportunism, perceived or otherwise, from few processors. In New Zealand societal marketing boards<sup>14</sup> with a wide range of powers and activities have been introduced on behalf of producers in an effort to provide them market power. In some instances producer boards intervene between downstream participants. In others, producer boards have vertically integrated the roles of producers, processors, exporters, distributors and marketers. The producer owned cooperative is the modus operandi. Not all industries' producer boards have exclusive rights to export.

Producers of all forms of land-based output are expected to maintain some form of federation (Provan, 1983) - coordinating agency - given they are confronted with a small numbers bargaining problem. Alternatives to federations exist in the form of alignment between producers and processors, yet the easy substitutability between suppliers may negate alignment in forms other than ownership.

## **2.2.6 Trade barriers**

Agricultural export products attract trade barriers. Trade barriers are erected for many reasons. The United States of America, for example, maintains agricultural trade barriers in an effort to ensure the continuity of domestic industries, Japan maintains trade barriers in an effort to remain self-sufficient in staple foods. The significance of self-sufficiency is not lost during times of war, trade conflict or other crises. But while trade barriers, including phytosanitary regulations, impose restrictions on international business in agricultural products price support measures and other forms of assistance also serve to

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<sup>14</sup> The features and objectives of a generic marketing board are described by Izraeli & Zif (1977).



distort trade. The rationale given for “universal (or nearly so)” (Robinson, 1989, p. 2) agricultural policy measures includes issues such as people needing food and fibre; that agriculture is intimately connected with human health and environment quality; agriculture is important in international relations; and, the moral and aesthetic importance of family farms.

Agricultural policy measures in New Zealand and the United States of America, for example, were originally introduced in response to either a *food problem* or a *farm problem* (Robinson, 1989). Robinson (p. 2) states that a “food problem arises whenever the rate of growth of output fails to match the rate of growth of demand”, forcing prices upwards. “A farm problem whenever the opposite conditions prevail”, forcing prices downwards. However, once implemented these policies have side effects which are inevitably countered by the introduction of yet more policies. In 1984 the New Zealand government addressed the increasing dependence on agricultural policy by removing all support and protection measures. New Zealand is now one of few nations that has no agricultural policy (see Richardson, 1991).

The resolution of GATT should, in part, reduce agricultural trade barriers. There is a high level of optimism amongst some industry participants and commentators that the GATT round will provide significant benefits to the New Zealand economy in the long term, others are less convinced. The New Zealand agriculture sector was effectively cosseted prior to the mid-1980s. A decade later upstream participants are now ardent supporters of the removal of trade barriers elsewhere. Output from New Zealand’s land-based industries still attracts a plethora of policy measures designed to shelter domestic industries. These measures restrict trade by either increasing prices (import tariffs, duties, phytosanitary regulations) or directly limiting imports (restrictive quotas, phytosanitary regulations, *quid pro quo* agreements): all of which have “essentially the same effects” (Enders & Lapan, 1987, p. 146) to “increase domestic price, increase domestic production, and decrease domestic consumption” (p. 147).

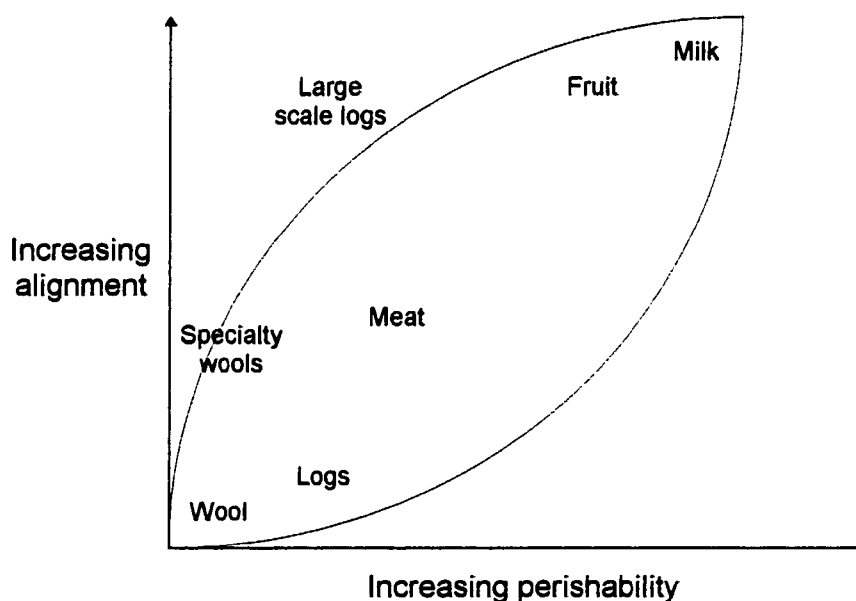
### **2.2.7 Perishable output**

Farm output is often highly perishable. There are few products, either natural or manmade, more perishable than fresh wholemilk. Livestock such as finished lambs and prime cattle should be processed when they reach appropriate grade standards as it is difficult to

maintain them in this state (carcass values decline if they slip outside preferred grading standards). Even newly cut logs deteriorate unless adequately treated. The only land-based output of exception is wool. Wool can be stored near indefinitely in dry conditions. Land-based farmers are engaged in the production of perishable products that require some form of processing or coolstorage to maintain value and enhance product life.

Vertical alignment between producers and first stage processors within an industry appears to intensify alongside product perishability. For example, the New Zealand dairy industry is fully integrated between producers and processors. Producers are assured that their milk will be collected daily by their own cooperative. By contrast, instances of alignment between sheep farmers and wool processors, although not unknown, are rare. The relationship between the perishability of land-based output and vertical alignment within an industry is presented in Figure 2.2.

Figure 2.2. The relationship between output perishability and industry-wide alignment among producers and first stage processors.



There are numerous forms of alignment between producers and first stage processors. Producer owned packhouses and coolstores are commonplace in orcharding. Producer owned distributors, producer owned cooperative processors, contractual arrangements with

processors ensuring timely killing space (Waddell, 1993), and shareholdings in processing companies (AFFCO, 1995) are utilised in the meat and game industries.

Two exceptions to the trend, illustrated in Figure 2.2, are large scale producers and processors in the forestry industry (such as Carter Holt Harvey, Fletcher Challenge, Forestry Corporation) and specialty wool producers such as Mount Linton Station and processors (Davis, R., 1993). In large scale forestry factors other than perishability appear to motivate alignment. These factors, discussed at other points in this essay, include the 25 - 30 year crop rotations, asset specificity in the processing sector, and scale economies. The rare instances of alignment in the wool industry appear to be attempts to capture downstream returns.

### **2.2.8 Coarse grading standards**

Land-based products are subject to coarse grading standards. Carcass traits of live animals are difficult to assess objectively and internal fruit blemishes are hard to identify without cutting to waste. Relatively low technology is employed in first stage processing: the production of essential commodities such as milk powders, bulk butter and cheese, manufacturing beef, lamb carcasses, crossbred wool and radiata pine logs. Therefore, products can be substituted easily between suppliers. For example, manufacturing beef is near indistinguishable in terms of country of origin let alone processor or distributor. Substitution on the basis of raw product attributes is, therefore, not expected. Technological advantages based on product characteristics are being pursued. The New Zealand Apple and Pear Marketing Board, for example, invested in the development of new pipfruit varieties such as the GS series - of which one, GS2085, has been subsequently named Pacific Rose - planted by orchardists during the early-1990s.

Substitution on the basis of price is, however, expected to be prevalent. Price sensitivity is symptomatic of the commodity - price taking - nature of undifferentiated land-based products.

Opportunities to differentiate products, as discussed earlier in the context of price variation, appear to increase as land-based output approaches the end consumer. Efforts to differentiate product should then be more visible at the end-market than upstream. Another

means of reducing substitutability between alternate suppliers is to provide additional services such as credit, tailored packaging and labelling (consumer packs), and reputable service, namely to add value at every opportunity (Egan, 1993).

One common response exhibited by exporters is to impose increasingly strict grading standards and in doing so, invariably, submitting less produce to the marketplace - *ceteris paribus*<sup>15</sup>. Average product is then temporarily of better quality than those from competing suppliers. Temporarily, in that such advantages in a low technology industry are expected to be short lived. Substitutability between producers can be prevented by creating regional or even nation-wide cooperatives. Substitutability between exporters can, however, only be prevented by creating single desk sellers or some other form of federation that maintains strict market discipline. Competition, therefore, resides in the international market.

### **2.2.9 Output requires processing**

Farm output is often in a form unsuitable for end consumption. Land-based output commonly needs processing prior to sale. Only products suitable for consumption in their raw form such as fruit, and to a lesser extent wholemilk have any consumer value at the farmgate. Farmers and first stage processors are, therefore, mutually dependent (particularly in industries where output requires immediate processing). It is expected that alignment between producers and processors increases with increased need for processing. This point is not unrelated to perishability, as discussed earlier.

Producers' typical response has been to invest in the processing sector immediately downstream from the farm. Investment has occurred by retaining earnings, for example, through cooperatives such as in the dairy, pipfruit and kiwifruit industry. Although, in the latter two this investment is, compared with the dairy industry, minimal. Substantial direct investment in the meat processing industry has also been undertaken, repeatedly, by the New Zealand Meat Producer's Board on behalf of sheep and beef farmers - funded through compulsory levies.

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<sup>15</sup> Increasingly stringent grading standards may not decrease total crop volumes submitted during times of increasing production as, for example, occurred in the New Zealand pipfruit industry during the early 1980s.

Mutual dependency also exists between New Zealand participants and international freight operators. Although in this instance the dependency is unlikely to be mutual. Yet, New Zealand participants have not invested, to any extent, in this sector. It appears that some activities can be contracted out, particularly where surrogate competition exists, while others must be kept *in house*. The principle common to these examples is the retention of product ownership. Providing ownership can be maintained, freight forwarders don't take ownership of their freight, there appears to be little incentive to invest. Ward (1975), in his classic history of the New Zealand cooperative dairy industry, suggests that the industry's founders quickly took exception to the vagaries of the market for the reasons identified here. Interestingly, similar reasons are presented by the New Zealand Rural Press (1990) for the establishment of the Canterbury Frozen Meat Company in the 1880s.

### **2.2.10 Production lag**

Output from biological production systems is inherently difficult to change despite farmers' apparent responsiveness to market demands: breeding programmes are long term. Both land use decisions and enterprise choice decisions are of a long-term nature. Production cycles for forestry in New Zealand, while being some of the shortest in the world, are approximately 25 years. Pipfruit may take seven to eight years to reach breakeven, the generation interval for sheep and dairy cattle is two years, and beef cattle more often three years. Rates of genetic improvement are measurable in terms of specific traits being bred for but such programmes are long term. Despite the slow supply response inertia implicit in biological production farmers, where possible, respond rapidly to market demand. For example, sheep farmers responded quickly to the acceptability of ram lambs and pipfruit farmers have shown remarkable willingness to respond to the advent of new varieties.

First stage processors face high exit barriers. Dry powder plants, packhouses, freezing works, and pulp mills rarely have alternate uses. Plant is specifically designed, capital intensive, and invariably located close to production rather than the consumer population. Therefore, producers and processors have extremely limited ability to make alterations midstream other than ever increasing cutting and tailored packaging. Cartwright (1994) labels these features supply response inertia. However, a distinction needs to be recognised between the adoption of technological change and breeding programmes at the farm level. At

the processor level a similar distinction needs to be recognised between technological change and the more monolithic impediments resulting from high exit barriers.

### **2.2.11 Synthesis of implications**

Some of the attributes identified and discussed in this Section are unique to land-based industries other attributes appear common to mineral extraction industries and commercial fisheries. The unique attributes of land-based agriculture, drawn largely from empirical experience, are not mutually exclusive as evident during the discussions of perishability, industry structure, and the need for product processing. The attributes have common abstract concepts relating, largely, to the dependency on biological production systems; industry structure; and, the inherent attributes of output.

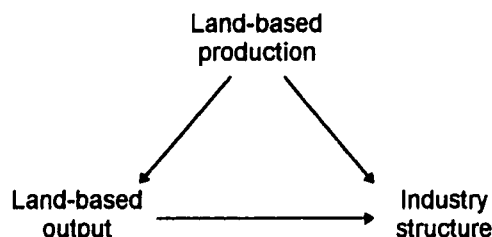
Land-based agricultural industries are dependent on upstream resources that have few alternate uses. This resource base is affected by biological and climatic variability. Output from this resource base is seasonal. Supply from land-based agriculture is, therefore, variable in quality and quantity, is seasonal, and geographically fixed.

On a global scale little agricultural production is traded internationally. There are many producers and few processors, and while this in itself is not unique to agriculture (a comparison with parts manufacturers in the automobile industry springs to mind), producers face a small numbers bargaining problem. Most industrialised countries attempt to protect their domestic producers by imposing trade barriers of some kind. The structure of agricultural industries typically presents producers with a small numbers bargaining problem.

Most land-based output is perishable and often quite unsuitable for immediate consumption. Output from both producers and processors is homogeneous, and subject to relatively coarse grading standards. Further, land-based industries exhibit supply response inertia due to high exit barriers and the dependency on *stable* biological production systems. Land-based outputs must be processed, often immediately. Opportunities to add value reside downstream. Causal relationships exist between the

three concepts; land-based production; industry structure; and, land-based output as illustrated in Figure 2.3.

Figure 2.3. Dependency diagram of relationships between land-based production, output and industry structure.



Land-based output is clearly dependent on land-based production, yet there are features of land-based production such as the lack of alternate uses that remain to be recognised. Hence the necessity to recognise characteristics of production in conjunction with and separate to characteristics of output. Both land-based production and output give rise to characteristics identified as industry structure.

Further aggregation of attributes and implications would succeed in the neglect of unique variables. The ubiquitous assumption remains that international consumers require land-based food and fibre products. These products are consumed daily, and heightened levels of consumption are expected for cultural and religious festivals. Therefore, ambient demand will be subject to short-term seasonal and regional requirements.

## 2.3 COMMODITY SYSTEMS

**A**GRICULTURE has long ceased to be defined in terms of farm functions (e.g., Boehlje & Eidman, 1984; Makeham & Malcolm, 1981; Rae, 1994) such as growing and storing food and fibre products. Despite increased specialisation on-farm producers remain dependent on off-farm functions (Barkema, Drabenstott, & Welch, 1991; Davis & Goldberg, 1957; Spedding, 1979, 1988). Off-farm functions, over the last 150 years, have assumed the roles of providing inputs, processing, storing and merchandising food

and fibre. In 1957 Davis and Goldberg observed that the interdependence of the agricultural sector - farm functions - and the business sector - off-farm functions - has increased (as reported in Section 2.2.7). However, interdependence has increased “without creating adequate machinery whereby these factors of the economy can plan and work together in formulating sound policies which are mutually beneficial to them and which further our national [US] economic goals” (p. 1). The authors acknowledged the “two-way independence with businessmen and farmers in the dual roles of suppliers and purchasers” (p. 2). Davis (1956) suggested that a new word, *agribusiness*, may best describe the interrelated functions of agriculture and business. The author defined agribusiness as:

the sum of all farming operations, plus the manufacture and distribution of all farm production supplies, plus the total of all operations performed in connection with the handling, storage, processing, and distribution of farm commodities. In brief, agribusiness refers to the sum-total of all operations involved in the production and distribution of food and fiber. (p. 109)

Davis and Goldberg (1957) illustrated generic product flows and identified and quantified the resources employed in US agribusiness. The aggregate value of inputs and outputs was estimated at farm supplies, farming and processing/distribution stages of agribusiness. The interactions, inputs and output were then identified between the various commodity flows. Goldberg and Davis postulated that “so-called farm problems” (p. 2) are agribusiness rather than agricultural in nature. Some four decades later the US still remains beset with farm problems (Carr, 1992; Hanrahan, 1991; Rawson, 1991; Robinson, 1989; United States Department of Agriculture (USDA), 1990).

Goldberg later (1968) elaborated on the description of agribusiness. Goldberg stated that “managers must be aware of the total *commodity system*” (p. 3) to develop strategies and policies, and that “they must understand the interaction of its parts”. Goldberg examined three commodity systems wheat, soybean, and Florida oranges and calculated the profitability, price stability, competitive behaviour, and adaptability of each system. The entire commodity system was included in his descriptions. However, Goldberg’s approach was to describe the generic commodity flow in a traditional trading sense, rather than analyse



value added by participating firms. The relationships between firms in the commodity systems studied were largely ignored.

### 2.3.1 The value system

Davis and Goldberg's concept was then extended by Porter (1985) - crediting Porter with the benefit of an anticipation (Merton, 1968). Porter's *value system* embraces a sequence of organisations and focuses on the creation of value through the system. Porter sought to identify the value created within each firm and the competitive relationships that exist between firms. Porter's value system<sup>16</sup> includes suppliers' value chains, the firm's value chain, distributors and retailers' value chains, and ultimately the buyer's value chain. Contributions from Davis (1956), Goldberg and Davis (1957), Goldberg (1968), and Porter (1985), therefore, contributed to the concept of a *land-based system value chain* (Cartwright, 1993c). Cartwright (1993c) proposed two generic land-based system value chains, presented as Figure 2.4.

The only complete description of linked organisations can be provided by a value system. Anything less than a system (Boulding, 1956; Checkland, 1984) is, at best, only a partial description of product flow, value creation or other phenomena. A value system includes all stages between production and consumption, not just those of immediate interest to the academic, researcher or practitioner: those that influence the *participant's* perspective.

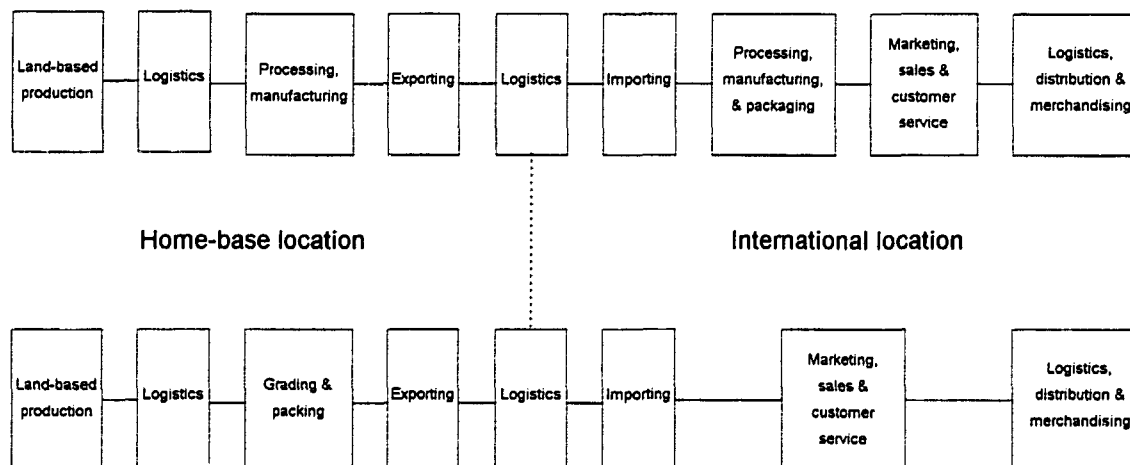
Cartwright (1993c) stated that the interpretation of the system value chain is intended to go *deeper* than a description of channel or product flows. Each step of the system value chain is intended to depict one or more firms adding net value. Net value is added by production, logistics, processing, manufacturing, marketing, distribution and selling or the provision of services. The commodity is transformed through the value system within one firm or by the sequential activities of a number of firms. The stages located in New Zealand and those located internationally are depicted in the Figure. The home-base sub-system may "interface with multiple international value chains, corresponding to alternative geographical business locations and different value-adding transformation opportunities" (p. 26).

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<sup>16</sup> Porter's (1985) value system is presented as Figure 3.10 in the following Chapter.

Figure 2.4. Representative land-based system value chains.

#### 2.4a. Manufactured product system value chain



#### 2.4b. Fresh product system value chain

*Note.* From "Theoretical Aspects of the Relationship Between International Competitive Performance and the Structure of Land-based Industries and Firms," by R. W. Cartwright, 1993, *Papers presented at the 18th Annual Conference of the NZ Branch Australian Agricultural Economics Society*, p. 30.

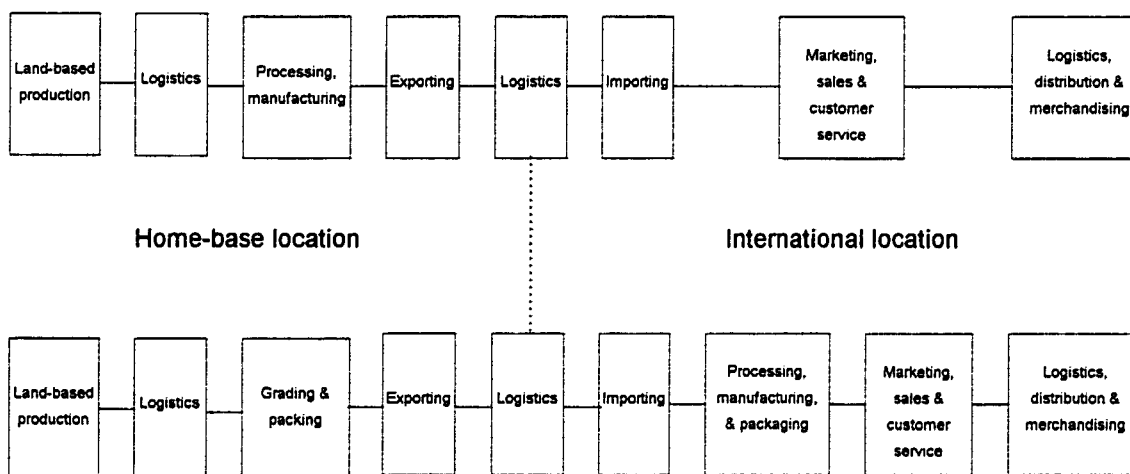
The two system value chains distinguish between manufactured and fresh products: a manufactured product system value chain (Figure 2.4a) and a fresh product system value chain (Figure 2.4b). The fresh product system value chain would be better named either raw or whole product. In doing so products are instead differentiated on the basis of processing. Many processed products are consumed fresh, for example, air-freighted chilled lamb. Similarly, many fresh products are not consumed in international markets until months after harvest. The manufactured product system value chain does not distinguish between alternative levels of activities in the home-base or international location. Processing and manufacturing are assumed to occur in both home-base and international locations.

Activities in the manufactured product value system may be largely home-based, for example, New Zealand's export wine industry. With wine commonly all production, processing and manufacturing activities are completed in New Zealand. Only marketing, sales, logistics and distribution activities are completed in the international location. Therefore, the export wine industry combines Cartwright's (1993c) manufactured product

home-base activities and the fresh product international activities; presented as the home-base manufactured system value chain as Figure 2.5a.

Figure 2.5. Land-based value systems for home based and internationally manufactured products.

### 2.5a. Home-base manufactured product system value chain



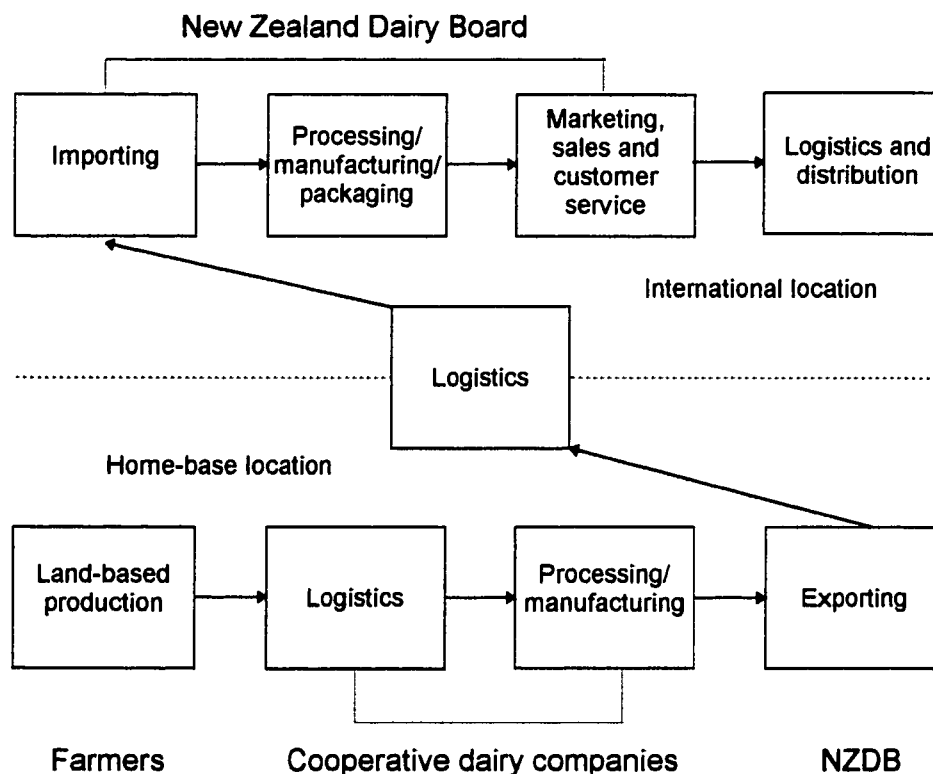
### 2.5b. Internationally manufactured product system value chain

Alternatively, the manufactured product value system may be largely internationally-based, for example, logs exported from New Zealand. Logs are exported from New Zealand in a relatively raw form with processing and all subsequent activities being completed in the international location. In this case the value system combines Cartwright's (1993c) fresh product home-base and the manufactured product international location activities, presented as Figure 2.5b.

The New Zealand dairy industry's value system, based on Cartwright's manufactured product system value chain, was described and analysed by Lockhart and Cartwright (1994) ("Maximising farmer wealth," 1994). Ownership of stages in the value system was demarcated and documented. The value system, presented as Figure 2.6, was depicted beginning with land-based production - farm inputs were acknowledged. The value of milk is increased by its transportation to the processing and manufacturing site - the cooperatively owned dairy company - where the value of milk products are enhanced by processing before the majority of product is exported. The value of milk products is increased again by

transporting them from New Zealand to international locations. The New Zealand Dairy Board is then discharged with the responsibility of adding further value by additional packaging, distribution, and marketing.

Figure 2.6. New Zealand's export-dependent dairy industry's value system.



*Note.* From "Capital Investment, 'Bundling' and Returns to New Zealand Dairy Farmers," by J. C. Lockhart and R. W. Cartwright, 1994, *Dairyfarming Annual*, 46, p.133.

In most international locations the Board processes, manufactures and packages milk products. The Board attempts to capture market rents by stretching the value system with marketing and the provision of sales and customer service. Further value is then added to dairy products with additional logistics and distribution to wholesalers, retailers, and consumers. Each participant in the system whether New Zealand dairy farmers, New Zealand owned dairy cooperatives, or the NZDB has an opportunity to add value to products.

The structure of the dairy industry has attracted criticism from Hussey (1992, 1993), Ireland, Wallace and Associates (1994), and Sullivan and Scrimgeour (1995). The dairy industry is claimed to be anticompetitive; dairy farmers receive a bundled price for their

produce; and, value added from Board investments is not reported. The Board's performance has been compared with Nestlé S. A. (Sullivan & Scrimgeour) in an attempt to validate analyses by Ireland et al., and Findlayson (1993). However, none of these authors consider the value system from the perspective of the land-based producer: those investors largely responsible for the industry's current configuration.

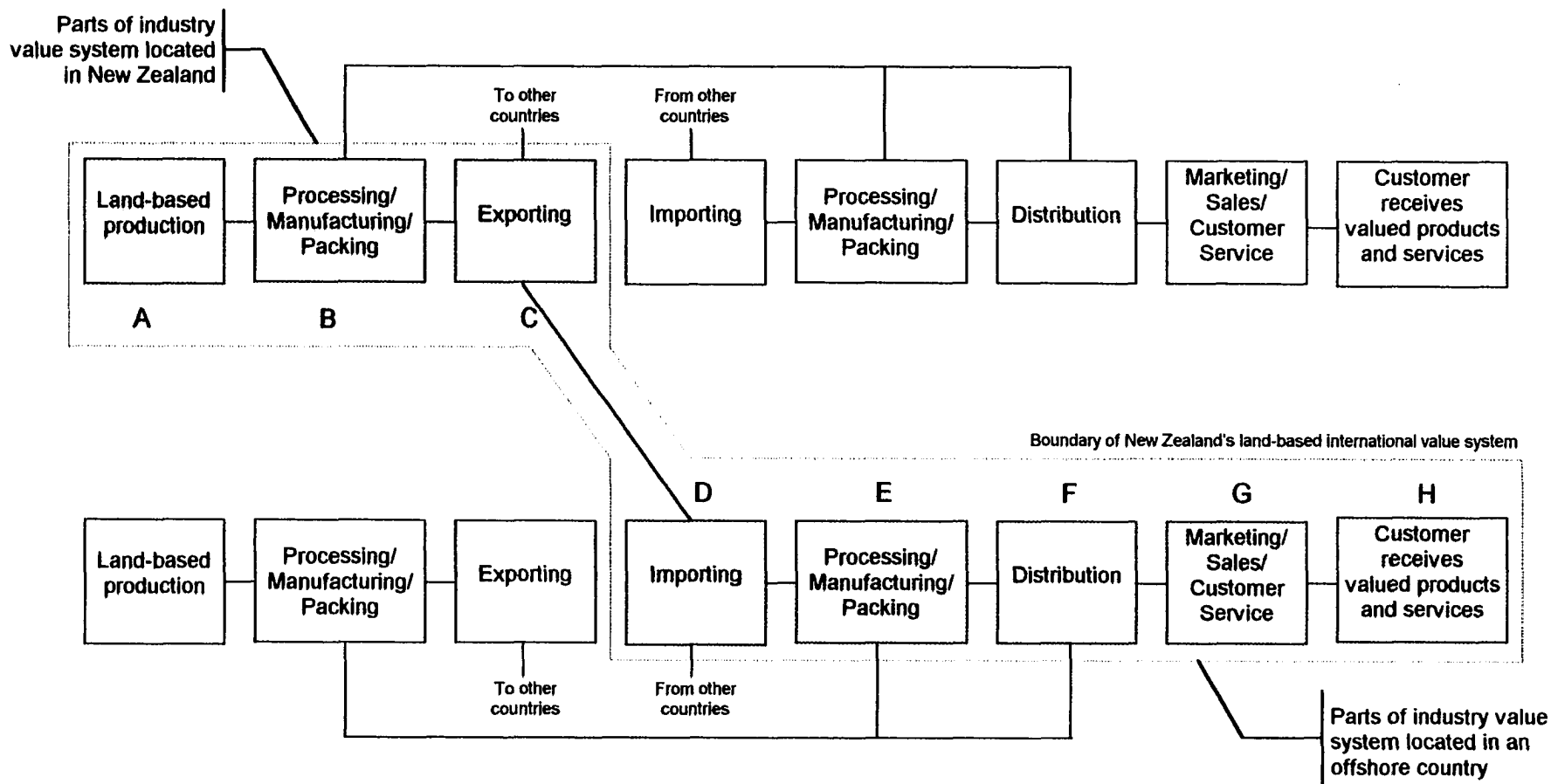
The New Zealand lamb value system in the British market was examined by Lorigan and Harman (1990). They calculated the average returns generated by each participant in the value system and identified the nature of relationships between successive participants. Cartwright (1993c) acknowledged that relationships between successive activities in the value system were likely to take one of many forms. These relationships may range from open market transactions, through various forms of alliance to vertical integration.

### **2.3.2 The Z-form Model**

Cartwright (1994) consolidated the models of land-based product value systems into a generic model. He described the model as a Z-form, and by extending the home-base and international locations of the dairy industry model better embraced relationships between the parts of the value system located in New Zealand and those located offshore. Cartwright's generic Z-form Model of New Zealand's land-based international value systems is presented as Figure 2.7.

The boundary of the value system is denoted by the shaded area. The system, therefore, "interfaces with an associated system that serves customers in the home-base market, and with another associated system that provides domestic supplies of land-based products in the off-shore market" (Cartwright, 1994, p. 7). The Z-form Model depicts the various stages and locations where value can be added. Note that not all the stages may exist in each value system. Each stage "may comprise one or more firms that add net value by either transforming products that are transferred to the adjacent upstream stage or by providing services that increase the value of these products" (Cartwright, p. 6).

Figure 2.7. The Z-form Model of New Zealand's export dependent land-based value systems.



Note. From *Strategy and Structure For Developing the Future of New Zealand Land-based International Industries* (p. 6), by R. W. Cartwright, 1994, available from AGMARDT, PO Box 399, Shortland St, Auckland.

Land-based activities, A, are undertaken predominantly in New Zealand. First stage processing/manufacturing/packaging is completed on-shore, B, prior to exporting, C. Offshore activities include importing, D; processing/manufacturing/packaging, E; distribution, F; marketing/sales/customer service, G; and, consumption of products and services by the foreign consumer, H. The domestic market, which consumes relatively little product, is excluded from this study. Whereas opportunity to acquire foreign products, represented by the linkage between off-shore processing/manufacturing/packaging (the foreign equivalent of B) and the activities completed internationally by New Zealand's value systems is included.

Opportunities for creating value concurrently with product flow are identified in the model. Value is then, implicitly, captured within each stage. The model could be applied to any industry: included are *all* activities between producer and domestic or international consumer. For example, the producer could just as easily be a Swedish forester providing logs for use in IKEA's kitsets (Normann & Ramirez, 1993).

The role of New Zealand's firms, as any other firm in a value system, is to capture value realised in the international market place. Only when this value is realised that is the product is sold for a sum greater than the costs can wealth be distributed to home-base participants (A, B, C) - as product prices, shareholder dividends, or stakeholder wealth. Intermediaries, between the producer and consumer, enhance product value through adding value activities. Adding value activities prior to consumption contribute to inventory value. However, only when the product or service provides value to an end-consumer is value captured. The sale of goods and services between intermediate participants, while creating value for the seller, does not ensure that value is ultimately realised.

Cartwright (1994) stated that the profits that accrue to a firm at any stage in the value system are largely dependent on two considerations. First, the relative bargaining power of the firm relative to those in adjacent stages of the value system: described in terms of Porter's (1980) five competitive forces (discussed in Chapter Three) as external influences of profitability. Second, the resources at the firm's disposal, the firm's capabilities (Hamel & Prahalad, 1994), the firm's competencies (Prahalad & Hamel, 1990), and management ability (e.g., Robbins & Barnwell, 1994) are internal influences of profitability.

The Z-form Model does not identify the extent of value adding activities that should be completed by each firm or likely boundaries between firms. One long held assumption amongst land-based producers (A) is that they must have control, and ownership of home-based activities to capture wealth, particularly wealth derived from the international marketplace. Configuration of the value system *may* be dictated by government policy commonly in the form of a societal marketing board (Izraeli & Zif, 1977). Configuration of the value system may also be determined by participating firms. In this case the extent of the firm's activities, theoretically, is governed by transaction costs. These two factors that configure value systems are not necessarily mutually exclusive (e.g., Maughan & Schroder, 1983). The feature common to both is relationships between participating firms; these relationships appear to determine the ultimate configuration.

The importance of relationships between firms in the commodity system has been recently acknowledged. Barkema, Drabenstott, and Welch (1991) state that "changes in consumer demand and food technology are changing the way the food market links producers, processors, and consumers" (p. 25). The authors suggest that the new market structure "shortens and clarifies the communication channels" (p. 29) between producers, processors, and consumers. The relationships between firms at adjacent stages in the Z-form Model may take many forms. Further, relationships may exist between firms at *nonadjacent* stages in the value system.

Several studies have attempted to examine the attributes of vertical integration within New Zealand's and Australia's primary industries (Campbell, 1973; Crocombe, Enright, & Porter, 1991; Hussey, 1992; McCann & Lattimore, 1990; Nicholson, 1990; Sieper, 1982). However, most of these studies have primarily considered the political dimensions of statutory marketing boards against the background of a partially deregulated economy<sup>17</sup>. From an economic perspective it can be seen as purely

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<sup>17</sup> Some of Hussey's results should be treated with caution. He calculated the value of off-farm income from NZDB investments as \$22,300 per New Zealand dairy farm and compares this with net farm profit of \$21,800 reported by the MAF (1991). However, quite different results are reported in the actual cash working budget (MAF, 1991). Farm surplus (gross income - farm expenses) equalled \$62,424, less interest (\$22,093) and tax (\$10,518) left \$29,813 for consumption and reinvestment. Hussey should have stated that of the \$104,178 received from milkfat sales some \$22,300 is attributable to the NZDB's investments (which at the very least is taxable income). The income received from livestock sales (\$22,782) and the cost of debt servicing (\$29,981) are also importantly influenced by expected long-term returns from NZDB's investments.



coincidental if the optimal firm size encompasses an industry. For example, the NZAPMB and the NZDB account for nearly all the produce exported from their respective industries. In these instances the firm's stakeholders (farmers) may be forgoing economic optimality in favour of other advantages.

The advantages of horizontal integration (Jackson, 1971; Robertson, 1991) and the associated returns on capital are relatively easily calculated at the farm level (Lockhart, 1990). There is little evidence to suggest that the same microeconomic principles are not appropriate for the analysis of horizontal integration at the processing level (Schroder, 1982). The vertically integrated value system has, however, received considerably less attention.

Added value strategies, when considered in value systems, create both *generative* and *distributive* effects. Generative effects produce higher net value and result from one or more of higher priced goods, the consumption of greater volumes of goods, and cost reductions, namely those phenomena that contribute to value. Distributive effects refer to how that wealth is then captured by participants - stages - in the value system. Value is created by all participants (generative), however, it may not accrue to participants (distributive) in the manner akin to which it was created.

The Z-form Model can be interpreted in two distinctly different modes with respect to generative and distributive effects. First, it has a descriptive (functionalist) interpretation representing all value added activities associated with product flow from land-based producer to international consumer. Value added activities may be completed by all stages from A to G: generative effects. Adjoining organisations being linked by some form of relationship which may, largely, be regarded as either competitive or collaborative. This interpretation of the model is similar to that intended by Achrol, Reve and Stern (1983) in their depiction of marketing channel dyads, discussed in Section 3.5.3.

The generation of wealth appears to be dependent on factors such as the firm's resources, capabilities, management ability, and competencies. Wealth is then supposedly distributed to the stakeholders of that stage or stages of the value system.

However, factors such as relative bargaining power, and the nature of relationships between adjoining firms, at times suppressed by vertical integration, will influence the distribution of wealth: distributive effects.

Second, the Z-form Model can be interpreted in a normative (radical-structuralist) mode with associated implications for the configuration and management of the value system. A normative view implies that there is some optimal mix of resources, capability, management ability, and competencies that creates more value than others. For example, the location of processing and packaging in the international location may provide benefits that cannot otherwise be realised by completing these stages on-shore. Further, a normative view suggests that some form of configuration may distribute value for the benefit of a select stage or group of stages. The implications suggest that the value system may be configured to repatriate a disproportionate share of wealth to New Zealand owned organisations: distributive effects in favour of a home-base perspective. Likewise, a consumer's perspective would seek to maximise value at H and minimise wealth elsewhere - excluding concern for wealth distribution between all other participants. The accrual of wealth results from bargaining power/collaboration between adjoining stages or the suppression of bargaining power/collaboration by integration, either backward or forward, through successive stages of the value system. Therefore, specific recommendations may be offered to enhance a particular stage's or group of stages' ability to distribute wealth in their own favour.

The Z-form Model provides a framework in which to consider the potential research questions offered in Chapter One. The intention of management is to generate wealth within each successive organisation and then to distribute proceeds in favour of that organisation's stakeholders. Whether the value *system* can be managed, how it can be managed, and how it ought to be configured remain the subject of this study.

### **2.3.3 Systems thinking**

A system implies a "holistic view" (Gummeson, 1991, p. 76). In agriculture, horticulture, and forestry a holistic view refers to an emerging *pasture-to-plate* perspective (Anderson, R. D., 1991; French, 1986). Despite a claim that the term system

has become “tired” (Thorelli, 1986, p. 39) the use of a systems approach identifies the study as eclectic. Boulding (1956) attributed the name and many of the ideas of systems theory to Bertalanffy (subsequently published in 1968). Similarly, Checkland (1981) reported that it was Bertalanffy “who insisted that the emerging ideas in the various fields could be generalized in systems thinking” (p. 93).

The systems approach was motivated by the search for an “optimum degree of generality” (Boulding, 1956, p. 198), a position not always reached in the reductionist sciences. However, systems thinking is not itself a discipline: “systems ideas *provide a way of thinking* about any kind of problem” (Checkland, 1981, p. 99). Checkland concludes his review of systems thinking with:

...thinking starts with an observer/describer of the world outside ourselves who for some reason of his own wishes to describe it “holistically”, that is to say in terms of the whole entities linked in hierarchies with other wholes. This leads to the most basic prescription of what the observer’s description will contain: his purpose, the system(s) selected, and the various system properties such as boundaries, inputs and outputs, components, structure, the means by which the system retains its integrity, and the coherency principle which makes it defensible to describe the system as a system. (p. 121)

The systems examined are New Zealand’s export-dependent land-based value systems. New Zealand, in this study, denotes geographical ownership implying some degree of nationalism. Cranston (1993, p. 215) states that nationalism “has become the most powerful, if not the dominant, ideology of our time”. However, as Cranston observes in the case of the European Community, and proposes in the case of North America, a progressive economic unit systematically breaks “down first the economic and then the political barriers between nations” (p. 248). Therefore, New Zealand ownership and/or control may not necessarily coincide with the country’s geographic boundary. Nonetheless, the implication remains that production, first stage processing, and exporting must be New Zealand owned to have any residual claim on wealth.

As discussed in the preceding sections the concept of land-based systems is not new. However, the examination of land-based systems from the perspective of creating value and distributing wealth is a more recent development. The Z-form Model is the end result of several attempts at depicting all stages between land-based producer and international consumer. The model depicts the critical relationship between activities in the home-base location and those in an international location and provides a framework from which to examine the transformation of farm products into consumer goods.

Value systems may involve few stages and few participants in the case of raw products. However, in the case of manufactured products many more stages, and potentially more participants, are involved. The number of stages and participants may not, however, be synonymous with the creation of value, merely the opportunity to do so. Value systems comprise all activities, resources, and actors between and inclusive of producers and consumers. Adjoining stages may be connected through various forms of competitive, collaborative or internalised linkage between participating firms.

The value system consists of all organisations (firms) and the relationships between them. The intent of firms is to generate wealth and distribute that wealth in favour of the firm's stakeholders. Theories of the firm are introduced in the following section.

## **2.4 THEORIES OF THE FIRM PERTAINING TO THE Z-FORM MODEL**

**J**ENSEN AND MECKLING (1976) recognised that most firms are “legal fictions” (p. 310), referring to the “artificial construct under which the law allows certain organisations to be treated as individuals” (p. 310)<sup>18</sup>. The authors defined the firm as a “nexus for contracting relationships and which is also characterised by the existence of divisible claims on the assets and cash flows of the organisation which can generally be sold without permission of the other contracting individuals” (p. 311). This view of the

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<sup>18</sup> The partnership, however, is one important omission from Jensen and Meckling's (1976) definition. The partnership operates as an organisation and is not treated as an individual for legal and taxation purposes. The liabilities and rewards earned by partnerships are distributed appropriately to each of the individuals involved (Owen, 1994; Prebble, J., 1994).

firm emphasises the contractual nature of firms and other organisations. Jensen and Meckling (1976), therefore, stated that “it makes little sense or no sense to try to distinguish those things which are *inside* the firm from those which are *outside* of it” (p. 311). However, several authors since Jensen and Meckling (Barry, Sonka, & Lajili, 1992; Koenig & van Wijk, 1991) distinguish between the firm and the firm’s relationships with other organisations

Relationships between adjacent firms have traditionally been considered as either markets or hierarchies (Williamson, 1975). The distinction between intra-firm transactions and inter-firm transactions, yet to be depicted in the Z-form Model, is necessary for this study. It is accepted that some economic theories, for example, transaction cost theory (Coase, 1937; Williamson, 1975, 1979, 1981), agency cost theory (Jensen & Meckling, 1976) and asset specificity (Aldrich, 1976; Pfeffer & Salancik, 1978) may be used, in part, to explain both the theory of the firm and the relationships between firms in a manner suggested by Jensen and Meckling.

There are three theoretical foundations for the firm; the firm as a production function, the firm as a governance structure, and the firm as a value chain. The conventional *orthodox* theory is to view the firm as a production function (Sporleder, 1992). Viewing the firm as a production function provides considerable understanding of the firm’s response to the price and quantity of inputs and outputs. The firm is assumed to maximise the sum of expected profits “over a long period of time, these profits being properly discounted to the present” (Mansfield, 1991, p. 137). Discounting attempts to determine the current value of a future income stream (Hirshleifer, 1958; Fisher, 1977; Rae, 1977). The production function theory provides rules of behaviour for a firm wishing to make as much money as possible. This view largely assumes the firm has “complete dependency on markets” (Sporleder, p. 1228). However, the production function theory often fails to explain firms’ behaviour in situations where profit maximisation is not the firm’s single goal. In these instances the economist refers to utility maximising behaviour (e.g., Jensen & Meckling, 1976). It is fortunate that the measurement of utility derived from non-pecuniary attributes of firms such as “appointments of the office, the attractiveness of the secretarial staff, the level of employee discipline... personal relations... with employees,” (p. 312) and lifestyle is

fraught with difficulty. For example, were the attractiveness of secretarial staff to be objectively measured economists may have been distracted from their work.

The second economic theory considers the firm as a governance structure. The governance structure view, based on Coase (1937), was popularised by Williamson (1975). In this view the firm is considered as a “substitute for market transactions” (Sporleder, 1992, p. 1228). Two theories contribute to the governance structure view. First, transaction cost theory, which includes information costs (Coase; Williamson, 1979) and second, management cost theory which can be extended to include agency theory (Coase; Demsetz, 1988; Jensen & Meckling, 1976; Knight, 1921).

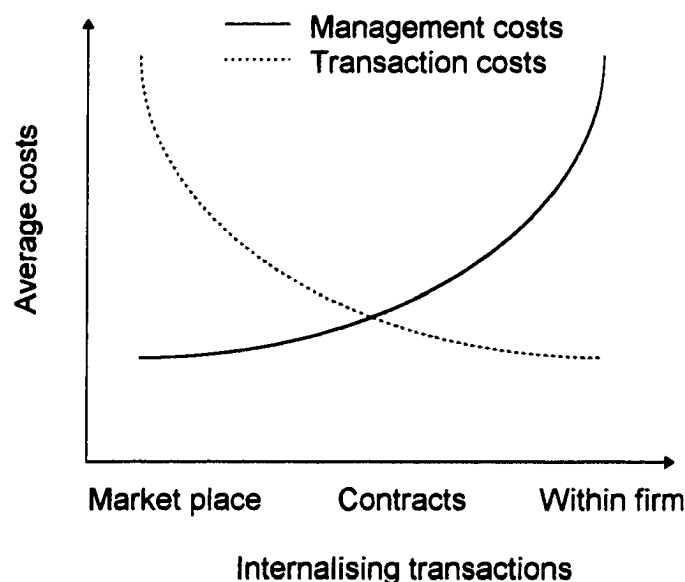
Coase (1937) was unsatisfied with the thinking that the economic system was coordinated by the price mechanism. Coordination by the price mechanism is, at best, only a partial description of the economic system. The economic system is made up of a number of subsystems of which firms are a conspicuous member (Williamson, 1993). Coase suggested that the extent of the firm is determined by the relationship between transaction costs and management costs. The firm can reduce market costs by internalising transactions and in doing so the firm pursues to some extent vertical integration. As the firm internalises transactions it is proposed, however, that management costs increase.

As the firm internalises transactions, for example, by moving from the market place, to contracts, to manufacturing within the firm (internalising) transaction costs are postulated to decline and management costs are postulated to increase. Therefore, optimal firm size is assumed to occur where the sum of transaction costs and management costs are minimised. The theoretical relationship between transaction costs and management costs is depicted in Figure 2.8

Blair and Kaserman (1983) summarised the reasons given for high transaction costs as uncertainty about the conditions under which exchange will take place, and problems relating to small numbers bargaining. The authors stated that transaction costs will rise when there is uncertainty about price, quality or availability of a good or service. Maughan and Wright (1993, p. 55) suggested that such uncertainty will result from

“variability of input supply [seasonality], perishability, lumpiness in output and price rigidity in input or output markets”.

Figure 2.8. The theoretical relationship between decreasing transaction costs and increasing management costs as the firm internalises transactions.



Transaction costs will also rise when there is an ex ante or ex poste small numbers bargaining problem (Blair & Kaserman, 1983). Maughan and Wright (1993, p. 56) recommended that “it is easier to think of the *small numbers* as referring to the options rather than to the number of individuals involved in any given transaction”. It may not, however, be possible to reduce transaction costs in all circumstances. For example, seasonality of production cannot be overcome by vertical integration. Similarly, small numbers bargaining problems may only be overcome when both parties pursue integration.

The third theory of the firm is Porter’s (1985) value chain theory. The firm is viewed as “a collection of discrete but related production functions, if production functions are defined as activities” (p. 39). The value chain focuses on how each of these activities creates value. Porter’s value chain theory provides a more useful introduction to the analysis of product and service flows through an organisation: Porter’s (1985) generic value chain is reintroduced in Chapter Three (see Figure 3.9).

Vertical integration describes the completion of segments of the production/marketing system within a firm (Adelman, 1949). The attributes of vertical integration as a corporate strategy were reviewed by Harrigan (1983, 1984). Vertical integration is recognised as developing high productivity and enhancing stockholder wealth. The success of vertical integration requires that the internal and competitive benefits outweigh the internal costs and competitive dangers. Harrigan's summary of the attributes of vertical integration is presented in Table 2.1. There is agreement that vertical integration offers a sensible framework within which to add value. However, conventional accounting data is not necessarily appropriate for the analysis of added-value strategies. Capital investment or consumption decisions need to be made that maximise producers' and processors' returns and provide opportunities for further product differentiation.

Table 2.1. The advantages and disadvantages of vertical integration.

Internal benefits	Internal costs
Integration economies reduce costs by eliminating steps, reducing duplicate overhead, and cutting costs (technology dependent)	Need for overhead to coordinate vertical integration increased costs
Improved coordination of activities reduces inventorying and other costs	Burden of excess capacity from unevenly balanced minimum efficient scale plants (technology dependent)
Avoid time-consuming tasks, such as price shopping, communicating design details, or negotiating contracts	Poorly organised vertically integrated firms do not enjoy synergies that compensate for higher costs
Competitive benefits	Competitive dangers
Avoid foreclosure to inputs, services or markets	Obsolete processes may be perpetuated
Improved marketing or technological intelligence	Creates mobility (or exit) barriers
Opportunity to create product differentiation (increased value added)	Links firm to sick adjacent businesses
Superior control of firms' economic environment (market power)	Lose access to information from suppliers or distributors
Create credibility for new products	Synergies created by vertical integration may be overrated
Synergies could be created by coordinating vertical activities skilfully	Managers integrated before thinking through the most appropriate way to do so

*Note.* From "Formulating Vertical Integration Strategies," by K. R. Harrigan, 1984, *Academy of Management Review*, 9 (4), p. 639.



Williamson's (1975) view of business transactions is regularly criticised by many contributors to industrial economics for failing to describe the array of transactions found between the disparate poles of markets and hierarchies (e.g., Granovetter, 1985; Jarillo, 1987; Ouchi, 1977, 1980). The over-riding weakness with transaction cost economics is the assumption that "opportunism is a central concept in the study of transaction costs" (Williamson, 1979, p. 234).

Williamson (1991) distinguished between markets, hybrids and hierarchies. He attempted to "locate hybrid modes - various forms of long-term contracting, reciprocal trading, regulation, franchising, and the like - in relation to" markets and hierarchies (p. 280). A review of Williamson's hybrids is beyond the scope of this Chapter, suffice to say that the sweeping generalisations of transaction cost economics served as a stimulus to the developers of industrial economics. Williamson (1979), quoting from Macneil (1978, p. 901), acknowledged that:

The fiction of discreteness is fully displaced as the relation takes on the properties of 'a minisociety with a vast array of norms beyond those centered on the exchange of its intermediate processes'. (p. 238)

adding that:

Where personal integrity is believed to be operative, individuals located at the interfaces refuse to be a part of the opportunistic efforts to take advantage of (rely on) the letter of the contract when the spirit of the exchange is emasculated. Such refusals can serve as a check upon organizational proclivities to behave opportunistically. (p. 240)

Therefore, Williamson was aware that organisational forms are not always to be found as either markets or hierarchies. However, Williamson retreated to Veblen's view of business enterprise commenting that the supposed distance between the head of a large enterprise and his or her employees is sufficient to ensure that any personal conduct mitigating opportunism is eventually eliminated. Management can proceed "untroubled by sentimental considerations of human kindness or irritation or of honesty" (Veblen cited in Williamson, 1979, p. 241). The reader is then left with the impression that while bilateral relationships exist, particularly in the case of "recurrent, nonstandard transactions" (p. 259), opportunism remains the sole

motivate of CEOs<sup>19</sup>. Macneil (1978) would appear to endorse Williamson's view, without necessarily adopting the assumption of opportunism. He stated that "typically it is the ongoing relation rather than the individual that is the more powerful of the two" (p. 900). Therefore, the interorganisational relation has some critical mass - inertia<sup>20</sup> - that ensures its longevity beyond that of the immediate facilitators within each firm<sup>21</sup>.

Ghoshal and Moran (1996) take issue with what is predominantly Williamson's view of transaction cost economics. Why for example do attitudes and behaviour such as trust, honesty, and integrity "matter any less than that of opportunism" (Moran & Ghoshal, 1996, p. 61)? Opposing values are embedded in the alternate views of organisation. Transaction cost economics is dependent on the view that managers will display opportunism - attitude - and opportunistic behaviour (Ghoshal & Moran, p. 18). Transaction cost economics does not consider managers capable of values such as trust and commitment (Morgan & Hunt, 1994). Transaction cost economics should not, however, be dismissed completely. There may be specific linkages in specific industries that are, in fact, better explained by transaction cost economics rather than other theories of the firm. Maughan and Wright (1993), and Waddell (1993) used transaction cost economics to interpret the relationship between sheep and beef producers and first stage processors: an unenviable relationship better interpreted from an alternate paradigm.

Ghoshal and Moran (1996) argue that organisations are not mere substitutes for market failure; "they possess unique advantages for governing certain kinds of economic

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<sup>19</sup> Williamson's reference to Macauley is equally confusing. Williamson stated that "both parties have an incentive to sustain the relationship rather than to permit it to unravel, the objective being to avoid the sacrifice of valued transaction-specific economies" (p. 251). Macauley (1963, p. 61) recognised that "disputes [between businesses] are frequently settled without reference to the contract or to potential or actual legal situations". To which Williamson retorts that this is because "recurrent, nonstandard transactions are governed by bilateral or unified structures" (p. 259). It is hard to imagine the managers of bilateral structures avoiding legal situations if both parties are motivated solely by opportunism.

<sup>20</sup> Macneil's (1978) comments on status quo are enlightening. For example, given that "it is well to remember that we are dealing with situations where the desire is to continue the relation, not to terminate it" (p. 896) then "the status quo itself may be one in which changes are expected in a certain direction". He further added that "unlike discrete transactions, many contractual relations are, for all practical purposes, expected never to end" (p. 899). While Macneil acknowledges correspondence with Williamson he appears to have adopted a more holistic view of the nature of contractual relations (see Macneil, 1980), not being constrained to the economist's view of opportunism.

<sup>21</sup> If this is the case some of the methodology offered by contributors to industrial relations is circumspect, under these circumstances the firm's ecology - which is a network described in a historical, current and future sense - would assume a far greater importance.

activities through a logic that is very different from the market” (p. 13). They endorse Simon’s (1991) view that the market economy is a misnomer, the majority of modern business being conducted in organisations. A more realistic assumption is, therefore, that offered by Rumelt, Schendel, and Teece (1991): markets begin where organisations fail.

The major departure between economics and business schools of thought is the role of management. Economic paradigms invariably ignore the role of management - opportunism excluded. Transactions are assumed to take place, largely, in the marketplace or in a hierarchy independent of human intervention. Further, the economic theories assume that the firm faces a demand curve outside of its control. An important objective of management is, however, to increase demand for the firm’s products through branding (Watkins, 1986), marketing (Aaker, 1992) or by inventing new markets (Prahalad & Hamel, 1990). Not only is management concerned with increasing demand but *new age* management is concerned with altering both the internal and external environments in which the firm operates - *ceteris paribus* is *not* assumed.

Business schools recognise that transactions take place between managed firms. Management not only manipulates the firm’s resources but also attempts to manage the marketplace. To highlight this difference in perspective Ghoshal and Moran (1996) distinguish between market logic as autonomous adaptation - which is near miraculous - and organisational logic as purposive adaptation. Purposive adaptation is observed to have at least three advantages. First, purposive adaptation is possible without either prices or markets. (The authors failed to observe that markets are not possible without organisations, or individuals as in a labour market or end-consumer.) Second, purposive adaptation “allows organisations to pursue dynamic efficiency creating new options” (p. 33). Third, purposive adaptation transforms the domain in which “relations are embedded” influencing actors’ attitudes and behaviour.

In ignoring management the economics literature avoids recognising differences in management ability. For example, the limiting hierarchical control structure associated with increasing firm size (Williamson, 1967) is assumed to be invariant to management ability. Peters and Waterman (1984), Iacocca (1984; see Range, 1991), Peters and Austin (1985), and Pascale (1990) all recognise that management ability is paramount to

the success of the firm. Similarly, at the firm level the success of the firm is dependent on management ability (Haines, 1982; Boehlje & Eidman, 1984; Gray & Lockhart, 1996; Lockhart, 1990; Reganold, Palmer, Lockhart, & Macgregor, 1993), much of which is directed at minimising risk (Johnson, R. W. M., 1990). Economics provides general theories of determining optimal firm size and firm behaviour. However, they may be too abstract to apply to an individual firm without first recognising stakeholders' goals and industry configuration, by which time critical assumptions are likely to be violated.

One issue easily overlooked in the Ghoshal and Moran (1996)/Williamson (1996) debate is the need for strategy and management researchers to develop their own theories of organisation rather than adapting theories such as transaction cost economics. However, it is only with the emergence of *new age* strategy (introduced in Section 3.6.2) that an alternate paradigm can be seen to explicitly engender interdependency (Bartlett & Ghoshal, 1989; Covey 1990; Covey & Merrill, 1994; Hamel & Prahalad, 1994; Quinn, 1992; Senge, 1992): the antithesis of opportunism.

A firm consists of a number of inter-related activities (production functions), under a common governance structure in an industry coordinated through markets, alliances, contracts or some form of hierarchy such as vertical integration. The degree of vertical integration in the value added process can be viewed as dependent on the sum of transaction and management costs. The transaction cost view of the firm is, however, based on opportunism at the exclusion of values. This perspective is increasingly difficult to uphold when alternate views of organisation and transaction are considered.

## 2.5 MANAGEMENT IN THE Z-FORM MODEL

**T**HE "PRACTICE OF MANAGEMENT is largely eclectic" (Easterby-Smith, Thorpe, & Lowe, 1991, p. 5), and it ignores academic efforts to create distinct disciplines. Easterby-Smith et al. stated that "managers need to be able to work across technical, cultural and functional boundaries; they need to be able to draw on knowledge developed by other disciplines such as sociology, anthropology, economics, statistics and mathematics" (p. 5). Easterby-Smith et al. don't offer *blanket*

recommendations for management research. They merely suggest that “it is through contrasts that new ideas and insights are most easily created” (p. 9) - implying that the perspective offered from one discipline, while parsimonious, may be intellectually barren.

The nature of management research will influence its relevance and immediacy of application by the profession. Pure research is likely to be “too abstract and not oriented enough in an applied direction and consequently not relevant to the ‘real’ problems of business” (Porter, L. W., & McKibbin, 1988, p. 170; see also Hambrick, 1994). The authors correctly argued that the relevance of research is not necessarily where it lies on the pure-applied continuum. More importantly, it is a matter for researchers to “give as much attention to the problems on which they choose to do research as they do to the approach to carrying it out” (p. 177). A problem will too often be subjugated by an academic’s desire to apply a *pet* technique (Locke, 1989). Further, Locke recognised that other aspects, particularly personnel and organisation, are culture specific and the way these aspects of management are integrated into research and practice is culture-specific. The adoption of theory relating to personnel and organisational practice developed from cultures other than our own may, therefore, require substantial empirical support.

### 2.5.1 Strategic management

The various management disciplines introduce *people* to the value system. The participants at each stage of the value system are no longer just organisations but collectives of stakeholders. The strategic goal for any organisation (Andrews, 1987; Grant, 1991b, 1995; Johnson & Scholes, 1993; Pettigrew, 1987) is to create value and distribute wealth. Implicit in this goal is that wealth is distributed to the organisation’s stakeholders (Rappaport, 1981, 1983) which will include firstly, shareholders and then secondly, employees.

Management also provides a dynamic link between the Z-form Model of the value system - a static model - and opportunities for the generation and distribution of wealth amongst participants. The Z-form Model identifies generic value creation: collection at A, logistics between C and D, distribution from F to G and so on. What it doesn’t show are the

nature of linkages - either competitive as say Porter's (1980) five forces or collaborative (Axelsson & Easton, 1992; Jarillo, 1987; Powell, W. W., 1990; Thorelli, 1986) - between adjoining or non-adjoining participants.

Whittington (1993) observes that organisations have pluralistic goals. The assumption that organisations are profit maximisers is naive. The goal function will be influenced by various stakeholder groups all of whom exert influence on the distribution of wealth. When stakeholders are considered as buyers, sellers, and upstream participants in a value system, for example, in addition to shareholders and employees the forces affecting wealth distribution prevent profit maximisation.

Forces external to the organisation are considered by Porter (1980) in his five forces model. Buckley (1994) applauds Porter's contribution to the "deconstruction of standard industrial economics" (p. 97). The five forces model may be assumed to operate at each participant in the value system. Buyers and sellers will compete for wealth distribution, the outcome of which is determined by bargaining power (Porter), as discussed in Section 3.4.1. When two adjoining firms collaborate the distribution of wealth will be more complex. Little appears to have been written on the distribution of wealth between collaborating firms as invariably strategic management commentary is provided from the perspective of a single firm. Yet the rational long-term distribution of wealth is essential to the long term success of all participants: a means to ensure the effective, and efficient production of land-based goods and services. Paradigms contributing to the understanding of linkages between organisations are introduced in Section 2.5, and reviewed in detail in Chapter Three.

The opportunity for value enhancing activities are identified in the Z-form Model but there is, as yet, no system-wide strategic intent (Hamel & Prahalad, 1989). The value system is seen to operate on its own accord. The conventional *fit* model of business strategy (Andrews, 1987; Ansoff, 1965; reviewed by Mintzberg, 1990) seeks to match the firm's capabilities with the external environment. Therefore, business strategy may be viewed as a means for the organisation to position itself within the value system. Numerous perspectives of strategy are enunciated in the literature of which the most common are the Design - or deliberate - school, characterised by Ansoff and Andrews and the emergent - or behavioural -

school, characterised by Cyert and March (1963) and Mintzberg. Any review and discussion of strategy must rationalise the contributions from these schools.

Management was first considered as a cyclical process by Fayol (1916/1949). The process includes four functions variously named as planning, implementation, leading and control. However, research of managers' behaviour, for example, Mintzberg (1975) and Gray and Lockhart (1996) has identified a void between actual behaviour and that depicted by normative models. To be sure, management activities can be *forced* into one of the four functions of management; the result seldom describes what manager's do.

Recently what were offered as alternative models of strategic management have gained international recognition. Hamel and Prahalad's (1993, 1994) paradigm of strategy as stretch and leverage is considered a viable alternative to the conventional fit paradigm. The development and contribution of *new age* strategic management ought to first, assist with identifying shortcomings in the conventional model and second, provide a different view of the firm within the value system. Other contributions to strategy that appear relevant to this study are global strategy (Ghoshal, 1987; Kogut, 1985a, 1985b) and the management of change (Strebel, 1994), both reviewed in Chapter Three.

### **2.5.2 'Competitive advantage' and 'economic rent'**

Competitive advantage is the "value a firm is able to create for its buyers that exceeds the firm's cost of creating it" (Porter, 1985, p. 3). Value, to the producer, is the difference between the costs of production and the price paid for the product. Value, to the consumer, is the price buyers are willing to pay. Porter acknowledged that competitive advantage is increasingly a function of how well a company can manage the value system; all the participating firms and the linkages between them. Collaborative linkages between firms' value chains create interdependencies between a firm and its suppliers and its buyers (Porter). Theories on the nature of linkages between organisations in the Z-form Model are introduced in the following section.

McNamee and McHugh (1989, p. 63) suggested that competitive advantage reflects "superior long-run return on invested capital". Grant (1991b, p. 39) stated "that

the basic source of profit is the creation of value for the customer". Consumers attempt to maximise their "welfare by purchasing goods which give greatest value relative to the price charged for them" while the "producer tries to maximise profit by charging the highest price which can be achieved" (Pitt-Watson, 1992, p. 49). Grant (p. 64) also noted that Porter's (1980) generic strategy framework, discussed in Section 3.7, "fails to take account of the dynamic character of competition". Competitive advantage describes the performance of a firm relative to its competitors. Unfortunately competitive advantage is likely to be transitory only, because seldom can technologies be monopolised in the long term. The transitory nature of competitive advantage reflects the firm's dynamic environment within its industry. While it is not an absolute necessity for a firm to achieve a position of competitive advantage it is ideal.

Pitt-Watson (1992) concluded that a company can be profitable if it meets customers' needs better and at lower cost than its competition. However, if value is considered a managed variable competitive advantage is a position a firm achieves when it can provide *value* to customers at a lower cost than that provided by competitors. It should be noted that lower cost is relative rather than absolute. Firms can provide value in the form of a managed variable at considerable cost relative to others as is the case with BMW and either Hyundai or Daewoo.

Contributors to the economics literature identify the returns from competitive advantage as rent (Tullock, 1967). Therefore, rent seeking (Krueger, 1974) describes an entrepreneur's pursuit of competitive advantage. Buchanan (1980) discussed the relationship between economic rent and added value describing rent as follows:

a potential entrepreneur, discovers a use for resources or a combination of resources that had not been previously discovered. No one else in the economy is aware of this opportunity. The entrepreneur organizes production and commences sale of the commodity or service. By definition, he is a pure monopolist during the initial period. (p. 6)

The entrepreneur receives economic rent for the activity and, in turn, it is the prospect of rent that motivates the activity. Invariably the pursuit of rent creation requires the



allocation of scarce resources between alternative uses (Amit & Schoemaker, 1993). Decisions relating to capital investment or consumption must be made to ensure that the process of rent creation continues. Rent is the return to the resource owner over and above the return those resources could earn if put to an alternative use (opportunity cost). Differences in the definitions of wealth, economic rent, or competitive advantage, therefore, simply reflect the author's paradigm<sup>22</sup>.

Cartwright (1994, p. 7) stated that the "total net value generated" in a value system is the "total gross value less the sum of the costs incurred at all stages". However, wealth in a value system is realised only when a final-product or end-service is sold. Until such sale wealth (competitive advantage, value, profit, or rent) *accumulates* in the system. This accumulation may enhance the value of individual firms and, therefore, the value of the system in the short term. Continued accumulation of wealth in the form of stock-on-hand may be symptomatic of a system struggling to create value. For example, Fortex valued its unsold stock at \$62 million in 1993. Within six months this stock was deemed to be worth half that (Brett, 1994). Wealth supposedly accumulated in the Fortex system, yet value was not realised. One caveat to the longer-term accumulation of wealth in the value system is forestry. Forestry's relatively long production cycles ensure that over the time from planting the value system ought to increase in wealth without necessarily contributing value. Unlike either BMW or Daewoo firms within the land-based value system are paid for value on the basis of the subsequent buyer's expectation, more so with participants separated both temporally and spatially from the international consumer.

Wealth may be described as either economic rent, competitive advantage, profit or value. Wealth may be returned to suppliers - in the form of product prices above the prevailing market price - and stockholders - in the form of increased stock value and dividends. While wealth may accumulate within the value system as stock-on-hand or in the

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<sup>22</sup> For example, Buchanan (1980, p. 3) defines wealth in terms of economic rent. Economic profit is "the amount a firm earns over and above the payments for all other inputs, including the interest payments for the capital it uses and the opportunity cost of any capital provided by the owners of the firm" (Baumol & Blinder, 1985). Wealth, in accounting terms, is defined simply as profit (Robinson & Ker, 1993) while Walter (1990) describes wealth in more detail. The aim of the firm is "to maximise common stock value. The means to this objective is to invest in areas where anticipated returns equal or exceed the cost of the company funds that must be committed to generate these returns" (p. 138).

form of investment it is only when value is realised, the end consumer pays for a final-product or end-service, that wealth can be attributed to value system participants.

## 2.6 LINKAGES BETWEEN ORGANISATIONS IN THE Z-FORM MODEL

**B**OTH ECONOMIC and organisational researchers recognise the importance of inter-firm relationships (Aldrich, 1976; Coase, 1937; Hamel, Doz, & Prahalad, 1989; Murray & Siehl, 1989; Porter, 1985; Williamson, 1975, 1985). Koenig and van Wijk (1991) reviewed the prevalent theories of inter-firm relations. They identified two extant theoretical frameworks that provide useful “insights into the main reasons for firms to develop more than anonymous market relations” (p. 171) prior to introducing their own views. The theories are resource dependency and transaction cost to which Koenig and van Wijk (1991) added the role of trust.

Resource dependency theory was postulated by Aldrich (1976). Aldrich suggested that organisations actively seek to reduce environmental uncertainty. Critical dependencies are identified, and control over the relevant suppliers or buyers is sought by means of lobbying, contracting or acquiring. Koenig and van Wijk (1991) noted that the theory does not predict the “prevalence of any particular inter-organisational form” (p. 171) but implies a preference for formal control whenever possible. Transaction cost theory, introduced in Section 2.5, extends the theory of the firm to encompass inter-organizational transactions between the firm and suppliers and buyers. Firms can reduce transaction costs by pursuing vertical coordination through interorganisational relations (Johanson & Mattsson, 1987b). Vertical coordination is “the alignment of direction and control across segments of a production/marketing system” (King, 1992, p. 1217). Vertical integration, therefore, represents the extreme form of vertical coordination.

Koenig and van Wijk (1991) stated that collaboration results in informal agreements based on mutual trust and often involves a transfer or sharing of assets. Sporleder (1992) suggested that strategic alliances may be considered as an intermediary between the spot market and vertical integration. Mutual trust is proposed to develop

asset specificity reducing complexity and uncertainty. Sporleder notes that strategic alliances are becoming more common in agricultural commodity marketing channels in the Mid-West. Similar empirical evidence exists in New Zealand to suggest that various forms of strategic alliances are *emerging* in export-dependent land-based value systems.

Interorganisational relationships, known as strategic alliances or linkages, are now recognised as an alternative view of inter-firm relations (Hamel, Doz, & Prahalad, 1989; Johanson & Mattsson, 1987b; Koenig & van Wijk, 1991; Lei & Slocum, 1991; Ohmae, 1989b; Sporleder, 1992). The emerging theory of strategic alliances better recognises managerial choices, while choices may still be analysed in a transaction cost framework. An “interfirm alliance is any agreement for cooperation among dependent firms to serve a strategic purpose” (Sporleder, p. 1229). This perspective views interfirm relationships as opportunity for collaboration: enhancing productivity and profitability.

Inter-firm relationships and the nature of transactions between firms have been the subject of much study during the 1980s and 1990s. Interfirm relationships provide the conduit between domestic producer and international consumer depicted in the Z-form Model (Section 2.3.2). The literature on interfirm transactions is dominated by the discussion of strategic alliances (Bleeke & Ernst, 1991; Borys & Jemison, 1989; Bowersox, 1990; Clarke & Brennan, 1988; Devlin & Bleackley, 1988; Hung, 1992; Kobayashi, 1988; Larson, 1991; Lei, 1993; Lei & Slocum, 1991; Lorange & Roos, 1991; Porter & Fuller, 1986), and the establishment and management of joint ventures (Berg & Friedman, 1980; Goldenberg, 1988; Gomes-Casseres, 1988; Harrigan, 1985, 1988; Janger, 1980; Killing, 1983; Kogut, 1988; Lyons, 1991; Ring & Van de Ven, 1992; Turpin, 1993). Central to the discussion is the notion that firms on either side of the relationship or transaction participate towards some common goal. Strategic alliances, while credited as a strategy to create competitive advantage, may also dissipate competitive advantage asymmetrically between participating firms. For example, some xenophobic authors (e.g., Reich & Mankin, 1986) don’t consider strategic alliances between American firms and firms from foreign countries, particularly Japan (Main, 1990), beneficial to the US in the long term.

Lei and Slocum (1991) considered that strategic alliances are “transition mechanisms that propel the partners’ strategy forward in a turbulent environment” (p. 44). The authors identified three forms of global strategic alliances; licensing, joint ventures and consortia (keiretsu/chaebol) structures. Licensing agreements are the least sophisticated form of strategic alliance because partners “do not take an equity position in one another” (p. 45). Joint ventures involve creating a new entity “in which the originating partners take active roles in formulating strategy and making decisions” (p. 50). Western consortia, Japanese keiretsu and South Korean chaebols are “designed to maximise all the potential benefits of joint ventures while allowing for industry specialisation” (p. 58). The form of strategic alliance identified by both Koenig and van Wijk (1991) and Sporleder (1992), however, defies this classification.

Both equity and non-equity relationships (Lorange, Roos, & Bronn, 1992; Root, 1988 cf., Murray & Mahon, 1993) are likely to occur in the value system. Equity relationships (Hennart, 1988) may result from intertwined shareholdings in existing firms or the deliberate formation of joint ventures (Harrigan, 1985; Lorange & Roos, 1992). The establishment of equity relationships may be a strategy to reposition the firm in the value system. Some joint ventures resulting from equity relationships are anticipated to deteriorate into mergers or acquisitions (McManus & Hergert, 1988), while in others mergers or acquisitions are intended. In the event of a merger or acquisition the identity of each firm is subsumed and the project or organisation is internalised (Rugman, 1982). Where discrete organisations are maintained in spite of equity relationships adjoining firms partake in interfirm transactions.

Morris and Hergert (1987) describe a non-equity strategic alliance as a collaborative agreement while Jarillo (1988) refers to non-equity strategic alliances as social partnerships. Auster’s (1987) term international corporate linkage (ICL) is more descriptive of the sort of relationship expected to be considered in this study. ICL refers to the “diverse interorganizational arrangements created by firms based in different countries to obtain strategic advantages in their markets and environments” (p. 3). Joint ventures need only be included if they are created to enhance the value system. The subject of mergers and acquisitions is excluded because value creation is then internalised

as is the distribution of wealth. Therefore, interfirm transactions will include those within equity and non-equity strategic alliances (Morris & Hergert, 1987).

Axelsson and Easton (1992, p. *xiv*) argue that economic exchanges between buyer and seller are commonly more than a random collision, as is implicit in microeconomic models. Something more than simple transactions occur between firms. Stability suggest that the relationship is significantly more than the one-off, arms-length, marketplace exchange. The industrial network paradigm recognises the enduring relationships developed between buyers and sellers (Johanson & Mattsson, 1987b); the *space* between firms.

Industrial networks is in the Kuhnian tradition of an immature paradigm. There are alternative views with multiple interwoven branches. They have a near common beginning and common goals; not unlike the braided river metaphor used by Chambers (1992) to describe the development of the Farming Systems Research (FSR) paradigm. The problem of multiple perspectives is not unusual during the early stages of a paradigm, however, eventually one perspective is expected to prevail.

The benefits from cooperation rather than competition are now well documented in the literature (Contractor & Lorange, 1988; Dunning, 1995). Benefits from cooperation between firms at the same stage of a value system are considered to include access to partner's knowledge, markets, and intangible assets plus reduction in competition (Contractor & Lorange). Costs include the restraints imposed on the firm through cooperation, partners reap benefits, and price setting is no longer the sole domain of the firm. Cooperation between firms at adjoining stages will reduce transaction costs (Johanson & Mattsson, 1987b) and enhance adaptability (Axelsson & Easton, 1992).

The literature on collaborative linkages between organisations describes relationships between adjoining firms and what were previously competing firms. The strategic alliance literature is dominated by cooperation between firms (Contractor & Lorange, 1988) that may be considered as the same stage of a value system. The industrial networks literature, however, focuses on those firms aligned to enhance rather

than replicate alternate product flows. Despite its shortcomings the industrial networks approach is, therefore, expected to provide a significant contribution to this study.

## 2.7 THE INTERNATIONAL LINKAGE IN THE Z-FORM MODEL

**I**NTERNATIONAL LINKAGES are critical to New Zealand's export-dependent land-based value systems. The process of linking the home-base and international location may be described by the models of international trade. The shortcoming of these models and Porter's (1990) diamond theory were identified in Section 1.2 - countries don't trade, firms do. The value system perspective of the international linkage recognises firms on either side of the transaction linked through collaborative or competitive relationships, namely some form of exchange (Toyne, 1989). Toyne concludes that "exchange, and its attendant sociopolitically influenced process, is centrally, intimately, and inextricably a part of international business" (p. 15). However, the transaction may also be internalised (Buckley, 1989, 1994; Dunning, 1981, 1995) through some form of multinational enterprise (MNE). MNE's may take a number of forms (Bartlett & Ghoshal, 1989) each of which display identifiable attributes.

Buckley (1994) contrasted the theoretical bases of internalisation theory and international strategic management. Internalisation theory is based on transaction cost economics, discussed in Section 2.4, and models of the growth of the firm (Kaldor, & Penrose cited in Buckley). Buckley judges this approach as "successful in explaining and predicting the growth and pattern of multinational firms, although somewhat at the expense of dealing with management decision making" (p. 96). In reviewing the theory of the MNE Itaki (1989), however, is somewhat less enthusiastic about its explanatory and predictive ability.

Bartlett and Ghoshal's (1989) contribution to international management is regarded by Buckley (1994) as an "exemplar of international strategic management" (p. 97). Bartlett and Ghoshal provide a detailed discussion of the models of international management. They then synthesise an alternate model, the transnational solution, that captures the beneficial attributes of the three extant models. The authors identify three

constraints to achieving the transnational. The constraints are first, administrative heritage second, cultural impact on management and third, norms, values and leadership styles. Therefore, the transnational solution may be better regarded as recommended management practice rather than an alternate structure.

The international linkage in New Zealand's export-dependent value systems may be internalised, may be an industrial network, or may be simple exporting, i.e, produce into competitive foreign markets. Buckley (1994) identifies similarities between internalisation and international management as the "centrality of the 'make or buy' decision" (p. 97), the interaction of location and organisational variables, and internal control mechanisms. However, as with economics (see Section 2.3) management is largely ignored in internalisation theory. Buckley admits that efforts to incorporate decision making variables within the theory "sit rather awkwardly" (p. 96).

Contributions to the international linkage are likely to be provided by both internalisation theory and international management. Internalisation theory will underplay the role of management. International management will recognise decision making and the interactions a "company faces across its various markets" (Buckley, 1994, p. 98). Therefore, contributions from internalisation theory are expected to be somewhat limited.

## 2.8 PERSPECTIVES OF LAND-BASED INDUSTRY IN THE HOME-BASE LOCATION

**T**HREE ACADEMIC PERSPECTIVES of land-based industries are briefly introduced in this section; farm management, agricultural economics, and agribusiness. Contributions from each perspective to the configuration and management of New Zealand's export-dependent land-based value systems are briefly reviewed. First, an introduction to societal marketing boards and definition of industry is provided as both issues transcend the three perspectives. Contributions and approaches to the amelioration of risk are also identified. Recent literature on trends towards vertical integration, *the industrialisation of agriculture*, is briefly reviewed. Much of this

contribution is from the United States of America, however, such is the scale of their local economy that relatively few participants are involved in exporting. Notable value added exceptions include tobacco and prime beef. Other US land-based products in a state of consistent surplus such as wheat are also exported, surpluses often exacerbated by food and farm programmes (Robinson, 1989).

One long held assumption amongst producers is that they must have some form of control, but not necessarily ownership of home-base activities in the value system. Control without ownership is commonly sought through societal marketing boards (Izraeli & Zif, 1977; McKinlay, 1991). The core objectives of societal marketing boards are the ability to impose rigorous market discipline - through one seller - and the substantial enhancement of individual producer's bargaining power. The collective bargaining power of all suppliers to the marketing board potentially improves either product prices or terms and conditions of trade. The conduct and operation of societal marketing boards is typically provided by the imposition of government legislation (Hussey, 1992, 1993; McKinlay). However, in doing so individual rights are subjugated by those of the majority<sup>23</sup>.

If the value system is not vertically coordinated there exists little opportunity for the upstream participants, both producers and processors, to benefit from value added strategy. In these circumstances food and fibre industries will source raw materials from the cheapest supplier worldwide. Raw or partially processed materials will be purchased at international clearing prices, up-stream participants will receive a variable residual income.

Contributors to the discussion of management have been plagued by the definition of an industry, namely, which organisations, goods, and services are to be included in the research of a particular industry. Caves (1967) defined an industry as "the sellers of a particular product" (p. 6). However, he acknowledged that "drawing the boundaries too

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<sup>23</sup> Detractors of societal marketing boards seldom recognise that democracy prevails - individual rights are being subjugated by the decisions of the majority. The aim of the study is not to review the performance of societal marketing boards. Suffice to recognise that they exist and have made a vast contribution, in various means, to both New Zealand and international agriculture over the last 90 odd years. The role of marketing boards in the case industries is discussed in full in Chapter Five. At this stage of the research the development of rigorous market discipline and bargaining power are expected to improve the



narrowly places in separate industries firms which are actually quite sensitive to one another's actions" (p. 7). Porter (1980) defined an industry as "the group of firms producing products that are close substitutes for each other" (p. 5). Grant (1991b) stated that "no industry has clear boundaries in terms of products or geographical areas" (p. 60), concurring with Porter that substitutability, "both on the demand and the supply side" is an industry's major criteria. Therefore, an industry includes all organisations that provide substitutable goods and services to either industrial or consumer markets.

Specification of substitutability is problematic: what constitutes substitutability in some industries remains at the buyer's, rather than the researcher's or management's discretion. Within the car tyre industry, an example mentioned by Porter (1980), mainstream firms include Avon, BF Goodrich, Bridgestone, Continental, Dunlop, Falken, Firestone, General Tyre, Goodyear, IRC, Kumho, Michelin, Pirelli, Reidrubber, Two-ply Manufactures, Uniroyal, and Yokohama. By comparison, the specification of substitutability amongst land-based products is, in some instances, extraordinarily difficult. For instance consider a lamb loin. Substitute products may include other lamb cuts, other red-meat cuts (chilled, fresh, frozen), white-meats (alligator, chicken, fish, pork), game-meats (buffalo, grouse, pheasant, venison), non-meat foods (pasta), or a restaurant meal. Porter acknowledges that drawing industry boundaries is difficult. He stated that "there is a great deal of controversy over the appropriate definition... how close substitutability needs to be in terms of product, process or geographic market boundaries" (p. 5) is subject to debate and the judgement of managers.

The production of a New Zealand chilled lamb loin for the international consumer requires nearly all the stages of the value system (A to H, but may exclude E). Organisations included within the definition of substitutability will differ through A to H: the subject industry changes as product value is enhanced. At A there is substitution between all lamb finishers in New Zealand - for the time being. The *industry* comprises New Zealand's lamb finishers. At B there is substitution between lamb processors and packagers amongst fresh, chilled, and frozen suppliers. The *industry* then comprises all meat processes and packagers with a meat export license. At F and G there appears to be substitution across meats, maybe non-meats, and the restaurant trade, at which stage the lamb industry appears to have lost its identity. The

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performance of export-dependent land-based value systems. Therefore, societal marketing boards are to be considered as one of a range of mechanisms that may provide specific sources of competitive advantage.

*industry* may now include all retail food outlets which, unfortunately, is not a particularly useful definition however accurate. The argument remains that land-based goods have a high degree of substitutability, and the specification of industry boundaries is fraught with difficulty.

### **2.8.1 Farm management**

The history of farm management has been reviewed extensively by several authors, for example, Campbell (1957) and Malcolm (1990). A more succinct review is presented by Parker, Gray, Lockhart, and Townsley (1994). None of these authors have claimed that one particular paradigm has prevailed for any length of time. However, at different times in the past paradigms have emerged. Johnson, Halter, Jensen, and Thomas's (1961) study of Midwestern farmers' decision making<sup>24</sup> and Chambers, Pacey, and Thrupp's (1989) farmer first, for example, are two paradigms worthy of endorsement by the greater farm management community. Because there is no prevalent paradigm (Wright, 1985) much activity passes under the guise of farm management and the scope of farm management research is unclear. The discipline appears to have retreated to a pre-paradigmatic stage characterised by the random collection of facts.

Text books on farm management (e.g., Barnard & Nix, 1979; Black, 1947; Boehlje & Eidman, 1984; Castle, Becker, & Nelson, 1987; Kay, 1981; Osburn & Schneeberger, 1983) that are widely adopted by researchers and academics in the discipline offer little, if any, farm management theory. Instead farm management texts provide numerous planning aids for practitioners and students rather than general management principles (e.g., Harling & Quail, 1990). Even a cursory view of such work would suggest that the theoretical contribution is constrained to normative decision making (Castle et al.); a process questioned in the business management literature by Mintzberg (1973).

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<sup>24</sup> Farmer's decision making was neglected by the farm management academic community from the publication of Johnson et al's. (1961) plenary work until Todd, Gray, Lockhart, and Parker's (1993) real-time study of the summer-autumn management of Manawatu seasonal-supply dairy farmers.

Many current research studies reported in the farm management literature are contracted examinations requiring little knowledge of theory. The distinction made by Hunt (1976) between marketing research and market research can be extended to farm management. "Marketing research (or alternatively, scholarly research in marketing) always seeks to expand the total knowledge base of marketing. In general, market research attempts to solve a particular company's marketing problem" (p. 1). By extending this differentiation between paradigmatic research and the research of practice to farm management, most research is observed to solve a particular farmer's or group of farmers' problems (e.g., Lockhart 1995a, 1995b). McRae, Anderson, & Brazendale (1993), Jiggins (1993), and Mueller (1993) have reported alternatives to normal science better equipped to address practitioners' problems. However, rarely is research conducted in farm management with the intention of contributing to the *knowledge base* of farm management.

Two issues challenging the boundaries of the discipline are first, the artificial delineation between the management on-farm and off-farm resources (often involving processing) and second, the treatment of risk. Various means of vertical coordination and vertical integration exist. Any form of vertical coordination on the part of farmers, or backwards coordination by processors must be recognised as an attempt to create a continuum from the producer through the value system. Unfortunately, the discipline is rarely concerned with issues beyond the farm gate - those supposedly being the domain of agribusiness. Second, embedded in farm management but seldom treated overtly is the examination and treatment of risk (sources of risk in land-based value systems were identified in Section 2.2). Contributors to farm management offer techniques to manage sources of production and price risk so practitioners may be better equipped to achieve their goals. However, techniques such as feed budgeting<sup>25</sup> (Lockhart, Ridler, Brookes, & Hawkins, 1987), cash forecast, and cashflow budgeting (Lockhart, 1990) are relatively naive models in that assumptions will be violated within the first planning period - due to production and price variability. Used in conjunction with a dynamic interpretation of management; the cyclical adoption of planning, implementation and control (Parker et

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<sup>25</sup> Feed budgeting is used to describe the relationship between seasonal feed demand and feed supply, such as that depicted in Figure 2.1.

al., 1994) the techniques can become powerful tools to ameliorate production risk and overcome many effects of price risk.

The farm management discipline provides the basis from which identification of attributes unique to land-based industries were discussed in Section 2.2. Thereafter, select contributions are expected to contribute to concepts and theories of management.

## **2.8.2 Agricultural economics**

Agricultural economics was developed as an “applied discipline of the economics discipline” (Goldberg, 1980, p. 5). The paradigm is characterised by contributions from Goodwin (1977), Rae (1977, 1994), Robinson (1989), Roy, Corty, and Sullivan (1981), and Tweeten (1979). Goodwin defines agricultural economics as “the social science concerned with the allocation of scarce resources among those uses associated with producing, processing, and consuming the products of farms and ranches” (p. 4). The major contribution of agricultural economics to agriculture is the production function view of the firm. Simple input/output relationships concerning one crop or livestock activity are extended using linear programming (Levin, Rubin, Stinson, & Gardner, 1989; Paterson, 1993; Rae, 1977) to develop an optimal farm enterprise mix.

Agricultural economics has traditionally provided quantitative skills such as econometrics (Johnson, A. C., Johnson, M. B., & Buse, 1987; Judge, Hill, Griffiths, Lütkepohl, & Lee, 1988) and investment analysis (Rae, 1977) to agricultural researchers. The paradigm explicitly upholds the view of rational economic man (REM) (Goodwin, 1977), therefore, techniques seek positions from which to maximise profit (this view of REM is discussed in Section 3.2). The quantitative skills are commonly applied to production to either address issues of risk (Johnson, R. W. M., 1990) or to optimise production mix decisions. Regrettably the application of such techniques invariably produces models (see Barioni, Dake, & Parker, 1996; Lambie & Bicknell, 1996) few of which appear to be adopted by practitioners.

The shortcomings of transaction cost economics, identified in Section 2.3, are equally applicable to agricultural economics. The paradigm upholds views of the

Chicago school of economic thought (Harrigan & McGregor, 1991), particularly with respect to markets - “complete unfettered market system” (p. 142) - that performance can only be enhanced by competition. This view is not reconcilable with the Post-Keynesian school (Dow, 1991) of agricultural policy (Robinson, 1989; Tweeten, 1979).

The relationship between producers and first stage processors has been explained in part by agricultural economists using transaction costs economics (contributors were identified in Section 2.3). On the basis of this review, the value of contributions to this study from agricultural economics is expected to be limited.

### **2.8.3 Agribusiness**

Davis and Goldberg’s (1957) concept of agribusiness was introduced in Section 2.3. Since the 1950s agribusiness has become viewed as the agricultural discipline concerned with land-based activities beyond the farm gate (Biere, 1988). However, Sonka and Hudson (1989) suggested that this concept of agribusiness was dated and sought to redefine agribusiness in terms similar to those used by the originators. Sonka and Hudson include both agricultural production and consumers in their definition and emphasise the “word ‘food’ as part of name of the sector” (p. 307): the food and agribusiness sector (p. 306).

Agribusiness is viewed as an extension of farm management (Sonka & Hudson, 1989). The authors suggest that the sector has sufficiently different characteristics from other industries that it requires “special managerial; skills and knowledge to facilitate efficient and effective decisions” (p. 308). Sonka and Hudson regard both agricultural economics and management as critically important to agribusiness. However, they concede that the tensions between economic theory and management in agribusiness do “not appear to be greatly different than similar concerns expressed in numerous areas where economics is applied” (p. 313). Strategic management is considered necessary in agribusiness if the firm is to be viewed as anything other than a black box (Cotterill, 1987; Rogers & Caswell, 1988; Westgren, 1987; Westgren & Cook, 1986). Rogers and Caswell argue that research in the food distribution system requires “more tools than are commonly found in the economist’s neoclassical toolkit” (p. 3). These authors support the use of various strategic management paradigms as legitimate tools for agribusiness research.

A significant contribution to this study from agribusiness is research and commentary on the *industrialisation* of agriculture. The process of vertical coordination in United States agriculture appears to have been first reported by Godwin and Jones (1971). The process, the industrialisation of agriculture, sees closer alignment between producers and consumers in response to final market demand. The shift away from uncoordinated commodity production (Hudson, 1990) was attributed to rising national affluence; a larger share of women in the work force; and higher priorities for leisure time (Godwin & Jones).

Barkema, Drabenstott, and Welch (1991) also presented a compelling discussion of the factors leading to “tighter vertical coordination in the United States agricultural and food markets” (p. 34). They suggested that increasingly sophisticated consumer demand is providing a stimulus for vertical coordination. Sporleder (1992) commented that there is increasing consensus that “vertical linkages in agricultural commodity marketing channels have been evolving to tighter coordination over several decades” (p. 1226). Similar forces are reported in the European food industry (Munch, 1992).

The shift away from uncoordinated commodity production is not a phenomena confined to United States agriculture. For the last decade, amidst deregulation and restructuring, many producers and processors in New Zealand have sought forms of vertical coordination. For example, strategic alliances have been developed between lamb finishers, meat processors and marketers in Hawkes Bay (“Farming for the future”, 1993). Vertical coordination has also been fostered “by the increasing capability of the distribution system to build more services into products” (Godwin & Jones, 1971, p. 806). The authors concluded that producers, if they wish to participate, will firstly “forgo individual decision prerogatives to attain the level of aggregation needed for an appropriate interface with firms in the food and fibre distribution system” (p. 813). And secondly, develop “organisational and operational schemes of aggregation that are efficient in function and that will allow farmers to become participants in the emerging system with appropriate equity in the proceeds from the final marketplace”. Therefore, if producers are to participate in vertical coordination they are expected to sacrifice some autonomy and may have to aggregate. Farmers’ goals, however, commonly include

autonomy and independence (Fairweather & Keating, 1990; Gasson, 1973). Fairweather and Keating (1990) provide a detailed account of the management styles Canterbury farmers. Interestingly, only 12% of the farmers surveyed, ranked marketing and off-farm investments with importance. On this evidence, some farmers may be expected to display certain reluctance to move towards vertical coordination.

Gasson (1973, p. 521) stated that economic theory “does not provide a wholly convincing account of farmers’ actions”. Despite Gasson’s concerns some New Zealand farmers pursue vertical integration (“Deer farmers plan to buy”, 1993) while others, for example, dairy farmers and pipfruit growers have in place cooperative processing and marketing facilities (NZDB, 1991; Pope, 1993) where they are attempting to control the value system by integrating stages in the home-base and international locations.

The role of the farmer, or other up-stream participants, in vertically coordinated channels appears to be unresolved. Barry, Sonka, and Lajili (1992) identify farmers as the agent in agency relationships resulting in forms of vertical coordination. They suggest that self-interest seeking, limited cognitive powers, information asymmetries, and uncertainty restrict the use of comprehensive contracts. Maughan and Wright (1993) add that small numbers bargaining problems and the difficulty of defining quality standards (in meat) adds further difficulty to establishing contracts. Thus, contracts as one means of coordination are generally incomplete (Hart, 1988).

Barry, Sonka, and Lajili (1992) considered farmers as agents only, rather than principals. However, the concept of farmers as agents reflects the postulate of capital dependency, that farmers are dependent on borrowing capital, the lender being assumed to be principal. In New Zealand’s land-based industries farmers are often the principal, employing agents for processing and marketing their products. Douglas and Burgess (1992), for example, criticise the performance of the agents, the NZKMB, in their review of the New Zealand kiwifruit industry. The implied relationship, of up-stream participants assuming agent status suggests that farmers only provide an input to the vertically coordinated linkages rather than manage these linkages to their own advantage. Under circumstances of being agents farmers are more likely to continue receiving a variable residual income. New Zealand farmers’ income is variable because production

levels are, in part, and prices are largely outside of their control. Farmers receive a residual income after downstream participants have met their own costs.

Amelioration of price risk has become a significant subject agribusiness research. Price risk can be reduced by improved forecasting (Skaggs & Snyder, 1992), the use of futures and forward contracting (Brorsen, Coombs, & Anderson, 1995; Ennew, Miorgan, & Rayner, 1992, Waddell, 1993) and the management of exchange rates (Schroder, Mavondo, & Wallace, 1993). It is anticipated that participants in New Zealand's export-dependent land-based value systems adopt various techniques to minimise the effects of production and price risk, of which one is the societal marketing board (Schroder et. al., 1993) - considered as a means of sharing risk across all producer-suppliers.

The agribusiness paradigm is, therefore, a legitimate source of literature concerning land-based value systems. Contributions from the discipline to this study are expected to be founded in the strategic management paradigm.

## 2.9 SUMMARY

**T**WO ORGANISATIONAL PARADIGMS were identified as contributors to the theory building process; the functionalist paradigm and the radical-structuralist paradigm characterised by an objective view and a concern for change. The functionalist paradigm provides a means to gain a detailed understanding of the value systems studied. The radical-structuralist paradigm provides a mechanism by which change for the benefit of participants may be considered.

The unique attributes of New Zealand's agricultural systems were described and their implications discussed. The attributes were grouped into those relating to land-based production, output, and industry structure. The opportunities and constraints provided by each of these attributes needs to be recognised and upheld throughout the balance of the theory building process. The iterative development of the Z-form Model was then discussed. The model provides the basis for the identification of paradigms contributing to the study.



Economic theories of the firm were discussed in Section 2.4. The governance structure theory introduced the relationship between transaction costs and management costs. Transaction costs could be reduced by the firm pursuing some degree of vertical integration, supposedly at the expense of increased management costs. The boundary of the firm was postulated to have been reached when the sum of transaction costs and management costs were minimised. Therefore, from an economic perspective it would be purely accidental if a firm's boundary coincided with the entire industry. Transaction cost economics was reviewed and its likely contribution identified as explaining, or predicting, the relationship between adjoining stages in the value system.

The role of strategic management in the value system was then introduced. Strategic management introduces decision makers to the value system responsible for the creation of value and the distribution of wealth. Literature on deliberate, and emergent strategy, conventional and new age strategic management was identified as contributing to the study. An objective of reconciling alternative views of strategy was noted.

Both economics and business schools identify that firms achieving returns above the cost of capital, however transitory that may be, have attained a position of competitive advantage over their rivals. Competitive advantage, the receipt of market rents, was identified as the ideal position for a firm to achieve.

Inter-firm transactions were introduced and the rationale for cleaving them from transactions within a firm was discussed. Intermediate forms of vertical coordination, between markets and hierarchies were reported. The industrial networks approach was identified as the long-term stable but not static group of firms that may be linked either vertically or horizontally within a value system. Of real interest is the vertical alignment of firms within the value system. The equity strategic alliance may be seen as a means of creating intermediate firms in a value system, the intermediate firm being used to link the original participants. More recent work on organisational structure and alternative linkages focuses on the firm's ability to adapt and respond. In the past organisational structures were reported as having less dynamic and hence less adaptive forms. There is now acknowledgment that structures and linkages such as those identified in the industrial networks literature considers a more dynamic, and hence realistic, framework.

The international linkage is central to the Z-form Model. The recognition that this linkage is a *necessity* distinguishes this study from others such as Crocombe et al. (1991). Alternate views of international business and international management were introduced. Concepts common to both views were identified.

The farm management, agricultural economics and agribusiness paradigms were briefly reviewed. All three disciplines were observed to offer contributions to the management of risk. Farm management was observed to suffer from a lack of consensus as to its theoretical basis, manifest by the random collection of facts. Agricultural economics was identified as applied economics, largely of the production function view of the firm. Only agribusiness, and within this only the management perspective of agribusiness, was identified as a useful paradigm to include in the study. The industrialisation of agriculture is anticipated to occur in New Zealand. To date, most research of New Zealand's land-based industries has used selected aspects of supply-side economics. As the vertically integrated land-based firm expands it will encounter the problems and opportunities confronted by the multinational enterprise, but it will not necessarily take that particular form.

## CHAPTER THREE: POTENTIALLY APPLICABLE CONCEPTS AND THEORIES

### STRATEGIC MANAGEMENT - CREATING VALUE AND DISTRIBUTING WEALTH

*2002: Bud Eisenhaff takes decisive action. He decides to merge his tiny but vigorous company with any firm that contains the word "General" in its corporate name, believing at the time that this strategy is what is meant by the concept of vertical integration. Facing widespread skepticism but with strong support from security analysts and Wall Street, Eisenhaff goes on to forcibly acquire General Electric, General Dynamics, General Motors, General Rubber, General Foods, and General Colin Powell, merging all six entities into General Power, the core of what would one day be the greatest and most powerful human organization the world has ever seen, except perhaps for ancient Rome.*

Stanley Bing. (1995). While you were out. *Fortune*, 132 (8), 34.

### 3.1 INTRODUCTION

**C**HAPTER THREE provides an orderly review of the literature from the partitions identified in Chapter Two as potentially offering applicable concepts and theories. The objective of the chapter is to *explore* the literature for useful contributions for subsequent theory building; less than useful contributions will be discarded<sup>26</sup>. In that respect the breadth of the literature review necessarily exceeds what may typically expected through the course of theory testing research. The focus of the chapter is to develop and extend the single firm perspective of strategic management to the value system: land-based producer to international consumer. In continuance of Chapter Two two themes are further developed; linkages between participants in the value system - represented as the lines between stages in

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<sup>26</sup> In that respect the literature review may be considered the first 'data set' from which useful contributions to the theory are drawn. The relevant partitions of literature identified in Chapter Two as potentially being useful are now explored in detail. Useful contributions are identified and eventually included

the Z-form Model and second, the strategic management of those stages. The literature is being searched for potentially applicable concepts and theories.

The first theme discussed in the chapter is linkages between organisations in the value system. First, a brief introduction to the concept of an organisation's pluralistic goals is presented in Section 3.2. Pluralism appears to be influenced by stakeholders' collective views in addition to managerial attention beyond the boundary of the firm. Common worldwide organisational structures are described and particular attention is paid to the effect these structures have on the international link in the value system. Organisational and environmental approaches to competitive and collaborative linkages between organisations are then reviewed. Competitive linkages (Section 3.4) are identified as resulting in the distribution of bargaining power between adjoining firms while collaborative linkages (Section 3.5) result from the development of business relationships between firms. Important attributes of the two forms of linkages are contrasted. The perspective of hypercompetition is introduced and its influence on business strategies identified.

The chapter then presents a discussion of strategic management, the second theme. Contributions from strategy and management are introduced and the conventional (predominantly North American) view of strategic management is briefly reviewed. New age strategy: strategy as stretch and leverage, and the effect of forces inhibiting strategic change are then discussed in Section 3.6.2. An understanding of the essential components of strategic management is necessary to identify how the individual firm is expected to respond to the external environment, and what factors influence the boundaries of the firm. Knowledge of this response may then be used to identify why specific constraints and opportunities exist in the value system. Generic strategies are identified and their modifications reviewed. The considerable literature available for investigation on each of these subjects is limited to that partitioned in Chapter Two.

The first iteration of study is to focus on the international value system. The international value system comprises the long term stable (Gadde & Håkansson, 1992) but not static group of firms that create value and distribute wealth between upstream

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in the Z-form Model and subsequent theory, while less than useful contributions are discarded in a manner akin to non-significant results.

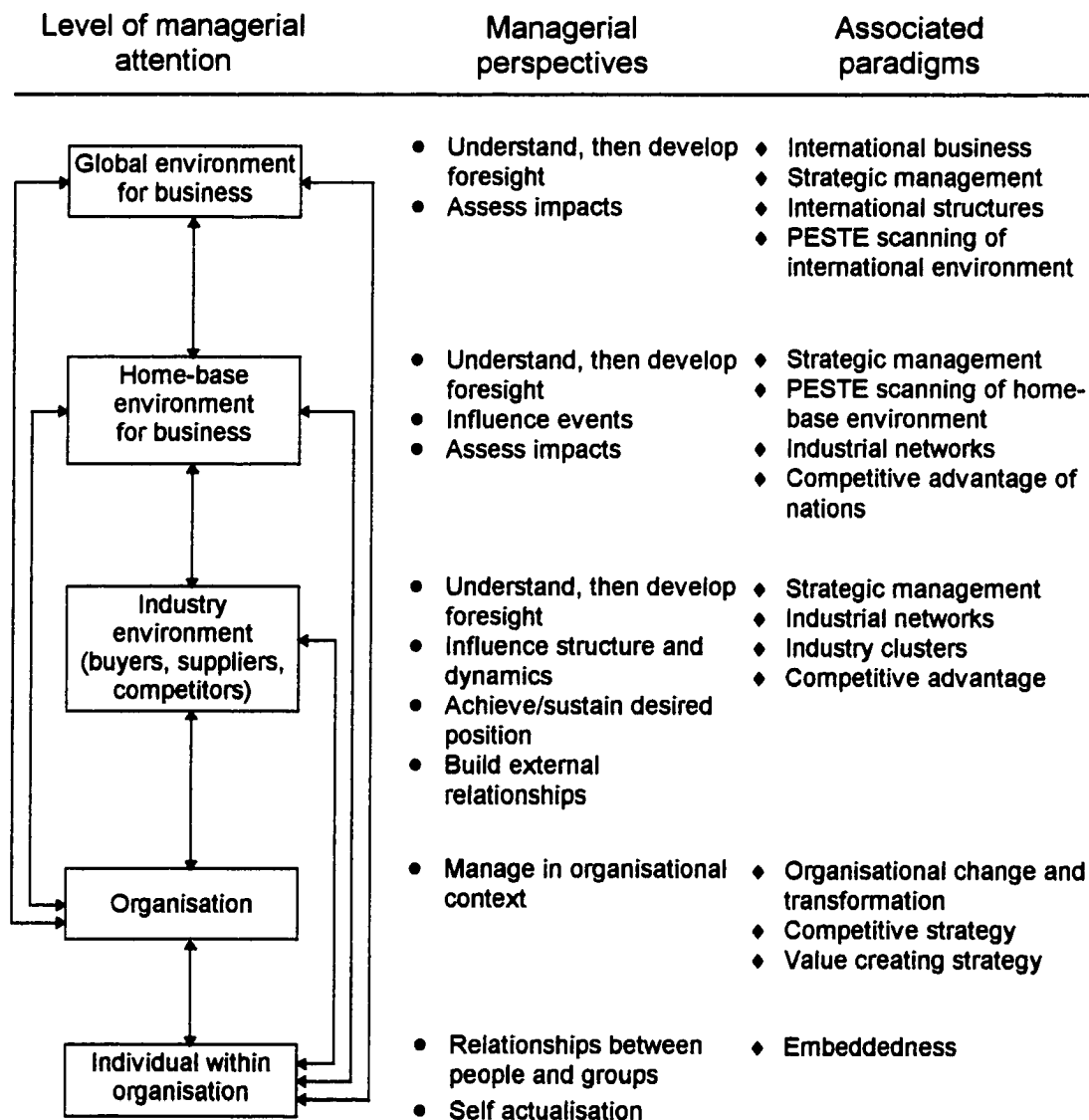
producer and the international consumer. The value system may also be regarded in other multiorganisational forms such as value chains [*sic*], value stars or constellations, relationship marketing, and industrial networks. Of primary interest is how value is generated and wealth distributed by participants in these value systems. Value is created from transformations within firms and transactions between firms: the end product of configuration and management. Potential concepts and theories are drawn from a broad range of literature (as identified and partitioned in the previous chapter). The likely contributions to theory building from concepts and theories are identified, less applicable concepts and theories are discarded.

To summarise, the subject of study is New Zealand's land-based export-dependent value systems from, and including, producer to the international consumer. Real interest resides with value creation and wealth distribution as a result of product flow. However, before restricting the context of study to what may be a special form of value system it is necessary to examine literature for valuable contributions on the broader issues of configuration and management of value systems in general.

### 3.2 MANAGERIAL ATTENTION AND OBJECTIVES

**A** MANAGER'S PERSPECTIVE of the value system is attributable to his or her level of managerial attention (Cartwright & Lindsay, 1995). Cartwright and Lindsay identified likely managerial perspectives associated with various levels of managerial attention. Their schema, and the business paradigms associated with each level, is presented in Figure 3.1. Some managers are expected to exhibit broader attention of the value system than others. Those managers with broader attention are, in turn, expected to have a different perspective to strategy and linkages with other participants. For example, a manager concerned solely with organisational considerations appears less likely to be interested and, therefore, less inclined to take a role in influencing activities and events beyond the firm. On the other hand, a manager with a broader perspective may attempt to influence activities and events well beyond what may be regarded as the physical boundary of the firm.

Figure 3.1. Levels of managerial attention and perspectives, and associated business paradigms.



*Note.* From *Levels of Managerial Attention and Managerial Perspectives*, by R. W. Cartwright and V. J. Lindsay, 1995, Unpublished course notes for MBA Students Department of International Business, The University of Auckland.

A manager may also assume that critical activities in the value system, beyond his or her organisation, are outside of individual *reach*. One response expected to extend managerial reach is the establishment of federations (Litwak & Hylton, 1962; Pfeffer & Salancik, 1978; Provan, 1983; Warren, 1967). Federations are a horizontally linked organisational form comprising a group of organisations with common goals. Litwak and

Hylton, in their study of welfare fund raising, postulated that federation development is related to the degree of standardisation, observability, interdependency, and the number of organisations. Federations are, therefore, formed “on a perceived need to coordinate, manage, and control the interdependent activities of two or more organizations” (Provan, p. 81). Under such circumstances the federation may provide a conduit for extending managerial attention, as undertaken by societal marketing boards on behalf of producers.

Whittington (1993) considers that business strategy has either one of two expected outcomes. The expected outcome of which the single profit-maximising goal - or perhaps something approaching it - is one view and pluralistic goals the other. Pluralistic goals “allow other possibilities to intrude” (p. 2) on profit. Profit-maximising for rational economic man is, however, an absolute rather than relative position: the organisation is either profit-maximising or it is not. Any outcome other than profit-maximising must, therefore, be pluralistic. Whittington’s interpretation of pluralism is fortunately less constrained in that he appears to regard profit-maximisation as a relative rather than absolute position. Pluralism may result from broader, rather than narrow perspectives of the business environment. Managerial attention beyond the boundaries of the firm may well mitigate the pursuit of absolute profit in the short-term in favour of holistic long-term goals.

Rationality is based upon an “assumption of perfect information” (Ekelund & Hébert, 1990, p. 552). Rational economic man (REM) (Foster, 1991) requires “complete specification of the problem” (Loasby, 1991, p. 52). Loasby concludes that optimal choices... can have no consequences which were not foreseen at the time of the decision” (pp. 52-53). Rational thought, therefore, represents the theoretical perspective of a decision maker with perfect information and complete specification of outcomes. In business such a stance is untenable, yet managers are no less capable of *rational* thought.

Pluralistic outcomes, of which profit may assume greater or lesser importance at different times, are the result of organisational members bargaining with each other to arrive at a set of goals satisfactory to all (Cyert & March, 1963). Whereas Drucker (1973) simply suggested that to manage a business is to balance needs and goals. Strategic management (see Section 3.6.2) tends to be entrenched in routines and

procedures imposed by political exigency and restricted by cognition. Political exigency (Johnson, G., 1992) and restrictive cognitive limits will mitigate profit-maximising behaviour. Organisations tend to adapt to the environment slowly (Hardaker & Anderson, 1981) as “awkward messages from a dynamic environment gradually force themselves on manager’s attention” (Whittington, 1993, p. 24) rather than adapting through evolutionary change.

Whittington (1993) largely confines the specification of organisational goals to influences within the organisation. The influence of other organisations is implicit only in environmental effects. Organisations have constraints imposed by stakeholder groups such as employees, buyers, suppliers, shareholders, and society at large. Stakeholder groups are expected to, and in the case of management are charged with the responsibility of influencing the organisation’s ability to pursue profit-maximisation. The economics literature describes profit<sup>27</sup> mitigation in terms of principal-agent theory (Jensen & Meckling, 1976). Principal-agent theory, however, fails to recognise that stakeholder groups do not have common values - pluralism is reduced to the agency problem. Pluralistic goals will then not only encompass factors affecting value creation but also factors effecting wealth distribution to value system stakeholders. It is, therefore, unlikely that any organisation has an unconstrained goal of profit maximisation. Strategic management (e.g., Asch & Bowman, 1989) must ensure adequate and sustainable value creation and wealth distribution from activities both completed within the organisation and conducted through various linkages between organisations. This process will be contingent on the implicit and explicit values of stakeholder groups.

Managers with a broader perspective are expected to attempt to influence the value system beyond their organisation’s boundaries. Business goals are assumed to be many and varied which, to be sure, must include profit. Goals may include the process of value

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<sup>27</sup> The measurement of profit reflects pluralism, in that various techniques used to measure profit do so largely for the benefit of specific stakeholders. For example, profit may be measured by techniques such as economic value added (EVA) (Smith, 1994; Tully, 1993) or market value added (MVA) (Walbert, 1993). EVA is a tool to measure a firm’s real profit. Analysis includes the total cost of capital (both debt and equity capital), equity capital is not assumed free. EVA is a measure of wealth creation from the shareholder’s perspective. MVA is a measure of the increase in a firm’s capital. MVA is “forward looking, reflecting the



creation and wealth distribution beyond the immediate boundaries of the firm. Managerial perspective of the value system, rather than the firm in isolation, ought to result in more numerous business goals. Pluralistic goals may be anticipated to expand alongside attention span as value system-wide managerial perspectives develop. Interorganisational forms such as alliances are one manifestation of attention beyond a select stage in the value system.

### 3.3 INTERNATIONAL LINKAGES

**T**HE PHENOMENA OF EXPORT-DEPENDENCY was identified in Chapter One. Evolutionary processes of internationalisation as say described by Bilkey (1978); the Uppsala Internationalisation Model (Anderson, O., 1993; Johanson & Vahlne, 1977, 1990; Johanson & Wiedersheim-Paul, 1975); internationalisation in industrial networks (Johanson & Mattsson, 1988, see Section 3.5.4.); or the internationalisation of non-dominant firms (Mascarenhas, 1986) are, in this context, not necessarily relevant. The discussion of international business and strategy must be conducted from the view of firms that *have* to export, are exporting and may have near a century of exporting experience. To these firms the strategy of international business (Robock & Simmonds, 1989; Selvarajah & Cutbush-Sabine, 1991) may, therefore, not be one of conventional internationalisation.

This discussion of international linkages<sup>28</sup> provides an elaboration of linkages in the value system between the home-base and international location. Organisations may serve to bridge the domestic/international link, explicit in the Z-form Model (C-D), as a multinational enterprise (MNE) (Dunning, 1981, 1988). The MNE's activities may then extend upstream beyond exporting (C) or downstream beyond importing (D). The domestic/international link may also be an international strategic alliance (Auster, 1987; Ohmae, 1989b). The theory of

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market's assessment of a company's prospects (Walbert, p. 56). An assumption of MVA is that the market is capable of assigning value to a firm's future income streams, reflected in market capital.

<sup>28</sup> The expression international business is maintained whenever there is little likelihood of confusion with terms of specific meaning such as global, multinational, multilocal or multidomestic. Where confusion is likely to arise the term worldwide business, a neutral expression, is used to designate a firm's resource allocation and activities on more than one continent (Yip, 1992). For the benefit of this discussion worldwide business is assumed to operate on more than one continent. The definition of continent is, however, accepted to be sufficiently loose to regard Australia, New Zealand, and Great Britain as continents.

the multinational enterprise is briefly reviewed. Bartlett and Ghoshal's (1989) three worldwide organisational forms are described and the attributes of each discussed. The authors' prescriptive transnational solution is introduced. Bartlett and Ghoshal's view of the transnational solution as a MNE at the exclusion of strategic alliances is then challenged.

Some researchers have attempted to relate the tendency of a firm to export to firm size - the contingency approach applied to internationalisation (e.g., Bilkey & Tesar, 1977). Other authors have attempted to relate the development of exporting to the "psychologically closest country" (Bilkey, 1978, p. 36). The vast majority of exports are now accounted for by trade within MNEs. Ball and McCulloch (1990) estimate that between 80 and 85% of all trade is accounted for in this fashion. To which Bilkey poses the question "is it possible that exporting to affiliates is the ultimate current stage of a firm's export process?" (p. 37). Trade between foreign affiliates alleviates psychological proximity in that the activity is internalised; the capability for internalised trade may then provide a guideline for minimum firm size.

Dunning (1981) offered the internalisation theory<sup>29</sup> as an explanation of growth in MNEs. Internalisation theory has three concepts first, the MNE is assumed to possess "ownership advantages *vis-à-vis* firms of other nationalities" (p. 79) in particular markets. Ownership advantages are due to possession of assets unique to the firm. Assuming that the first condition is satisfied the firm must then retain these advantages rather than sell, or lease them to foreign firms. The firm internalises those ownership advantages in foreign markets by retaining ownership through subsidiaries. Finally, assuming the first two conditions are met there must be some benefit in utilising these advantages in conjunction with local "factor inputs" or "foreign markets would be served entirely by exports and domestic markets by domestic production" (p. 79). The internalised theory of MNE is, therefore, an international application of transaction costs (discussed in Chapter Two)<sup>30</sup>. An "MNE is any firm which owns outputs of goods and services originating in more than one country" (Casson, 1985, p.

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<sup>29</sup> Dunning (1995) takes care to distinguish between the theory of internalisation, discussed here and the eclectic paradigm of the multinational enterprise. The eclectic paradigm treats advantages of MNEs as endogenous rather than exogenous variables, which is contrary to Itaki's (1989) view. Itaki suggests that advantages are the simultaneous result of the MNE's activities in specific locations.

<sup>30</sup> The theory of internalisation has subsequently been identified by Itaki (1989) as containing redundancy. Itaki also considered that ownership and location advantages are more likely determined simultaneously. Additional assumptions necessary for the explanation of internalising particular products and particular locations were identified by Casson (1985).

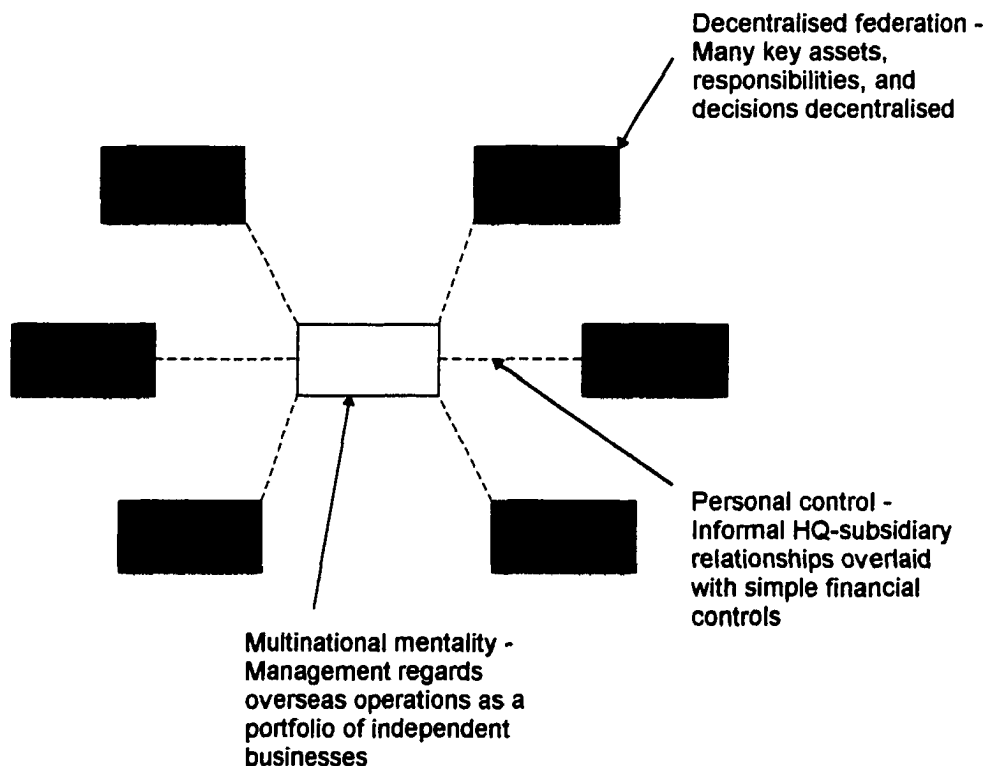
36). Therefore, the organisation is assumed to add “value by operating” (Buckley, 1989, p. 3) on more than one continent.

Bartlett and Ghoshal (1989) identified three extant strategies, organisational structures, and processes of management within MNEs. The three models are described as multinational, global, and international. All three models of worldwide strategy, organisational structure and management processes were found to restrict the ability of the case study firm to develop and maintain competitive advantage. Ghoshal and Bartlett (1990) suggest that in cases of large worldwide corporations the configuration should be conceptualised as an “interorganizational grouping rather than as a unitary *organization*” (p. 604). Consideration of the interorganisational grouping as a network (Section 3.5.4), albeit with common ownership, reflects the true “nature and complexity” of such organisations.

The multinational company, presented as Figure 3.2, is managed as “a portfolio of multiple national entities” (Bartlett & Ghoshal, 1989, p. 14). The multinational’s key strategic capability is “building strong local presence through sensitivity and responsiveness to national differences” (p. 15). A multinational industry is made up of national structures (multilocal) only loosely connected across borders. Therefore, a multinational industry necessitates multilocal (Yip, 1992) responsiveness. Companies have to achieve minimum scale efficiencies, namely, scale efficiencies within each domestic market.

The multinational company benefits from the dispersed resources and “decentralised decision making” (Bartlett & Ghoshal, 1989, p. 59) being able to respond to local demand. However, decentralisation produces inefficiencies and reduced learning knowledge and innovation retained at the national level, are unlikely to be shared. Doz (1980) describes the difficulty as the need for trade-off between multilocal integration and competitiveness. Ghoshal and Bartlett’s multinational organisation treats strategy as multilocal, in that each country or region is managed on a “stand alone basis” (Yip, 1992, p. 10). Were a multinational company to internalise the linkage between specific exporters and importers in the value system the company would then hold several near independent offshore holdings. These holdings, while catering for local markets, would no longer benefit from centralised efficiencies.

Figure 3.2. The multinational organisation model.



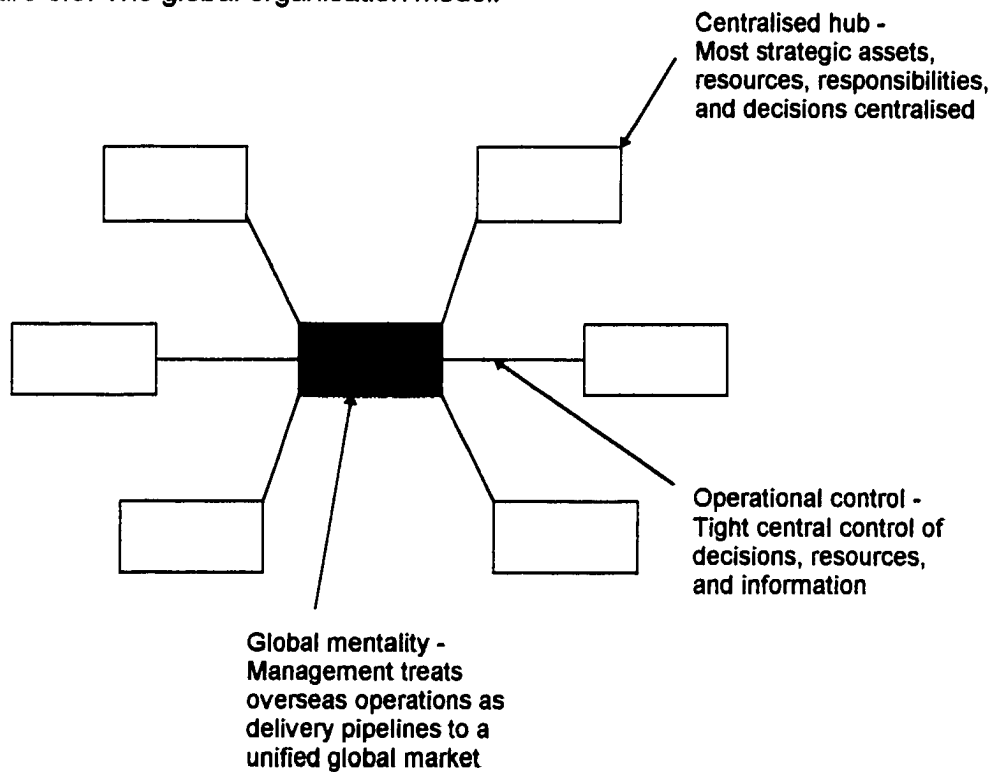
*Note.* From *Managing Across Borders: The Transnational Solution* (p. 50), by C. A. Bartlett and S. Ghoshal, 1989, Boston, MA: Harvard Business School.

The global company is typically driven by the need for global efficiency, has more centralised operations and treats “the world as an integrated whole” (Bartlett & Ghoshal, 1989, p. 14). The key strategic capability of the global company is described as “building cost advantages through centralized global-scale operations” (p. 15), epitomised by Vernon’s (1983) view of globalisation. Vernon postulates that the global organisation will “force suitably standardized products and practices on the entire globe” (p. 102). A model of the global organisation is presented as Figure 3.3.

No single market is assumed to generate sufficient revenues to fund state-of-the-art technologies. A global industry is characterised by the need for global scale, and relatively unimpeded national differences. The global company’s resources and capabilities (Prahalad & Hamel, 1990; Stalk, Evans, & Schulman, 1992) are concentrated in the centre where the organisation can exploit scale economies. The configuration implies that subsidiaries have few “slack resources” (Bartlett & Ghoshal, 1989, p. 58) and, therefore, are devoid of the

motivation or ability to respond to local demand. The global company, having centralised capability and knowledge, can quickly develop and produce new products, however, these products are conditioned by home market demand. In defence, Bartlett and Ghoshal (1989) observe that retail chains have applied asymmetrical bargaining power (discussed in Section 3.4.1) to squeeze manufacturers' margins, and concurrently manufacturers have had to increase advertising as retail staff are less knowledgeable of product attributes. Therefore, break-even volumes have increased further fuelling the need for the global form.

Figure 3.3. The global organisation model.

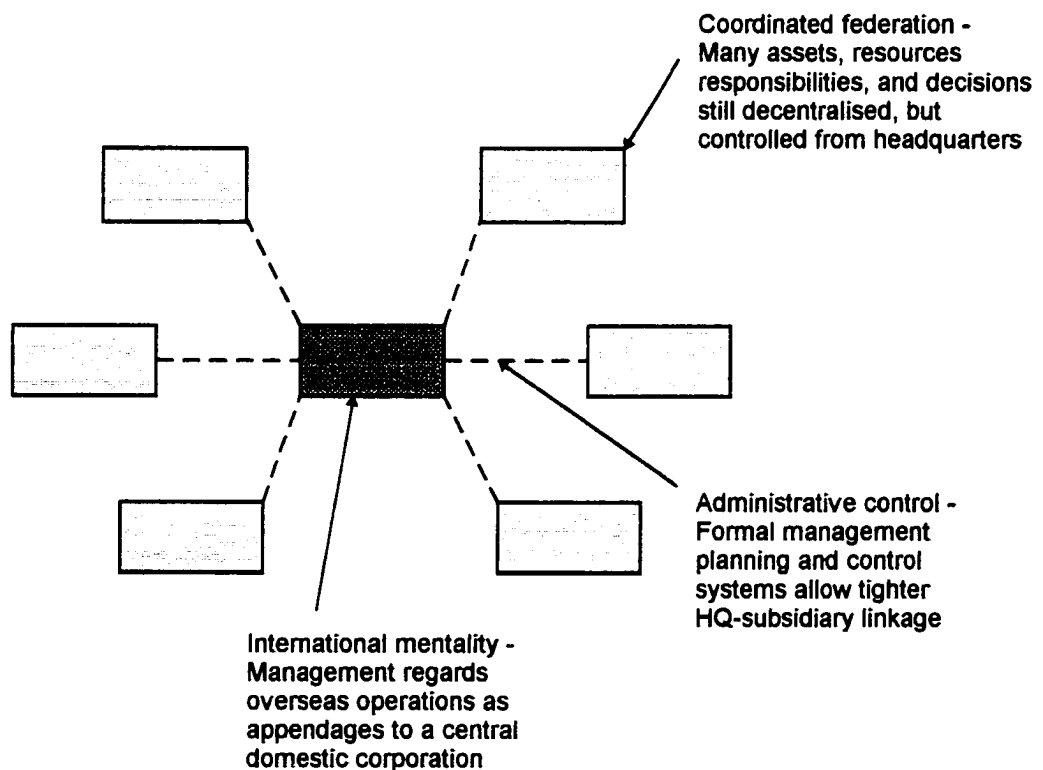


*Note.* From *Managing Across Borders: The Transnational Solution* (p. 52), by C. A. Bartlett and S. Ghoshal, 1989, Boston, MA: Harvard Business School.

The debate of global “standardisation versus country-by-country differentiation” (Meffert & Bloch, 1991, p. 3) is at the root of multinational versus global forms. However, Walters and Toyne (1989) pragmatically argued that the debate had degenerated into absolute uniformity versus complete localisation, both positions being untenable. From a value system perspective the global company offers centralised efficiencies, most likely located in the organisation’s country of origin, at the expense of inadequate local market resources.

The headquarters of the international company retains less control than the global company suggest Bartlett and Ghoshal (1989). In doing so subsidiaries have the opportunity to “adapt products and ideas” (p. 15) emanating from the centre. However, these subsidiaries have less independence than those in the multinational company. The key strategic capability of the international company is, therefore, to exploit “parent company knowledge and capabilities through worldwide diffusion and adaptation” (p. 15). International industries require a multidimensional strategic capability. Products are postulated to follow the traditional international product-cycle pattern (Vernon, 1966; Wells, 1972). Exports are then replaced by local products once subsidiaries have developed and adapted the products to local demand. A model of the international organisation is presented as Figure 3.4.

Figure 3.4. The international organisation model.



*Note.* From *Managing Across Borders: The Transnational Solution* (p. 51), by C. A. Bartlett and S. Ghoshal, 1989, Boston, MA: Harvard Business School.

The “international company is better able to leverage the knowledge and capabilities of the parent company” (Bartlett & Ghoshal, 1989, p. 59) than the multinational company. However, its resource configuration creates inefficiencies

relative to the global company and it is considered less responsive than the multinational. Adapting products for less developed countries (Hill & Still, 1984) appears problematic. Its operation in the value system is dependent on the near continual production of innovative ideas and knowledge, from a home-based location.

Bartlett and Ghoshal (1989) suggest that those organisations that fit corporate strategy and environmental demands, and fit organisation structure and strategy achieve superior performance. However, the authors observe that company performance can be constrained by the need for fit between the key strategic requirement of an industry and the firm's key strategic capability, that is, the match between what a firm might do (as predicated by the industry) and what it can do<sup>31</sup>.

Worldwide industries underwent major transitions during the 1980s (Bartlett & Ghoshal, 1989) and continue to do so, resulting in increased complexity. The dominance of a single set of environmental forces was replaced with more complex factors such as markets, costs, government and competition (Yip, 1992). Fewer industries can now be described as either multinational, global or international, therefore, companies must respond accordingly. Bartlett and Ghoshal observe that firms cannot succeed with unidimensional strategies such as the emphasis of multinational responsiveness, global efficiency, or international learning, knowledge, and competencies. Worldwide industries are now driven by simultaneous demands for global efficiency, national responsiveness, and worldwide leveraging of innovations and learning characteristics.

### **3.3.1 The transnational solution**

Bartlett and Ghoshal (1989) claim that to compete effectively "a company [has] to develop global competitiveness, multinational flexibility, and worldwide learning capability" (p. 16): positive attributes of each of the three worldwide models. The authors argue that to

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<sup>31</sup> Stopford and Wells' (1972) model of international structural changes is typical in the setting of international business. Whereas Bartlett and Ghoshal observed that an organisation's structure, commonly the result of administrative heritage, may constrain strategy, structure is recognised as a "powerful but blunt weapon for effecting strategic change" (p. 32). In some instances the authors' case managers reported that strong resistance forces (Strebel, 1994), embedded in administrative heritage, prevented them from changing strategy hence comment to the effect that companies are captives of their past.

achieve these key strategic capabilities organisations have to change their management processes and organisational structure (p. 57). Similarly, Yip (1992) states that firms need to integrate and manage for “worldwide business leverage and competitive advantage” (p. 9). Bartlett and Ghoshal have in response synthesised the transnational model. The significant departure from the other three models is that the transnational “is a new management mentality” (p. 17). This new management mentality reorients the concepts of efficiency, responsiveness, and innovation; efficiency is sought to achieve competitiveness; responsiveness provides flexibility; and, organisational learning enhances innovation.

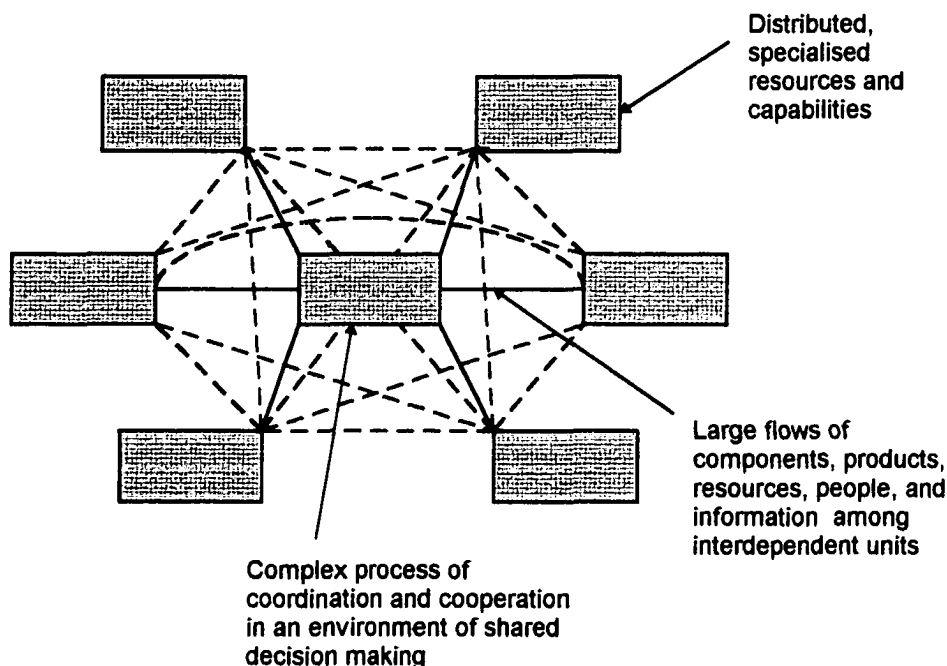
The transnational model is prescriptive: Bartlett and Ghoshal (1989) acknowledge that only some of its features were observed in their study. Certain activities are best centralised (Doz, 1978) in the location of headquarters, for example, research and development, finance or corporate strategy. Other activities may be centralised in a subsidiary to take advantage of local resources and conditions. While yet other activities and resources may best remain decentralised because of minimum scale economies or to benefit from national differentiation. The distribution of the transnational’s resources is, therefore, relatively complex and may be depicted as an “integrated network” (p. 61). Value chain activities are, therefore, partially concentrated and partially duplicated around the globe (Yip, 1989). The transnational is responsive to national market requirements by encouraging subsidiaries to differentiate, other subsidiaries may “adopt standard global products” (p. 62). Subsidiaries have greater autonomy and the opportunity to develop their own styles of management (Bartlett, 1981; Ohmae, 1990) within headquarters’ guidelines, systems and values. The role of management appears to be one of managing relative power (Prahalad, 1976) between the various components such as actors, activities, and resources. A diagram of the transnational model is presented as Figure 3.5.

The critical feature of the transnational model is interdependency, either perceived or actual between the headquarters and subsidiaries. Both headquarters and subsidiaries need to retain activities, resources, or actors sufficient to maintain congruence. The benefits from interdependency must be adequate to contain the self interest of subsidiaries. Without interdependency the organisation would regress into a multinational or even dissolve into separate firms in multidomestic (Hout, Porter, & Rudden, 1982; Yip, 1989) locations. One activity commonly retained in headquarters is global brand (Aaker, 1992; Bayley, 1994; see



Kominik, 1995; Morris, 1996; Watkins, 1986) management. Global brand management appears integral to successful global strategy, discussed in Section 3.6.3.

Figure 3.5. The transnational organisation model.



*Note.* Modified from *Managing Across Borders: The Transnational Solution* (p. 89), by C. A. Bartlett and S. Ghoshal, 1989, Boston, MA: Harvard Business School. Specifically, interdependencies between the headquarters (depicted centrally) and subsidiaries are shown as stronger relations than those between subsidiaries. Bartlett and Ghoshal do not assign greater importance in their model to HQ-subsidary relations. Nonetheless, the organisational structure appears to benefit from centrally controlled financial, corporate, or marketing services.

To summarise, Bartlett and Ghoshal's (1989) prescriptive transnational organisation is dispersed globally yet subsidiaries remain interdependent and specialised (Meffert & Bloch, 1991). Responsiveness is achieved by subsidiaries integrated in a worldwide operation. Knowledge and learning (Quinn, 1992) are developed jointly and then shared worldwide. To effectively manage the transnational, management must sanction diverse perspectives, develop multidimensional coordination processes, and create a shared vision.

The discussion of worldwide organisations throughout this section has viewed worldwide linkages within the firm. Common to all structures has been the theory of

internalisation. Various attributes of the transnational may also be achieved through international collaborative linkages (ICL) (Auster, 1987; Buckley & Casson, 1988; Ohmae, 1989b). Gugler (1992) reported that cooperative agreements with foreign organisations outnumber foreign subsidiaries fourfold<sup>32</sup>. While Porter and Fuller (1986), and Dunning (1995) directly attribute coalition formation to the process of globalisation. The use of cross-border strategic alliances as “viable vehicles for international strategy” was recommended by Bleeke and Ernst (1991, p. 127), as opposed to Bartlett and Ghoshal’s (1993) perspective of subsidiaries providing global reach. Hedlund’s (1986) heterarchical perspective of the MNE includes both views.

The management of international linkages as either headquarters-subidiaries (Doz, 1986; Doz & Prahalad, 1981, 1984; Hedlund, 1981; Otterbeck, 1981a; Prahalad & Doz, 1981), international strategic alliances (Ohmae, 1989b) or joint ventures (Holton, R. H., 1981; Otterbeck, 1981b) has been the subject of much discussion in the literature of worldwide business. Managing the integrated organisation requires the pursuit of “efficiency within the network” and “effectiveness at its margins” (Doz, 1986, p. 188). The management of each of the subsidiaries is likely to differ as a result of the contextual environment (Ghoshal & Nohria, 1989) between headquarters and subsidiaries; described as integrative (Kanter, 1983), hierarchical (Williamson, 1975), federative (Provan, 1983), or clan-like (Ouchi, 1980).

Ohmae (1989b) suggests that global strategic alliances in a changing environment are a preferred form of organisation to internalisation (Rugman, 1981). However, “a real alliance compromises the independence of economic actors” (Ohmae, p. 143). Rugman (1982) maintains that the internal market of a multinational enterprise is superior because costs of internalising are less than the costs of contracting. Rugman does not, however, discuss distributive effects, implicit in internalisation theory. Dunning (1995) summarises the choice between internalisation and international alliance as depending on their “respective costs and benefits” (p. 467) adding that the rationale is “extensive and well known”. A trade-off exists between sharing risks, capital costs, and benefiting from various synergies on the one hand with loss of control, dependency, and the distribution of wealth on the other. The attributes of collaborative relationships are discussed more fully in Section 3.5.

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<sup>32</sup> These agreements must, however, only account for a minority of worldwide business.

The international linkage in the value system may be internalised through some form of MNE producing a headquarters-subsidiary relationship. MNEs typically take one of three forms of worldwide organisation all of which have notable weaknesses. The transnational appears to be the preferred form of worldwide organisation and differs from the earlier forms in that interdependency exists between headquarters and subsidiaries. The transnational model also prescribes a mode of management capable of both ignoring and exploiting geographic borders. The international linkage may also be completed through the establishment of strategic alliances. The relative trade-offs between the attributes offered by internalisation and alliances are well established in the literature. However, these trade-offs refer to the static analysis of actual and perceived costs and returns. Management's role in seeking to create value and redistribute wealth in stakeholders' favour from either organisational form appears to have been ignored. Ultimately, organisational strategy is expected to determine the selection of one organisational form in favour of the other.

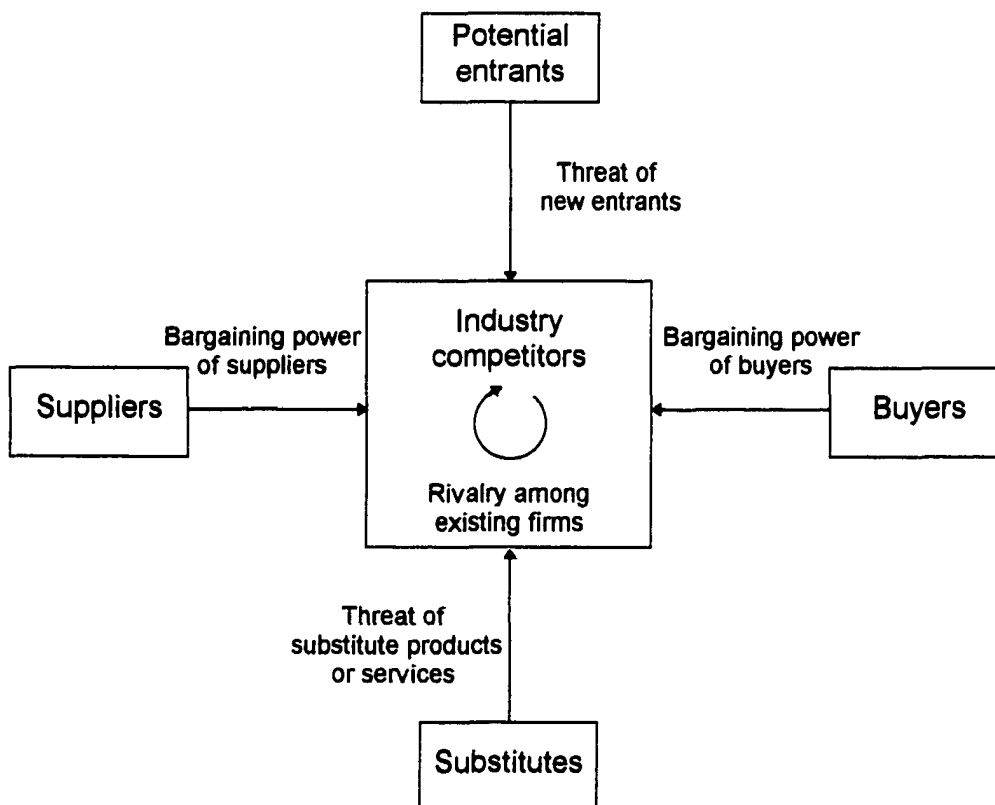
### 3.4 COMPETITIVE LINKAGES BETWEEN ORGANISATIONS

**T**HE OBJECTIVE of this section is to examine the nature of competitive linkages between adjoining organisations in the value system. The discussion of the nature and scope of competitive linkages in the strategy literature is lead by Porter (1980). Porter suggested that the "key aspect of the firm's environment is the industry or industries in which it competes". Industry structure, he stated, "has a strong influence in determining the competitive rules of the game as well as the strategies potentially available to the firm" (p. 3). Porter added that "the intensity of competition is neither a matter of coincidence nor bad luck", suggesting that competition within an industry is dependent on the industry's "underlying economic structure". The significance of *economic* structure was not explained, but appears to refer to the current and expected well being of participants. Porter then presented his five forces model of industry competition, presented as Figure 3.6.

The critical assumption of industry analysis is that industry profitability is not accidental but is "determined by the characteristics of industry structure" (Grant, 1991b, p. 40). The nature and scope of competition across industries is, therefore, postulated as a "product of common structural factors". Grant states that the conduct-structure-performance

approach “seeks to relate characteristics of industry structure to the nature of competitive behavior and to the level of profitability” (p. 40). The *theories* of perfect competition and monopoly provide the range over which all industry structures are found. Monopoly providing the means for a firm to earn “profits in excess of the opportunity cost of capital” (Baumol & Blinder, 1985, p. 513); perfect competition zero economic profit.

Figure 3.6. Five forces driving industry competition.



*Note.* From *Competitive Strategy: Techniques for Analyzing Industries and Competitors* (p. 4), by M. E. Porter, 1980, New York: Free Press.

Porter (1980) suggests that competition within any industry serves to reduce the return on capital to a yield similar to government securities. Industry returns greater than this risk-free rate attract competition, while industries returning less than this rate will divest. In practice industry returns may be quite different from those approximated by government securities, however, for the time being the assumption will hold. The forces driving industry competition were identified as threat of entry, intensity of rivalry among existing competitors,

pressure from substitute products, bargaining power of buyers and, bargaining power of suppliers.

Threat of entry to an industry “depends on the *barriers to entry* that are present, coupled with the *reaction* from existing competitors that an entrant can expect” (Porter, 1980, p. 7). Porter identified many potential barriers to entry including, for example, access to distribution channels, and government policy. The barriers to entry while accepting they change over time are relatively static. Expected retaliation, reaction by incumbents, is by comparison a dynamic, hostile, and potentially volatile force.

Porter (1980) observed that firms within an industry are “mutually dependent” (p. 17). Competitive action by one firm inevitably results in competitive action by others within the industry. “Some forms of competition, notably price competition, are highly unstable and likely to leave the entire industry worse off” (p. 17). This idea is elaborated on in Section 3.8. Other competition, for example, “advertising battles” may increase demand industry-wide. Porter, again, identified many causes of rivalry amongst existing participants including exit barriers. He then combined “a simplified case” (p. 23) of the effects of entry and exit barriers on profitability: an illustration of the combined effects of rivalry amongst existing firms and threat of entry. The two-by-two matrix is presented as Figure 3.7. Clearly, an industry with low entry barriers and high exit barriers is likely to suffer from low, risky returns. The case of sunk costs in recently-deregulated industries in New Zealand spring to mind.

Figure 3.7. Entry barriers, exit barriers and their relationship to profitability.

		Exit barriers	
		Low	High
Entry barriers	Low	Low, stable returns	Low, risky returns
	High	High, stable returns	High, risky returns

*Note.* From *Competitive Strategy: Techniques for Analyzing Industries and Competitors* (p. 23), by M. E. Porter, 1980, New York: Free Press.

Summarising Porter's (1980) discussion of the five forces serves little justice to a proposition that is compellingly well articulated. Porter's significant contribution to industry analysis is to view customers, suppliers, substitutes, and potential entrants as sources of variation in profitability (depicted in Figure 3.6), in addition to the rivalry that may exist between established organisations. Competition between existing organisations is the economist's entrenched view of competition. This view completely ignores bargaining power. All five forces appear to influence the intensity of competition and hence profitability. Identification and understanding of the strongest forces influencing profitability is, therefore, critical for effective strategy formulation.

Numerous authors have endorsed the model. For example, Bartlett & Ghoshal (1991) considered Porter's contribution the most influential in the 1980s. Day & Wensley (1988) used Porter's model in the development of their normative framework "for diagnosing competitive superiority" (p. 1). Gardener (1990) applied the model to his study of "investment banking strategies in London" (p. 61). Grant (1991b) concluded that "the merit of this model is that it provides a simple yet powerful, organizing framework for classifying the relevant information about an industry's structure and for predicting what the implications of these structural features are for competitive behaviour" (p. 64).

Sonka and Hudson (1989), contributors in agribusiness, suggest that Porter's (1980) model assists identify "linkages between an industry's competitive characteristics and strategies for success in that industry" (p. 89). To date, authors of at least three studies of New Zealand's land-based industries have used the five-forces model to explain industry performance: R. Davis (1993), a partial value system for wool; Lorigan and Harman (1990), the United Kingdom lamb carcass market; Furniss (1992), New Zealand's blueberry industry.

The five-forces model has, however, attracted criticism. Bartlett and Ghoshal (1991), for example, pose the warning that "to view industry structure as the primary determinant of the competitive rules of the game, and thus of firm strategy" (p. 8) is to neglect internal organisation, competence and resources. Bartlett and Ghoshal's warning needs to be tempered by persistence in undesirable industries, for example, "cart wheels" (Anderson, personal communication, January 1990) or "buggy whips" (Kidney & Jewison, 1991).

Singer and Brodie (1990) stated that the “power of the approach is moderated by the ability of the analyst and the information available” (p. 80). The “ability of the analyst” appears to refer to the lack of direction on how to assess and then compare the forces (O’Shaughnessy, 1984). O’Shaughnessy also questioned why Porter (1990) subsumed government regulations into the five forces, rather than including it as a force in its own right. The organisation’s capability and competence should not be ignored, information may be scarce (as Davis, R., (1993) found), and the data set likely imperfect. There is also little guidance on how to operationalise the model (Speed, 1989). Thackray (1989) provides a pragmatic counter to such criticism noting that Porter’s five forces “are a common vocabulary amongst strategists” (p. 53). Unfortunately, Porter made no attempt to operationalise the model (a characteristic in common with other renown authors from Harvard Business School). Nonetheless, the model provides a powerful analytical and diagnostic tool for the structural analysis of industries - a means of considering factors affecting the profitability of industry.

Porter’s (1980) five forces model can, therefore, be assumed to operate at each stage of the value system. Superimposing the *five forces* on the Z-form Model provides a challenging view of the structure of New Zealand’s land-based export-dependent industries (Figure 3.8). Challenging *if* each stage of the value system is regarded as an independent organisation, each stage being identified as an industry, and each stage linked with adjoining stages by competitive relationships.

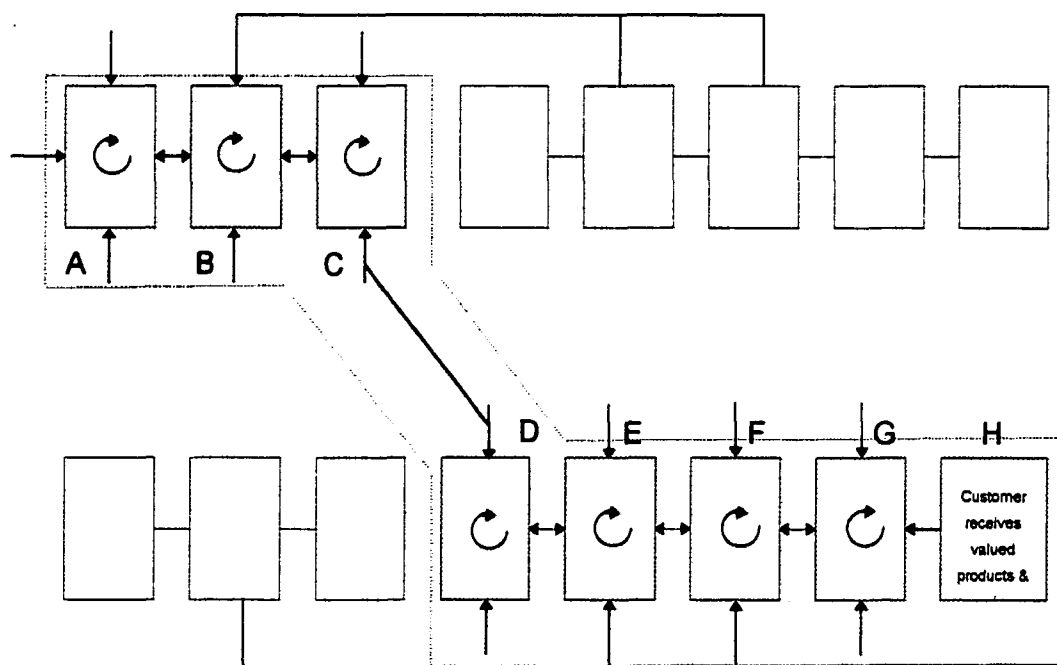
The purpose of the figure is to graphically demonstrate the forces that may confront participants in the value system. If the figure is depicted correctly there remains little wonder land-based producers (A) receive a residual, variable income.

### **3.4.1 Bargaining power**

Substitute goods and services provide competition and “limit the potential returns of an industry by placing a ceiling on the prices firms in an industry can profitably charge” (Porter, 1980, p. 25). The availability of substitute products, therefore, reduces bargaining power and dependency. Buyers’ and suppliers’ bargaining power is not unrelated. The underlying concept is simply one of buyers’ and suppliers’ ability to change prices. In the

case of buyers' bargaining power it is one of forcing down the price of goods and services, or demanding higher quality. With supplier bargaining power the opposite is true, especially one of extracting a higher price for the goods and services, or the ability to reduce quality. Porter stated that bargaining power was related to the concentration or volume of buyers and sellers relative to the industry; the importance of the goods and services in the final product; differentiation of the product; switching costs; the threat of integration and so on.

Figure 3.8. Potential competitive forces in the Z-form Model of New Zealand's land-based international value systems.



Porter's (1985) view of bargaining power relates to an organisation's ability to change prices. The effects of bargaining power are reflected in the division of margins between adjoining organisations in the value system. Bourantas (1989) associates bargaining power with dependence (Pfeffer & Salancik, 1978): dependence on a dominant organisation. Dependence, as a result of asymmetrical bargaining power, is said to reduce "autonomy and degree of strategic freedom, and allows the direct transfer of benefits from the dependent of the dominant organization" (Bourantas, p. 140).



Three simultaneous conditions are identified by Bourantas (1989) to create dependency between two organisations. Dependency is created by first, the importance of resources acquired second, the substitutability of those resources and third, discretion over resource allocation between the organisations. Bourantas (1989), Kotter (1979) and Porter (1985) provide suggestions for reducing dependency. Therefore, it is favourable to the dominant organisation, at least in the short-term, to create an environment of dependency.

Porter (1985) discusses bargaining power and Bourantas (1989) dependency in terms of traditional resources and their prices. A more holistic view of bargaining power may be adopted if change, rather than resources, is considered the dependent variable. Bargaining power can then be recognised by an organisation's ability to either invoke change in others, or to resist change. Change is discussed more fully in Section 3.6.3. The motivation for collaborative linkages may, therefore, be to relieve bargaining power in an effort to redistribute wealth in the organisation's favour.

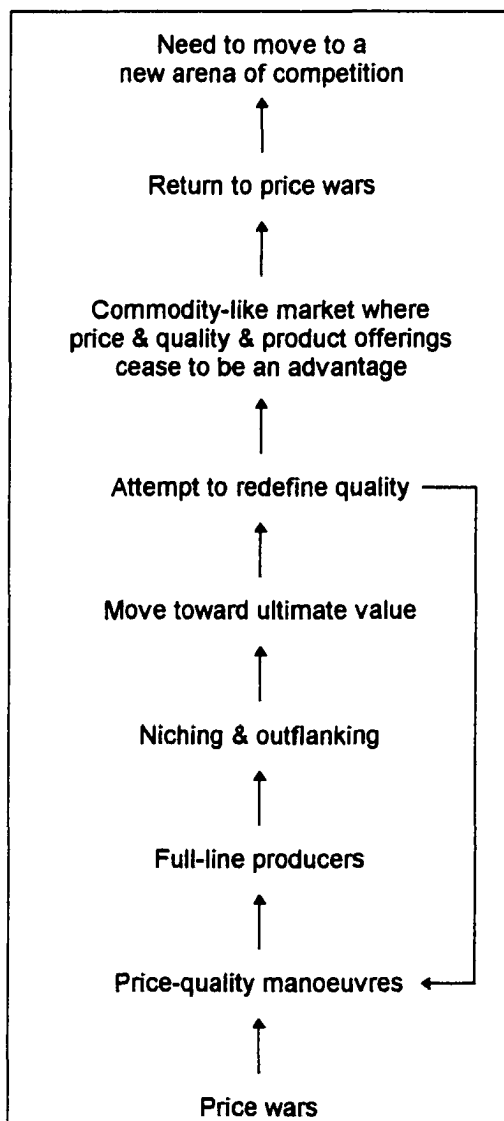
An alternate, and recent view of competition and the seemingly constant dissipation of competitive advantage, discussed in Chapter Two, has been presented by D'Aveni (1995). A brief review of D'Aveni's perspective of hypercompetition is presented in the following section. The model is then referred to during discussions of strategy later in this chapter.

### **3.4.2 Hypercompetition**

D'Aveni (1995) identifies generic stages for competition, a practical interpretation of perfect competition. The author identifies the ground of competition at each stage, how competitive advantages are eroded, and how some companies maintain competitive advantages<sup>33</sup> for longer periods than others. In a global economy those rates of return will then be dictated by the lowest cost producer (an unsavoury position for those members of the global economy with somewhat higher aspirations). Two firms selling the same product and same quality must compete on price. This simple situation then escalates into price wars, a no-win situation for the firms involved but beneficial to the customer. To avoid price wars competitors move "toward offering progressively higher" (p. 12) value to customers.

D'Aveni likens the force of price-competition to gravity. Price wars escalate into quality, differentiated markets, full-line production, niching and outflanking, ultimate value, before degenerating back into price-wars. The price-quality<sup>34</sup> cycle is presented as Figure 3.9.

Figure 3.9. The cycle of price-quality competition - moving up an escalation ladder.



*Note.* From *Hypercompetitive Rivalries: Competing in Highly Dynamic Environments* (p. 36), by R. A. D'Aveni, 1995. New York: Free Press.

<sup>33</sup> Competitive advantage may not be a necessity for the long-term survival of the firm providing stakeholders are prepared to accept ordinary rates of return.

<sup>34</sup> D'Aveni (1995) defines quality as the *perceived quality* by consumers. In his models there is an assumed quality standard for any industry, and that "consumers are concerned about price and quality" (p. 13).

D'Aveni (1995) notes that individual firms may be better off if they don't escalate the conflict. However, "if one of them drop[s] out of the competition, the other would gain a temporary advantage. Each one cannot trust the other to de-escalate the conflict. This course is set in motion the minute the two players step into the arena of competing on price and quality" (pp. 12-13). Beyond price-quality a competitive position is temporarily sustainable. For example, the next stages are full-line production, and then niching and outflanking at which stage the customer is provided with "ultimate value" (p. 35), new definitions of product price and quality then evolve initiating a "new cycle of dynamic interactions" (depicted as the feedback loop in Figure 3.9).

As an example, D'Aveni (1995) contrasts the watch and coffee maker industries. The watch industry's progress toward the ultimate value point is impeded by fashion, "price is a signal of quality" (p. 58). D'Aveni argues, therefore, that a low-priced, high-quality product may have a lower perceived value than a higher priced product. D'Aveni's observation is correct providing the industry is considered as a whole (i.e., Rolex, Omega, Seiko, Olympus, and Casio manufacture watches as both Ferrari and Mazda manufacture cars). The watch industry may be better cleaved into mainstream (Seiko, Olympus, Casio and so on) and high-end (e.g., Rolex, Omega, Tag Heuer) manufacturers. Escalation through the competition ladder (see Figure 3.9) is then evident amongst the mainstream manufacturers, while the high-end manufacturers compete on fashion and technical expertise.

By way of contrast the coffee maker industry has been driven toward the ultimate value point. Hypercompetitive firms continue to pursue transitory advantages by progressing up the competition ladder, advantages are "fleeting", and firms "pass through periods of price wars for short periods of time but find new ways to break out of that state" (D'Aveni, 1995, p. 38).

D'Aveni identifies particular strategies - four arenas - a firm may employ to avoid competition, techniques a firm may use to out-manoeuvre competition. To "leap into a new market or jump to a new level of quality" (p. 40) a firm must have a "product timing or know-how advantage". Timing advantages are created by skills, particularly innovation, and know-how is the result of learning and technical knowledge, identified as the second arena of competition. Once competitive advantage is threatened established firms then resort to using

barriers to entry, the third competition arena. Firms can, therefore, slow movement up the escalation ladder. Barriers to entry include “tacit cooperation among rivals” (p. 83), asymmetrical bargaining power over buyers and suppliers, and “power over potential entrants and substitutes” (p. 84). Eventually competitive advantage will again be threatened. D’Aveni then considers that firms resort to “deep-pockets”, the fourth and final arena of competition. At this stage the “industry may have merged into a large global market without barriers and fast-paced, aggressive maneuvering” (p. 121). Competition being reduced to the depth of financial and managerial resources.

Figure 3.9 depicts the competitive route open to firms as they are invariably forced from competing on price and quality. Some or all of the four arenas of competition may be applied at each stage of the competition ladder until competitive advantage is eroded and each firm ceases to achieve “abnormal profits” (p. 235). The end result is a situation approaching the economist’s theoretical perspective of perfect competition. D’Aveni concludes that the focus of strategy should, therefore, be to “control the dynamic evolution of the industry as firms progress up the escalation ladders in each arena” (p. 245). Untenable positions are competing on price-quality. Competitive advantage is achieved through controlled escalation up the competition ladder, exhausting all four arenas of competition at each rung.

Veliyath (1996) states that “*Hypercompetition* challenges conventional thinking and confronts today’s competitive reality” (p. 294). Yet there is little evidence in the literature to suggest that competitive advantage is anything other than transient. A sustainable competitive advantage (Williams, 1992) requires continuous pursuit (Hamel & Prahalad, 1993, 1994; Strebels, 1994) as the external environment is anything but static. More importantly D’Aveni’s (1995) model provides an operational framework for the development of business strategy.

The nature of competitive relationships between organisations has been reviewed. The alternate view, collaborative relationships between organisations, is now discussed.

### 3.5 COLLABORATIVE LINKAGES BETWEEN ORGANISATIONS

**C**OLLABORATIVE LINKAGES among participants in a value system are referred to variously as value chains (in error), value stars, value constellations, relationship marketing and industrial networks. Such linkages may involve forms of equity exchange, joint ventures, or more simply non-equity strategic alliances. A discussion of the attributes of collaborative linkages is presented in this section. MacMillan and Farmer (1979), for example, recommended “collaborative dealing in intermediate industrial markets” (p. 284) as a means, at the expense of mutual dependence, to reduce both risk and fixed costs, retain discretion, and enhance learning.

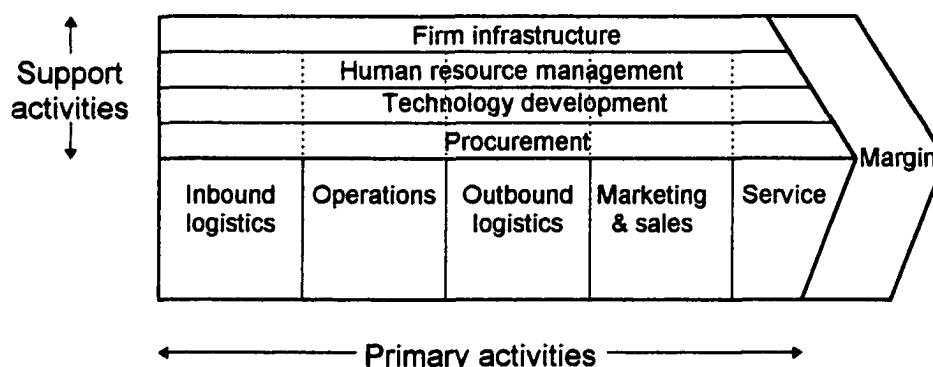
#### 3.5.1 Value chains

Porter (1985) is responsible<sup>35</sup> for developing the value chain view of a firm (Day & Wensley, 1988). The aim of the value chain is to “disaggregate a firm into its strategically relevant activities” (Porter, p. 33) in an industry, and to better understand costs, and existing and potential sources of differentiation. Porter’s value chain approach presents the firm as a collection of interrelated generic activities; activities described as either primary or support. The firm is viewed as a suite of discrete but interrelated production functions providing “production functions are defined as activities” (p. 39). The value chain then focuses on how each of these activities creates value. Porter stated that value “activities should be isolated and separated that (1) have different economics, (2) have a high potential impact on differentiation, or (3) represent a significant or growing proportion of cost” (p. 45). Porter’s assumptions of what constitutes a firm’s separate activities are explicit in his value chain model, presented as Figure 3.10.

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<sup>35</sup> Day and Wensley (1988) attribute the value chain framework to McKinsey and Company. However, Porter (1985, p. 36) appears to have anticipated such criticism. He makes a distinction between his view of the firm as activities and McKinsey and Company’s business system view of the firm as unrelated functions. Kogut (1984) used the term “value-added chain” (p. 151) to describe functions, analogues to Porter’s activities, within an organisation that contribute to a product’s market value.

Figure 3.10. The generic value chain.



Note. From *Competitive Advantage: Creating and Sustaining Superior Performance* (p. 37), by M. E. Porter, 1985, New York: Free Press.

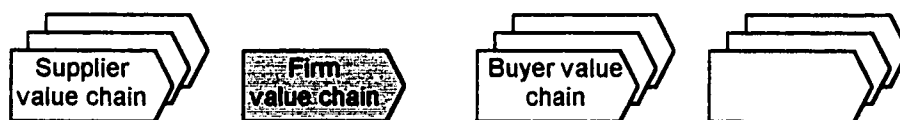
The value chain model presents the firm as a “system of interdependent activities” (Porter, 1985, p. 48), rather than considering these activities as being mutually exclusive. This view suggests that relationships between the firm’s various activities is critical to value creation. Porter claimed that an analysis of the value chain rather than value added<sup>36</sup> is the appropriate way to examine an organisation’s competitive advantage (p. 39). A value chain, or a series of value chains - value system - linked through interfirm transactions provides an aggregate mechanism of determining value added.

The value chain approach has been reviewed and applied by several researchers (e.g., Prahalad & Hamel, 1990; Rayport & Sviokla, 1995; Skyrme, 1990; Willcocks, 1992) for the analysis of organisations. However, Hergert and Morris (1989) identified difficulties of using accounting data for value chain analysis. Hergert and Morris’s conclusion is supported by Rappaport (1981) who, although predating the value chain approach, stated that the creation of value for shareholders cannot be analysed with conventional accounting data. Rappaport (p. 139) dismissed the “conventional accounting-oriented approach” to evaluate strategic plans and the success of the business. Therefore, most firms’ decision making with respect to their value chain is based on inherently problematic data. An organisation’s value chain is “embedded in a larger stream of activities” that Porter (1985, p. 34) calls a value system (depicted as Figure 3.11). A value chain only includes those activities completed within an

<sup>36</sup> Value added analysis typically calculates value added to raw material.

organisation, irrespective of whether these activities are completed domestically or internationally (Kogut, 1984).

Figure 3.11. Porter's value system.



*Note.* From *Competitive Advantage: Creating and Sustaining Superior Performance* (p. 35), by M. E. Porter, 1985, New York: Free Press.

Shank and Govindarajan's (1992) conceptual value chain of the paper industry, which refers to all activities from the production of raw material to the end-consumer, is in fact a value system. Normann and Ramirez (1993), Snow, Miles, and Coleman (1992), and Trotter and Kay (1996) also confuse value chains with value systems. For example, Normann and Ramirez state that "every company occupies a position on a value chain [*sic*]" (p. 65). Clearly every company occupies a position in a value system.

### 3.5.2 Value constellations and value stars

Normann and Ramirez (1993) reported from a multiple case study that value occurs "in complex constellations" (p. 69). Their cases included IKEA<sup>37</sup>, ATM networks, Denmark's pharmacy association, and French public utilities from which they developed an alternate view of organisational linkages. The authors suggest that value creation was no longer the domain of a single firm as described by a value chain. "A single company rarely provides everything anymore [*sic*]. Instead, the most attractive offerings involve the customers and suppliers, allies and business partners, in new combinations" (p. 69). Normann and Ramirez concluded that a firm's primary strategic task is to reconfigure relationships and business systems with adjoining firms. They

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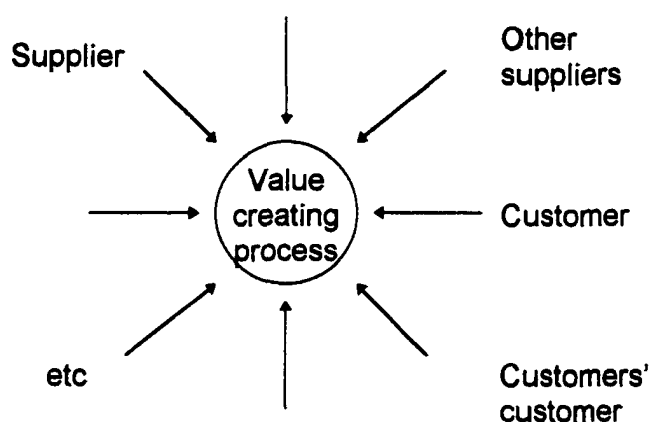
<sup>37</sup> IKEA, a Swedish based kit-set furniture retailer, is reported as the world's largest retailer of home furnishings with an international network of some 100 stores, visited by 96 million people, generating an annual income of \$6.5 billion (Normann & Ramirez, 1993).

attribute competitive advantage to the firm's ability to conceive and implement a value-creating system, supposedly configured as a constellation.

IKEA pursue low cost, good quality suppliers. The result of this policy is that the sources of components for kitsets are geographically widespread - 1800 suppliers in 50 countries. Suppliers receive technical support and lease equipment from IKEA with the view of establishing long-term supply relationships (Normann & Ramirez, 1993). Normann and Ramirez stated that a value system, as presented in Figure 3.11, "fails to capture the complexity of relationships in the IKEA business system" (p. 68). They describe IKEA as "the central star in a constellation of services, goods, design, management, support, and even entertainment". Value creation is, therefore, viewed as the entirety of processes within a constellation rather than those within a value system.

Wikström and Normann (1994) further developed the value constellation concept by redefining market relationships at the expense of vertically integrated systems. They observed that relationships between customers, suppliers, and organisations are becoming increasingly complex. Firms are incorporating customers into "closed systems - closed that is, to competitors" (p. 30). Wikström and Normann's value star (synonymous with Normann & Ramirez's value constellation) is depicted in Figure 3.12.

Figure 3.12. Value star depicting participants contributing to value creation.



*Note.* From *Knowledge and Value: A New Perspective on Corporate Transformation* (p. 31), by S. Wikström and R. Normann, 1994, London: Routledge.



The process of value creation is depicted as differing from that in traditional models such as Porter's (1985) value system, Davis and Goldberg's (1957) commodity system, or the land-based value system presented in Chapter Two, all of which are based on product flow. The constellation view of value creation accepts a single organisation as the catalyst for creating value amongst immediate firms.

While immediate firms and customers are acknowledged to benefit from their relationship with the central organisation (Normann & Ramirez, 1993) others are largely ignored. The authors fail to comment on the role of upstream participants; the benefits to foresters of the IKEA constellation are not considered. Upstream participants appear to again be left as the recipients of residual income. Participants contribute to value creation *alongside* product flow - a fact neglected by the constellation view. The value constellation is, therefore, no substitute to the value system. The value constellation may better be considered as an important, on occasions even dominant feature of a value system dependent on product flow.

### **3.5.3 Relationship marketing**

The marketing channel (Mallen, 1967) literature was reviewed by Rae (1986), and endorsed by Martin, Rae, and Zwart (1986), and Woodhouse (personnel communication, May 1993) as an integrated framework for analysing agricultural marketing issues. Research in the area of organisational marketing (Campbell & Cunningham, 1983), business to business marketing (Anderson, Håkansson, & Johanson, 1994; Anderson & Narus, 1990) and organisational buying behaviour (Håkansson & Wootz, 1975) has developed two different traditions. The first, and original marketing channel approach (Achrol, Reve, & Stern, 1983; Arndt 1979, 1983; Reve & Stern, 1979; Stern & Reve, 1980) from North America has been to study relationships between buyers and sellers. The second, European approach, is to study the space between organisations in the form of industrial networks (Powell, W. W., 1990). The industrial network approach is discussed in the following section.

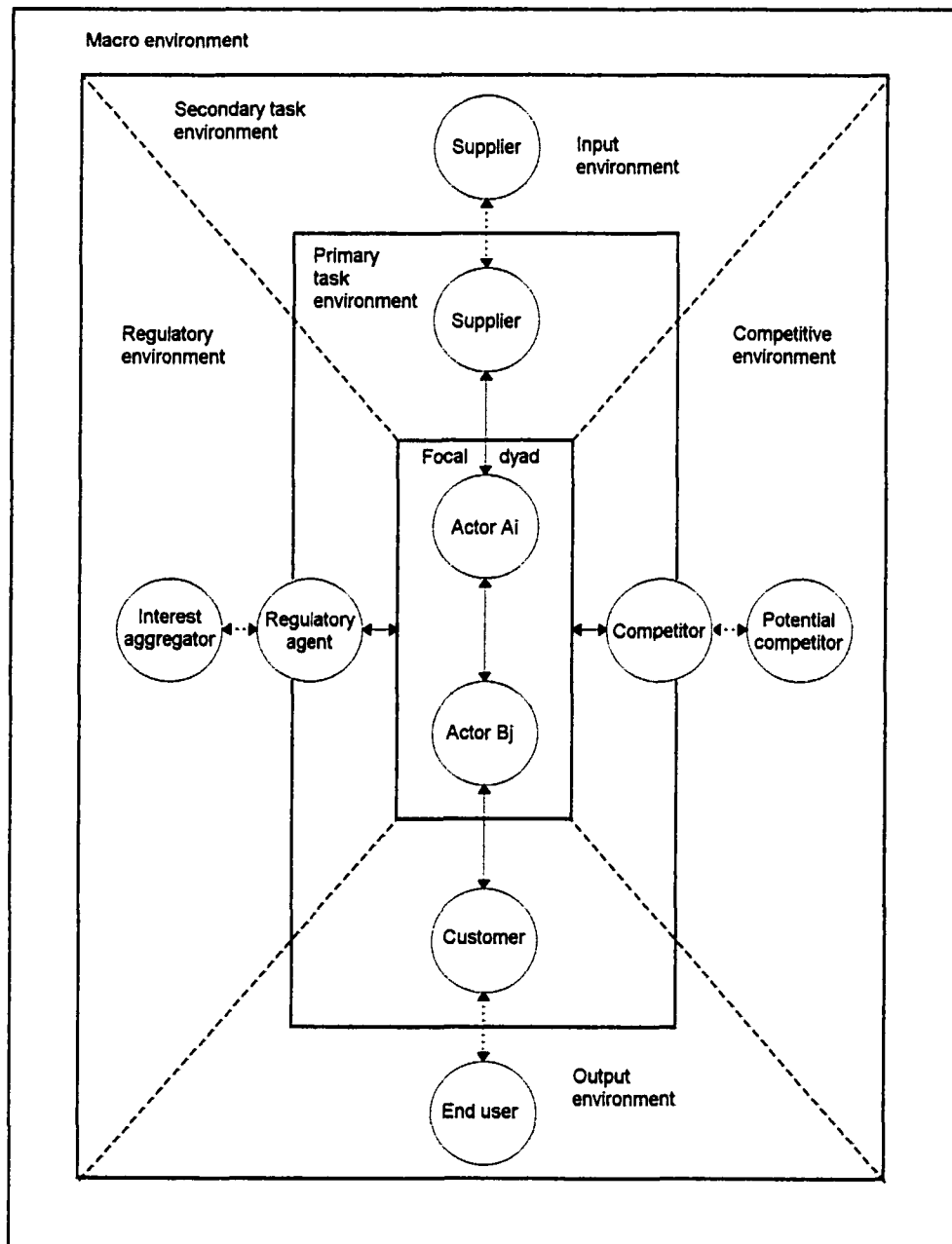
Achrol, Reve, and Stern (1983) were the first marketing authors to extend the conventional marketing channel literature (e.g., Rosenberg & Stern, 1971) beyond the distribution of power and authority in a dyad. Achrol et al. distinguished between a primary

task environment comprising the dyad's immediate suppliers and customers and the secondary task environment "comprised of suppliers to the immediate suppliers, customers to the immediate customers" (p. 57). Achrol et al.'s diagram of the environment of marketing channels is presented in Figure 3.13. However, despite recognising that firms beyond the dyad have an effect on dyadic interaction the channel literature remains primarily concerned with power and authority (e.g., Heide, 1994; Heide & John, 1992).

The significant contribution from the marketing discipline pertinent to this discussion is relationship marketing (Berry, 1983; Dwyer, Schurr, & Oh, 1987; Grönroos, 1995; Morgan & Hunt, 1994; Sheth & Parvatiyar, n.d). Morgan & Hunt attribute the term relationship marketing to Berry. Berry stated that "relationship marketing is attracting, [and] maintaining... customer relationships" (p. 25). Relationship marketing is, therefore, characterised by *direct marketing* (see Bucklin, 1967; Schultz, 1990; Sheth & Parvatiyar, 1995); when buyers and sellers associate directly with one another. The importance of direct association between firms was understated by the discipline before emergence of the industrial marketing paradigm. Relationship marketing, therefore, represents an extension of industrial marketing's departure from a focus of transaction and exchange (Hunt, 1983; Kotler, 1972).

Webster (1992) considers relationship marketing as representing a fundamental reshaping of the field. While Kotler (cited in Morgan & Hunt, 1994) and Parvatiyar, Sheth, and Whittington (1992) identify it as a genuine paradigm shift. Morgan and Hunt are, however, quick to identify that "relationship marketing is part of the developing network paradigm" (p. 20) rather than claim it as something unique to the marketing discipline. Dwyer et al. (1987) criticised marketing research and strategies as treating buyer-seller relationships as discrete events rather than ongoing relationships; hence the realisation that direct marketing practices were worthy of study. Dwyer et al. stated that "the lack of attention to antecedent conditions and processes for buyer-seller exchange relationships is a serious omission in the development of marketing knowledge" (p. 11). An argument hauntingly familiar in that both organisational theorists and economists often ignore the context in which business strategy, relationships and transactions take place. Rarely do such activities take place in a vacuum.

Figure 3.13. The environment of marketing channel dyads.



*Note.* From "The Environment of Marketing Channel Dyads: A Framework for Comparative Analysis," by R. S. Achrol, T. Reve, & L. W. Stern, 1983, *Journal of Marketing*, 47 (4), p. 58.

Dwyer et al. (1987, p. 15) propose that business relationships evolve through five general phases identified as awareness, exploration, expansion, commitment and dissolution: a *relationship lifecycle*. Awareness is characterised by "party A's recognition that party B is a

feasible exchange partner". "Interaction between parties has not transpired" (p. 15). In phase two the "potential exchange partners first consider obligations, benefits and burdens, and the possibility of exchange; trial purchases may take place. The exploration phase may be very brief, or it may include an extended period of testing and evaluation" (p. 16). Expansion, the third phase, refers to "the continual increase in benefits obtained by the exchange partners and to their increasing interdependence" (p. 18). Dwyer et al. suggest that the "critical distinction [between exploration and expansion] is that the rudiments of trust and joint satisfactions now lead to increased risk taking in the dyad". Phase four, commitment, is characterised by an "implicit or explicit pledge of relational continuity by exchange partners" (p. 19). By the fourth stage the exchange partners have achieved a level of satisfaction from the relationship that "virtually precludes" other parties that could provide similar benefits, a position identical to Wikström and Normann's (1994) closed system. The final phase, that is not always necessary, is dissolution. Until the final stage the option of dissolution has remained present providing of course the relationship proceeds beyond awareness.

McKenna (1991) and Sewell<sup>38</sup> (Sewell & Brown, 1990) popularised the concept of relationship marketing. They recognise that business success is dependent on the intangibles implicit in the concept of relationship marketing. The authors consider that intangibles in a business relationship may be more important than the goods and services themselves.

Morgan and Hunt (1994) summarise relationship marketing theory and then develop and test a parsimonious model. They define relationship marketing as "all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges" (p. 22). "Central to relationship marketing is whatever distinguishes productive, effective, relational exchanges from those that are unproductive and ineffective". The authors posit that commitment and trust (Achrol, 1991; Dwyer et al., 1987; Rotter, 1967; Schurr & Ozanne, 1985) are central to successful relationship marketing rather than simply being two independent variables that affect the outcome: the creation of value and distribution of wealth. One limitation of reducing business relationships to these virtues is apparent in such diverse works as Sullivan, Peterson, Kameda, and Shimada (1981), Dwyer et al. (1987) and Gercik

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<sup>38</sup> Carl Sewell is the USA's top luxury car dealer, living in Dallas, Texas. He owns a number of car franchises selling Cadillac, Hyundai, Lexus and Chevrolet. "His customer satisfaction scores are the auto-industry equivalent of a 3-minute, 30-second mile" (Peters cited in Sewell & Brown, 1990).

(1992). These authors' accounts of business relationships *oversocialise* economic activity. The authors are guilty of reducing business relationships to "either generalized morality or institutional arrangements" (Granovetter, 1985, p. 490). Despite the tendency to oversocialise business relationships the approach offers important contributions to the study of collaborative linkages. Concepts such as trust, close personal relationships, and the relationship lifecycle are expected to assist in the understanding of collaborative business relationships between firms in the value system.

### 3.5.4 Industrial networks

Discontinuities (Merton, 1968) between the industrial networks approach and the market channel literature are commonly espoused. Easton (1992), for example, summarises marketing studies of distribution channels as dealing with power and control between retailing and distribution functions. He stated that "the relatively narrow approach to inter-organisational activities could be taken and the assumption of a homogeneous channel could be justified" (p. 6). Until recently it has been rare for authors of industrial network literature to recognise contributions from marketing paradigms and vice versa.

Thorelli (1986), in offering one of the first paper on business networks in English, positions networks between markets and hierarchies. Networks were described as "two or more organizations involved in long-term relationships" (p. 37). Thorelli acknowledges contributions to the development of business networks from Aldrich and Whetten (1981), Benson (1975), Boissevain (1974), Fombrun (1982) and Provan (1983) in the field, he claims, of non-profit organisations. Thorelli also acknowledged "stimulating interaction with members of what may be called the Swedish School of Industrial Marketing", notably Mattsson, Håkansson, and Hammarkvist (p. 49).

Boissevain (1974) examined social networks in Sicily. The author suggested that the social relations "in which every individual is embedded<sup>39</sup> may be viewed as a network" (p. 24). Boissevain attributed the concept of social networks to Mitchell (1969). Mitchell, in reviewing the development of social networks, stated that networks as an analytical rather

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<sup>39</sup> Not to be confused with Granovetter's (1985) use of embedded.

than metaphorical concept (see Easton & Araujo, 1993) dates from 1954. Mitchell described a social network as “a net in which there are no loops but in which the arcs may be given values. In other words it is thought of as being finite, but there may be several links in either direction” (p. 3). Mitchell (p. 1) attributes the social network concept to Barnes, referring to his (1954) study of class and committees in a Norwegian island parish.

Barnes (1969) differentiated total networks from partial networks. He stated that total networks provide “information about the whole of the social life of the community to which it corresponds” (p. 56) whereas partial networks are “an extract of the total network based on some criterion applicable throughout the whole network” (p. 57). This distinction has more recently been ignored hence Easton’s (1992) comment that specifying network boundaries is problematic and will vary “depending upon the purpose” (p. 3), that is the specification of the partial network is contingent on the research objective.

The concept of social networks was then adopted for the description of nonprofit organisations (e.g., Van de Ven, 1976; Van de Ven, Walker, & Liston, 1979). A review of the field was presented by Aldrich and Whetten (1981). A network approach was also pursued concurrently in the political economy literature (e.g., Blau, 1964; Benson, 1975).

The IMP Group<sup>40</sup> established in the 1970’s (Axelsson & Easton, 1992, p. Xi) developed the interaction approach to marketing and purchasing problems. The IMP Group (1982) confronted the industrial buyer, single discrete purchase literature with the importance of business relationships. The relationship between buyers and sellers was recognised as often being close, may be long term and “involve a complex pattern of interaction between the two companies” (IMP Group, p. 1). Secondly, the group challenged the seemingly passive response attributed to industrial buyers recognising the existence of interaction between the parties. Third, they challenged the view that industrial markets consist of a large number of buyers and sellers instead stressing “the stability of industrial market structures” (p. 1) and fourth, they challenged the separation of industrial purchasing from industrial buying. The Group recognised the “similarity of the tasks of buyers and sellers in industrial markets”.

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<sup>40</sup> The Industrial Marketing and Purchasing Group involved collaborators<sup>40</sup> from France, Italy, Sweden, West Germany, and Great Britain, notably Cunningham, Ford, Håkansson, Hallén and Johanson (Håkansson, 1982).

Contributions to interorganisational theory which gave rise to the interaction approach are classified into three groups (IMP Group, 1982) as follows: organisation based studies (e.g., Aiken & Hage, 1968, Blau, 1957; MacMillan & Farmer, 1979); studies based on several organisations (e.g., Arndt, 1979; Assael, 1969; Benson, 1975; Blois, 1972; Cunningham & White, 1974; Levine, 1972; Macauley, 1963; Reve & Stern, 1979; Stern & Reve, 1980); and, studies of the organisation in a societal context (e.g., Aldrich, 1979; Levine & White, 1961; Terreberry, 1968; Van de Ven, Emmit, & Koenig, 1974). The interaction approach may, therefore, best be described as consisting of simultaneous independent discoveries (Merton, 1968). Notwithstanding independent discoveries, the IMP Group is attributed (Axelsson & Easton, 1992) as having had a significant effect on the way organisational researchers consider resource exchange processes in marketing and beyond. Significantly, the IMP Group “emphasised the important role that long-term, stable relationships play in industrial markets” (p. xi).

Despite noting the early use of business networks (Håkansson, 1982) it was not until the late 1980’s that the IMP Group realised “that it was inappropriate to focus solely on single relationships” (Ford, 1990, p.3). Ford acknowledged that the “study of business markets can be seen as a process of development” (p. 441). The IMP Group’s interaction approach was eventually recognised as being “far from complete” in that “no pair of firms operates in isolation from others” (Ford, p. 441).

The idea of industrial networks is attributed to Hägg and Johanson, and Hammarkvist, Håkansson, and Mattsson whose first contributions were published (in Swedish) in the early 1980s (see Axelsson & Easton, 1992; Håkansson & Johanson, 1988; Håkansson & Snehota, 1989; Johanson & Mattsson, 1988). Other early papers of note besides those from Jarillo (1987) and Thorelli (1986) are by Easton and Araujo (1986), and Johanson and Mattsson (1987b). The IMP Group (1982) identify other contributors as Levine and White (1961), Litwak and Hylton (1962), Evan (1966), Warren (1967), Marrett (1971) and Aldrich (1976, 1979). These authors considered relationships between organisations beyond the dyad. These latter contributions are, however, better regarded as an anticipation rather than a rediscovery (Merton, 1968).

Easton and Araujo (1986) stated that the central concept of the industrial networks approach is connectedness. They describe a network as follows:

If entities A and C are connected through entity B such that a change in A is, or could be, transmitted to C then there is the beginning of a network [Figure 3.14]. If the connectedness does not transmit through the intervening entity then a network need not be invoked [Figure 3.14b]. The collectivity can then be explained or modelled in terms of the aggregation of dyads it comprises. (p. 9)

Figure 3.14. Network transmission through connectedness between entities.

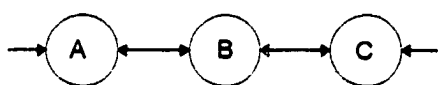


Figure 3.14a  
Connectedness transmitted

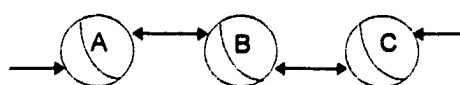


Figure 3.14b  
Connectedness not transmitted

*Note.* From "Networks, Bonding and Relationships in Industrial Markets," by G. Easton and L. Araujo, 1986, *Industrial Marketing and Purchasing*, 1 (1), 9.

Håkansson and Snehota (1995) distinguish between single-actor connectedness and network connectedness. Despite connectedness being transmitted between A and C (Figure 3.14a), the diagram represents a series of dyadic relationships. *Eventually* B's ability to control A or C will be dissipated. Benson-Rea and Lockhart (1996), therefore, described network transmission (Figure 3.14a) as single-actor connectedness and suggested that a network must contain multiple connectedness, illustrated in Figure 3.15a.

A distinction can now be made between networks and dyadic relationships: Networks display multiple connectedness. The focus of the network approach is, therefore, network connectedness involving relationships between firms. Easton and Araujo (1986) stated that vertical relationships, "those which serve the flow of goods or services from the initial supplier to the final consumer, are emphasised at the expense of lateral links" (p. 11). The vertical flow of goods and services does not exclude network



connectedness (as depicted in Figure 3.15a). However, relationships between intermediate buyers and suppliers must exhibit multiple connectedness, rather than single-actor connectedness - lateral links refer to service and other organisations.

Figure 3.15. Network transmission and multiple connectedness.

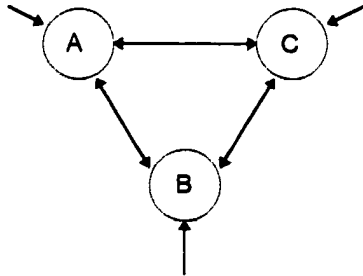


Figure 3.15a  
Network connectedness

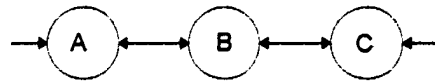


Figure 3.15b  
Single-actor connectedness

*Note.* From "Industrial Networks in New Zealand's International Business" (p. 3), by M. Benson-Rea and J. C. Lockhart, February, 1996, New Zealand Strategic Management Society, *Strategic Management Educators Conference*, Massey University, Albany Campus.

Benson-Rea and Lockhart (1996) state that "the definitions of industrial networks remain as near numerous as there are authors" (p. 2). Broad definitions such as Thorelli's (1986) or Easton and Araujo's (1986) describe a network as any linkage between two organisations. Whereas narrow definitions (Benson-Rea & Wilson, 1994; Håkansson & Snehota, 1995) identify strategic intent (Jarillo, 1987, 1993) and tighter interaction between more than two organisations. Benson-Rea and Wilson's definition of industrial networks is adopted for this study. The definition specifically identifies strategic objectives, multiple interconnectedness, and collaborative exchange:

An industrial network involves collaborative relationships between organisations to achieve strategic objectives relating to competitive, production and/or marketing positions. In addition, networks involve more than two companies and all parties are actively involved in various collaborative exchanges within the network. (p. 6)

## Relationships in industrial networks

Easton (1992) argues that relationships among firms is the very essence (*sine qua non*) of the industrial network approach. Network relationships are described in terms of five elements; their mutual orientation, dependence, bonds, investments, and atmosphere. Each of these elements are now discussed, a summary is presented in Table 3.1.

Cooperation between firms in an industrial network requires some complementarity between objectives (Hägg & Johanson cited in Easton, 1992). However, Easton surprisingly claimed that “complementarity of objectives is a rather abstract rationale for entering into a relationship” (p. 9). The defence of organisations persisting in business relationships in the absence of complementary objectives is sophist.

Table 3.1. Important characteristics of network relationship elements.

Element of a relationship	Attribute
Mutual orientation:	Requires cooperation
complementary objectives	Needs can be matched more accurately, adaptive process can be hastened
network access	Reduction of uncertainty, data conduit
Dependence on each other	Loss of autonomy
Bonds of various strengths:	Strong bonds are resistant to external and internal forces
economic	Self evident, but may be absent where networks are not of an economic nature
social	A significant factor in the strength of the relationship
technical	Characteristics of products and services exchanged
logistical	Adjustments made for transfer of products and services
administrative	Interface of systems
informational	The currency of networks, but differs from the social or technical dimensions
time based	Time patterns of critical activities
Investments made in the relationship	People and time
Atmosphere	The tension between conflict and cooperation

The relationship, and the network, are considered a valuable source of information. Relationships “serve as data conduits” (Easton, 1992, p. 9). Therefore, entering into a business relationship is likely to reduce uncertainty and increase stability, themselves “very valuable objectives” (p. 9) for some organisations. The second element of networks as

relationships is the dependence that each firm has on others. Easton suggested that dependence is “partly a matter of choice and partly a matter of circumstance” (p. 10). Dependence creates power and control. If power is held asymmetrically the relationship may be difficult to manage, and it is more difficult for the *junior* firm to accrue the benefits. Power, or influence are likely to be difficult to objectively measure. The difficulties of measuring power in a network setting are no different from those experienced when applying Porter’s (1980) five forces model, only the inherent assumption of cooperation instead of competition is different.

The bond between firms is the third element of relationships. Easton (1992) recognises that the strength of the bond may be difficult to measure and suggests that it may be defined in terms of the firms’ ability to withstand a disruptive force (Easton & Araujo, 1986). Bonds may be described as economic, social, technical, logistical, administrative, informational or time based. Mattsson (cited in Easton & Araujo) suggested that these types of bonds are not necessarily mutually exclusive. Therefore, the bond between two firms may be described as being both social and informational with the intention of developing into economic bonds. Weakly bonded networks are likely to be unstable, that is, the participants in the network change. That assumes the network is subjected to *similar* forces as others. Longevity appears to be a related characteristic. Hence, network structures are expected to be “stable not static” (Easton, p. 10).

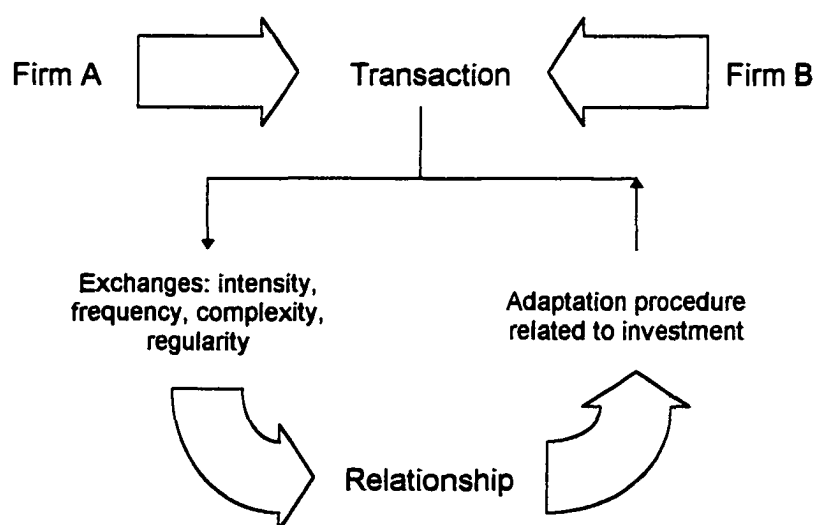
Easton (1992) acknowledges that the relationship between longevity and strength is not simple, however, of more importance than longevity is the influence that the bond has on participating firms. Stronger relationships are expected to influence the behaviour of firms. Conversely, weak relationships, although present, are not likely to influence the behaviour of firms to the same extent (cf., Granovetter, 1973). Here lies one of the weaknesses of industrial network approach. Easton claimed that “where any form of relationship may be held to exist among firms in an industrial system a network approach will be appropriate” (p. 11). This suggests that the theory may be used to describe all transactions (in Chapter Two the seemingly random collision of buyer and seller was dismissed as a theoretical position). The approach is being postulated as ubiquitous, the complete industrial network would include *all* firms.

The fourth element of relationships is investment (Easton, 1992). Investment in relationships will include traditional “hard investment” (p. 13). For which Easton provides the example of purchasing a new machine for the purpose of supplying a particular customer. However, the proponents of network theory appear to be more interested in *soft investment* (intangibles) - the resources of people and time. Investments in this manner are attributed to reduce transaction costs (costs associated with *recurring* transactions, see Chapter Two).

The fifth, and final element of relationships is atmosphere: the tension between conflict and cooperation. Easton (1992) suggested that this is inherent in any relationship because each party will be concerned that they are “receiving an equitable share of the benefits that are accrued” (p. 14). Relationships can, therefore, be described in terms of the mutual orientation between firms (objectives and data source), dependency, bonds, investment and atmosphere.

Easton (1992) states that relationships form the context in which transactions take place. On the one hand these relationships may be merely exchange, and on the other, they may be better regarded as an adaptational procedure. Adaptational procedures are closely related to the investment element of relationships (refer to Figure 3.16).

Figure 3.16. Adaptation procedure developing from business relationships.



Regular, frequent, and/or complex exchanges will influence the adaptation procedure. Implicit in this view is the realisation that strongly bonded relationships define networks.

Easton and Araujo (1986) also recognised, and distinguished between weak, potential and residual exchange relationships. Håkansson and Johanson (1992) describe networks in terms of three elements: actors, activities and resources. Actors are “those who perform activities or control resources” (p. 28) who may be individuals, groups, or organisations; activities, result from either transfer or transformation of resources; and resources, “have attributes in an unlimited number of dimensions” (p. 32). The three elements are related to each other in a network.

### Strategic networks

The network approach appears to have been developed in isolation from strategic management. Jarillo (1987, 1993) distinguished between the metaphorical networks used to “describe business transactions” and “something that entrepreneurs use purposefully to obtain a competitive advantage for their firms” (p. 32). He added the term strategic to networks, describing strategic networks as “long-term, purposeful arrangements among distinct but related for-profit organizations that allow those firms in them to gain or sustain a competitive advantage vis-à-vis their competitors outside the network” (p. 32). Therefore, competition supposedly occurs between networks (Easton, 1992; Doyle, 1995). The factors contributing to the development of strategic networks are presented as Figure 3.17.

Figure. 3.17. Factors contributing to the development of strategic networks.

		Integration costs	
		High	Low
Transaction costs	High	No transaction strategic network	Subsidiary
	Low	Export, subcontracting	Indifferent

Note. From *Strategic Networks: Creating the Borderless Organization* (p. 161), by J. C. Jarillo, 1993, Oxford: Butterworth-Heinemann.

Jarillo identified the contributors to networks in a strategic sense as MacMillan and Farmer (1979), Miles and Snow (1984), and Johanson and Mattsson (1987b). More recent contributions to the strategic view of industrial networks include Snow, Miles, and Coleman (1992), and Zaheer and Venkatraman (1995). Notwithstanding the later discussion of contingency variables in Section 3.6.2, Miles and Snow's evolution of organisational form is presented as Table 3.2.

Table 3.2. An evolution of organisation forms depicting product-market strategy, structure and core activating and control mechanisms.

	Product-market strategy	Organisation structure	Inventor or early user	Core activating and control mechanisms
1800	Single product or service. Local/regional markets	Agency	Numerous small owner-managed firms	Personal direction and control
1850	Limited, standardised product or service line. Regional/national markets	Functional	Carnegie Steel	Central plan and budgets
1900	Diversified, changing product or service line. National/international markets	Divisional	General Motors; Sears, Robuck; Hewlett-Packard.	Corporate policies and division profit centres
1950	Standard and innovative products or services. Stable and changing markets	Matrix	Several aerospace and electronics firms (e.g., NASA, TRW, IBM, Texas Instruments)	Temporary teams and lateral resource allocation devices such as internal markets, joint planning systems, etc.
2000	Product or service design. Global changing markets	Dynamic network	International/construction firms; Global consumer goods companies; Selected electronics and computer firms (e.g., IBM)	Broker-assembled temporary structures with shared information systems as basis for trust and coordination

*Note.* From "Fit, Failure and the Hall of Fame," by R. E. Miles and C. C. Snow, 1984. *California Management Review*, 26 (3), p. 19.

Johanson and Mattsson (1987b) compared the industrial networks approach with the theory of transactions costs. The authors noted that managers are assumed to actively pursue exchange relationships to gain access to external resources and to sell products. "A basic assumption in the network model is that the individual firm is dependent on resources controlled by other firms" (p. 36). Johanson and Mattsson suggested that the "firm gets

access to these external resources through its network position” - a strategic position - a preferred strategy to be pursued by the disaggregated industrial firm (Lewis, J. D., 1990; Snodgrass, 1993). The network strategy is postulated as a means of enhancing the competitive position of the firm, reducing transaction costs and suppressing the need for integration.

Exchange relationships need to be pursued with collaborators. Strong relationships reduce search costs, and products can be conjointly designed, therefore, adding value. Hamel, Doz, and Prahalad (1989) identified collaboration between competitors “as a low cost route for new competitors to gain technology and market access” (p. 133). Entry into an alliance does not mark a change in competitive goals, merely a change in competitive tactics. The cost of strong relationships is mutual dependence; networked firms forgo the flexibility supposedly offered by market-place transactions. Jarillo’s (1987, 1993) significant contribution to the approach was to propose that industrial networks are a deliberate strategy available to the firm.

Thorelli (1986) postulated that a number of strategic issues may be better understood if examined in a network context, including those associated with international business (Axelsson & Johanson, 1992; Johanson & Mattsson, 1987a, 1990; Jarillo, 1987, 1993; Thorelli, 1986). The approach has been successfully used to study the internationalisation process of industrial firms (Johanson & Mattsson, 1988), the results of which were compared with the transaction cost approach (Buckley & Casson, 1976) and the Uppsala Internationalisation Model (Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975). Johanson and Mattsson reported that both the transaction cost model and the internationalisation model “leave out characteristics of the firm and the market which seem important in the case of ‘global competition’ and co-operation in industrial systems” (p. 310). The authors concluded that the network approach may be used to study the cumulative nature (Fornell, Lorange, & Roos, 1990) of international networks (entry strategies, initiatives, ambition); and, for analysing “how to build preparedness for action when the time is ripe” (p. 311).

The network approach is not without criticism (see Salancik, 1995). Salancik criticises the approach for failing to predict the development of activities or alternate

structures between such actors. Lack of prediction was also noted by Easton (1992). Easton was mindful to label it an approach rather than a theory, in doing so he avoids the predictive implications associated with theory. The approach is also expected to describe all transactions and, therefore, relationships between firms not engaged in either market or hierarchical transactions. More recent definitions, however, narrow the scope of networks to firms engaged through multiple connectedness (Benson-Rea & Lockhart, 1996; Benson-Rea & Wilson, 1994; Håkansson & Snehota, 1995). To date the approach has been primarily used to describe various activities between actors (e.g., Zuscovitch, Héraud, & Cohendet, 1988) with the assumption that transaction costs decline in circumstances of stable relationships. The network approach also provides a contrast to economic models of resource dependency (Pfeffer & Salancik, 1978) in that, at the cost of mutual dependence, firms in an industrial network gain access to resources without acquiring ownership.

Easton (1992) observes that the network perspective provides a contrast to Porter's (1980) model of industry structure. Porter was largely concerned with competitive linkages between firms; rivalry being postulated as a source of competitiveness. However, these two views of industry analysis aren't entirely antagonistic. Porter provides a broad framework from which to examine an industry albeit from the perspective of competitive linkages between firms (e.g., Lorigan & Harman, 1990). The network perspective, on the other hand, examines the industry from the perspective of collaborative linkages between firms. However, elements of competitive linkages such as bargaining power are still likely to remain.

Relationships in international networks ought to result in the evolution (Gadde, 1993) of strategies in response to other participants (Astley & Fombrun, 1983) rather than predetermined strategies emanating from headquarters in the home-base location (Johanson & Mattsson, 1988). Implementation of strategies in foreign locations may develop laterally throughout the *product net* (Johanson & Mattsson, p. 311). Networks can be described in terms of the relationships between firms. Relationships have five elements and are likely to progress from ones of simple exchange to adaptational procedures enveloping firms' practices. The proximity of the relationship<sup>41</sup> is also likely to have some

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<sup>41</sup> One characteristic of relationship proximity is whether they are direct or indirect. A firm has more indirect relationships than direct, and the effect of these indirect relationships is postulated to decline with *distance* (Easton, 1992, p. 16).



effect on the adaptational procedure. Three elements exist within a network actors, activities and resources.

The industrial networks approach must be developed into a real, quantified, and operationalised theory. Easton (1992), Koenig and van Wijk (1991), and Maitland, Bryson, and Van de Ven (1985) identify the middle ground, albeit at the expense of being quantitative or prescriptive. Few authors appear to recognise this dilemma.

Industrial networks, positioned between Williamson's (1975) markets and hierarchies, "represent a viable pattern of economic organization" (Powell, W. W., 1990, p. 295). The industrial network perspective is, therefore, an appropriate domain from which to examine New Zealand's land-based export-dependent value systems. More so because the approach has previously been used to study the process of internationalisation (Håkansson & Johanson, 1988; Johanson & Mattsson, 1988). The problem of boundary definition, a common criticism of the approach, is overcome by focussing on the value system. Inclusion of organisations within the network must remain sufficiently loose (i.e., ignore the strict network definition) to ensure that all stages in the value system are considered. For example, the dyadic relationship commonly observed between land-based producers and first stage processors would exclude most producers from a *network* study. Further, strict adherence to a network approach would focus on the space between organisations in the value system, to the exclusion of strategy - value appears to be created at both sources.

### 3.6 BUSINESS STRATEGY

**S**TRATEGY, derived from the Greek word *strategos*, means "the art of a commander-in-chief; the art of projecting and directing the larger military movements and operations of a campaign" (Onions, 1944, p. 2145). The word has been used in a military sense from the end of the 18th Century (Matloff, 1974). Strategy in the context of business is, by comparison, a "newcomer" (Ansoff, 1980, p. 131) having been used for only three decades (Whittington, 1993). During that time the definition of strategy has evolved from one of largely deliberate intent (e.g., Ansoff, 1965; Andrews, 1971; Hofer & Schendel, 1978) to one that also encompasses emergent

intent (Johnson, G., 1988, 1992; Mintzberg, 1978, 1990; Porter, 1991). More recently Normann and Ramirez (1993) have simply stated that “strategy is the art of creating value” (p. 65) while Grant (1995) states that “strategy is about winning” (p. 3).

Whittington (1993) dates the beginning of business strategy<sup>42</sup> as “a coherent discipline” to the early 1960s, which he identifies from the writings of Chandler (1962), Sloan (1963), and Ansoff (1965). Mintzberg (1994) also traces the development of business strategy to that period. He identifies early contributions as important similarly from Ansoff, (1965) and from Learned, Christensen, Andrews, and Guth (1965). The latter contribution is described as “the original Harvard textbook” on business strategy (Mintzberg, p. 39).

Strategy was defined by the early contributors as the analytical process the firm uses to set and meet long-term goals. More specifically, Chandler (1962) defined and elaborated on strategy as “the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for these goals” (p. 13). Sloan (1963) stated that “the strategic aim of a business [is] to earn a return on capital, and if in any particular case the return in the long run is not satisfactory, the deficiency should be corrected or the activity abandoned for a more favorable one” (p. 49). Ansoff (1965) stated that strategic questions include “what are the firm’s objectives and goals; should the firm seek to diversify... and how should the firm develop and exploit its present product-market position” (p. 6).

Early contributors to the field provided both positive and normative<sup>43</sup> (prescriptive) approaches to strategy formation (Ansoff, 1991). Chandler (1962) and Sloan (1963), largely, reported on business strategy in case study firms, while Ansoff (1965) provided a theoretical model to assist strategy formulation. Chandler, Sloan, Ansoff, and their Harvard colleagues (Learned et al., 1965) gave rise to the deliberate -

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<sup>42</sup> A concise summary of the development of the concept of business strategy and its relationship to strategic management is provided by Bracker (1980).

<sup>43</sup> Normativism provides a methodological basis concerned with what ought to be (Johnson, 1986). Within normative knowledge distinctions can be made between prescriptive knowledge and knowledge about values (Lewis, C. I., 1955). Positivism is concerned with what is, and is value free. Values are “widely regarded by positivists as emotive or as figments of the imagination” (Johnson, G. L., 1986, p. 32). It is now

Design School (Mintzberg, 1990) or explicit (Ansoff, 1991) - view of business strategy. Their view, best characterised by Andrews (1971, 1980, 1987) is one of largely deliberate intent.

Miles and Snow's (1978) and Mintzberg's (1978) views were the first to differ significantly from the deliberate view of strategy. Miles and Snow suggested that strategy is "more of a pattern or stream of major and minor decisions about an organization's possible future domains. Further, these decisions take on meaning only as they are implemented through the organization's structure and processes" (Miles & Snow, p. 7). Mintzberg observed that "strategy formation over periods of time appears to follow distinct regularities" (p. 941). Later Mintzberg and Waters (1985) argued that the process of strategy formulation should consider the "variety of ways in which strategies actually take shape" (p. 257). Mintzberg and Waters distinguished "*deliberate* strategies - realized as intended - from *emergent* strategies - patterns or consistencies realized despite, or in the absence of, intentions" (p. 257). Therefore, strategy may be viewed as both the firm's deliberate intent - represented by plans - and emergent intent - represented by behaviour.

Mintzberg (1994) identifies five separate uses of the word strategy, presented as Figure 3.18. He identifies strategy as firstly, "a plan, or something equivalent - a direction, a guide or course of action into the future" (p. 23) and secondly, "a pattern, that is, consistency in behavior over time". Next, Mintzberg identifies strategy as position (Porter, 1980, 1985), "namely the determination of particular products in particular markets" and strategy as perspective, "namely an organizations way of doing things" (p. 27). Finally, he identifies strategy as ploy, "a specific maneuver intended to outwit an opponent" (p. 29); questioning whether realised strategies must be intended.

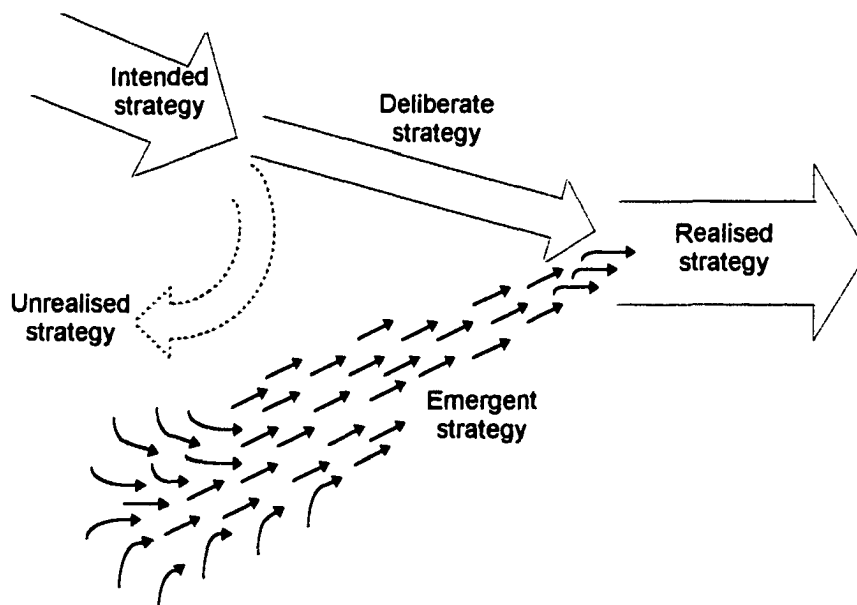
Quinn's (1977, 1980) research on strategic goals suggests that business strategy is seldom deliberate. Quinn stated that executives adopt "incremental 'muddling' processes" (1977, p. 3) outside the structure of formal management systems and techniques recommended by Design School adherents. The concept of strategy was,

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"widely recognized that postivism places severe constraints on the social sciences concerned with explaining the behaviour of people and groups" (p. 33).

therefore, extended beyond the predetermined specification of an organisation's goals and the acquisition and allocation of resources to achieve these goals: what an organisation wants to achieve, and how it intends to do so (Shirley, 1982). Strategy now includes the pattern of decision making associated with implementation: what an organisation does (Robbins & Barnwell, 1994). This latter view holds that an organisation's strategy may be "inferred from its behavior" (Miles & Snow, 1978, p. 7).

Figure 3.18. Sources of strategy, plans and processes.



Note: From *The Rise and Fall of Strategic Planning* (p. 24), by H. Mintzberg, 1994, New York: Free Press.

Bailey and Johnson (1992, 1995) have recently reviewed the strategy development process. They rationalise the contributions of deliberate intent and emergent behaviour and identify other factors that contribute to the strategy formulation process as political (Pfeffer & Salancik, 1978), cultural (Johnson, G., 1992), visionary (Ohmae, 1982; Trice & Beyer, 1986), and natural selection (Aldrich, 1979).

Early contributors to business strategy presented absolute positions of either deliberate or emergent intent. Only recently have authors such as Andrews (1987), Mintzberg (1990, 1991), and Ansoff (1991) included contributions from alternate schools in their modified views of business strategy. Ansoff's discussion of deliberate

strategy reviews three decades of evolution in thought and practice. Deliberate strategy is not necessarily “rigid and does not foreclose attention to new opportunities which are outside the scope of strategy” (p. 458). The deliberate view of business strategy has, therefore, been broadened to include notable elements of a firm’s emergent behaviour. No doubt emergent contributions such as those from Miles and Snow, Mintzberg, and Quinn have contributed to this process. Some authors, however, merely include both views of strategy in a definitional potpourri (see Duncan, Ginter, & Swain, 1992, p. 14; Robbins & Barnwell, 1994, p. 108) leaving the reader with the impression that near anything goes.

Strategic control, argues Ansoff (1991), provides the organization with a means of correcting errant and ineffective strategy. It also provides a critical feedback to enhance organisational learning. Inclusion of control ensures that deliberate business strategy is now viewed as a cyclical process - formulation, implementation, control, formulation.... Formulation resulting from deliberate intent, implementation resulting in emergent intent.

Ansoff (1991) also attempted to identify the environmental conditions in which alternate models of business strategy may prevail. The “key contextual variable” is the “concept of environmental turbulence<sup>44</sup>” (Ansoff, p. 459). Ansoff considers that the emergent model is a “valid prescription for organizations which seek to optimize their performance in environments in which strategic changes are incremental and the speed of the changes is slower than the speed of the organizational response [italics removed]” (p. 459). Ansoff adds that this domain accounts for some 20% of organisations, in particular those involved in “not-for-profit” (p. 460). The balance, some 80%, of environmental conditions are “discontinuous”. Those organisations that adopt an emergent strategy in a discontinuous environment “will not be among the successful performers” (p. 459). Discussion of the relationship between deliberate and emergent strategies is developed further in Section 3.6.3.

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<sup>44</sup> Ansoff (1991) cleaves environmental turbulence into incremental, which describes a domain where “the change process, and the speed of the changes is slower than the response time of the organization” and discontinuous, which describes a domain where “successive changes are discontinuous from the preceding ones, and speed of change is greater than the speed of the organizations’ response” (p. 459) (see Section 3.6.3).

Hamermesh (1990) identified three levels of strategy; corporate, business, and institutional. Corporate strategy refers to the determination of businesses in which an organisation will participate and the resource allocation between these businesses. Business strategy refers to “the determination of how a company will compete in a given business and position itself amongst its competitors” (p. 308). Hamermesh’s institutional strategy ought to be referred to as an organisation’s culture (Robbins & Barnwell, 1994; Sinclair, 1993). Johnson and Scholes (1988) also identified corporate and business levels of strategy. However, their third level of strategy was described as operational strategy: “concerned with how different functions of the enterprise - marketing, finance, manufacturing and so on - contribute to the other levels of strategy” (p. 9).

A diversified company consisting of several business units has two levels of strategy: corporate strategy and business strategy. Corporate strategy concerns “what businesses the corporation should be in and how the corporate office should manage the array of business units” (Porter, 1987, p. 43). Therefore, corporate strategy provides “the overall plan for a diversified company”. Porter refers to business strategy as business unit or competitive strategy. Porter’s definition of business strategy is similar to those offered by Hamermesh (1990), and Johnson and Scholes (1988). Whether organisations have further levels of strategy beyond corporate and business appear to be a matter of choice. The specification of additional levels of strategy, however, serves to distract from the umbrella plan, whether deliberate or emergent, engendered by the term.

### **3.6.1 Management**

Strategic management ought to relate strategy to management: strategy being intent, strategic management being the process of formulating and operationalising intent (Asch & Bowman, 1989; Gluck, Kaufman, & Walleck, 1980, 1982). One of the better definitions of management has been provided by Dillon (1980). Dillon defined management, in the context of farming, “as the process by which resources and situations are manipulated by the farm manager in trying, with less than full information, to achieve his goals” (p. 258). Giles and Stansfield (1980) suggested that it may be more helpful to think in terms of management applied to farms rather than farm management as a subject in its own right, management being regarded as the “common province” of all sciences

(Meij, 1965). Therefore, Dillon's definition of management need not be confined to the management of farms. Management is regarded as the component of the firm responsible for the manipulation of the entire resource bundle, including itself: management can be enhanced, educated, hired and fired.

Fayol (1916/1949), a general administrative theorist, is commonly accepted (see Mintzberg, 1989; Robbins & Mukerji, 1994) as first to formalise the functions of management. Fayol described management as planning, organising, commanding (leading), coordinating, and controlling. However, these five functions are typically condensed to four: commanding is omitted (Robbins & Mukerji). In farm management (Boehlje & Eidman, 1984; Parker, Gray, Lockhart, & Townsley, 1994) and other small business disciplines, where management and labour are considered one and the same, the functions are further reduced to three: planning, implementation, and control. Fayol considered that "thinking out a plan and ensuring its success is one of the keenest satisfactions for an intelligent man to experience. It is also one of the most powerful stimulants of human endeavour" (Fayol, p. 39).

The need for planning arises from three basic considerations. First, goals are to be achieved, namely the organisation has some purpose (Robbins & Mukerji, 1994) second, resources available to meet these goals are limited and third, the resources available have alternative uses. Planning includes the specification of an organisation's goals (Abell, 1980), and the establishment of "an overall strategy to achieve these goals" (Robbins & Mukerji, p. 7). Management's role as organising refers to the "design of an organisation's structure" (p. 8) and includes the allocation of tasks, their groupings, reporting procedures, and decision making protocol. Leading refers to directing and motivating personnel. Because unforeseen events occur implementation rarely proceeds as planned. Management controls the organisation by comparing planned targets with the outcome. With the view of, supposedly, returning the organisation to the state planned when deviations occur. Mintzberg (1973), however, provided a positive view of management, later arguing that Fayol's normative functions "tell us little about what managers actually do" (Mintzberg, 1975, p. 31). Consequently, Dryden (1995) and Gray and Lockhart (1996) described farm management from a positive perspective.

### 3.6.2 Strategic management

The study of business strategy is an academic distraction if consideration of the firm's activities are then ignored. Strategy is a part, albeit an important one, of strategic management. Strategic management operationalises (Bracker, 1980) business strategy. Some renowned authors (e.g., Rumelt, Schendel, & Teece, 1994) use the terms strategy and strategic management interchangeably which serves to confuse action from process. If a deliberate view of strategy is held strategy only provides the planning function to strategic management. If an emergent view is held strategy provides an implementation function. However, if a more holistic view of strategy is held business strategy provides planning and contributes to the implementation function of strategic management. Nevertheless, a distinction ought to be observed between business strategy and strategic management: strategy is the action (pattern or intent) whereas strategic management is the process that manager's subsequently pursue.

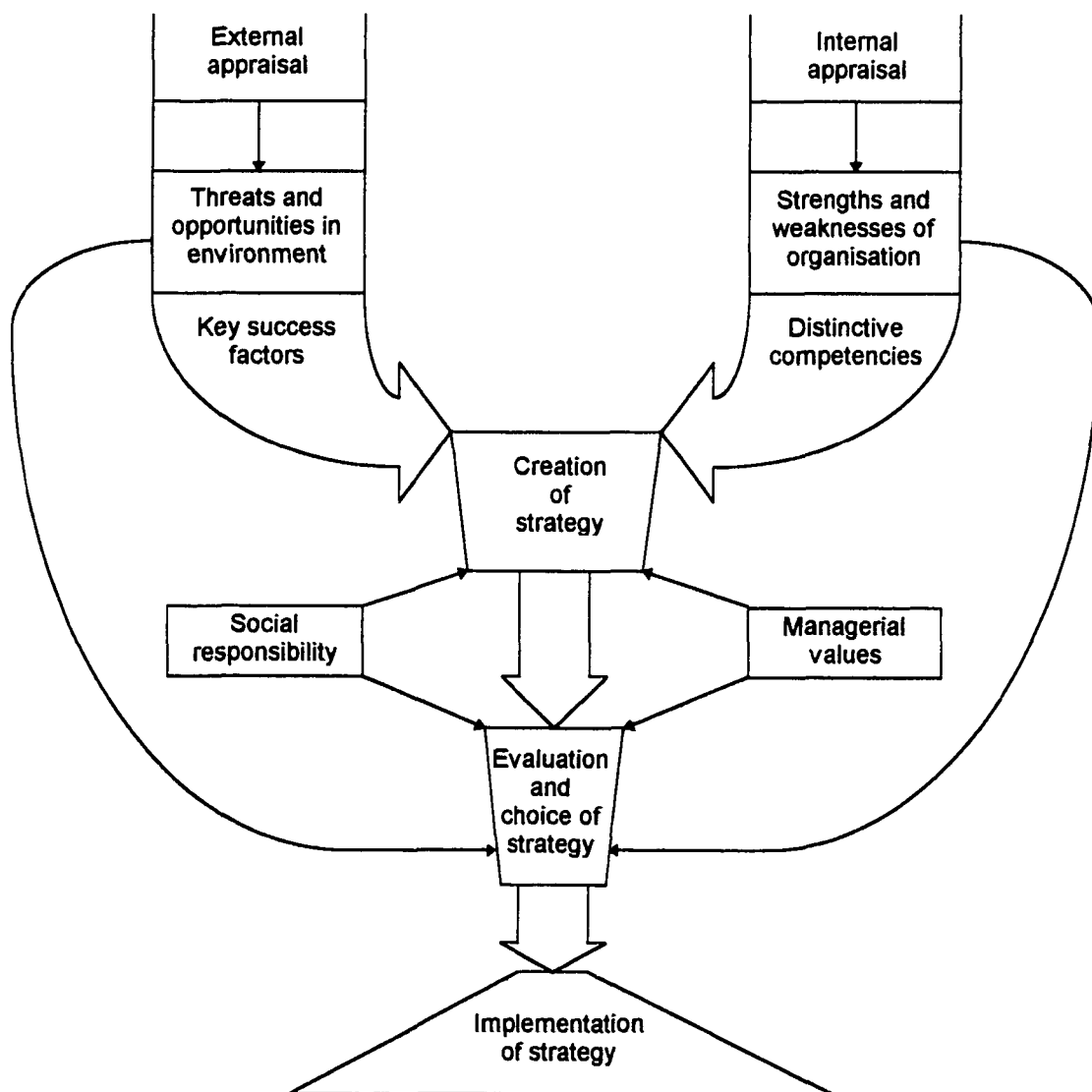
Managers are most often involved with operational control (Johnson & Scholes, 1988). But while it is "vital to the effective implementation of strategy it is not strategic management" (p. 10). Strategic management is concerned with deciding on strategy, both deliberate (Chandler, 1962) and emergent (Mintzberg, 1994), "planning how the strategy is put into effect" (Johnson & Scholes, p. 10), implementing, and then evaluating that strategy (Robbins & Mukerji, 1994).

The aim of strategic management is to achieve *fit* (Andrews, 1987; Johnson & Scholes, 1988) between environmental opportunities and threats, and the organisation's resources and capabilities. By identifying the organisation's capabilities, and taking on tasks appropriate to these capabilities, the organisation appears to take advantage of external opportunities and can, therefore, avoid external threats. In doing so, the firm seeks to "match" (Collis & Montgomery, 1995, p.121) what it can do with what it might do. Further, strategic management is concerned "with organisation-wide issues in the context of a whole range of environment influences" (Johnson & Scholes, p. 17). In doing so the organisation develops strategy consistent with the external environment.



The Design School Model (Andrews, 1980) focuses on the “creative act of putting together a company’s unique internal capability and evolving opportunity in the external world” (Andrews, 1971, p. 100). Minor emphasis is drawn to managerial values and social responsibility (Mintzberg, 1990). Implementation, in this model, refers to “a series of subactivities which are primarily administrative” (Andrews, 1980, p. 98). Strategic control, as mentioned by Ansoff (1991), is not depicted in Figure 3.19.

Figure 3.19. The Design School model of business strategy.



*Note.* From “The Design School: Reconsidering the Basic Premises of Strategic Management,” by H. Mintzberg, 1990, *Strategic Management Journal*, 11 (3), p. 174.

The relationship between strategy and strategic management is identified in various models of strategic management (see Johnson & Scholes, 1988; Robbins & Mukerji, 1994). Strategic management is described as a process encompassing the functions of planning, implementation, and evaluation (control). The first function of strategic management - planning - invariably describes the formulation of levels of business strategy (Hamermesh, 1990; Johnson & Scholes). Therefore, the Design School model overlaps the first steps of the model of strategic management. Implementation, the second function, no longer refers to the administration of strategy, as in Figure 3.19, but to all activities undertaken by the firm to achieve its mission and strategies. The evaluation function describes the comparison of strategic targets with those planned.

Despite strategic management being described as a series of sequential functions the process is iterative and indiscrete. All feedback relations have been omitted from Figure 3.19. Johnson and Scholes (1988) stated that there is a “danger in thinking of the process of strategic management as a specific, orderly sequence of steps” (p. 16). Accordingly their diagram of the process resembles a fairground balloon seller. That strategic management is considered a process, “a continuous and regular action or succession of actions” (Onions, 1944), should not be left to chance.

Chandler’s (1962) contribution that structure follows strategy is, supposedly, only one determinant of business structure. Study of the determinants of organisational structure is known as the contingency<sup>45</sup> approach (Fry & Smith, 1987; Schreyögg, 1980; Tosi & Slocum, 1984). The contingency approach seeks to identify variables that determine organisational structure. For example, if structure is contingent on strategy, a change in strategy will result in a change in structure. The underlying assumption is that aligning structure with contingent variables enhances the achievement of an organisation’s goals (Robbins & Barnwell, 1994). Contingent variables have been identified as strategy (Chandler, 1962; Miles & Snow, 1978; Miller, D., 1986; Pugh, Hickson, & Hinings, 1969), size (Blau, 1970; Child, 1973; Meyer, M. W., 1972; Pugh, Hickson, Hinings, & Turner, 1969), technology (Woodward, 1965; Harvey, 1968), the

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<sup>45</sup> Contingent appears to have been in preference to dependent because researchers rarely assigned direction to their analysis. Relationships were identified, not cause and effect.

environment (Emery & Trist, 1965; Mintzberg, 1979), and alignment (Powell, T. C., 1992).

The contingent variables have attracted fair criticism, and in some cases refuted (e.g., Ford & Slocum, 1977; Keats & Hitt, 1988). Schreyögg (1980) states that a variety of structures are adequate. He argues that first, there is no such thing as one best fit. The one consistent reason for specific structures is internal efficiency. Second, organisations “try to shape the environment along desired lines” (p. 310). Finally, organisations must achieve some minimum level of economic performance. “The survival of the system [organisation] will be threatened only if it persistently performs below this level, rather than if it falls short of maximum performance” (p. 312). Despite its shortcomings the contingency approach has had a major influence on the strategic management discipline. The influence is perhaps best evident in the search for fit between the external environment and the organisation’s resources - structure being contingent on environment.

Collis and Montgomery (1995) state that views of strategy formulation have focussed alternatively between the external environment and the firm’s resources. Concerns with the external environment result in examination of industry profitability (Porter 1980, 1985), whereas concerns with the firm’s resources result in examination of capabilities (Hamel & Prahalad, 1988), competencies (Prahalad & Hamel, 1990), learning (Benito & Gripsrud, 1992; Senge, 1992), and knowledge (Hedlund, 1994; Wikström & Normann, 1994). Both models have deficiencies: Singular concern with industry ignores a firm’s resources and management capability while concern with the firm’s resources ignores the external environment (Collis & Montgomery). The resource-based view of the firm (RBV) attempts to combine internal analysis of resources and management with external analysis of environment and industry (Collis & Montgomery; Tallman, 1991).

The RBV “explains how a company’s resources drive its performance in a dynamic competitive environment” (Collis & Montgomery, 1995, pp. 118-119). Proponents of RBV (Conner, 1991; Dierickx & Cool, 1989; Grant, 1991a; Hall, R.,

1993) argue that “superior performance... [is] based on developing a *competitively distinct* set of resources and deploying them in a well-conceived strategy” (p. 120).

Barney (1991) recognised that resources are heterogeneously distributed and that this resource distribution is stable over time. The alternate view that firms have homogeneous resources and these are mobile over time is not tenable with competitive advantage. Amit and Schoemaker (1993) identified these resources as *strategic assets*. RBV is concerned with the accumulation of assets and asset specificity (Peteraf, 1993), a position of internal strength relative to competitors. In doing so RBV provides a procedure to developing fit between internal resources and the external environment.

RBV has recently been redefined in terms of organisational capability (Collis, 1995; Prahalad & Hamel, 1990; Stalk, Evans, & Schulman, 1992). The organisational capability literature acknowledges the need to “continually innovate valuable new features” (Collis, p. 2). Organisational capability recognises that companies compete on time. Therefore, a temporal dimension is imposed on the disposition and mobility of an organisation’s resources. Established competitors, argue Stalk et al., are “out-manuevered and overtaken by more dynamic rivals” (p. 60). However, Hamel and Prahalad (1994) observe that leadership in “new industries is seldom built in anything less than 10 - 15 years” (p. 34). No doubt speed is important but the concept of speed, at the exclusion of factors, suggests an organisation spinning in ever-diminishing circles.

### **‘New age’ strategic management**

Hamel and Prahalad (1989) observed that “as ‘strategy’ has blossomed the competitiveness of Western companies has withered” (p. 63). The authors added that the application of concepts such as strategic fit, generic strategies, and levels of strategy appear to have hindered the pursuit and attainment of competitive advantage. The conventional strategic management paradigm is one of strategy as strategic fit. An alternate approach to strategic management is provided by Hamel and Prahalad (1993, 1994): the paradigm of stretch and leverage.

Hamel and Prahalad (1989) contrasted two models of business strategy observed amongst senior managers in America, Europe and Japan. The first model, as discussed earlier in this Section, focuses on the maintenance of strategic fit. The second model focuses on leveraging resources. Both models attempt to address competition from the perspective of an organisation's limited resources. The first model, however, implicitly trims "ambitions to match available resources" (p. 65). But where the conventional model of strategic management passively accepts the external environment management adopting the second model is charged with creating the environment. To summarise, the conventional model of strategic management seeks opportunities within given constraints, the second model seeks to overcome constraints given opportunities.

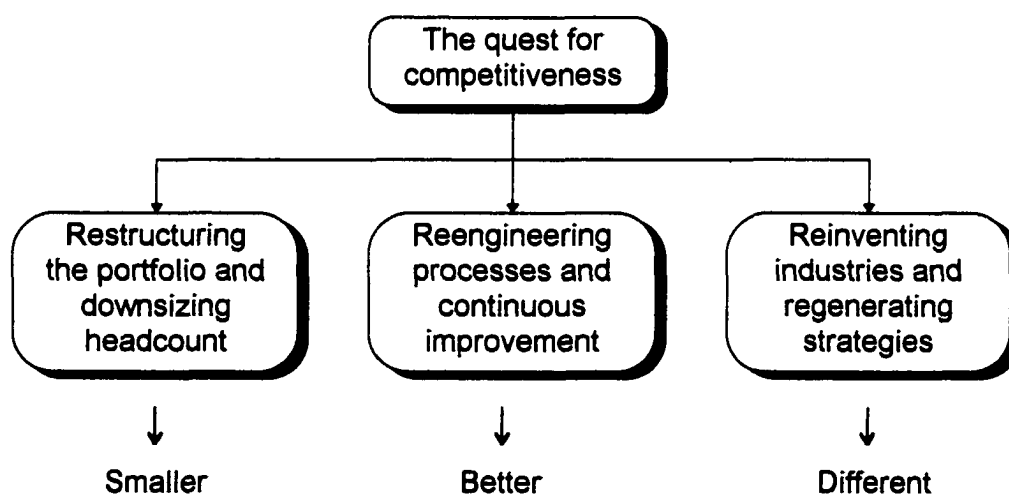
Hamel and Prahalad (1993) stated that "companies that have risen to global leadership over the past twenty years invariably began with ambitions that were out of all proportion to their resources and capabilities" (p. 64). The authors termed the desire to win at all levels *strategic intent*. Ambitions of Japanese companies such as 'Encircle Caterpillar', 'Beat Xerox', were identified as expressions of strategic intent (p. 63).

Hamel and Prahalad's (1994) text, *Competing for the Future*, presents a synthesis of the stretch and leverage paradigm developed, largely, from their earlier work (Hamel, Doz, & Prahalad, 1989; Hamel & Prahalad, 1985, 1988, 1989, 1991, 1993; Prahalad & Hamel, 1990). Hamel and Prahalad (1994) argue that organisational transformation (denominator management) is inadequate, the organisation must "take charge of the process of industry transformation" (p. 19). Senior management's responsibility is described as one of "reinventing industries and regenerating strategy, not reengineering processes" (p. 19) - strategy that seeks rather than abhors change. Hamel and Prahalad suggest that understanding the forces of competition only enables a firm to catch-up; industry structural analysis (described in Section 3.4) identifies the "*what* of competitiveness" (Hamel & Prahalad, 1994, p. 75), it does not identify the "*why*". Management must understand why competition exists to get ahead, presented as Figure 3.20.

Competencies were identified as the root of competitiveness by Prahalad and Hamel (1990). Short run competencies were then identified and distinguished from long run competencies. An organisation's competitiveness is derived "from price/performance

attributes of global products” (p. 81) in the short-run. A state that is transient as all companies converge on similar standards, an idea recognised by D’Aveni (1995). In the long run an organisation’s competitiveness is, however, derived “from the ability to build, at lower cost and more speedily than competitors, the core competencies that spawn unanticipated products” (p. 81). Core competencies were identified as “the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies” (p. 82). Hamel & Prahalad (1991) suggested that “to realize the potential that core competencies create” an organisation must have the “imagination to envision markets that do not yet exist and the ability to stake them out ahead of the competition” (p. 82). The term collective should not be ignored. Collective marks a significant departure from corporate leadership (Zaleznik, 1992) in that collective ensures that employees, at all levels, are involved in and take ownership of the process (Senge, 1992; Trice & Beyer, 1986).

Figure 3.20. The quest for competitiveness.



*Note.* From *Competing for the Future* (p. 15), by G. Hamel and C. K. Prahalad, 1994, Boston: Harvard Business School.

The implications of strategy as stretch and leverage are that firstly, the organisation’s management is responsible for creating the external environment rather than passively accepting the existing domain. Secondly, organisational structures (challenged by Hamel & Prahalad (1991) in core competencies) ought to provide internal efficiency, measured by the

establishment and maintenance of core competencies. The third implication is that strategy is neither singularly explicit nor emergent but a combination of both. Strategic intent is clearly explicit, its achievement will involve strategic activities that are deliberate, and those that are emergent. Fourth, the organisation must be receptive to both learning and change. The space between the organisation's current position with respect to competitiveness and its strategic intent must by necessity involve change, and the ability to learn. Finally, only a global strategy will provide a long term competitive position. Domination of regional markets only serves to attract cross-subsidisation from organisations domiciled elsewhere (unless they are somehow protected, or geographically unattractive).

Coster (1996) reported that the paradigm of stretch and leverage lacks a structural framework. Hamel and Prahalad (1994) describe the conceptual development of the paradigm (which is not confined solely to their efforts), but they offer little guidance in putting the strategy into practice (Coster). For example, revitalising managerial frames, developing industry foresight, and creating strategic architecture are reported as anecdotal accounts rather than processes which either practitioners may follow or academics scrutinise. These limitations appear to restrict the immediate adoption of the paradigm elsewhere.

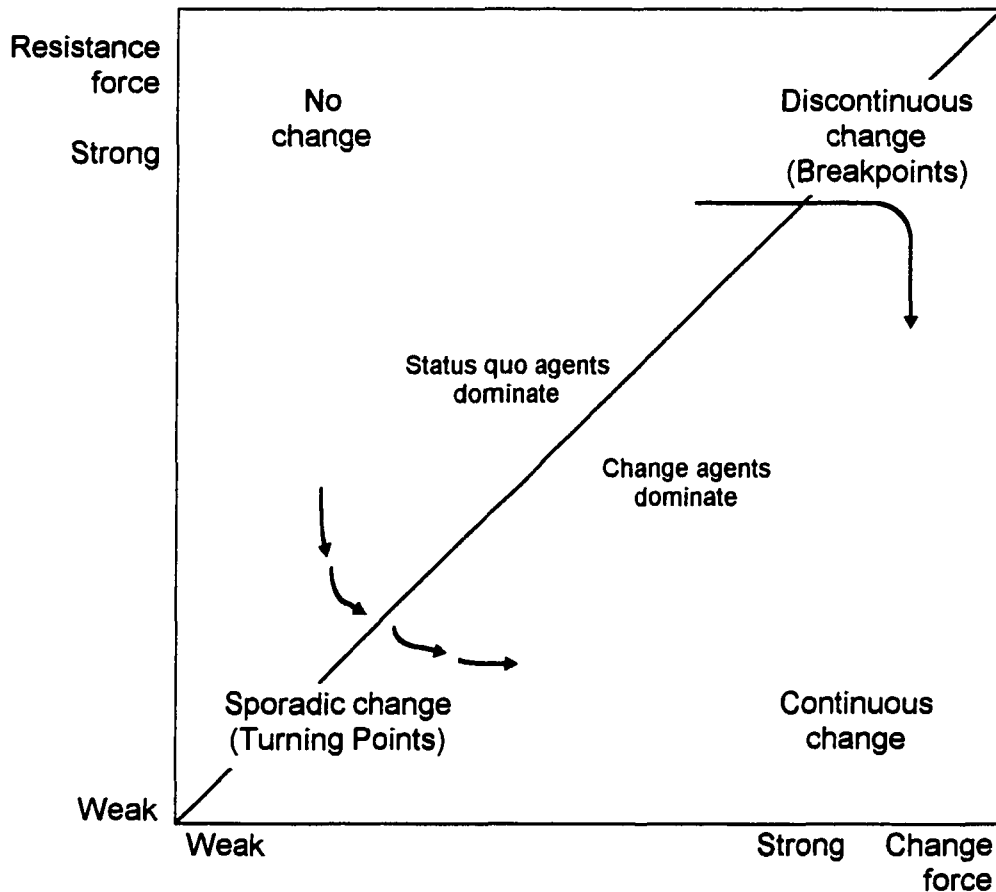
Hamel and Prahalad's (1993, 1994) view of strategy as stretch and leverage is at the radical - *new age* - end of strategy based on the managerial conviction of creating the future. It provides a much needed dynamic perspective to strategic management. Importantly, it offers a perspective of strategic management that is not necessarily constrained by an organisation's immediate resources.

### **Strategy and change**

Successful implementation of Hamel and Prahalad's (1993, 1994) strategy as stretch and leverage is dependent on the organisation creating and maintaining an environment of change. Employees at all levels need to be receptive to constant change required for leveraging resources and achieving strategic intent. Change is dependent on the strength of the change force and the resistance to that force (Strebel, 1994). Change forces are those external to the organisation, resistance to change refers to the organisation's internal environment. Strebel distinguishes between "strong and weak forces of change" and "strong

and weak forces of resistance” (p. 29). The combination of change forces and resistance to change produce change paths, subsequently depicted in a change arena, as Figure 3.21.

Figure 3.21. Change arena.



*Note.* From “Choosing the Right Change Path,” by P. Strebler, 1994, *California Management Review*, 36 (2), p. 32.

Weak change forces have little effect in the top left corner of the change arena “on an industry or company with strong resistance. Since the resistance threshold has not been reached, the status quo prevails and no change occurs” (Strebler, 1994, p. 31). Strebler notes that this situation is typical of regulated markets and bureaucratic governmental organisations. In the diagonally opposing corner, the forces of change are strong and resistance to change is weak. “The forces of change far exceed the resistance threshold, so the system adapts continuously to the change forces” (p. 31). This situation represents an industry or company that responds to change forces, “one in which there is little resistance to change” such as those in “high-tech and financial service industries”.



The diagonal bisecting the change arena designates the boundary between the dominance of status quo agents and the dominance of change agents. In the bottom left hand corner, where both forces are weak, the boundary is readily crossed. Strebel identifies this situation as that described by Quinn's (1978) logical incrementalism. As the change force grows with continued low resistance status quo agents are overcome by change agents, depicted as "*turning points*" (p. 32) in Figure 3.21. Strebel suggests that this situation is present in "many intermediate-volume markets and medium-sized companies". The opposite corner - top right - depicts a markedly different situation. Change forces are strong, and resistance to those forces is also strong. "The transition between status quo and change agent behavior is characterized by a sudden jump" (p. 33). "Once the change forces exceed the resistance threshold" resistance breaks down and a shift from status quo to change agent behaviour takes place, depicted in the figure as the *breakpoint*. A. D. Meyer (1982) identified these as environmental jolts, suggesting they provided opportunities for learning, administrative drama, and the introduction of other unrelated changes.

Strebel (1994) identifies eight change paths (in the form of a decision tree rather than matrix hence eight not four paths). Change paths are either reactive or proactive depending on the strength of change forces. Reactive change describes the situation where an organisation has to "respond to well developed forces of change and resistance" (p. 34) - close to the breakpoint. The outcomes of reactive change, other than in circumstances where change is eventually resisted, are similar to *smaller* and *better* in Hamel and Prahalad's (1993, 1994) quest for competitiveness (Figure 3.20). An organisation reacting to change paths will restructure, revitalise and renew: a strategic process described as fit. The organisation is forced to redevelop the match between what it might do and what it can do.

An organisation adopting proactive change is attempting to ensure that change forces do not "affect performance" (Strebel, 1994, p. 43). Strebel notes that this situation describes an industry leader who will take advantage of weak change forces, namely creating their own environment. Strebel labels this situation as cascading implementation - the "progressive adaptation to change forces" (p. 45) - or bottom-up experimenting - "learning by example from successful internal change" (p. 45). Therefore, the adoption of proactive change by an organisation appears to be characteristic of strategy as stretch and leverage (Hamel &

Prahalad). The organisation must, however, maintain an environment of proactive change. Failure to do so will, according to Strelbel's model, result in either the development of strong resistance forces or suffering at the hands of strong change forces. In adopting proactive change the organisation assumes that resistance to change is nonsense.

Gadde and Håkansson (1992) used a network approach to study the relationship between change and stability in distribution channels. They acknowledged that traditional models of change view change as a response to the environment, and that stability (rather than change) is "normal" (p. 167). In contrast, the authors recognised that "companies themselves are very important change agents" (p. 167). Central actors, those with both suppliers and buyers, supposedly "have an opportunity to control change" (p. 171). Central actors can support change that is beneficial to their position in the distribution channel and suppress change through their central position. If the central actor's resistance to change is strong change will only occur when the change force is overwhelmingly strong. Only then will change affect those organisations associated with the central actor. Such organic changes (Hardaker & Anderson, 1981) may not support the existing structure. If a multiple connectedness view of industrial networks is held the central actor is, however, no longer in a position to mitigate change. In such cases change may be initiated at any point in the network - supplier, buyer and hitherto central actor. Such changes within a network may have a stabilising effect in favour of the current structure.

To analyse change it is not appropriate to relate the activities to the channel itself as change is actor initiated and the channel is not an actor (Gadde & Håkansson, 1992). The analysis of change may, therefore, be ignored if actors are not considered in a network approach. The network approach must be upheld when considering the configuration and management of the value system otherwise relationships outside of product flow resulting from connectedness could well be ignored.

### 3.6.3 Global strategy

Ghoshal (1987) provided a conceptual framework for “organizing existing literature” (p. 425) on global strategy. The distinction between global competition, global businesses, and global companies (Hamel & Prahalad, 1988) was introduced in Section 3.3, although not all industries are global (Clarke & Brennan, 1992; Porter, 1986). Clarke and Brennan note that some industries are “like fortresses ringed with defences of entry barriers, local markets, unassailable local economics of production and logistics” (p. 80). While Porter identifies multidomestic industries in which competition in one country or “small group of countries” is “independent of competition” elsewhere (p. 8). In both cases competitive advantages of the firm are “specific to each country” (Porter, p. 8), irrespective of whether the firm is a MNE. Ghoshal recognises that global strategy is not necessarily *contingent* on the need for cross-subsidisation (Hout, Porter, & Rudden, 1982), nor driven by the pursuit of scale economies. He suggests, therefore, that discussions of the relationship between global industry and global strategy “may be more useful for ex-post explanation of outcomes” (p. 426) rather than ex-ante predictions. Unfortunately many commentators of global strategy reduce their focus to one variable at the expense of all others, for example, global standardisation (Levitt, 1983; Vernon, 1983) subsequently refuted by Douglas and Wind (1987), and Hamel and Prahalad (1985). Both Ghoshal, and Yip (1992) provide reviews of such contributions, identifying their limitations and contradictions.

Ghoshal (1987) observes that an organisation’s - pluralistic (Whittington, 1993) - goals can be classified into three categories<sup>46</sup>. The three categories are first, efficiency in current activities (Hofer & Schendel, 1978; Markowitz, 1952; Porter, 1980, 1986; Wind & Douglas, 1981, Yip, 1992) second, the management of risk (Vernon, 1966, 1977; Wells, 1972; Woo & Cool, 1990) associated with those activities and third, the development and maintenance of “internal learning capabilities so as to be able to innovate and adapt to future changes” (p. 427) (Aldrich, 1979; Porter, 1986; Wikström & Normann, 1994). The latter is also characteristic of Hamel and Prahalad’s (1993) strategy as stretch and leverage. Ghoshal

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<sup>46</sup> The lineage of the transnational solution (Bartlett & Ghoshal, 1989) is apparent in Ghoshal’s (1987) paper, “Global strategy: An organizing framework”. Compare the three strategic goals of efficiency, risk and learning with the three key strategic capabilities of the global, multinational and international organisations: efficiency, responsiveness (local risk), and learning.

(1987) suggests that an organisation's competitive advantage (Porter, 1985) is derived from the optimal achievement of these goals.

An organisation has three tools available to develop competitive advantage (Ghoshal, 1987). The three tools are first, exploitation of supplier's and buyer's markets in and between countries in which it operates (Kogut, 1985a) second, scale economies (Mascarenhas, 1982; Porter, 1985) and third, exploitation of "synergies or economies of scope that may be available because of the diversity of activities and organization" (Ghoshal, 1987, p. 427) (Hamel & Prahalad, 1985; Kogut, 1985b; Porter, 1985; Prahalad & Hamel, 1990).

Ghoshal (1987) identifies successful global strategy as the management of the interactions between the three goals and three tools - nine in all. Ghoshal's matrix (3 × 3) then provides a framework for organising literature on global strategy, developing global strategy and mapping global strategy. The organising framework is presented as Table 3.3.

Table 3.3. Global strategy: An organising framework.

Strategic objectives	Sources of competitive advantage		
	National differences	Scale economies	Scope economies and synergy
Achieving efficiency in current operations	Benefiting from differences in factor costs - wages and cost of capital	Expanding and exploiting potential scale economies in each activity	Sharing of investments and costs across products, markets and businesses
Managing risks	Managing different kinds of risks arising from market or policy-induced changes in comparative advantage of different countries	Balancing scale with strategic operational flexibility	Portfolio and diversification of risks and creation of options and side-bets
Innovation, learning and adaptation	Learning from societal differences in organisational and managerial processes and systems	Benefiting from experience - cost reduction and innovation	Shared learning across organisational components in different products, markets or businesses

Note. From "Global Strategy: An Organizing Framework," by S. Ghoshal, 1987, *Strategic Management Journal*, 8 (5), p. 428.

Doz, Bartlett, & Prahalad (1981) suggest that as the MNE develops and implements more complex global strategy it has to adopt a more complex management mode.

Limitations on global strategy are, therefore, not necessarily analytical but matters of administrative feasibility (Doz et al.).

Effective global strategy requires a certain vision (Daniels, J. L., & Daniels, N. C., 1993; Ohmae, 1982, 1989a) and geocentricity (Perlmutter, 1969) described as a “worldwide approach in both headquarters and subsidiaries” (p. 13). The sort of vision depicted in the management mentality of a transnational organisation, discussed in Section 3.3.1. The organisation is expected to pursue efficiency, provide local differentiation for national tastes, and develop a learning culture to ensure that wherever innovations are developed they can be incorporated throughout the organisation or global markets. The ultimate priority is to provide value to international customers (Stahl & Bounds, 1991). In that respect consideration of strategy in a global setting is no different from that elsewhere. A detailed account of generic strategies is provided in the following section. However, before concluding with global discussion there remain two issues worthy of note. While MNEs account for the majority of international business two aspects of them are far from international one is ownership; and, the second is directorship. Only 2.1% of seats on the board of major US corporations are held by foreign nationals, the same level as in 1981 (Farnham, 1994). Stock ownership is almost always concentrated in the home country, similar criticisms were presented by Perlmutter in 1969. Under such conditions ultimate control is maintained from the home location to where wealth is repatriated, although other international stakeholders are likely to benefit from collaborative linkages with the organisation. Patriotic ownership and directorship of MNEs is symptomatic of the importance of the home-base location on configuration and management of the value system. While value can be created anywhere in the value system the distribution of wealth resides primarily with ownership. The process of value creation is outward-looking - global strategy - yet wealth distribution is, by comparison, inward-looking.

### 3.7 GENERIC STRATEGIES

**S**TRATEGIES AVAILABLE TO PARTICIPANTS in the value system are reviewed in this section. Porter's (1980) generic strategies are identified and Johnson and Scholes's (1993) strategy clock, an extension of Porter's work is described. The concept of generic strategies are then contrasted with the hypercompetition framework (reviewed in Section 3.4.2): a framework that appears to assist strategy selection.

Porter (1980) postulated the three generic strategies available to an organisation; cost leadership, differentiation, and focus. "The focus strategy has two variants, cost focus and differentiation focus" (p. 11). Porter's three generic strategies, which determine a "firm's relative position within its industry", are presented as Figure 3.22. An organisation must make choices between the strategies it pursues rather than attempting to provide all product/market mix combinations. Porter suggests that appropriate strategy is, therefore, one source of competitive advantage.

Figure 3.22. Three generic strategies.

		STRATEGIC ADVANTAGE	
		Uniqueness perceived by the customer	Low cost position
STRATEGIC TARGET	Industry wide	<b>Differentiation</b>	<b>Overall cost leadership</b>
	Particular market segment	<b>Focus</b>	

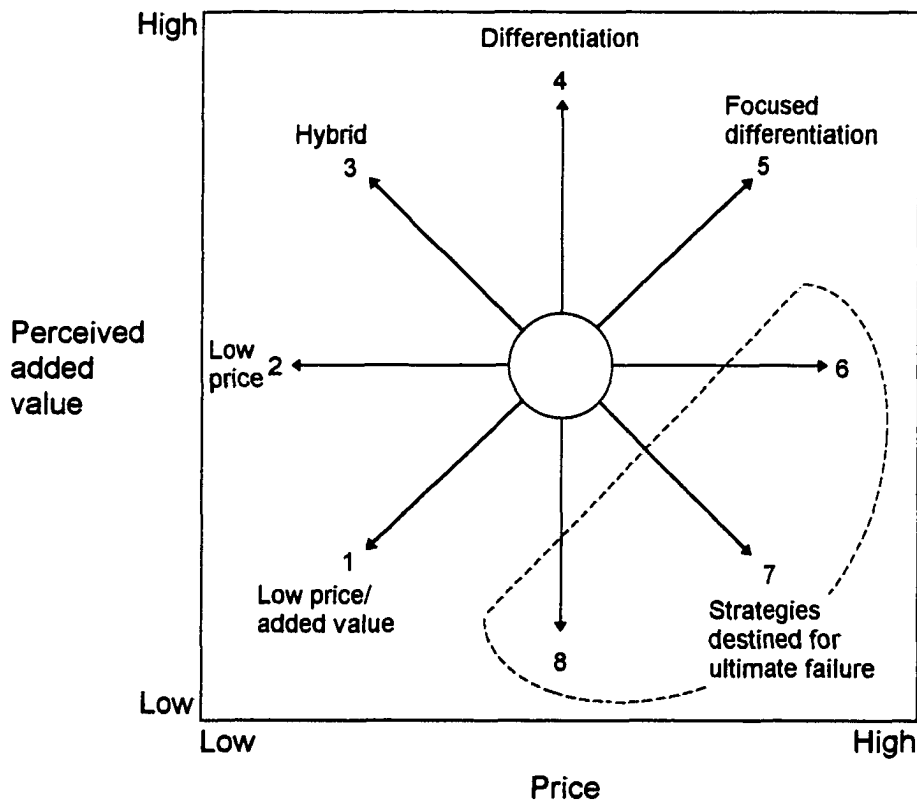
*Note.* From *Competitive Strategy: Techniques for Analyzing Industries and Competitors* (p. 39), by M. E. Porter, 1980, New York: Free Press.

Porter's generic strategies have attracted criticism (Bowman, 1989b; Johnson & Scholes, 1993; Murray, 1988). J. Miller (1992) suggested that "paying too much attention to too few things can be disastrous" (p. 38), adding that competitors may be able to imitate specialised strategies. Miller identified six scenarios when mixed strategies would be preferable to generic strategies. Henderson (1989) suggested that differentiation between strategies may be as subtle as the "customer's perception of the product and its supplier" (p. 140). Luchs (1986) concluded that quality, rather than differentiation or low cost, "is the sharpest competitive weapon available to most businesses" (p. 12). McNamee and McHugh (1989), however, referred to the pursuit of "very high quality" (p. 67) as differentiation. Mintzberg's (1994) distinction between strategy as position or perspective resolves this issue. A quality "driver" (McNamee, 1990, p. 6) is "an organization's way of doing things" (Mintzberg, p. 27) rather than a product-market mix consideration. Mintzberg concludes that "organizations have to consider both positions and perspectives in their strategy formation" and adds that "literature that favors one over the other does a disservice to that process" (p. 29). Strategy as position does not determine how an organisation does things; strategy as perspective does not determine what an organisation does.

Johnson and Scholes (1993) state that customers may purchase goods or services from one organisation in preference to another because either "the *price* of the product or service is lower than that of another firm... or the product or service is more highly valued by the customer from one firm than another; here the term *perceived added value* is used" (p. 210). Their interpretation of strategy, based on Bowman's (1989b) research, is presented as the strategy clock (see Figure 3.23). Eight strategies are identified by the authors of which two are price based (1, 2); there are one each of value added (3), hybrid (4), focused differentiation (5); and, three failure strategies (6, 7, 8).

The low price/low added value strategy is the "cheap and nasty option" (Johnson & Scholes, 1993, p. 210). Johnson and Scholes suggest that the strategy "might be viable because there could exist a segment of the market which, while recognising that the quality of the product or service might be low" is not in a position to buy better quality goods and services. This strategy appears to be targeted at the low income market.

Figure 3.23. The strategy clock: competitive strategy options.



Note. From *Exploring Corporate Strategy: Text and Cases* (3rd ed.) (p. 211), by G. Johnson and K. Scholes, (1993), Prentice Hall: New York.

The second price-based strategy involves reducing price while maintaining the quality of goods and services. A strategy that is sustainable only as long as the organisation maintains the lowest costs. The hybrid strategy (3) is the result of providing customers added value and offering goods and services at lower prices. The “success of the strategy” is said to depend “on the ability to both understand and deliver against customer needs, while also having a cost base that permits low prices which are difficult to imitate” (Johnson & Scholes, 1993, p. 213). The hybrid strategy offers the organisation an opportunity to achieve higher volumes, and it may provide a suitable means of entry in an existing market (Johnson & Scholes).

The aim of the Johnson and Scholes’s (1993) value-added (differentiation) strategy (4) is to “achieve higher market share, and therefore higher volume, than competitors by offering ‘better’ products or services at the same price; or enhanced



margins by pricing slightly higher” (p. 212). Johnson and Scholes argue the organisation must identify the customer’s “needs and values”. Being based on a mix of customer needs and values the value added (differentiation strategy) is more difficult to imitate than strategies based solely on a good or service. However, Johnson and Scholes warn that the strategy is not sustainable unless the organisation “review[s] continually the bases of differentiation” (p. 213).

Johnson and Scholes’s (1993) fifth strategy (5), focused differentiation, is to offer the customer high-value high-priced goods and services. The organisation is likely to compete in a “particular market segment” (p. 213) attracting “different sorts of customers (p. 214). Johnson and Scholes appear wary of the focus strategy. This strategy, like the others has to be monitored. The market segment needs to “defined in terms of a coherent set of customer values and needs” (p. 214) which must then be met.

The failure strategies (6, 7, 8), at first glance, simply appear to be an effort to *balance* the clock. Each route, however, describes organisations’ attempted efforts to either increase revenue or decrease costs without providing real or perceived benefit to the consumer. The first (6), is to increase price without increasing value. Johnson and Scholes (1993) suggest that only in a monopoly can this strategy be sustained. The second failure strategy (7), is to concurrently increase price and decrease value. The final strategy (8), is to maintain price while decreasing the quality of goods and services; a strategy that, surprisingly, is not confined to the example provided by the authors.

Johnson and Scholes’s (1993) strategy clock expands Porter’s (1980) generic strategies. The strategy clock is, however, based on customer’s perception of value, unlike Porter’s strategies which are based on the organisation’s goals. In that respect the interpretation of strategy is importantly different. Johnson and Scholes, and Bowman (1989a) view the strategy process from the customer - how can the organisation best meet the customer’s needs - whereas Porter views strategy from one of the organisation’s existing capabilities. Therefore, while the strategy clock encompasses Porter’s generic strategies, and answers the criticism of cost, differentiation, and quality, strategic intent differs. In that respect Johnson and Scholes’s typology of business strategy is one of creating value by meeting consumer’s needs.

Johnson and Scholes (1993) provide a more detailed account than Porter (1980) of strategies available to an organisation. They don't, however, discuss how an organisation may change from one to another. Although the selection of strategy appears absolute it may be far from permanent. It is unreasonable to expect an organisation to commit itself to one strategy for its entire lifespan. More importantly both authors, as well as those offering criticism endorse the need for an organisation to maintain one specific strategy.

The true pitfalls of generic strategies such as those recommended by Porter (1980) can now be identified. Neither Johnson and Scholes's (1993) strategy clock nor Hamel and Prahalad's (1993, 1994) strategy as stretch and leverage capture the nature and form of competition as described by D'Aveni's (1995) hypercompetition framework. The industry's position on the competition ladder (Figure 3.9), and the firm's within that, will importantly influence which of the generic strategies are available to the firm. Hamel and Prahalad's stretch and leverage paradigm is clearly one of niching and outflanking (interpreted with reference to Figure 3.9). D'Aveni's competition ladder, therefore, provides a much needed dynamic interpretation to strategy.

The discussions presented of new age strategic management and change, linkages between organisations, strategies, and goals suggest that management is being confronted with an increasingly complex and changing environment. Competitive advantage is, therefore, expected to be becoming increasingly difficult to maintain as advantages are quickly dissipated to competitors.

### **3.8 CONTRIBUTIONS FROM THE LITERATURE**

**C**ONCEPTS AND THEORIES POTENTIALLY APPLICABLE to a theory of configuration and management of export-dependent land-based value systems were identified in Chapter Two - the partitioning process. The objective of this chapter was to then review those bodies of literature in search of contributions that were expected to assist with explanation and development of the Z-form Model. Two themes were pursued first, linkages between organisations and second, management of those organisations. The aim of this section is to identify worthy contributions from the

literature explored in this chapter. Literature reviewed during the chapter and not considered applicable to the study is also identified.

The Z-form Model implies a perspective of management that extends well beyond the boundaries of a single firm. Further, the focus of the study, as cleaved in Chapter Two, is the creation and subsequent distribution of wealth. Both processes are expected to be the result of several organisations participating in a value system. The value of literary contributions is determined against the Z-form Model and particularly its relevance to export-dependent land-based value systems - hence the need to determine the unique attributes of land-based industries (discussed in detail in Section 2.2). Value systems comprise all participants and linkages responsible for product flow between (and inclusive of) producers and consumers. The chapter provided a review and discussion of literature expected to assist with the understanding of each of these concepts. At first glance the opening discussion on pluralistic goals (Whittington, 1993) may have appeared misplaced. Further, the introduction of the multinational enterprise in any other setting would have been discussed amidst a debate of global strategy. However, both concepts provide an essential entrée to a value system perspective of organisations and the linkages between them, that is, a perspective of strategic management that transcends individual organisations.

The Z-form Model, offered in Chapter Two, provides the framework for discussion and development of subsequent theory. The model depicts stages - which are not necessarily identical with the scope of participants' businesses - and linkages between stages in an international value system. Each participant is likely to have a different view - managerial attention - of their roles and activities in the value system. This view, introduced in Section 3.2, will be subject to stakeholders' collective influence observed through an organisation's pluralistic goals. Pluralism will reflect stakeholders' values towards the dual processes of value creation and wealth distribution. Rational economic thought based on the assumption of profit maximisation was identified as being, largely, a theoretical perspective adopted for normative planning.

The unique feature of an export-dependent value system is the necessity for some form of domestic-international linkage. This linkage may be internalised through some

form of MNE, met through international strategic alliances (Ohmae, 1989b), or completed through exporting. Exporting is expected to be either accompanied or unaccompanied by some form of business relationship.

MNEs make take one of Bartlett and Ghoshal's (1989) four forms - multinational, global, international or transnational. However, the important contribution from *all* theories of internalised international linkages may be summarised as maximising wealth creation, that is, irrespective of the organisational form the organisation is in a better position to create wealth, and supposedly to distribute that wealth to stakeholders. By contrast, international strategic alliances were identified as a specific form of collaborative linkage (Auster, 1987). Exporting anything other than commodities - in the absence of some more formal alliance - may be better explained through an industrial networks approach rather than more traditional perspectives of transaction cost economics.

Despite strategic alliances being numerically superior trade between affiliates accounts for the vast majority of international transactions as measured by either volume or value. Internalising the domestic-international linkage has accepted costs and benefits some of which are well documented (Dunning, 1995). Both the MNE and ICL appear capable of providing some of the benefits of the transnational form, however, ICLs do not capture wealth in the fashion implicit in the internalised multinational enterprise. Alliances remain subject to bargaining power.

Worldwide organisational structures are reported to have common shortcomings expected to be overcome by the transnational form of organisation. However, even the transnational form must retain some level of interdependency between all business units or it will likely fragment. Interdependency could be retained by the centralisation of critical activities such as research and development and global brand management. Only the transnational form can exploit global efficiency, differences in buyers and sellers' markets, and provide a learning environment for innovation of goods and services. The classification of organisational form assists in identifying the attributes of various structures and hence scope for improvement. Explicit in all models is the creation of wealth through international trade and the capture of wealth by the organisation's

stakeholders. Therefore, the internalised models of conducting international business are only expected to explain part of the value system, that is, the linkage between exporting and importing and whatever integration is pursued in each location.

Competitive and collaborative linkages between organisations can be used to identify the dynamic processes missing from the static Z-form Model. However, in pursuing processes contributors have inadvertently, if it was ever their intent, reduced the creation of value to those processes employed by select organisations. The notion of creating and distributing wealth through connectedness between producer and end-consumer has been subjugated by increasingly narrow perspectives. Either form of linkage between organisations are the result of the flow of goods and services. Competitive linkages ensure that the distribution of wealth results from the bargaining power (Porter, 1980) of adjoining firms. Clearly, asymmetrical bargaining power will result in asymmetrical wealth distribution, restricted in the long-term only by stakeholders' acceptance of minimum rewards, of which one is profit. This subject has been given scant regard in the literature.

There is little discussion in the literature of how wealth is distributed between organisations in collaborative business relationships. Bargaining power is unlikely to be absent in such relationships, despite the presence of trust and commitment. Multiple connectedness (Håkansson & Snehota, 1995) appears to mitigate opportunities for intermediate participants to control adjoining linkages. However, whether multiple connectedness results in rational distribution of wealth in the long-term remains open to debate. Collaborative linkages do, however, create mutual dependency, reduce transaction costs, and facilitate change and adaptation (Easton, 1992).

The concept of relationship marketing in identifying key behaviours of business relationships is subsumed by the industrial networks approach. This approach, although far from parsimonious, seeks to capture the nature of all business conducted between organisations save those of true markets and hierarchies. In that respect, particularly if the notion of multiple connectedness is adopted, the industrial networks approach is anticipated to be useful in both explaining and predicting the behaviours of value systems.

The mainstream focus of strategic management on single organisations bypasses issues of wealth distribution because value creation, and its capture by stakeholders, is assumed to remain the sole responsibility of the firm. Internalising transactions through vertical integration (Harrigan, 1983) rather than relying on strategic alliances to source buyers and sellers of goods and services appears to be the only fail-safe method of capturing wealth. Organisations are, therefore, not only confronted with the traditional trade-off between the costs of integrating and wealth capture; they are also confronted with the trade-offs between the dependency risk of strategic alliances, the intangible costs of business relationships, the reduction in transaction costs, opportunities for organisational adaptation, and the subsequent opportunity for wealth redistribution. For collaborative activity to occur, the advantages of it must outweigh the independent self-interest of firms.

The requirement for a global perspective for business and the concept of linked organisations, despite the single organisation focus, can only be provided by the strategic management discipline. Strategic management is the means by which the organisation's decision makers identify fit between the external environment and the organisation's resources and capabilities. However, the traditional fit model (Andrews, 1987; Ansoff, 1991) is a static, pattern matching view of competence. The firm is credited with the ability to only pursue opportunities identified at the time of strategic analysis. Positioning the firm to create or take advantage of opportunities yet to be recognised is beyond the scope of the mainstream view of strategic management.

Deficiencies in conventional models of strategic management were identified. One limitation of the fit model of strategic management is the implicit assumption that management accepts the external environment, rather than assuming responsibility for its creation as is explicit in Hamel and Prahalad's (1993, 1994) model of strategy as stretch and leverage. A second limitation of the fit model is the explicit acceptance of an organisation's current resources as the only means of creating competitive advantage. Strategy as leverage recognises current resources as a start-point from which additional resources may be levered as required. By contrast, the key limitation to the conventional model of strategic management is the assumption that fit is static within some temporal bound, usually three to five years, which limits the scope of definition of strategic issues.

In that respect conventional views of strategic management are not expected to assist greatly with the development of value system theory - a surprising outcome and certainly not something expected at the outset of the literature review.

The stretch and leverage paradigm (Hamel & Prahalad, 1994) addresses strategic management from the perspective of creating opportunities. Management is charged with the responsibility of creating the external environment rather than accepting the domain as a *fait accompli*. The paradigm does not accept the resource based view of the firm, nor is it constrained by the contingency approach. Management upholds a collective vision in a change environment.

The generic strategies (Porter, 1980) and their subsequent extension as the strategy clock (Johnson & Scholes, 1993) provide a typology of strategies available to management. However, their consideration in isolation of the hypercompetition escalation ladder is limiting. D'Aveni's (1995) perspective of hypercompetition can be used as a ready template to position such diverse offerings as generic strategies and strategy as stretch and leverage. The pursuit of price/quality advantages is simply not sustainable. Explicit in hypercompetition is that firms progress up the ladder through competition arenas, the ladder then provides a path for scheduling strategy. Therefore, generic strategies in isolation of the competitive arena are expected to be of limited value. However, when considered in conjunction with the concept of a competitive arena, they are anticipated to explain value system participants' behaviour.

The study is conducted from the perspective of creating value and distributing wealth for the benefit of New Zealand registered organisations. Other actors in the value system may, however, be better equipped to lead the channel (as implied by Normann & Ramirez, 1993; Wikström & Normann, 1994). For example, an organisation that has a sustainable competitive advantage offshore in say secondary processing, distribution, or retailing and marketing is expected to hold a very different perspective on the distribution of wealth. Nevertheless, the maintenance of that competitive advantage requires product flow from New Zealand participants. Under these circumstances New Zealand participants may be expected to put systems in place to first, ensure that competitive advantage is sustained and second, capture adequate wealth from that source

of competitive advantage. If they are unable to capture adequate wealth, New Zealand participants are expected to configure and manage alternate value systems.

There appear numerous opportunities to configure and manage the value system with the sole objective of creating value and repatriating wealth. These opportunities range from vertical integration by producers through to consumer on the one hand, to various forms of multiple connectedness on the other. Value systems consisting of independent firms pursuing self interest (depicted as Figure 3.8) are expected to provide goods and services of lesser value to the end-consumer as compared to those that employ closer business relations to be more responsive to adaptation and change.



## CHAPTER FOUR: THEORY CONSTRUCTION

### RATIONALISING INDUCTIVE AND DEDUCTIVE CONTRIBUTIONS

*Our order is taken ... by a waitress wearing a cowboy hat, a miniskirt, a fringed vest, boots and red garters. 'The key to a successful restaurant' O'Donoghue says, 'is dressing girls in degrading clothes'.*

Michael O'Donoghue.

#### 4.1 INTRODUCTION

**A** DISCUSSION OF THEORY BUILDING processes is presented in this chapter. The two common processes; deductive theory building from general principles; and, grounded theory from empirical evidence, are compared and contrasted. The process used in this study to develop theory of the configuration and management of New Zealand's export-dependent land-based value systems is described in Section 4.3. Having developed a framework for theory building the Z-form Model is complicated with the effects of the unique attributes discussed in Chapter Two and the concepts and theories drawn from literature reviewed in Chapter Three - the next stages of theory building.

#### 4.2 THEORY BUILDING IN THE ORGANISATIONAL SCIENCES

**T**HE OBJECTIVE OF THIS SECTION is to discuss the processes of theory building in organisational science and then identify a technique appropriate for use in this study. Merton's (1968), and peers such as Zetterberg (1965), Blalock (1969, 1970), Glaser and Strauss (1967) and Hage (1972), contributions to theory building was from the perspective of social science. Their works provide the substantive base from which theory building in the organisational sciences (e.g., Gioia & Pitre, 1990; March &

Simon, 1958; Tsoukas, 1991; Van de Ven, 1989; Zikmund, 1988) have developed<sup>47</sup>. Continuities between the more recent organisational and the classical sociological theory building literature are identified. The technique used for theory building in this study, which has elements of both deductive theory building and grounded theory is discussed.

Zikmund (1988) defined theory as “a coherent set of general propositions, used as principles of explanation of the apparent relationships of certain observed phenomena” (p. 20). Things observed can be described as concepts, therefore, concepts are a first level of abstraction from reality. However, concepts in isolation are not theories (Zikmund). The relationships between concepts are defined as propositions (Blalock, 1969; Dubin, 1969; Hage, 1972). Propositions then provide “the logical linkage amongst concepts” (Zikmund, p. 22). Theories are networks of propositions representing the highest level of abstraction from reality.

Parsons (1948) suggested that a systematic theory is of fundamental importance to any science. Theory in sociology is described by Glaser & Strauss (1967) as a technique for “handling data in research, providing modes of conceptualisation for describing and explaining” (p. 3). Therefore, a theory is a system of “information-packed descriptions” and a “system of general explanations” (Zetterberg, 1965). Zetterberg summarised the power and attributes of theory simply by stating that to “ask for an explanation in science is to ask for a theory” (p. 11).

#### 4.2.1 Middle-range theories

Theory refers to “logically interconnected sets of propositions from which empirical uniformities can be derived” (Merton, 1968, p. 39). Merton stated that theories include “everything from minor working hypotheses, through comprehensive but vague and unordered speculations, to axiomatic systems of thought” (p. 39). The scope of a theory refers to how many of the basic problems of a discipline are handled by the theory (Hage, 1972). The more problems handled, the greater the scope the fewer problems handled, the

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<sup>47</sup> For example, a series of papers on theory building in the organisational sciences were presented during 1989 in the *Academy of Management Review*. The papers were presented as a forum

lesser the scope. The hypotheses common to hypothetico-deductive science, therefore, constitute *minor theory*. In this case they typically comprise a relationship between two well defined and readily measured concepts.

Merton (1968) identified *theories of the middle range* and defined them as;

theories that lie between the minor but necessary working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory that will explain all the observed uniformities of social behaviour, social organisation and social change. (p. 39)

Middle-range theories must involve some abstraction or they would be too specific. The degree of abstraction, the variables included and those ignored, should be specified (Barber, 1956). Theories in the middle range are “close enough to observed data” (Merton, p. 39) to be included in propositions that may be tested using empirical investigations. Because middle-range theories “deal with delimited aspects of social phenomena” (p. 39) they can be used to direct empirical inquiry. The relationship between working hypotheses, theories in the middle range and general theory is presented in Table 4.1.

Table 4.1. The characteristics of general, middle range and minor theories.

Theory attributes	Theory scope		
	General theory	Theories in the middle range	Minor theories
Explanatory aim	Explains all the observed uniformities of social behaviour	Deals with delimited aspects of social behaviour	Working hypotheses
Development	All-inclusive systematic effort	Abstraction guiding empirical inquiry	Evolve during day-to-day research
Validation	Too remote from particular classes of social behaviour to account for what is observed	Incorporated in propositions that permit empirical testing	Empirical testing

*Note.* The characteristics are derived from *Social Theory and Social Structure* (enlarged ed.), by R. K. Merton, 1968, New York: Free Press.

addressing the characteristics of a good theory, the process of building good theories and the methods to improve current theorising (see Van de Ven, 1989).

Merton (1968) proposed that the seminal ideas of middle-range theories are “characteristically simple” (p. 40). The author provides examples such as Darwin on coral atolls, Boyle on atmospheric pressure and Gilbert on magnetism. Each of these theories “provides an image that gives rise to inferences” (p. 40). In each case the initial idea can be seen to generate a suite of testable hypotheses. Each of the hypotheses can then be empirically tested to confirm critical parts of the theory. Merton then suggested that “the idea itself can be tested for its fruitfulness by noting the range of theoretical problems and hypotheses that allow one to identify new characteristics” (p. 40) of the theory.

Middle-range theories are “not logically *derived* from a single all-embracing theory of social systems, though once developed they may be consistent with one” (Merton, 1968, p. 41). Merton also states that middle-range theory is more than an “empirical generalisation - an isolated proposition summarising observed uniformities of relationships between two or more variables” (p. 41). A theory contains assumptions from which empirical generalisations can then be derived. Therefore, theories in the middle range can be recognised from their relationships to empirical testing, although they may not account for all observed phenomena.

Merton (1968) identified two important characteristics of theories in the middle range. Firstly, middle-range theories should “generate distinctive problems” (p. 42) for inquiry. Secondly, they are “frequently consistent with a variety of so-called systems” (p. 43) of theory. However, Merton did not develop the argument for continued sociological inquiry in detail. The relationship between theory and the continuum of research was discussed by Kuhn (1970) (introduced in Chapter One).

The second characteristic of theories in the middle range identified by Merton (1968) was their consistency with a range of general theories. Merton stated that comprehensive theories “are sufficiently loose-knit, internally diversified, and mutually overlapping that *a given theory of the middle range*, which has a measure of empirical confirmation, can often be subsumed under comprehensive theories which are themselves discrepant in some respects” (p. 43). Middle-range theory enables the researcher to transcend the mock problem between the general and the altogether particular. There is mounting evidence to suggest that the altogether particular, reductionist (atomist) approach to scientific research is unlikely to

solve practitioner's problems (McRae, Anderson, & Brazendale, 1993). Similarly, the general approach is likely to be far too abstract for implementation by practitioners<sup>48</sup>.

A theory of the configuration and management of New Zealand's export-dependent land-based value systems is theory of the middle range. As discussed in Section 1.4.1, subject-matter research (Johnson, G. L., 1986) provides a body of information for a group of practitioners confronted with a number of distinctive problems. The theory will, in part, be consistent with the systems of theory reviewed in Chapter Three. Further, the theory will be subsumed by strategy, networks, and international business all of which are, in some manner, discrepant.

Bluedorn and Evered (1980) criticised Merton (1968) for not specifying the location of middle-range theories with "greater precision" (p. 20). They list four alternatives to Merton's case for theory building in the middle range. Bluedorn and Evered's alternatives are presented as follows:

1. Simply assume that scientific enquiry necessitates both attention to evidence and speculative thought.
2. The scope of a theory is a function of the researcher's capacity to manage the intellectual tension between unexplained observations and theory.
3. Recognition of the range of cognitive styles suggests that research styles will also differ.
4. The researcher's own perspective and interests are the primary determinants of both the form and the content of the theories that will be generated. (pp. 28-29)

However, whereas Merton justified theory building in the middle range Bluedorn and Evered simply justify theory building. The scope of theories should be regarded as a continuum. Justification of theories within a specific scope, for example, middle range is of importance in positioning the product between and including general theories on the one hand, and day-to-

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<sup>48</sup> The history of modern positivism is reported by Martindale (1981).

day hypotheses on the other. Sure, a narrow perspective (Bluedorn & Evered) may be the limit of a researcher's interest, however, it may be ineffective in solving real-world problems.

Unfortunately, Merton did not discuss the genesis of theory development in detail. The two common processes of theory building are now introduced.

#### **4.2.2 Deductive theory building**

Theories combine law-like propositions into systems (Zetterberg, 1965). Zetterberg described deductive theory construction as a process. Law-like propositions are stated explicitly and then evaluated for their consistency with existing findings and consistency with other accepted propositions. The propositions are then ordered so that they each come to represent a part of a process. The author stated that it can then "be demonstrated, both by theoretical deduction and empirical investigation" (p. 15) how this process functions. Hage (1972) suggested the most important starting point is "an interest in some problem, whether intellectual or practical" (p. 3). The first task is then to specify a limited number of definitions which delineate the few aspects of reality under consideration (Zetterberg).

The necessity to delineate research in the social sciences is reported by Merton (1968), Kuhn (1970) and Bourgeois (1979). Zetterberg (1965) called this task a taxonomy; Bourgeois (1979) defined it as "partitioning of the field (topic) under investigation" (p. 444). The goal of the taxonomy is to identify important characteristics, variables or concepts. Hage (1972) suggested the researcher seek general variables. A general variable is a continuum that applies to any culture and at any point in time. The end point of such taxonomies is a descriptive study, however, Zetterberg noted that descriptive studies "do not furnish explanations" (p. 26).

The second task is to identify a "small number of propositions that are valid in several diverse contexts" (Zetterberg, 1965, p. 28). Merton (1968) also recognised the overlapping nature of many divergent general theories in the social sciences. The "systematically interrelated propositions are theories" (p. 28) stated Zetterberg, adding that "theories summarise and inspire, not descriptive studies, but verificational studies - studies construed to

test specific hypotheses". A summary of the activities generated from the two tasks, delineation of the subject and identification of diversity is presented in Table 4.2.

Theory construction should be recognised as a dynamic and iterative process. It is inappropriate to label the process as singularly deductive or inductive, despite Glaser and Strauss's (1967) polemical discussion of logico-inductive theory building. The genesis - initiation - of the research process may be the result of either an abstraction from general knowledge or reasoning from a particular experience. Kaplan (1964) called this dilemma the paradox of conceptualisation. "The proper concepts are required to write a good theory, but a good theory is required to arrive at the proper concepts" (p. 53).

Table 4.2. A classification of sociological research.

Research level	Delineation of subject	Identification of diversity
Unit	Definition	Proposition
Interrelated units	Taxonomy	Theory
Application of unit to specific subject-matter	Diagnosis	Explanation
Research summarised by or inspired by unit	Descriptive study	Verificational study

Note. From *On Theory and Verification in Sociology* (3rd enlarged ed.) (p. 29), by H. L. Zetterberg, 1965, New Jersey: Bedminster Press.

Blalock (1969) and Hage (1972) described the process of deductive theory building in detail. "A deductive theory must contain both axioms and theorems" (Blalock, 1969, p. 10). Axioms are defined as "propositions that are assumed to be true". Theorems are derived by deductive reasoning from axioms (Blalock). "Axioms are inherently untestable but at least some of the derived theorems can be tested" (Blalock, p. 10). Axioms should be the causal assertions that will be untestable because of the fact that it will never be possible to control all the relevant variables.

Tests of the theory involve empirical testing of the derived theorems. "If the theorems prove false the theory must be modified or the axioms of the theory abandoned" (Blalock, 1969, p. 11). If they are not proved false verification can only be claimed once all possible alternatives are rejected. However, it may be difficult to eliminate all the possible

alternatives. In such cases progress may only be made by eliminating inadequate theories rather than by establishing them.

A theory cannot exist of concepts alone. Homans (1964) stated that “a theory does not begin to exist until propositions are stated about contingent relationships of the general form  $x$  varies as  $y$  between the properties” (p. 957). Blalock (1969, p. 12) reported that many of the empirical generalisations in the social science literature are stated in simple covariance form. For example, “the greater the  $X$ , the greater the  $Y$ ”. However, it is not clear whether causal asymmetry is implied. There should be no ambiguity about the direction of causality (Costner & Leick, 1964; Hage, 1972). The behaviour of uncontrolled variables should also be stated. Unexplained variation encountered in empirical testing, therefore, can be explained without discarding the deductive argument (Costner & Leick). Homans (1964) states that it is inadequate to claim “other things equal” (p. 959). The other things should be specified and where they are equal should also be identified.

Blalock (1969) recommends theory builders adopt two rules for stating theories in verbal form. First, the selection as axioms “those propositions that involve variables that are taken to be directly linked causally” and second, “state theorems in terms of covariations and temporal sequences, thereby making them testable provided adequate measures of all variables can be obtained” (p. 18). Adoption of these two rules ensures that theories are specified in a fashion that the direction, the nature, and the temporal sequence of variables are defined. Blalock (1970, p. 84) later added that “a good deal of attention must also be given to the question of what is to be included as an  $X$  or a  $Y$ ”.

Hage (1972) stated that concepts can be related in an either-or fashion or related in a continuous fashion. Hage, like Blalock (1969), insisted that the “continuous statement is much more precise” (p. 36). Hage listed three methods of deriving continuous statements. First, continuous statements of a linear nature can be derived from constructs presented in the literature once the general variables are identified. Secondly, several continuous statements can be collapsed into a more general one providing common causes and consequences are identified. Third, axiomatic reasoning (path analysis) can be used (Hage, 1965, 1972).



Hage (1972) described axiomatic reasoning in the form of a *path analysis* (p. 56). Path analysis reduces the large number of combinations of variables that can be obtained when a number of variables are identified. He recommended dividing the variables into the following elements or classes of variables:

1. Variables outside the collective - those variables that may be considered relevant but are outside the theory's domain.
2. Variables that represent the resources or inputs of the collective.
3. Variables that represent the structures of the collective.
4. Variables that represent integration processes of the collective.
5. Variables that represent performances of the collective.
6. Variables that represent the outputs of the collective. (p. 56)

This proposal assumes that the time-ordering moves approximately from (1) to (6) creating a unidirectional flow. Once this flow is achieved, the variables in general classes that "form a block of interrelated variables" can be identified (Hage, p. 57). Finally, feedback effects can be added. Path analysis appears to be a useful technique to produce theoretical statements in some causal sequence.

### **4.2.3 Inductive theory building: Grounded theory**

The antithesis of deductive theory building is grounded theory. Grounded theory is systematically developed from data: a largely inductive process of theory building (Glaser & Strauss, 1967). Developing a theory from data "means that most hypotheses and concepts not only come from the data, but are systematically worked out in relation to the data during the course of the research" (p. 6).

Grounded theory is derived from comparative analysis. Comparative analysis is claimed to be a powerful methodology because it can be applied to social units of any size (Glaser, 1968). Furthermore, Glaser suggested that comparative analysis can be used to "compare conceptual units of a theory or theories... such as categories and their properties and hypotheses" (p. 7).

Comparative groups are selected on the basis of their theoretical relevance “for furthering the development of emerging categories, properties, hypotheses and the integration of the theory” (Glaser, 1968, p. 8). Group comparisons, recognised as being conceptual, are used to generate theory. The selection of groups for comparison, either similar or different, will determine the scope of the theory generated. “The scope of substantive theory can be carefully increased and controlled by [the] conscious choices of groups” (Glaser, p. 9).

Glaser and Strauss (1967) identify the elements of grounded theory as conceptual categories and their conceptual properties, and hypotheses or propositions among the categories and their properties. Glaser and Strauss made an important distinction between categories and their properties. “A category stands by itself as a conceptual element of the theory whereas a property is a conceptual aspect or element of a category” (p. 36). These authors suggested that lower level categories emerge quickly. Higher level categories and the properties that elaborate them tend to emerge much later during the analysis. The distinction between categories and properties, rather than bundling them as concepts, provides a mechanism for initiating the theory building process. Because categories can be “borrowed from existing theory” (p. 36) grounded theory is not a solely inductive process.

The second element of grounded theory are hypotheses or propositions. “Generating hypotheses requires evidence enough only to establish a suggestion” (Glaser & Strauss, 1967, p. 39). As categories and their properties emerge their “accumulating interrelations form an integrated central theoretical framework” (p. 40).

Glaser and Strauss’s (1967) significant contribution was the claim that “generating grounded theory is a way of arriving at theory suited to its supposed uses” (p. 3). Glaser and Strauss acknowledged that the research is not approached as a *tabula rasa* - clean slate. Yet, their process of generating theory began with comparative analysis. How the researcher identifies the concepts worthy or necessary for this analysis is seemingly left to chance. Developing a theory from data “means that most hypotheses and concepts not only come from the data, but are systematically worked out in relation to the data during the course of the research” (p. 6).

Both deductive theory building and grounded theory aim to identify concepts and the relationships between them. Glaser and Strauss (1967) distinguish between categories and their properties, adding another dimension to theory building. While these authors present grounded theory as a largely inductive process, they also advocate starting with more general theories, focusing on a specific area, then work down to data guided by specific hypotheses.

### 4.3 A CONJOINT APPROACH TO THEORY BUILDING

**B**OURGEOIS (1979) CLAIMS that there is no pure induction or deduction. Deduction starts with general knowledge and predicts a specific observation. Induction starts with a set of specific observations from which general principles are derived, namely “reasoning from particular experiences to general truths” (p. 446). Therefore, much science is the result of both deductive and inductive reasoning, although it is seldom reported in this fashion. Kuhn (1970) claims that the level of articulation required is often difficult to produce.

Research begins with general knowledge and then predicts (without acknowledging as much) a specific outcome. While in the researcher’s understanding knowledge appears to be general it may in fact be quite specific (atomistic)<sup>49</sup>. Experimental design must encapsulate the desired outcome. Therefore, the researcher designs and implements the experiment with an expected outcome in mind. Failure to encapsulate a predetermined outcome would render the experiment valueless. The experiment is then undertaken, often at the level of abstraction that renders it divorced from reality (reductionism). Kuhn (1970) suggests that “by focusing attention upon a small range of relatively esoteric problems, the paradigm forces scientists to investigate some part of nature in a detail and depth that would otherwise be unimaginable” (p. 24). The results from the experiment ought to then be (but seldom are) extrapolated to the general, an inductive inference.

Theories in the middle range appear to be developed from one of three importantly different processes. Firstly, an all encompassing (general) theory may be abridged to explain a more limited set of phenomena: a deductive process (as discussed in Section 4.2.2). The

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<sup>49</sup> Because normal science is paradigm based author’s assume peer’s knowledge (Kuhn, 1970).

researcher may adopt a form of Comte's cerebral hygiene and develop general principles (many of which are the result of life's specific influences) and then test these general principles in a deductive fashion. Secondly, abstraction from empirical evidence may give rise to middle-range theory: the inductive process of grounded theory (discussed in the previous section). At the outset of a study researchers must immerse themselves in facts and figures and then try and draw some general principles. Or third, theories in the middle range may be developed from an iterative process of theory building and empirical testing (Bourgeois, 1979). This latter process may include both induction from an empirical base and deductions from general theory into propositions.

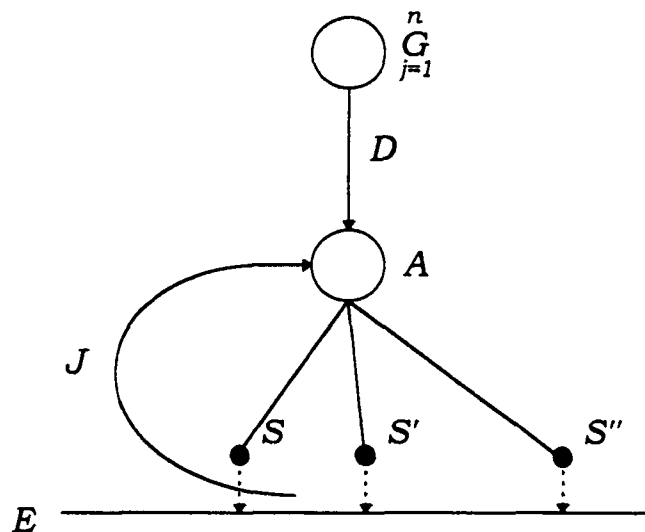
The appropriate theory building process to adopt appears contingent on the relationship between the phenomena studied and the relevance and validity of extant literature, knowledge, and experience. The development of the Z-form Model was presented in Chapter Two. General literature relevant to the study was identified from the model and then partitioned. Partitions included literature pertaining to firms; the management of firms; linkages between firms (including the international linkage); and perspectives of land-based industry in the home-base location. The relevant literature was subsequently reviewed in Chapter Three. Specific concepts were then identified throughout the discourse - a deductive process. New Zealand's export-dependent land-based industries have ten unique attributes (discussed in Chapter Two). However, as yet no attempt has been made to incorporate the effects of these attributes in the Z-form Model - an inductive process.

An iterative process combines the constructive attributes of both deductive theory building and grounded theory. Theory building in this study involves the processes of *both* abstraction from empirical evidence, and abridging general theory - induction and deduction. Bourgeois (1979) unwittingly failed to resolve the inductive-deductive dilemma by assuming that the process of theory building was inductive, while *testing* was deductive. In a manner akin to Einstein and G. Holton (see Chapter One, Section 1.4) the process adopted for this study is represented as Figure 4.1.

Induction from the empirical base, E, is depicted as the arc J. Deduction from general theories,  $G_1$  through  $n$ , is depicted as the vector D. The resultant theory, A, is in this case theory of the middle range. The need for both contributions has, in the case of this study, already

been identified. However, clearly one issue facing the researcher is deciding the *balance* of contributions from E and G. How much G, or for that matter E, is required? To be sure, both contributions are *not* mutually exclusive (Kaplan, 1964). Grounded theory (Glaser & Strauss, 1967) has little contribution from G, G serves only to guide the selection of E. Glaser and Strauss's contribution implies that D is near actively avoided. If the deductive process, D, for building theory of lesser scope is not fruitful the researcher will have to pursue a greater contribution from E, as such the study becomes increasingly grounded. Likewise, were the deductive process, D, to result in theory empirical evidence would then be used solely for referral.

Figure 4.1. A process of middle range theory building incorporating induction from empirical evidence and deduction from general theory.



*Note:* Modified from "Einstein's Model of Constructing a Scientific Theory," (p. 112), by G. Holton, 1979, in P. C. Aichelburg and R. U. Sexl (Eds.), *Albert Einstein: His Influence on Physics, Philosophy and Politics*, Braunschweig, Germany: Friedr. Vieweg.

A second issue facing the researcher is procedural, namely, how to combine the two contributions. Providing the *components* of theory are maintained through both procedures few difficulties should be encountered, the creative product from grounded theory ought to complement the deductive product from abridging general theory. The temptation to use empirical evidence for theory testing rather than theory generation must, initially, be avoided.

The relationship between theory verification/validation<sup>50</sup> and theory generation does not appear to be resolved. Several authors, for example, Zetterberg (1965), Glaser and Strauss (1967), and Weick (1989) claim that the researcher's primary goal is the systematic generation of theory. Verification, while recognised as being a vital task is subsumed by theory generation. Note that these views represent a marked departure from hypothetico-deductive science. Lindblom (1987) suggests that theorists often write trivial theories because their process of theory construction is restricted by their preoccupation with validation. However, Kuhn (1970) in describing the structure of science, recognised that the role of verification is to modify, not destroy theory. Therefore, a theory's only replacement is a better theory.

Whetten (1989) summarised the four essential elements of a complete theory as proposed by authors such as Merton (1968) or Dubin (1969). The essential elements are identified as what, how, why and who, where, when. The what and how elements "constitute the domain" (p. 491) of the theory. The relationships between the whats and hows can be tested empirically. However, only when the whys are acknowledged does the research make a theoretical contribution. Whetten (1989, p. 491) warned that when researchers have "insufficient understanding" of why they are pursuing a problem, or "what theoretical direction they are following", discourse "tends to degenerate into heated methodological debates". He suggested that to avoid such "vacuous discussions, propositions should be well grounded in the whys, as well as the hows and whats" (p. 491). Lastly, the who, where and when tests are most often tested through "subsequent tests of the initial, rudimentary theoretical statement" (p. 492). These tests are the similar to those described by Bourgeois (1979) as extension of the theory presented in Chapter Six.

Tsoukas (1991) advocates the controlled use of metaphors<sup>51</sup> in developing theory in the organisational sciences. Metaphors can assist the theory building process by providing a knowledge function. Tsoukas concluded that metaphorical and literal discourses have different but not mutually exclusive knowledge functions. Metaphors are better sensors than literal terms, "capturing and expressing the continuous flow of experience" (p. 581).

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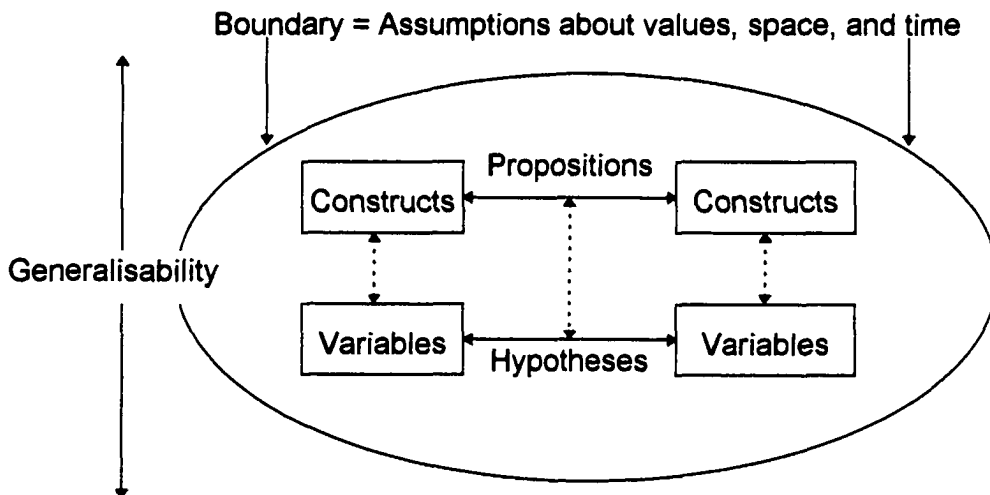
<sup>50</sup> Verification and validation are used interchangeably in the sociological literature, see Weick (1989).

<sup>51</sup> A metaphor is a statement that maintains two phenomena are isomorphic.

However, literal descriptions of much social phenomena tend to be more clinical, more precise, and more testable. Therefore, a transformational link between the metaphorical development of theory and the literal development of theory appears useful.

The purpose of theoretical statements is to organise (parsimoniously) and to communicate (clearly) (Bacharach, 1989). Bacharach stated that a theory “is no more than a linguistic device used to organise a complex empirical world” (p. 496). Bacharach’s components of a theory are presented in diagrammatic form in Figure 4.2. The relationship between constructs and variables, in terms of decreasing generalisability, is depicted. Similarly, the relationship between different variables (hypotheses) and different constructs (propositions) is also portrayed. The boundary of the theory is described in terms similar to Whetten’s (1989) assumptions about who, where, and when namely values, time, and space.

Figure 4.2. Representation of the components of a theory.



*Note.* From “Organizational Theories: Some Criteria For Evaluation,” By S. B. Bacharach, 1989, *Academy of Management Review*, 14 (4), p. 499.

Recent contributions to theory building in the organisational sciences mark no radical departure from their predecessors in the social sciences. The descriptions of theory, the role of theory, and the processes of theory building - deductive and grounded - are consistent. However, efforts have been made to further structure the creative process of theory building.

This process, whether through metaphors, explicit components and elements, theory building through case studies (see Eisenhardt, 1989; Section 5.2), or the adoption of falsifiability criteria (Bacharach, 1989) ensures that the inductive path developed by the researcher is open to scrutiny. In doing so the end result, while still dependent on intuition, is less likely to contain speculative leaps.

Bacharach (1989) provided a framework for evaluating theories in terms of falsifiability and utility. “Falsifiability determines whether a theory is constructed such that empirical refutation is possible” (p. 501). Bacharach’s falsifiability criteria is in accord with the theory testing procedure recommended by Blalock (1969). Bacharach postulates that a theory should meet all of the criteria specified in Table 4.3.

Table 4.3. A framework for evaluating theories.

Theory component	Falsifiability	Utility
Variables	Measurement issues	Variable scope
Constructs	Construct validity	Construct scope
Relationships	Logical adequacy	Explanatory potential
	Empirical adequacy	Predictive potential

*Note.* From “Organizational Theories: Some Criteria For Evaluation,” By S. B. Bacharach, 1989, *Academy of Management Review*, 14 (4), p. 502.

“Utility refers to the usefulness of theoretical systems” (Bacharach, 1989, p. 501). Theories must be able to explain and predict phenomena. “An explanation establishes the substantive meaning of constructs, variables and their linkages, while a prediction tests that substantive meaning by comparing it to empirical evidence” (p. 501). Bacharach (1989) concludes “only that rare theory which meets all the evaluative indicators may be considered ... to be acceptable and generally superior to the alternative theories against which it is compared” (p. 511).

That theories must be constructed so they can be refuted is likely to impose unnecessary constraints on theory building. Surely techniques for measurement ought to be developed in response to theory rather than constrain the creation of theory. There are a multitude of cases where theory has been developed in isolation of falsifiability. For example, Darwin’s (Huxley & Kettlewell, 1965) origin of species was, and still is, immeasurable. Yet,



the lack of falsifiability does not detract from his theory. The sentiment needs to be acknowledged but should not constrain the process - in due course the paradigm will.

The theory building process to be used in this study (Figure 4.1) incorporates the useful attributes of deductive theory building (Blalock, 1969; Hage, 1972; Merton, 1968; Zetterberg, 1965) and inductive theory building (Eisenhardt, 1989; Glaser & Strauss, 1967). The process must include the structured development of variables, constructs and propositions (Bacharach, 1989) and propositions should be best presented in a graphical form (Blalock, 1969; Hage, 1972; Whetten, 1989). The likely contribution of several paradigms (Burrell & Morgan, 1979) has already been acknowledged and a mechanism for incorporating their different contributions (Gioia & Pitre, 1990) included (see Section 2.1).

The role of theory in the social and organisational sciences was introduced. Theories in the middle range were then discussed. The scope of theories was reported as being significant rather than the position of theories. Theory building in the social sciences was recognised as the basis for current theory building methodologies in the organisational sciences. The important contributions to theory building by the social scientists during the 1960s and 1970s were subsequently presented. Recent theory building literature in the organisational sciences was then reviewed.

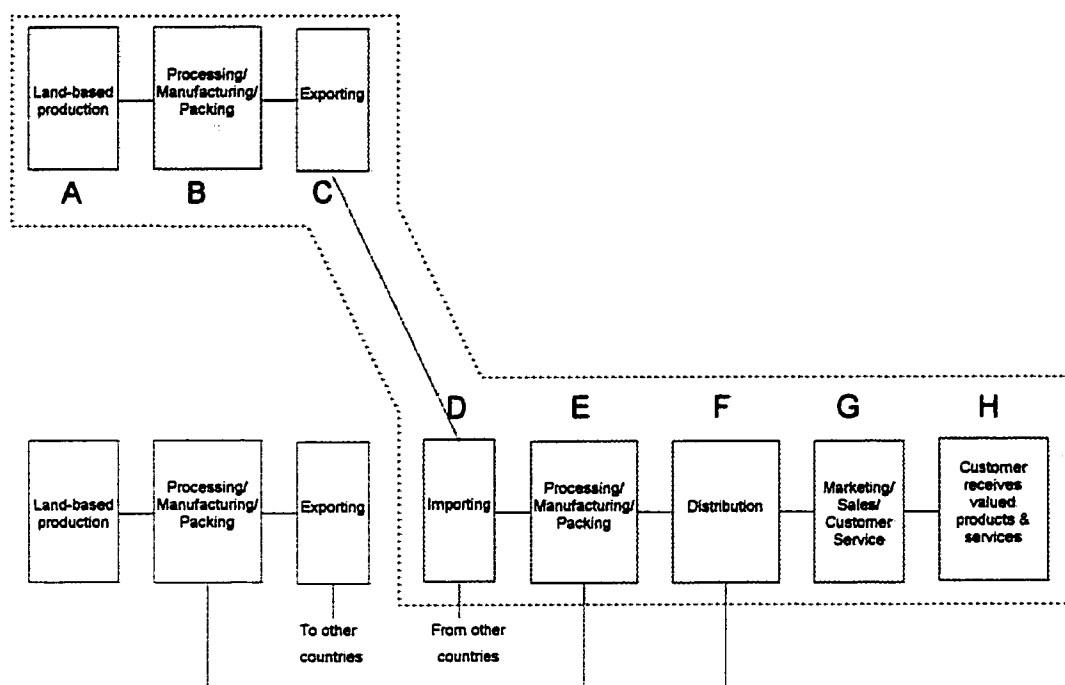
In 1964 Homans stated that “no one will go far wrong theoretically who remains in close touch with and seeks to understand a body of concrete phenomena” (p. 976). The theory building literature in the social and organisational sciences implicitly supports Homan’s statement. Theory building must be based on real problems with the aim of meeting peer’s and practitioner’s scrutiny alike.

To summarise, the creation of theory is a useful research output. Smiddy and Naum (cited in Swamidass, p. 810) suggest that theory building rises above “isolated problems” and “business exigency”. Theory building has the potential to produce radically new ideas and initiatives. But by way of caution, Shubik (1987) observed that “theory may become a waste of time for all but the theorists when there is no concern for relevance or application beyond the self-perpetuation of the club” (p. 1521).

#### 4.4 ADDITIONS TO THE Z-FORM MODEL

**T**HE IMPLICATIONS OF THE UNIQUE ATTRIBUTES of New Zealand's export-dependent land-based industries on the Z-form Model are now discussed. Consideration of the attributes' various effects on management and configuration is provided. The ubiquitous assumption remains that international consumers require land-based goods and services. These products are consumed daily, and heightened levels of consumption are expected for cultural and religious festivals. Therefore, ambient demand will be subject to short-term seasonal and regional requirements. The Z-form Model is reproduced in simplified form as Figure 4.3.

Figure 4.3. Simplified Z-form Model of a New Zealand export-dependent land-based international value system.

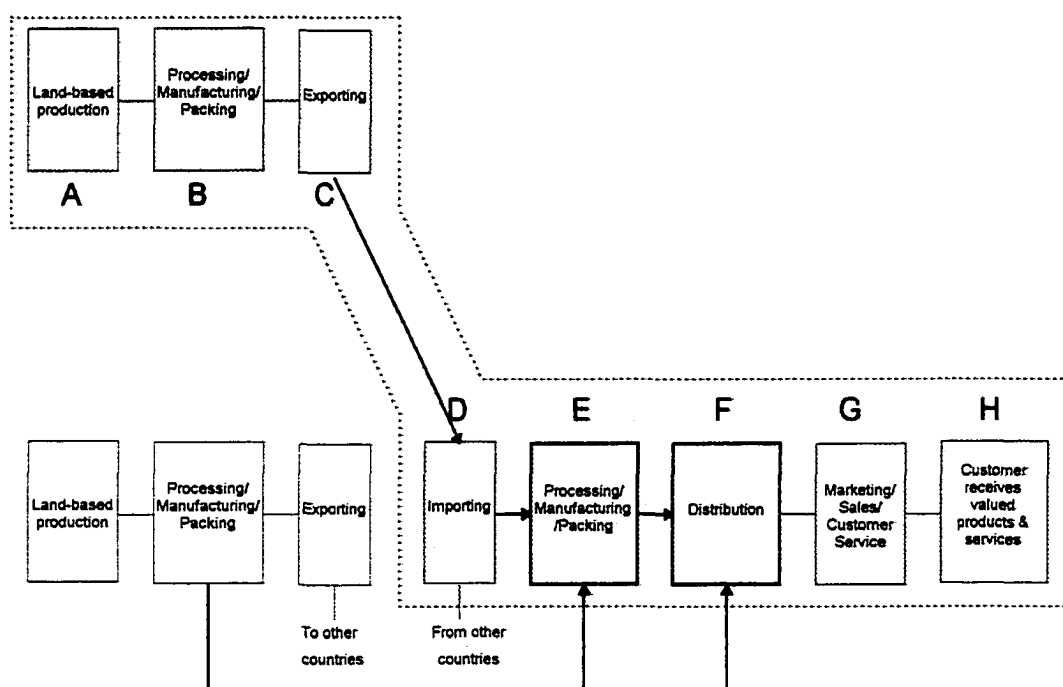


The value system is dependent on land-based production: upstream resources at A. Output is enduring, nondeliberate production push ensures mutual dependency between producers and processors, B, in the home-base location. Variability and seasonality of production is expected to result in a range of supply agreements between domestic producers and processors. In addition, processors and distributors in the

international location (E, F) are expected to purchase product from complementary sources (which are easily substituted) to ensure continuity of product in the marketplace. Therefore, the linkages between *other* home-base locations and the international location may influence the nature of domestic supply agreements.

The volume of product available on the international market is, in most countries, influenced by multi-domestic agricultural policy over which New Zealand has little sway. To repatriate wealth from stages of the value system located in the international location New Zealand must, therefore, establish and maintain processing and distribution at E, or F (identified in Figure 4.4). Failure to do so will result in New Zealand suppliers being paid no more than the international clearing price for land-based commodities. Ownership of processing and distribution stages in the international location would ensure that benefits accruing from substituting between alternate suppliers, necessary due to characteristics of production, are repatriated to New Zealand. More so with commodity products that are readily substituted rather than differentiated products.

Figure 4.4. Critical stages of ownership in the value system to mitigate characteristics of land-based production.

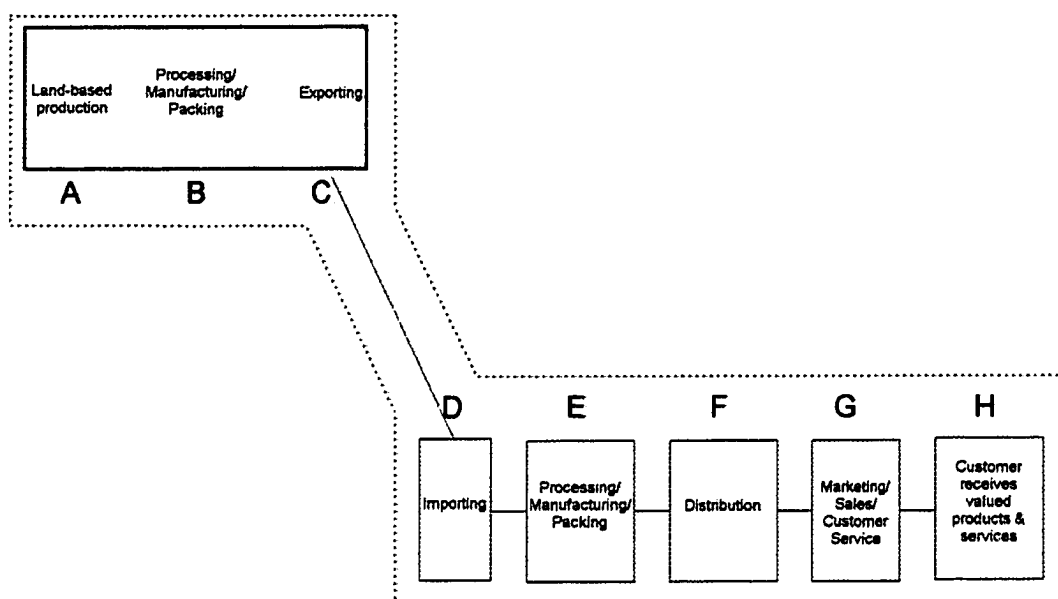


New Zealand's land-based producers, despite best management, will produce output of variable quantity and quality. Output volume, and its quality, will inevitably fluctuate from expected levels. Each of the land-based industries must accommodate this variability. Output volumes inevitably peak on a seasonal basis. Processing capacity, particularly for highly perishable products, must cope with peak output volume even if this peak is relatively short-lived. Therefore, each industry will maintain a gross over-capacity in the off-season - hence high exit barriers (previously noted at Figure 3.7). Within each industry, however, there reside opportunities for individual participants to exploit the seasonality and variability confronting others. Small processing plants have the ability to operate at full capacity year-round thereby minimising throughput costs per unit output, providing they can favourably manipulate their supply pattern. Within the home-base processing stage (B) quite different business strategies are expected to exist, of which the sum capacity meets, or exceeds total processing demand.

One result of many producers and few first stage processors is the establishment of federations amongst producers of which one form is the producer cooperative (Izraeli & Zif, 1977; McKinlay, 1992; Ward, 1975). In addition to cooperatives producers have captured legislation (Hussey, 1992, 1993) in an effort to enhance investment opportunities downstream in added-value and perishable products, and alleviate bargaining power amongst first stage processors (caused by small numbers). Within the current discussion this action is highly rational. However, it presupposes that the benefits to the producer from cooperatives are greater than those to be gained by having, even few, buyers at the first stage processor (notwithstanding the discussion of opportunism in Chapter Two, benefits supposedly stimulated through competition for product - an argument fully rebutted in Chapter Six). The net effect on the value system, particularly in the case of added-value and perishable products, is that ownership is extended through A, B, C, and even beyond. Common ownership of the upstream stages of the value system is depicted in Figure 4.5.

Key variables from the literature review relating to management and configuration of the value system are now added to the Model. The core business of New Zealand's export-dependent land-based value systems is assumed to remain the repatriation of wealth to New Zealand participants.

Figure 4.5. The common effect of producer cooperatives on the Z-form Model.



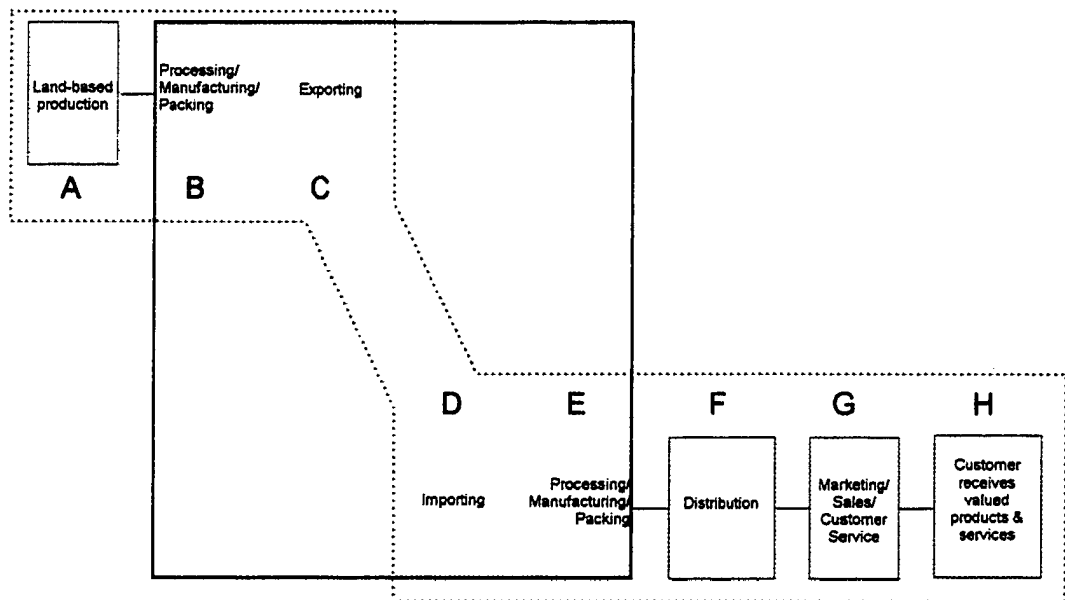
Managers with a broader perspective of the value system are expected to show an interest if not an attempt to influence the value system downstream. One role of federations is to provide a conduit for extending managerial attention beyond the boundary of the firm. If managerial perspective is considered in conjunction with pluralistic goals the behaviour of the firm may not be confined to an individual stage in the value system. These two variables alone provide adequate reason to anticipate the pursuit of relationships in addition to those between adjoining stages in the value system as depicted in the Z-form Model.

The international linkage is critical to New Zealand's export-dependent land-based value systems. Irrespective of the paradigm, models of the multinational enterprise (whether multinational, international, global or transnational) internalise the international transaction. The benefits of this form of organisation were identified as the retention of assets unique to the firm through subsidiaries and then the utilisation of these advantages in conjunction with local factor inputs.

The transnational prescription incorporates the specific advantages of each of the other three: namely, global competitiveness, multinational flexibility, and worldwide learning capability. Providing New Zealand's land-based industries possess unique assets *vis-à-vis* other nationalities firms are expected to retain these advantages through foreign subsidiaries.

The potential boundaries of a multinational enterprise are depicted in Figure 4.6, potential in that an exporting MNE is one particular form of multinational enterprise. They extend beyond the area of interest in the Z-form Model, representing activity in both the home-base domestic market and complementary acquisition and processing in international markets.

Figure 4.6. The multinational enterprise in the Z-form Model - internalising the international transaction.



The effect of bargaining power was summarised in Chapter Three as an organisation's ability to either invoke change in other organisations or resist change. Further, one motivation for collaborative linkages was recognised as an attempt to relieve bargaining power. Therefore, in the absence of bargaining power generic stages will integrate forward or backward to capture supply or buyers (one objective of producer federations). However, when bargaining power is present an individual stage will display resilience to integration. The organisation will be able to extract market rent without unnecessary investment either downstream or upstream of its current position. The concept is far from being operationalised at this stage of the discourse, suffice to say that the current configuration of the value system is a plausible measure of ambient bargaining power.

Hypercompetition provides a directive for business strategy with respect to product and market mix. Hypercompetition may even provide a direct measure of where specific

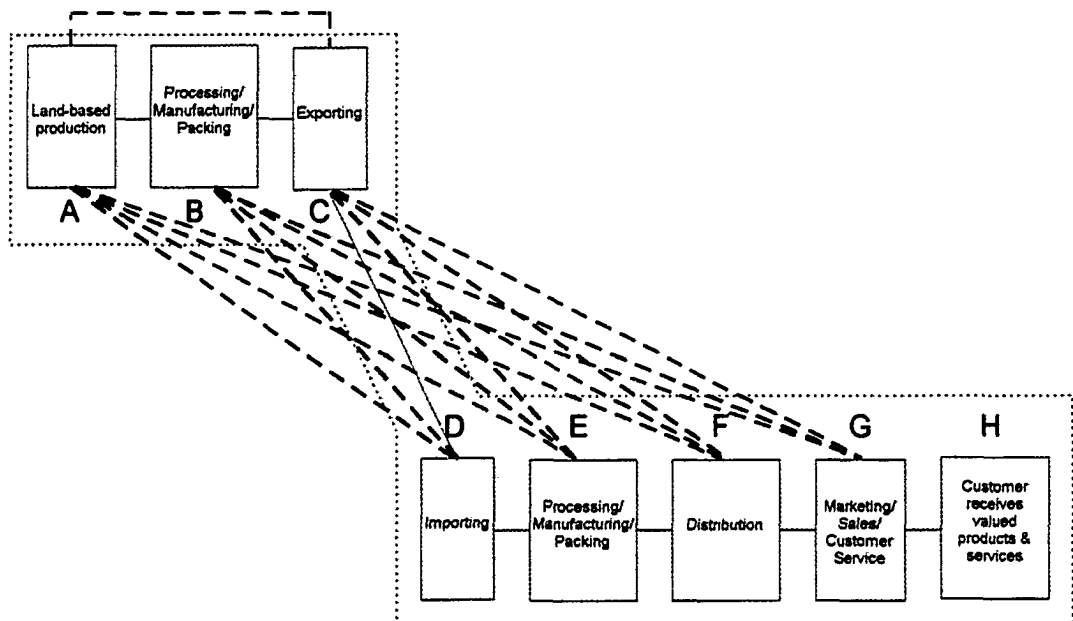
industries are in terms of competition in that the ladders may be employed as diagnostic tools for industry and predictors of time. Firms observed to be competing on price and quality face a no-win situation unless they develop full-line production. However, seasonality of production, variability of output, and supply inertia generally preclude New Zealand's processors from full-line production without sourcing product elsewhere.

Up until now linkages between organisations in the modified Z-form Model have been considered competitive. The introduction of collaborative linkages enables management of any stage to develop business relationships with management at any other stage. The benefits from business relationships, whether strictly as industrial networks or dyads, were reviewed in Section 3.5. Business relationships require some form of complementarity of objectives; they provide a source of information to participants; they result in a bond that can withstand a disruptive force; they require investment; and, they develop an atmosphere of conflict and cooperation. Importantly, relationships may result in adaptation between the participants enhancing the generation of value.

Multiple connectedness was postulated to mitigate bargaining power: one significant advantage of networks over dyadic relationships. Therefore, deliberate connectedness - strategic networks - may result from actual or perceived bargaining power being held by intermediary participants in the value system. The multitude of potential collaborative relationships in the form of multiple connectedness are depicted in Figure 4.7.

The aim of strategic management is to match the firm's capabilities with environmental opportunities and threats. Management will, therefore, position the firm within the value system through either deliberate or emergent strategy. The process of positioning the firm within the value system is, however, likely to be ongoing. Strategic management is the tool used to identify the boundaries of the firm and the collaborative relationships pursued. New age management provides a strategy no longer constrained by fit. Management seeks to overcome constraints imposed by the value system to develop opportunities beyond current resources and capabilities. Management seeks to create the external environment to its benefit rather than taking the environment as given.

Figure 4.7. Potential collaborative relationships in the Z-form Model, in addition to those existing between adjoining stages.



The adoption of new age strategy requires the creation and maintenance of an environment of change. Change forces are those external to the organisation and will reside collectively in the value system. In this respect change forces are related to bargaining power: an organisation may have to enhance bargaining power to overcome strong change forces.

#### 4.5 SUMMARY

**T**HE TWO COMMON PROCESSES of theory building in the organisational sciences were discussed. The deductive process of creating theory of lesser scope from general theory was introduced and then contrasted with grounded theory. The process of theory building to be used in this study was described. The procedure combines deductive contributions from general theory with inductive contributions from empirical evidence. The process adopted for this study was found to require both extant contributions (deductive) with empirical evidence (inductive).



Important concepts identified during the literature review were introduced into the Z-form Model. Of note is the multinational enterprise and those factors that motivate it as an organisational form. Bargaining power was viewed as a constraint to integration, in that the organisation can extract market rent without additional investment. Collaborative relationships within a dyad may be viewed as a means of enhancing adaptation while those resulting in multiple connectedness may serve to mitigate bargaining power. The Z-form Model provides a descriptive framework from which to consider implications provided by relevant literature and the unique attributes of New Zealand's agricultural systems. The literature review has provided insight into the sorts of configurations that may be expected, and indeed recommended for the value system. The unique attributes serve to temper wild flights of fantasy.

## CHAPTER FIVE: EMPIRICAL EVIDENCE

### CASE RESEARCH, SELECTION AND CASE REPORTS

*If you don't eat your meat you can't have any pudding. How can you have any pudding if you don't eat your meat?*

Roger Waters. (1979). Another brick in the wall (Part 2). On *The Wall*. New York: Pink Floyd Music Ltd.

#### 5.1 INTRODUCTION

**F**IVE COMMON RESEARCH METHODS ARE IDENTIFIED and the procedure used for their selection is introduced. The technique used to gather empirical evidence for the construction of grounded theory in this study, case study research (Gummesson, 1991; Yin, 1989a), is then described. Contributions to the case study research method are reviewed and the pitfalls and merits of the case study technique identified and discussed. The use of the case study method for both deductive and inductive research is analysed. Temporal factors used to define theory boundaries, in addition to those discussed in Chapters One and Three, are further refined in Section 5.3. The process used for the selection of case industries is then described.

Two export-dependent land-based industries in New Zealand provide the theoretical poles necessary for the grounded contribution to the study; these are first, pipfruit and second, meat. The history, roles of their societal marketing boards, current configuration, recent performance, and contribution to the economy from both industries is described in Section 5.4. Section 5.5 presents a brief discussion of other considerations for the selection of cases within each industry. The procedure used for the collection of case study data is then described (the research protocol which includes the interview questionnaire is presented as Appendix One). The grounded theory procedures and techniques (Miles & Huberman, 1994; Strauss & Corbin, 1990) used for the analysis of case data are introduced and discussed.

Concepts identified in and developed from the case reports are then presented at increasing levels of abstraction in Section 5.6. Case reports are presented in Appendix Two. The essential components of the theory are presented at the conclusion of the chapter.

## 5.2 CASE STUDY RESEARCH

**Y**IN (1989a) identified five common research strategies; experiments, surveys, archival analyses, histories, and case studies. Each research strategy has particular attributes, “advantages and disadvantages” (p. 13), depending on each of three conditions. The conditions for their use are first, the type of research question posed second, the extent of control the researcher has over events and third, the “degree of focus on contemporary as opposed to historical events” (p. 13).

The “most important condition for differentiating” between the five research strategies is the type of research question being asked (Yin, 1989a, p. 19). *What* questions favour the use of surveys or archival analysis whereas *how* and *why* questions favour the use of experiments, histories or case studies (Dixon, Bouma, & Atkinson, 1987; Hakim, 1987). The extent of control over behavioural events is the second condition for differentiation between the research strategies. Experiments, for example, are the preferred strategy where there is control over relevant behavioural events. Temporal focus is the third condition for differentiation. Histories are the preferred strategy to deal with the “dead” past (Yin, p. 19) whereas the case study is the preferred strategy when examining contemporary events. Relevant situations for different research strategies are presented in Table 5.1.

Identification of the appropriate research strategy using principles such as those offered by Yin (1989a) ensures that the researcher avoids the pitfalls associated with the *preferred technique method* as denigrated by Ackerman (1965) and Gummesson (1991) (briefly mentioned in Chapter One). The technique used to gather data is simply the means to an end, not the end itself. All too often scientists appear to succumb to their preferred technique in deference to seeking out research problems of value to an audience outside of their paradigm.

Table 5.1. Relevant situations for different research strategies.

Strategy	Form of research question	Requires control over behavioural events?	Focuses on contemporary events?
Experiment	how, why	yes	yes
Survey	how, what*, where, how many, how much	no	yes
Archival analysis (e.g., economic study)	who, what*, where, how many, how much	no	yes/no
History	how, why	no	no
Case study	how, why	no	yes

\*"What" questions, when asked as part of an exploratory study, pertain to all strategies.

Note. From *Case Study Research: Design and Methods* (Revised ed.) (p. 17), by R. K. Yin, 1989, Newbury Park, CA: Sage.

Research strategies may not, however, be mutually exclusive. A study may include an archival analysis or survey in a case study (Sieber, 1972; Yin, 1989a). With respect to this study, given the lack of control over behaviour and the focus on contemporary events, suitable techniques for the data gathering process are restricted to case studies and surveys. However, only the case study method is appropriate to provide an indepth understanding of why. Surveys are more suitable for the collection of broad, less detailed knowledge of phenomena. Yin (1993) stated that the "case study is the method of choice when the phenomena under study is not readily distinguishable from its context" (p. 3). Yin provided several examples of such complex interactions which require case study research including, for example, interorganisational partnerships. The critical features of a case study strategy are summarised by Yin<sup>52</sup> (1989a) as follows:

*A case study is an empirical inquiry that:*

- investigates a contemporary phenomena within its real-life context; when
- the boundaries between the phenomena and context are not clearly evident; and in which
- multiple sources of evidence are used. (p. 23)

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<sup>52</sup> Yin described a basic set of case study research designs in 1984. This set was developed further and reported in a revised form in 1989a and substantiated with applications in 1993.

The definition assists in distinguishing between case-study research and other research strategies. A history deals with non-contemporary events within a real-life context. An experiment “deliberately divorces a phenomena from its context” (p. 23) so attention can be drawn to specific variables in isolation, and while surveys can deal with phenomena, they do so at the expense of context.

Hakim (1987, p. 61) stated that “the case study is the social research equivalent of the spotlight or the microscope: its value depends crucially on how well the study is focused”. The case study can employ a variety of data collection techniques and allows for a “more rounded, holistic, study than any other design” (p. 61). Case studies can be exploratory, single case or multiple case and may focus on individuals, groups or organisations. Hakim suggests that the enormous variation in case studies makes it difficult to summarise their attributes relative to other research strategies. However, Hakim stated that “so much depends on the degree of fit between the questions being addressed and the particular case, or cases, selected for the study” (p. 64). The argument common to all discussions of case studies as a research strategy is the importance of design.

The case study strategy has its own research design (Yin, 1989a; Gummesson, 1991) and should not be confused with one-off, post-test designs (Cook & Campbell, 1979). D. Nachmias and C. Nachmias (1987) described research design as a plan for the process of collecting, analysing, and interpreting observations. The authors stated that a research design “is a logical proof that allows the researcher to draw inferences concerning causal relations among the variables under investigation” (pp. 77-78). The research design also defines the degree to which results can be generalised (i.e., whether the obtained interpretations can be generalised to a larger population or to different situations). This observation further supports the argument that case studies’ notorious reputation (Yin, 1984) is a result of poor research design rather than the strategy per se.

Yin (1989a) identified five components of case study research design as; a study’s questions; its propositions, if any; its unit(s) of analysis; the logic linking the data to the propositions; and, the criteria for interpreting the findings. (p. 29). The study’s objective will determine the appropriate research strategy. The *hows* and *whys* of the configuration and

management of New Zealand's export-dependent land-based value systems, therefore, appear to be best addressed by some form of case study.

Case study research has conceptual similarities to hypothesis testing research. The "concept of a population is crucial" (Eisenhardt, 1989, p. 537) to both forms. For example, the population defines the scope of subjects, controls nonessential variation, and delimits the scope of generalising from results (Eisenhardt). Selecting the case or cases to be studied, claims Yin (1993), is "one of the most difficult steps in case study research" (p. 8). Guidance to case selection is provided by the theoretical issues to be developed and explored during the study. Glaser and Strauss (1967) stated that the *process* of "data collection is controlled by the emerging theory, whether substantive or formal" (p. 45). However, because Glaser and Strauss's approach (discussed in Section 4.2.3) is almost but not quite solely inductive, initial decisions for case selection are not based on a preconceived theoretical framework.

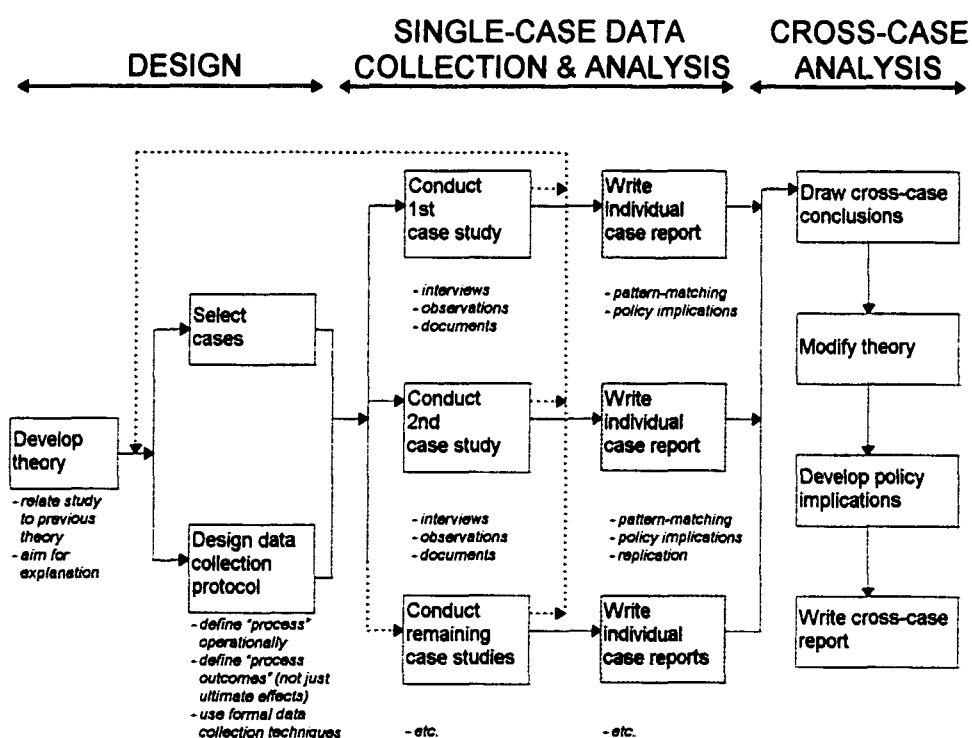
The functionalist approach is implicit in Yin's (1981, 1989a, 1993) method of case research. For example, Yin (1989a) states that the initial step in designing the study must consist of theory development. Theory building is argued to precede case selection (Yin, Bateman, & Moore, 1983). Yin, Bateman, and Moore's conceptual diagram of the case study method is presented in Figure 5.1.

Yin, Bateman, and Moore's (1983) template employs case research to verify theory. In later contributions Yin (1984, 1989a, 1989b, 1993) argues that the case research method provides an alternative to survey research methods in that theoretical replication, and literal replication achieve the same end as sampling logic (Kalton, 1983). Literal replication uses multiple cases to produce similar results while theoretical replication produces contrary results for predictable reasons. In each instance Yin's objective is to test rather than generate theory. The process of theory generation is, unfortunately, given short shrift in a fashion not dissimilar to that of Twentieth Century hypothetico-deductive science.

By contrast, the goal of the grounded approach (Glaser & Strauss, 1967) is to generate theory. Herein lies the organisational researcher's paradox: rationalising the

order that empirical evidence, literature, and theory construction are completed. Glaser and Strauss recommend a grounded approach, Yin a deductive approach. Gioia and Pitre (1990) correctly reconcile these differences by attributing each of them to different organisational paradigms. The “lack of clarity about the process of actually building theory from cases, especially regarding the central inductive process and the role of literature” is also acknowledged by Eisenhardt (1989, p. 532). Therefore, the process is an iterative rather than serial activity.

Figure 5.1. A conceptual model of the case study method.



*Note.* From *Case Studies and Organizational Innovation: Strengthening the Connection*, by R. K. Yin, P. G. Bateman, & G. B. Moore, 1983, Washington, DC: COSMOS.

Eisenhardt (1989) and Mintzberg (1979) recommend that a research question be defined within a broad topic before data collection. Even Glaser and Strauss (1967) hint that the grounded approach is not solely inductive. They state that categories can be “borrowed from existing theory” (p. 36) implying that extant theory has a role in guiding theory building research. Eisenhardt (1989) suggests that the “a priori specification of constructs can also help to shape the initial design of theory building research” (p. 536).

However, the author warns that it is “equally important to recognize that both [the research question and the constructs] are tentative in this type of research” (p. 536). Theory building research, therefore, begins with the specification of a research question and the identification of constructs. But at this stage no attempt should be made to link the constructs with propositions.

Theory is central to a case study research strategy (Yin, 1989a, 1989b, 1993). The recent interest in theory building in the organisational sciences (Van de Ven, 1989), whether inductive (Eisenhardt, 1989), deductive (Weick, 1989) or an iterative deductive-inductive process (Swamidass, 1991), appears to be partly in response to the “notorious reputation” (Yin, 1993, p. 4) of case study research. The inductive-deductive dilemma was rationalised, in terms of this study, in the previous chapter by the recommendation for a conjoint approach to theory building. Case studies’ reputation as an inherently weak research strategy concerns the difficulties associated with generalising: making inductive inferences from a *one-off* study or event. This weakness appears to be largely due to the lack of rigour applied to the strategy, poorly developed theory, and inadequately defined units of analyses.

The study’s propositions “direct attention to something that should be examined within the scope of the study” (Yin, 1989a, p. 30). Propositions will reflect the theoretical issues and direct the search for evidence. Yin’s third component of case study research design is to define the unit of analysis. For example, White’s (1986) study of corporate strategies included only 12 multi-business firms. However, the case being examined was the organisational data of each strategic business unit (SBU), giving 69 cases for analysis. The unit(s) of analysis narrow the relevant data and define the variables for subsequent analysis. Clear definition of the unit(s) of analysis delineates between the inclusion and exclusion of data<sup>53</sup>. The unit(s) of analysis may be delineated geographically or temporally (Yin, 1989a) to provide units such as advertising levels (Chang & Kinnucan, 1990), brands (Murphy, 1990) or costs (Hedley, 1976). Yin suggested that the last two components of his schema: the logic linking the propositions, and the criteria for interpreting the findings are the least developed.

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<sup>53</sup> The researcher, however, needs to be responsive to the broad environment in which the data is being collected. The unit(s) of analysis needs to be recognised within the boarder context of the operating environment.



These two components collectively represent the argument selecting the units of analysis, the analysis, and the discourse surrounding the subsequent discussion.

The main distinction to be considered when designing case study research is between single-case and multiple-case designs (Yin, 1989a). Yin states that prior to data collection a decision needs to be made “on whether a single-case or multiple cases are going to be used to address the research questions” (p. 46). One rationale for the single-case design is when it represents the “*critical case* in testing a well-formulated theory” (p. 47). Yin makes the analogy to the critical experiment. The single-case is used to determine “whether a theory’s propositions are correct”. Therefore, the single-case can represent a major contribution to knowledge. A second rationale for the single-case is “where the case represents an *extreme or unique case*” (Yin, p. 4). The third rationale identified by Yin is the *relevatory case*. A relevatory case exists when a researcher has the opportunity to study a phenomenon previously inaccessible to research. Yin acknowledges that there are likely to be other reasons for implementing a single-case design. However, he warns that the weakness of a single-case design lies in the case failing to deliver the research objectives. Therefore, the single-case design requires particularly careful case selection.

The rationale for multiple-case design is different from single-case design. For example, “the unusual or rare case, the critical case, and the relevatory case are likely to involve only single cases” (Yin, 1989a, p. 53). However, while multiple-case designs are commonly regarded as more robust they can require resources beyond the means of an individual researcher. Yin states that “every case should serve a specific purpose” (p. 53). Multiple-case selection should be designed to either predict similar results (literal replication), or produce contrary results for predictable reasons (theoretical replication). “Each individual case consists of a ‘whole’ study, in which convergent evidence is sought regarding the facts and conclusions of the case; each case’s conclusions are then considered to be the information needing replication by other individual cases” (p. 57). Yin, therefore, recommends the substitution of multiple cases and replication logic for hypothesis testing research: as observed both approaches are deductive and theory testing in nature.

Eisenhardt (1989) also warns against the random selection of cases. She states that random selection is “neither necessary, nor even preferable” (p. 537). Cases should be chosen

for theoretical reasons to “replicate previous cases or extend emergent theory”, or to “fill theoretical categories and provide examples of polar types”.

The use of cases for business research, taken from the Law School (Locke, 1989), was recognised “from a fairly early point in the development of case collecting at Harvard Business School” (McNair, 1954, p. 223). In 1922 the School’s Dean noted that “the number of cases which have been worked out with the detail necessary... for solving executive problems... is lamentably small” (Donham cited in Towl, 1954, p. 223). Towl suggested that the use of cases for research should be restricted to theory building. He stated that “the decision to base a research project on cases carries with it an obligation to adhere to the inductive method and not to gather material primarily with the view to demonstrating the validity of preconceived ideas” (p. 225). Accordingly, case research in this study is used as a tool to gather empirical evidence for the generation of theory. Towl’s statement should not, however, be regarded as an comprehensive rebuttal of the use of case research for theory testing. Yin’s recommendations provide a robust means of employing case study research methods for theory verification.

Case selection should include cases representing contrasting theoretical categories: the vertically integrated firm - from producer to retailer - marks one extreme category in this study. Unfortunately, case selection will be tempered by access. Gummesson (1991) identifies access as the researcher’s number one challenge. “Access refers to the opportunities available to find empirical data (real-world-data) and information” (p. 11). Case research requires cooperation from a person and/or company (Howard & MacMillan, 1991; Ladd, n.d.). Without one “efficient and benevolent informant” (Gummesson, p. 28) in an organisation the researcher’s progress is likely to be slow. Gummesson makes the distinction between overt and covert access. For example, Dalton’s renown (1964) study, *Men who Manage*, which he began while employed at Milo, epitomises covert research. However, covert research is likely to be limited to either a single-case or surreptitious investigation, the latter perhaps better reported as investigative journalism than in the form of a doctoral thesis.

The procedure to be used for generating theory in this study was described in Section 4.2.4. The procedure includes both deductive and inductive contributions. Data for the inductive contribution will be gathered using some form of case study technique.

Case research is the only means available to gather information on contemporary events beyond the investigator's control that will provide answers to how and why questions - necessary to provide a sufficient understanding of New Zealand's export-dependent land-based value systems from which to create theory. Additional temporal factors used to define the boundaries of the theory are discussed in the following section. The procedure used for case selection is then described.

### 5.3 TEMPORAL FACTORS AND INDUSTRY SELECTION

**T**HE OBJECTIVE OF THIS STUDY is to develop a theory of industry configuration and management for New Zealand's export-dependent land-based value systems. The temporal factors (Whetten, 1989), those which define the boundaries of the theory as discussed in Section 4.2.5, are New Zealand, land-based, export-dependent, and value systems. As each are defined attention is drawn to relevant discussions in previous chapters.

New Zealand is a small country comprising two major islands and numerous (hundreds) of small off-shore islands in the southwest Pacific. The main islands (North Island and South Island) extend from 34° to 47° latitude (Bartholomew et al., 1986). New Zealand is generally acknowledged to be settled some 1200 years ago by colonisers from the Polynesian islands (Orbell, 1985). The Dutch explorer Abel Tasman was the first European to discover New Zealand when in 1642 he cast anchor in Cook Strait (Brett & Leys, 1886). Captain James Cook conducted three voyages from England to New Zealand from 1769 to 1777, and "took formal possession of the country in the name of King George" III on 30 January, 1770 (p. 532). The first Europeans settled in New Zealand in 1792, when a sealing gang from New South Wales was disembarked at Dusky Sound for a year. During the next four decades sealing, timber, whaling and flax industries were established by European pioneers. Further relevant early history is recounted during introductions to the case industries.

The population of New Zealand is 3.58m, comprised predominantly of 74% European, 10% Maori, and 4% Polynesian (Edwards, 1996). The country is a

constitutional monarchy with one legislative house. The 120 representatives are democratically elected three yearly, official languages are English and Maori (Edwards).

Case study selection within specific industries excludes foreign owned firms because one perspective of the study, developed in Chapter One and pursued in Chapter Three, is distributive effects in favour of New Zealand owners. In that respect the study is charged from an ideological view rather than the view of neoclassical efficiency. Foreign firms result from foreign direct investment (FDI) (Connor, 1983) such as Heinz, and Grocorp. For example, Watties provides one source of "international production" or "foreign content" (Connor, p. 395) for H. J. Heinz (Pittsburgh). Another notable firm excluded from the study is Grocorp Pacific Ltd, owned by Sanyo General Capital Ltd (Japan) and Sentry Investments Ltd (Hong Kong).

In theory anyway, New Zealanders can partake in the ownership of Heinz. But as noted in Section 3.6.3 foreign ownership and control of publicly listed companies is small, Heinz stockholders are largely foreign. Only Heinz suppliers are in a position to capture wealth domestically. Heinz has no incentive to pay suppliers any more than the minimum required to maintain continuity of production - a price near identical to other processors<sup>54</sup>. Heinz's home-base location is the United States of America with tentacles reaching into New Zealand. The subject value systems of this study clearly need to conform to the opposing case: domestically owned and operated production, processing, and exporting with interests, investments and/or, operations (at various stages of the value system, D to G) in international locations. Interests and investments in the international location may in fact amount to little, particularly when product ownership changes with the geographical boundary (C to D).

Land-based refers to those value systems dependent on the land resource namely pastoral farming, horticulture, forestry, and some extraction industries. However, extraction industries being non-agrarian are excluded from the study. A discussion of the research implications on non-agrarian resource-dependent value systems is presented in Chapter Six. Factory farming systems where animals are housed year round, hydroponic

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<sup>54</sup> Heinz and other processors purchase raw-materials from producers at marginal cost.

production, and other forms of indoor horticultural production have an importantly different relationship with land. For sure controlled inputs are sourced from land, namely foodstuffs but these farming systems require land as a place-to-sit rather than for the direct provision of inputs. The unique attributes of land-based production in New Zealand were identified and discussed in Chapter Two.

Export dependency constrains the study to those industries where production in the home-base location far exceeds domestic consumption. Many of these industries were established some 100 years ago with the international market, particularly Britain, in mind. Domestic consumption, and supply to the domestic market may be considered as an after-thought. The domestic market is only now becoming of consequence to these industries. The nature and magnitude of export dependency amongst New Zealand's land-based industries was reported in Section 1.3.2.

Few of New Zealand's agricultural and forestry industries produce exclusively for the domestic market - the exceptions include the pigmeat and poultry industries. Most agricultural, and forestry industries are, therefore, export-dependent. Horticultural industries, by contrast, largely produce for the domestic market. Notable exceptions, as mentioned in Chapter Two, include kiwifruit, pipfruit, wine, and squash.

The concept of a value system was introduced and discussed in full in Section 2.3, and distinctions were made between value systems, chains, stars, and constellations. The descriptive interpretation of a value system plots current product flow from the land-based producer to international consumer, identifies stages where generative effects emanate, and identifies stages receiving the distribution of wealth. The boundaries of the value system were identified in Chapter Two, however, attention was drawn to critical horizontal linkages that enhance value. These linkages, absent from the Z-form Model, may need to be recognised, examined, and adopted during analysis.

The study's unit of analysis are the stages and the relationships between stages in New Zealand's export-dependent land-based value systems. Concepts likely to be discovered were, partly, identified in theories of international business, strategic management, and the emerging theory of industrial networks (which allows the inclusion of all forms of inter-

organisational relationships). The subject *networks* are defined by the scope of firms' activities within the Z-form Model with the caveat that firms providing critical inputs and services may also be included. The relationships between firms are expected to be stable, but not static; across a range of industry configurations, and products.

Industry configuration and product are two potential discriminators for the selection of appropriate case studies. At this stage of the discussion case selection needs to be considered by way of industry rather than value system as the scope of the value system is unknown beyond that defined by the Z-form Model. To allow any form of generalisability case selection, must provide suitable subjects across these two discriminators of industry selection, preferably in a polar (Eisenhardt, 1989) fashion. Otherwise discussion and elaboration of the results appears to be confined to either integrated or non-integrated, fresh or manufactured product value systems. The rationale for discrimination by configuration, and product is now introduced

Industry configuration is the first discriminator of industry selection. One extreme form of configuration is the vertically integrated industry resulting from a government sanctioned producer board. The producer board exercising [near] exclusive rights to export represents a deliberately coordinated and integrated value system, at least in terms of the activities located in New Zealand. At the other extreme - theoretical pole - is the nonintegrated (including the land-based producer), and supposedly, non-deliberately coordinated multi-participant value system.

Product is the second discriminator of industry selection. Raw (fresh) products and manufactured products were differentiated in Cartwright's (1993c) value chains (Figure 2.1). Manufactured product value chains are further differentiated by the location of processing, manufacturing, and packaging in either home-base or international locations (Figure 2.2). Land-based production commonly takes the form of a singular-product irrespective of the raw (fresh) or manufactured value system beyond the farm gate. That is the producer's unit of output such as lambs, milk, or fruit is a single product for subsequent processing, manufacturing, and packaging. Multiple products in these industries are created at processing. For example, dairy manufacturing creates "four main product groups - cream products, cheese, milk powders and protein products" (NZDB, 1991, p. 13). A notable

exception to singular-product farm output is wool: the fleece is skirted - coarse grading - prior to sale. (Despite on-farm fleece preparation prior to sale Lowe and Sherlock (1994) note that not all *desirable* fleece characteristics generate financial reward).

The international customer receives fresh product in singular-product form. Most other land-based products are consumed in multi-product form, that is several/many goods reach the buyer from one unit of farm output. The implications of singular- and multi-product land-based production on the value systems are threefold. First, the land-based producer cannot shift output between desirable and less desirable consumer goods - even *designer* lambs have two forequarters. Manufactured product value systems remain encumbered with less desirable goods. Second, the resources expended, and the value generated and distributed may differ significantly between desirable and less desirable goods. Third, defining the boundaries of the land-based international value system from the customer, rather than the producer, ignores the nature of singular-product output at the farm gate. Therefore, the *direction* of analysis (not necessarily data collection) should proceed from production through processing, exporting, and distribution accounting for multiple-products en route.

In addition, industries making a significant contribution to export earnings should be selected. Including important industry value systems will ensure that the research findings are of relevance to a greater number of professionals (academics and practitioners). Therefore, case industries need to be selected that provide the theoretical poles of vertically integrated and non-integrated value systems; raw (fresh) and manufactured product value systems; value systems that enter a range of markets; and also, value systems that are of importance to New Zealand's economy. Attributes of the two discriminators of industry selection for each of New Zealand's export-dependent land-based industries are presented in Table 5.2.

Three of New Zealand's export-dependent land-based industries fulfil the case selection constraints in addition to providing polarity to the theoretical constructs. The three industries are meat on the one hand, pipfruit or kiwifruit on the other. The kiwifruit industry is excluded having recently been the subject of an extensive review (see Caughey & O'Boyle, 1994). The meat industry, arguably New Zealand's single largest export industry (MAF, 1994), is a non-integrated manufactured product value system. The pipfruit industry, also of economic significance (MAF), is a deliberately integrated fresh product value system.

Table 5.2. The attributes of New Zealand's export-dependent land-based industries in terms of configuration, and product.

Industry	Discriminator of selection	
	Configuration	Product
Lamb and mutton	Non-integrated	Manufactured
Beef	Non-integrated	Manufactured
Venison	Non-integrated	Manufactured
Pipfruit	Vertically integrated producer board	Fresh (some manufactured)
Kiwifruit	Vertically integrated producer board	Single fresh
Wine	Integrated vintners, majority of independent growers	Manufactured
Squash	Non-integrated	Single fresh
Dairy	Vertically integrated producer board	Manufactured
Wool	Rarely integrated	Durable fresh and manufactured
Forestry	Exporters integrated	Manufactured

Other combinations of configuration and product are worthy of further exploration. However, case studies in the meat and pipfruit industry were considered sufficient to generate more than adequate material for the study's inductive contribution.

#### 5.4 AN OVERVIEW OF THE CASE INDUSTRIES

**A** BRIEF DESCRIPTION of New Zealand's meat and pipfruit industries follows. The industries' histories, development and roles of producer boards, contributions to the economy, configuration, the number of participants, major products, and markets are described. The unit of investigation providing access to the units of analysis is the firm. First round case selection in the meat industry will be influenced by a priori considerations of access. Case selection in the pipfruit industry *must* include the New Zealand Apple and Pear Marketing Board's international marketing division ENZA New Zealand (International).



### 5.4.1 The pipfruit industry

The first commercial pipfruit orchards were planted in the Hastings district in the 1870's (Boyd, 1984). New Zealand's planted area peaked in the late 1920's near 10,000 hectares (Wilton, 1989). Planted area subsequently declined to 2,350 hectares during the next two decades which Wilton attributes to the lack of industry organisation. Since the late-1940's the planted area has again increased to approximately 10,000 hectares (Wilton).

New Zealand produces some 400,000 tonnes of apples annually (20 million tces<sup>55</sup>). New Zealand is not a large producer by world standards, producing say 1.1% of world output (Lusztig, 1990). Production in New Zealand increased at the rate of 7% p.a. from the mid-1970s to 1989, at the time being the second highest growth rate next to Chile (14.6%).

New Zealand accounts for a disproportionate share of world apple exports, which is estimated at 9.7% (Lusztig, 1990). Only "ten exporting countries are documented to account for more than one percent each of world exports" (p. 27). Lusztig clusters the ten countries into three groupings. Two dominant exporters, Hungary and Chile; five major exporters, USA, South Africa, Argentina, EC, and New Zealand; and three minor exporters, Canada, Turkey, and Yugoslavia.

Fresh apples contribute 4-5% of New Zealand's agricultural export earnings, and of the horticultural export crops are second in value only to kiwifruit (MAF, 1996). In 1995 fresh apples and pears earned \$491 million in foreign exchange and fruit and vegetable juices a further \$35 million (MAF), 2.4% of the total value of New Zealand's export goods (fob).

The NZAPMB was established in 1948 in an effort to organise the marketing and distribution of pipfruit in New Zealand. The Apple and Pear Marketing Act (1948) gave the Board sole rights to acquire and market apples and pears. The Board, effectively a producers' cooperative, was established when "growers believed in the need for controlled marketing to give future security and stability" (Lockhart, 1990).

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<sup>55</sup> A tray carton equivalent (tce) is a bushel of fruit sold on export, local, or processing markets. A carton refers to one bushel of export fruit.

The Board's domestic monopoly - beyond restricted volume orchard sales - and export monopsony has attracted scrutiny from numerous sectors during the last decade. For example, the government (Douglas, 1984), produce auctions (see Turners and Growers, 1989), The Porter Project pipfruit industry study (see Crocombe, Enright, & Porter, 1990), the New Zealand Business Roundtable (Hussey, 1992, 1993), academics, and corporate apple producer Apple Fields Ltd have all recommended various degrees of deregulation. Initially the Board defended their domestic monopoly (NZAPMB, 1990). However, since mid-1993 they have recognised that deregulation of the domestic market provides an opportunity to focus the "business on export and offshore marketing" (McCliskie, 1994, p. 7).

Significant changes were made to the Apple and Pear Marketing Act in 1994 which "clarified export policy, deregulated the domestic market" and removed the obligation of processing from the Board (McCliskie, 1994, p. 7). The Board remains the near sole exporter of New Zealand's apples and pears. Consent to export (see NZAPMB, 1994b) has, to date, been granted to three applicants. Asia-New Zealand Marketing received consent to export 33,000 cartons of small fruit to East Malaysia (Stewart, 1995), Grocorp Pacific Ltd had approved a trial of 1500 cartons of Pink Fuji (McCliskie, 1995), and Apple Fields were approved the export of 5,000 cartons to the United States of America (Macfie, 1995).

The Board's statement of corporate intent (NZAPMB, 1994c) was promulgated to producers through a series of consultative regional meetings (Hutching, 1993). The Board's vision is as follows:

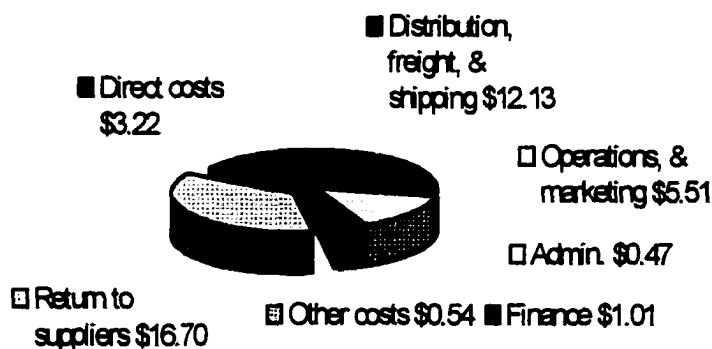
The Board will be the world's foremost pipfruit marketing organisation in order to achieve premium returns through an effectively integrated volume business and excellence in value creation, customer satisfaction and innovation. (NZAPMB, 1994a)

McCliskie (1994), the Board's Chairman states that the board is "at the top, in terms of sales value" but geographic isolation, and competition from lower cost Southern Hemisphere countries "make premium returns a necessity" (p. 2). Furthermore, he recognises that critical mass is "vitally important to achieve cost efficiencies and to compete in the marketplace where there is a growing concentration of buying power" (p. 2). The Board

“deal[s] with giant super-market chains who account for between 60 and 80 percent of apple sales in various European countries and 99 percent of apple sales in North America” (Petersen, 1993). In these markets customers generally are discerning and will pay premiums for quality *preferred varieties*.

Sales of fresh export apples and pears in 1995 by ENZA New Zealand (International), the Board’s export marketing division, totalled 17.2 million cartons. A further 81,000 tonnes (4 million cartons equivalent) were submitted to ENZA Processors Ltd (NZAPMB, 1995), just half the volume submitted the previous year following hail damage in Hawkes Bay (NZAPMB, 1994a). Fresh fruit exports, therefore, represent some 80% of the total crop volume handled by the Board. Fresh export sales realised revenue of \$556 million and payments to producers averaged \$11.22 per carton down from \$16.70 the previous year (NZAPMB, 1994a). Gross revenue was \$784 million, the \$227 million balance was received from commercial operations which includes processing, and revenues from the Chilean subsidiary. Of the Board’s gross export sales in 1995 some 36% was returned to producers. The balance was absorbed by postharvest handling, distribution, marketing, finance, and administration costs, as presented in Figure 5.2.

Figure 5.2. Disbursement of the New Zealand Apple and Pear Marketing Board’s income (\$ per tray carton) in 1995.



Note: From *Annual Report*, by NZAPMB, 1995, Wellington: Author.

Bruhn and Lockhart (1993) calculated the terms of exchange for New Zealand’s pipfruit producers. The average annual payout to producers (\$/tce) was used as the output index, and an input index was derived from New Zealand Department of Statistics

horticulture input price data<sup>56</sup>. The pipfruit industry was found to be suffering from declining terms of exchange over the last twenty years, despite consecutive record and near record prices received from export sales in 1990, 1991, and 1992 (NZAPMB, 1990, 1991, 1992). The average payout to export suppliers was \$13.85, \$19.86, and \$19.30 per tce in 1990, 1991, and 1992 respectively (NZAPMB, 1994a). Export returns then collapsed in 1993 (average price of \$10.85/tce) prompting the Board to suspend interim payments, and producers to stop expenditure ("Growers shut cheque books", 1993). Prices have since recovered and in 1994 produced "the third best returns" on record (McCliskie, 1994, p. 7).

The high returns in 1990 were attributed to the improved varietal mix, early completion of sales, and favourable exchange rates (NZAPMB, 1990). The record returns in 1991 and 1992 were reputedly attributable to low harvests of summerfruit and pipfruit in European countries (MAF, 1992; NZAPMB, 1992). Returns in 1993 collapsed (NZAPMB, 1993), and in 1994 fully recovered, only to decline again in 1995. Some of the increase in 1994 returns was due to the Board's efforts to freeze uncommitted expenditure and renegotiate packaging and logistic contracts (NZAPMB, 1994a, p. 12) following "a devastating hail storm in Hawkes Bay". The hail occurred in March - at the start of the export harvest season - and affected 489 producers, one-third of all growers.

World pipfruit markets are currently described by the Board as being "depressed because of large carry-over stocks from the Northern Hemisphere" (NZAPMB, 1994a, p. 12). However, estimated world apple production is expected to fall, notably in the EC (-11% on 1994) (MAF, 1996). But despite carry-over and supply by "aggressive" competitors the Board reports the maintenance of price premiums in the European, American and Asian markets (NZAPMB, 1994, p. 15). The Board purchases all export quality pipfruit supplied by producers. It is not obliged to accept fruit failing to reach their size, colouration, and blemish standards. The Board can raise its standards to avoid taking surplus fruit it is unable to market: a strategy it may adopt if production is greater than anticipated market demand.

The Board pursues opportunities in the value system beyond exporting. It has made a "commitment to control offshore distribution and marketing" (NZAPMB, 1994a, p. 14). The

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<sup>56</sup> The average annual payout to producers represents a bundled price from receipts across all markets, and varieties of fruit submitted to the Board.

Board's export markets are summarised in four regions, presented in Table 5.3. The largest market by volume is Continental Europe; by country are Germany (3.38 million cartons, 28% of export sales), United Kingdom/Eire (2.49 million cartons, 22% of export sales) and the USA (1.39 million cartons, 12% of export sales). Emerging markets include Japan, Vietnam, and Russia. New Zealand was the "first major apple exporting country to gain access to the Japanese market" (NZAPMB, 1994a, p. 16). Quarantine requirements add 40% to onshore costs and tariffs add an additional 20%. The Board's approach to the Japanese market has attracted criticism (see McIntyre, 1994). The "need for trade to proceed on a basis of trust and friendship" has been observed in the Japanese market (McIntyre, 1994, p. 9) - while access has been granted soft investment is required.

Table 5.3. The New Zealand Apple and Pear Marketing Board's 1994 volumes, percentage of export crop, market share and value in key areas of sales activities.

Market parameter	NZAPMB key areas of sales activity				
	Middle East, UK, Eire, & Scandinavia	Continental Europe	American Continent & Caribbean	Asia & the Pacific	Africa & Russia
Market vol. (cartons)	2.77 million	4.36 million	1.81 million	2.06 million	538,000
NZ export crop (%)	24	38	16	18	4
Market share (%)	23.6 <sup>a</sup>	-	37.5	37.5	
Market value (%)	30.2 <sup>a</sup>	-	41.7	44.3	

<sup>a</sup> Market share and market value from European Union.

*Note:* From *Annual Report*, by New Zealand Apple and Pear Marketing Board, 1994, Wellington: Author.

There are about 1600 producers (Willis, 1993), of whom half are in Hawkes Bay. Orchards in New Zealand are typically owner-operated (Lockhart, 1990). Owner-operated orchards contain 14 to 16 hectares of mixed plantings. The most common varieties, in declining order by export volume, are Braeburn (30.6%), Royal Gala (23.7%), Red Delicious (13.4%), Granny Smith (8.8%), Fuji (7.6%), and Cox's Orange Pippin (6.8%). Approximately "half of pipfruit orchards do not have enterprises other than apples and pears" (Lockhart, 1990, p. 51). The remainder have plantings of other fruit which may include citrus, kiwifruit, nashi, berryfruit, and stonefruit. Since 1984 three substantial corporate orchardists have emerged: Apple Fields Ltd, Eastern Equities Corporation Ltd, and Grocorp

Pacific Ltd. The three corporates collectively produce 1.8 million tonnes from 1,147ha (Dryden, 1995), about 9% of the total New Zealand crop.

New Zealand's producers have a comparative advantage in terms of production per hectare. Yields in New Zealand average 70 tonnes per hectare compared to France, 33 t/ha; Belgium, 25 t/ha; USA 24 t/ha; and, Australia, 53 t/ha (Willis, 1993). New Zealand's producers also hold a technical competitive advantage. The proportion of the national crop contributed by preferred varieties is greater than that in Argentina, Australia, Chile or South Africa (Willis, 1993). Over the last two decades New Zealand's orchardists have invested in restructuring their varietal mix. Traditional varieties such as Red Delicious and Granny Smith have been replaced with preferred varieties such as Royal Gala, Braeburn, and Fuji. The commercial development of newer varieties continues. But whether the level of investment on orchards required to maintain this advantage is sustainable is yet to be resolved (see Lockhart, 1992).

The export picking season starts in late February with Cox's Orange Pippin, and continues to May when Red Dougherty the latest maturing export variety is picked. One orchard in ten has its own packhouse (Lockhart, 1990) while the majority of producers transport loose fruit to be packed by neighbours, cooperatively owned, or commercial packhouses. The producer is paid according to the variety, quantity, and quality of fruit produced. Orchard financial performance is also affected by export packout - the percentage of fruit reaching export standards.

The challenges confronting the NZAPMB as a cooperative were identified by the Chief Executive (Pope, 1993). Pope listed the following challenges; suppliers are stockholders; the Board of Directors is chaired by a supplier where suppliers hold the majority (4/7) of seats; obligations to government; an obligation to treat suppliers equally; the Board must take all acceptable fruit; they can't retain profits; and they are subject to the Official Information Act. Pope also identified the advantages of cooperative status. Advantages include the clear definition of business; the requirement of perseverance; certainty of activities; and single desk marketing. Corporate governance is not significantly different from that in other commercial enterprises (Pope). The major departure from most other commercial enterprises is that producers of export quality pipfruit have little market choice.

The Board recognises the lack of producers' choice and appear to provide adequate market reports, information, and recommendations to producers in an effort to remain accountable.

New Zealand's international pipfruit value system involves few participants and few activities. The fruit is produced, harvested, and packed to predetermined standards set by the Board. If the fruit meets the specified standards it becomes the Board's property. After packing the fruit it is then coolstored in New Zealand in facilities either owned by the Board or contracted to the Board. The "fruit is held awaiting distribution... for shipping overseas" (Willis, 1993, p.11). Fruit is transported to international markets in refrigerated ships contracted to the Board. On reaching its destination the fruit is distributed through offices in London, St Truiden (Belgium), Cologne, and Vancouver (NZAPMB, 1994a).

The Board also acquires Chilean fruit through a wholly owned subsidiary (Zeus Service SA) (Kominik, 1994; NZAPMB, 1994a) to complement the New Zealand crop. A partnership with David Oppenheimer & Company (USA local market distributor) was also established to "keep control over the product as long as possible" (McCliskie, 1991).

In summary, the New Zealand international pipfruit industry comprises some 1,600 producers, the majority of whom are owner-operated orchardists and one cooperatively owned statutory marketing board. The Board has an obligation to grant licences to other exporters providing guidelines are met. The Board markets fruit and fruit products in 60 offshore countries through ENZA New Zealand (International) under the brand name ENZA (Kominik, 1995; NZAPMB, 1994a). Despite the Board maintaining price premiums in most markets producers are suffering from declining terms of exchange.

#### **5.4.2 The meat industry**

Sheep are "ubiquitous in New Zealand" (Lockhart, 1990, p. 44). The New Zealand economy was reliant upon the exports of sheep products: lamb, mutton, and wool until recent times (Grigg, 1974). For example, in 1972 approximately 40% of export receipts were from sheep products (New Zealand Department of Statistics, 1973). Since then the percentage of export receipts from sheep products has declined steadily. By 1992 only 15% of export receipts were from these industries (source MAF, 1993).

For much of its history New Zealand's meat industry existed for one purpose - to supply low priced meat to Britain (Maughan & Wright, 1993). Refrigerated shipping was introduced in New Zealand in 1882, two years after "refrigerated cargoes had been shipped to Europe from Australia and America" (New Zealand Rural Press, 1990, p. 133). The sailing ship *Dunedin* departed Port Chalmers on February 11 with 4,909 frozen lamb and mutton carcasses and arrived in London on May 24. The cargo was sold over the following fortnight at Smithfield for double its value in New Zealand: 4,908 carcasses fetched £4,000 - one was "deemed unfit for human consumption" (New Zealand Rural Press, p. 133). Following this early success New Zealand was quickly recognised as better "meeting the taste of the English market for frozen mutton than any other colony" (Donohue, 1886, p. 751)

The Canterbury Frozen Meat Company was one of several meat companies established in the 1880's (New Zealand Rural Press, 1990). Its objective was to "prepare meat and dairy produce for shipment on owners' account and to arrange the sale thereof on the London market" (Sutherland, 1966, p. 129). The company built a freezing works at Belfast, just north of Christchurch, for £15,000 and introduced carcass grading standards before export (New Zealand Rural Press; Sutherland). The Canterbury Frozen Meat Company is attributed as the first exporter of branded meat from New Zealand, their brand being registered in Britain in 1889.

By 1892 there were "21 freezing works, 12 in the North Island and nine in the South, capable of processing four million" sheep annually (New Zealand Rural Press, 1990, p. 134). At the outbreak of World War One the British Government contracted to buy all the meat New Zealand could produce. The "blanket offer made meat companies into nothing more than agents of the government" (New Zealand Rural Press, p. 134). At the end of the war the New Zealand meat industry was confronted with its first *meat mountain*: 180,000 tonnes of meat in store, equivalent to one season's production (New Zealand Rural Press).

The Meat Board was established in 1922 following four years of uneconomic returns. The objective of the Board was to "control the meat export trade" (New Zealand Rural Press, 1990, p. 134). Britain continued to import near 98% of meat produced in New Zealand. By the outbreak of World War Two New Zealand lamb was established in Britain as a high



quality product. New Zealand entered into a four-year agreement to supply as much meat as possible to Britain at the end of the war. The contract was extended in 1952 for a further 15 years, at prices one-third higher than those in 1939 (New Zealand Rural Press).

New Zealand's meat industry has been strongly influenced by the 1939 Meat Act. The Act subjected meat export slaughter facilities to licensing. The Act was amended in 1947, 1964, and 1976 before being repealed in 1981 (Waddell, 1993). Maughan (1980) summarised the purposes of the act as twofold. First, to ensure that producers had a reliable processing sector over which they could exercise some control. Second, to ensure that adequate hygiene standards were met. From 1939 to 1981 approximately 35 processors operated in New Zealand. During this forty-two year period only two closed and one opened (Maughan & Wright, 1993). New capacity was provided by additional chains at existing plants: increasing hygiene standards were met by upgrading existing plants.

Maughan and Wright (1993) note that the only exception to the lack of change during the first four decades following WWII was the opening of the US beef market in the 1950's. By 1960 three-quarters of New Zealand's "export beef was going to North America, and half of the export mutton to Japan. The United Kingdom remained virtually the sole market for lamb" (Maughan & Schroder, 1983, p. 1). Britain's entry into the EC in 1973 did not translate into immediate product or market diversification. However, by 1980, assisted by the New Zealand Meat Producers Board (NZMPB) diversification schemes, 24% of lamb was exported to Iran, 12% to the rest of the Middle East, and 6.5% to the United States of America and Canada. A further 12% was exported to Japan, Greece and the EC excluding Britain (Maughan & Schroder). Britain still remained the largest single market buying 40% of all export produce. But while market diversification was pursued product diversification had been largely neglected. Export product was frozen - whole sheep carcasses (lamb and mutton) or quarters (beef).

Deregulation of the meat industry began in 1981 when the Meat Act was repealed. Farm subsidy programmes were removed from 1984 (see Sandrey & Reynolds, 1990). The meat industry, producers and processors alike were confronted with massive restructuring during the 1980's the scale of which attracted global attention (see Jones, 1991; Sandrey, 1991; The United States-New Zealand Council, 1991). Rationalisation occurred both on-

farm and amongst the processing sector. Total sheep numbers have fallen from 72 million to 49 million over the last decade and are currently at their lowest level for 25 years (New Zealand Meat Industry Association (NZMIA), 1993a). The decline in sheep numbers has had a direct impact on the lamb kill which has reduced from 39 million to 24 million (AFFCO, 1995). Concurrently, beef cattle numbers have increased gradually to 4.8 million.

The processing sector has undergone dramatic change during the last decade. Most plants are new or have undergone extensive renovation (NZMIA<sup>57</sup>, 1993a, 1993b). Lamb processing costs have been reduced by some 20% (in real terms) over the same period. Furthermore, the “level of value added prior to export has trebled” (p. 2) from 17% to 55%; employee numbers have been reduced by 40% to 22,000. However, the NZMIA (representing processors and exporters) maintains that there is still a “serious lack of profitability in the farming, processing and exporting sectors of the industry” (p. 2). Maughan and Wright (1993) summarised restructuring in the processing sector into three forms. The three forms are as follows:

First the UK owned processing companies have largely exited from processing [at the time Weddel, owned by Vestey (Kitchin, 1994), was still in operation]. Second the industry is in the process of closing down old outdated plants, replacing them with new more productive plants, and simultaneously trying to reduce surplus capacity - a process which still has some way to go. And third, the industry is trying to orient itself to a variety of much more differentiated products and markets, notably in Asia. (p. 55).

Since 1922 the NZMPB has engaged in most activities of export trade. Its current role is “to promote the development of New Zealand’s meat industry so as to maximise returns to meat producers and to New Zealand” (NZMPB, 1992, p. 8) The Board is not directly involved in selling meat. The Board’s statutory responsibilities were reduced in 1985 when the Government returned the marketing of sheepmeat to the private sector. Prior to 1985 the NZMPB had at times sought and maintained control of the industry at various levels

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<sup>57</sup> The New Zealand Meat Industry Association is a voluntary organisation representing meat processors and exporters. In 1993 the NZMIA had 41 members from 56 meat export licence holders (NZMPB, 1994)

of the value system. The Board issues licenses to meat exporting companies, currently 56, and is actively involved in market monitoring, the coordination of transport, and generic promotion of New Zealand's meat products (NZMPB, 1994, p. 35).

By world standards the New Zealand meat industry is relatively small. New Zealand accounts for only 1% of global beef and veal production and 7.8% of mutton and lamb production (NZMPB, 1993b). However, exports account for 6.5% of the beef and veal market and 46.5% of the sheep meat market. The New Zealand meat industry is almost unique: most of the meat produced in New Zealand is exported. "Only eight [percent] of the lamb produced in New Zealand is consumed domestically. Similarly, 34 [percent] of mutton production and 16 [percent] of beef production is consumed in New Zealand" (New Zealand Meat and Wool Boards' Economic Service (NZMWBES), 1994b, p. 20). The export value of meat and meat industry products was \$3.8 billion in 1993, contributing some 21% of all export earnings fob (NZMPB, 1993a). Receipts from beef and veal were \$1.4 billion; and lamb \$1.2 billion. The value of exports from New Zealand's meat industry and the industry's contribution (%) to total export earnings are presented in Table 5.4.

About 90 countries currently import New Zealand meat. The single largest market for sheepmeat exports is Europe (67.9%) followed by the Middle East (12.6%), Americas (8.3%), Asia (6.9%), and the Pacific (4.1%) (NZMIA, 1994). The single largest market for beef exports is the USA (64%) followed by Asia (19.2%) and Canada (10.5%) (NZMIA). Therefore, since 1980 and the New Zealand Meat Producers Board diversification schemes, further market and product diversification has occurred.

The five most critical issues confronting the meat industry over the next seven years were identified by the NZMPB (1993a) in their strategic plan. The issues are market access, market development, research and development, quality, and education and training. Market access confirms Europe and North America as "high volume, high paying principal markets" (p. 4) and the Middle East and Asia as growth markets. Market development refers to competition from other sources of protein and "firm guarantees of supply" (p. 5). Issues of both comparative and competitive advantage were identified in research and development. Quality was presented as an all encompassing term for "everyone in the chain from pasture to plate". Finally, the need for ongoing education and training was recognised as a "paramount

issue” (p. 7). The NZMPB summarised the future with the need to add value growth rather than volume growth and that “all sectors must work together in partnerships” (p. 8).

Table 5.4. Export value of meat and meat industry products (\$million at fob).

Product	Receipts for the year ending				
	1991	1992	1993	1994	1995
Beef & veal	1,283.9	1,450.0	1,418.6	1,384.2	1,160.8
Lamb	977.3	1,182.0	1,207.5	1,084.7	1,043.9
Mutton	168.5	171.0	180.8	166.0	152.8
Total red meat	2,429.7	2,803.0	2,806.9	2,634.9	2357.5
Venison	53.4	81.3	129.8	123.5	138.1
Edible offal	84.3	106.6	102.5		
Other meats	41.0	45.7	47.4		
Hides & skins	386.5	353.3	376.0	420.1	438.4
Other offal	208.4	284.5	262.7		
Tallow	48.2	61.5	64.5		
Total meat industry	3,251.3	3,735.9	3,789.8	3,529.9	3,427.3
% of NZ export receipts	21.5	21.7	20.8	18.4	16.9

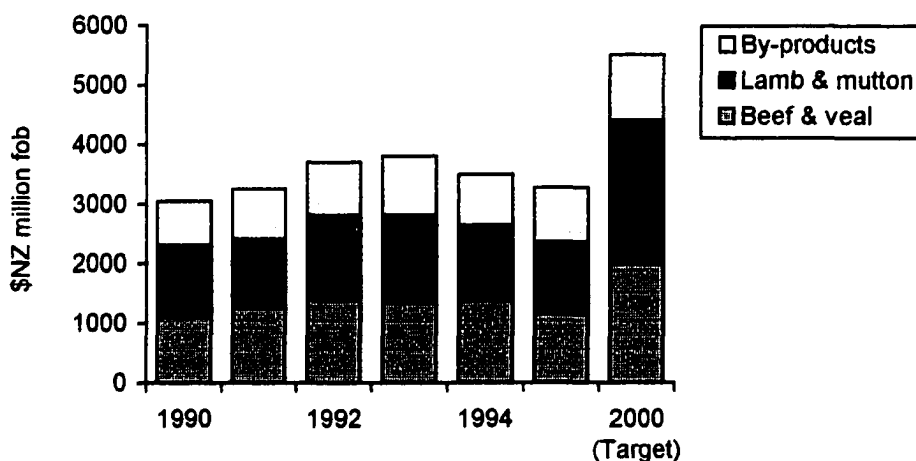
Note: The data in the first three columns is from *Strategic Plan 1993-2000*, by New Zealand Meat Producers Board, 1993, Wellington: Author. The data in the last two columns is from *Situation and Outlook for New Zealand Agriculture*, by Ministry of Agriculture and Fisheries, 1996, Wellington: Author.

The NZMPB’s export earnings target is \$5,500 million by the year 2000 (NZMPB, 1993a, p. 10). The NZMIA’s target is \$5,000 million by 1998. In both cases the targets represent a 30% increase in current export earnings and, more importantly, stretching beyond current rates of growth. Meat industry exports from New Zealand for the period 1990-1995, and the NZMPB target for 2000 are presented in Figure 5.3.

The NZMIA (1993b) identified four unique issues facing the industry. Several other issues were identified by the NZMIA common to other sectors such as compliance with resource management legislation, enhancing productivity and further rationalisation, and the entrenched views of the wider community. The Meat Industry Association’s key issues are that industry-wide profitability and reinvestment is persistently low; there is uncertainty over long-term market access; there is a need for ongoing response to criticism from dietary,

environmental and animal welfare sources; and finally, the presence of legislative institutional barriers (reviewed by Hussey, 1992). The NZMIA identified that higher quality products, expanded market access, distribution efficiencies, and improved market coordination are sources for enhancing shareholders' returns and increasing total meat export earnings.

Figure 5.3. Meat industry exports from New Zealand for the period 1990-1995, and target for 2000.



*Note:* The data is from *Strategic Plan 1993-2000*, by New Zealand Meat Producers Board, 1993, Wellington: Author and *Situation and Outlook for New Zealand Agriculture*, by Ministry of Agriculture and Fisheries, 1996, Wellington: Author.

The following quote from Beattie (1994), Chairman of the NZMIA, best summarises the current state of the meat industry. While Beattie is commenting on behalf of the processing sector he identifies issues that transcend the value system participants located in New Zealand. His focus for discussion is producers, processors, and the relationship between them. The discussion may be regarded as a somewhat myopic view of the industry: marketing and international business were discussed independently by Lynch, the Executive Director. However, the relationship, or lack of, between producers and processors is considered to be the single domestic factor critical to the success of the industry (see also AFFCO, 1995; Lockhart, 1994b; Waddell, 1993).

There are few New Zealand industries that could match the relentless scrutiny to which the meat sector has been subjected. During the past decade substantial reports have been prepared, and most of them made public, on an average of at least one every year. The process has continued this year. It could well be argued that there is little scope left for original diagnostic work. Certainly no one would claim that there is any deep mystery about the nature of the problems that currently stand in the way of a return to regular profitability. They will not be removed by further company collapses. The fatalistic approach favoured by some outside observers, that 'only a few more failures' will resolve the industry's problems, is not a valid or acceptable solution.

In a hugely complex industry such as ours, difficulties when they arise are rarely attributable to a single cause. For example, the highly seasonal production and supply cycle imposes a significant burden. Because sufficient processing capacity has to be available to meet demand peaks, the industry has high fixed costs and surplus capacity for much of the production season. A prolonged period of falling stock numbers, as has occurred since the mid-1980s, compounds the problem. It sets off successive waves of costly rationalisation designed to reduce the gap between available processing capacity and the demand for it. And competition for stock in the spot market is intensified, particularly during the off-peak season, as companies seek volume throughout to cover their fixed costs.

A second category of issues involves the relationship between producer and processor. Some analysts argue that this is a fundamental structural question which at its core is all to do with the responsibilities of ownership and risk-sharing. There is no doubt that a critical problem for companies is the reluctance of farmers to commit themselves to maintain continuity of supply to particular companies throughout the season. Producers find it hard to reconcile their ownership stake in the industry with their readiness to extract the maximum return from farmgate competition.

There are encouraging signs, however, of a growing recognition among farmer groups and producer organisations that a better balance is needed between a

single-minded pursuit of farm profit and the interests of all stockholders in maintaining company viability. Without the balance, companies cannot capture the full benefits of the productivity improvements made in recent years and the overall upward trend in export market prices, or be able to exploit the new GATT opportunities. (pp. 6-7)

Meat processors have used five methods to acquire livestock from producers. The “majority of livestock are purchased on schedule” (Waddell, 1993, p. 2). The schedule is a carcass based grading, and pricing system established by individual processors. Producers receive the prevailing schedule price, the spot-market price. The price paid to producers may also include transport costs, and any premium which may, in part, reflect seasonal demand. Producers appear to select a processor on the basis of their a priori knowledge of the schedule price and expected premiums. In “recent times the demands on meat companies to procure livestock” (Waddell, p. 2), in response to the threat of tradeable quotas, has resulted in higher unpublished premiums. Processors commonly pay premiums to attract throughput in an effort to minimise average costs. Under such circumstances spot-market prices may bear little resemblance to the schedules published by individual meat companies

The second method used by processors to purchase livestock is again at the farm, or at auction. However, in this case the price paid to the producer is a net price on-the-hoof. The price paid by the processor is an average price for each animal, as opposed to each carcass. The processor as opposed to the producer, therefore, accepts the carcass grading risk for livestock bought in this fashion.

Processors also procure livestock using contracts (NZMPB, 1993c; Waddell, 1993). The objective of contracts is to procure a predetermined quantity, and quality of livestock to meet specific market requirements such as chilled lamb in France at Christmas. The incentive for farmers to subscribe to contracts has been largely based on access to working capital. Contracts offer incentives such as advance and progress payments, linkages with the processor’s operating price, a premium (published or unpublished), simplified carcass grading targets, and provisions to change supply date if the producer is confronted with unfavourable climatic conditions.

Vertical integration is a fourth means through which processors procure livestock. A vertically integrated processor sources product from farms and/or livestock they own. In the vertically integrated system there is a high degree of coordination between the producer, the processor, and the market. Only one example of this system currently appears to exist in New Zealand. Five Star Beef was established in 1989 as a 50/50 joint venture between ANZCO (Asian New Zealand Meat Company) and Itoham Foods, Japan. The integrated feedlot-processor supply a product “consistent with that demanded by consumers in the top-end of the Japanese middle-market segment. Itoham handles the selling and distribution of Five Star’s beef in Japan” (Waddell, 1993, p. 3).

Lastly, producers had the “right of access to processing facilities if they choose to retain title” by using *owner’s account* (Maughan & Schroder, 1983, p. 3). Ownership of livestock sold on owner’s account did not change until wholesale. The processor assumed the “role of a service industry” (p. 3) and only recovered operating and distribution costs. “Non-processing exporters [had] a similar right” to owner’s account (Maughan & Schroder, p. 3). Using owner’s account the producer or exporter bore market risk. Maughan and Schroder commented that the ability for producers and exporters to use owner’s account during periods of peak kill was limited. Processors had limited ability to reduce average costs when killing chains were at capacity. The various forms of procurement employed by processors shift grading risk and market risk between themselves and producers. Producers commonly wish to maximise short-term income, while processors attempt to reduce average costs by maximising throughput.

The collapse of Vestey-owned Weddel New Zealand in August 1994 (Saunders, 1994) marked the end of an era for the New Zealand meat industry. The processing sector has, historically, largely been British owned. Producers are now confronted with the opportunity to participate in a domestically owned and operated processing sector. However, sheep and beef producers exhibit a marked reluctance to commit discretionary income to their processing sector. The recent collapses of Weddel and Fortex where producers, as unsecured creditors, lost \$5.6 million (Bell, 1995) and \$7.5 million (Weir, 1994a, 1994b) respectively do little to encourage producer-investment. Yet, as stated in the AFFCO (1995) prospectus, “the reasons to invest in AFFCO in 1995 are the same as in 1903. That is to have a strong farmer-owned meat company securing the best returns from the international market-place”



(p. 9). Despite the recent collapses of Fortex and Weddel AFFCO's \$50 million share float was oversubscribed on April 12, 1995 ("Float still on", 1995).

Ownership in the processing sector takes three forms: privately owned companies such as Lowe Walker, and Progressive Meats; publicly owned companies such as Alliance, Richmond, Huttons Kiwi and AFFCO; and producer cooperatives such as PPCS (Primary Producers Co-operative Society). Producer ownership, however, does not necessarily assist supply. Waddell (1993) found that 53% of farmer survey respondents owned shares "in either a meat company or processing cooperative" (p. 46), but "only half of these farmers preferred to sell stock" to that respective company/cooperative. Loyalty to a particular processor was not found to influence respondent farmers' contractual supply relationships. Waddell postulated that "farmer support (in shareholding terms) for company/cooperative structures is relatively low" (p. 46).

Unlike the pipfruit industry the meat industry is spread throughout New Zealand. Sheep and beef farms are located in most parts of New Zealand: processing plants and meat load-out ports are located in all regions. Concentrations exist only in the balance of livestock kill by species between the North and South Islands. The North Island accounts for the majority of beef kill (84%), while the South Island the majority of the lamb kill (62%) (NZMIA, 1994).

There are some 36,000 sheep and beef livestock producers in New Zealand (NZMPB, 1994) - not all of these are economic units. The vast majority of sheep and beef farms are owned and operated by the farming family. Describing a typical New Zealand sheep and beef farm is not a particularly revealing exercise. Economic properties range from 180ha to 448,000ha (Molesworth Station) carrying from 2,200 to in excess of 100,000 stock units<sup>58</sup>. The farms cover a range of soil types and climates, both of which have a significant effect on the level and seasonality of pasture growth rates. Livestock are grass-fed all year round: a significant departure from production systems throughout the rest of the world. Grass based production, however, is dependent on the weather and introduces seasonality - the majority of livestock is offered to processors from December to April. One important

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<sup>58</sup> A stock unit is the equivalent of a 55kg ewe rearing one lamb per year. For example, a breeding cow equals 6.0 stock units and a hogget equals 0.8 stock units.

farm class (of eight identified by the NZMWBES) is introduced in the following discussion to provide an example of land-based sheep and beef production in New Zealand.

About a quarter of New Zealand's 22,000 economic sheep and beef farms (5,100) are described as North Island hill country (NIHC) farms and a further 8% (1,700) are described as North Island hard hill country farms (NZMWBES, 1988, 1996). There are some 7,000 holdings in these two farm classes, approximately one-third of all New Zealand's sheep and beef producers, located throughout the North Island. Cattle sales provide approximately one quarter of farm revenue (one beast to thirteen sheep on these farms) with the balance being derived from the sale of store and prime sheep and lambs, plus wool income. A high proportion of stock is sold in forward store or prime condition.

The average NIHC farm is 421ha with an effective grazing area of 385ha. The balance of the land is in bush, scrub, gorges, planted forests and buildings. The NZMWBES (1996) reports that the average NIHC farm carries 2,550 sheep, comprised of 1,759 ewes, 735 hoggets and 56 rams and killers. Virtually all ewe replacements are home bred. Eighty five percent of lambs are sold in prime condition, 14% are sold as store lambs and the balance (1%) are sold as live export lambs. Ewes which are surplus to breeding requirements are sold as hoggets, two-tooths and cull/cast for age ewes. The average lambing percentage, defined as the percentage of lambs tailed - docked - to ewes mated, is 103% with a mean mating date of 21 March and lambing in mid-August (NZMWBES). The current sheep:cattle ratio, in terms of numbers of animals, on NIHC farms is 7:1. Cattle numbers on NIHC farms are made up of 340 head, comprising 99 breeding cows and rising three year heifers, 34 rising two year heifers, 131 mixed sex weaners, the balance (76) being steers and bulls. The cattle policy is similar to the sheep policy; farmers breed their own replacements and sell excess breeding stock - steers and bulls. Weaner Friesian bulls, sourced from dairy farms, are raised on some farms and are sold as either rising two or rising three year olds (NZMWBES, 1994a). This enterprise is a quite recent development on traditional sheep and beef farms but is an important link between the dairy and beef sectors. Approximately half the steers are sold as rising three year olds, the balance are sold as either rising two or rising four year steers. The average annual calving percentage (defined as the percentage of calves marked to cows and heifers mated) is 86%, with a mean mating date in early November calving in late August (NZMWBES).

The 1993-94 meat export year was an excellent year for meat production in New Zealand: the national lambing percentage (108%) was a record and lamb export slaughter weights were the highest in 35 years (15.42 kg) (Dawson, 1994). The average export lamb price was \$39.97, similar (-0.5%) to the previous season. However, lamb prices fell significantly as the season progressed. Some 25 million lambs were killed in 1993-94 (NZMPB, 1994), the second lowest level since 1985-86 when 33.2 million lambs were killed (NZMPB, 1993a). Over the last two seasons, 1994-95 and 1995-96, the average export lamb price declined to \$32.16, and \$33.50 respectively (MAF, 1996), reflecting the appreciation of the New Zealand dollar against the British pound. The lamb kill continued to decline to 24.6 million in 1996, and is expected to decline yet further (MAF).

Beef prices were weak throughout the 1993-94 year, and this trend has persisted throughout the following two seasons 1994-95, and 1995-96 (MAF, 1996). The average export beef price for the 1993-94 season was 10% lower than the previous year despite the average carcass weight of steers and heifers increasing to 290kg (NZMPB, 1994). Export beef production declined (down 12%) to 1.7 million carcasses as farmers withheld stock from processing in anticipation of higher prices in 1994-95. Export beef prices remained depressed throughout 1995-96 (average bull 220.5-245.0kg schedule was 183c/kg), as production in the United States of America increased.

The New Zealand meat industry has a history of inconsistent government intervention. The four decades from 1939 to 1980 are identified as a period of relative stability, the decade since 1984 as a period of tumultuous change. Recent periods of relative calm were punctuated by the collapse of Fortex and Weddel. Amidst the competitive procurement environment are further suggestions that a single-desk marketing system should be introduced ("Debate vital", 1995). However, despite the apparent strife it remains New Zealand's single most important export industry.

### **5.4.3 Summary of the scope of case study research**

Selecting the cases to be studied has been identified as one of the most difficult steps in case study research. Guidance to case selection can be provided only by the theoretical constructs to be developed (Eisenhardt, 1989). Case study research is an acceptable

methodology for theory building - inductive - research (Glaser & Strauss, 1967). Proponents of case study research (e.g., Yin, 1981, 1989a, 1993; Carroll & Johnson, 1990) argue convincingly, albeit apologetically, that case study research can also be used for theory testing - deductive - research.

Value systems were distinguished on the basis of product, market, and configuration. The meat industry and the pipfruit industry were identified as two industries that provide the polarity necessary for the development of theory. However, case selection within each industry is expected to be tempered by access (Gumnesson, 1991). The current state of the two industries was then summarised. The pipfruit industry is beset with declining product prices in real terms while meat producers have received increasing farmgate prices since 1989-90. This improvement in farmgate returns has been eroded over the last two seasons. The pipfruit industry in New Zealand is faced with continual increases in production levels despite the producer receiving a relatively volatile market price. The meat industry has recently undergone significant rationalisation in terms of processing plants, thwarted by the concurrent decline in stock numbers. Both industries are of national importance: the meat industry is the single largest source of export earnings, and the pipfruit industry's importance to export horticulture is second only to kiwifruit.

No attempt has been made to describe the relationships between participating firms in international locations. There is anecdotal evidence to suggest that international meat buyers are often confronted with several New Zealand exporters: the international buyer then exploits competition between alternate sellers - buying at the lowest possible price. Even rumours of such behaviour fuel the calls for further regulation of New Zealand's meat industry. The pipfruit industry may have developed relationships similar to those alluded to in Caughey and O'Boyle's (1994) market study of the kiwifruit industry. However, the objectives of the kiwifruit industry review did not include the rigorous examination of relationships between participants in the value system.

The seasonal nature of pipfruit production and, to a lesser extent, grass-fed meat production makes it difficult for New Zealand exporters to maintain a presence in international markets on an ongoing basis - exporters are expected to have to pick up where they left off last year. Therefore, New Zealand's land-based value systems may have cultural

aspects of their own. It will be necessary to develop these aspects alongside the emerging theory of international networks.

The procedure used to gather empirical evidence from case study firms is described in the following section. The research protocol which includes the open-ended questionnaire distributed to industry personnel is provided in Appendix One. A description of the process used for transcription and coding is presented in Section 5.5.2.

## 5.5 THE DATA GATHERING PROCESS

**T**HE PREPARATION OF QUESTIONNAIRES for surveys (Erdos, 1970; Moser & Kalton, 1971; Raj, 1972) or indepth interviews (Berdie & Anderson, 1974; Gorden, 1975; Hoinville & Jowell, 1982) is well documented. The critical tenets of the process are simplicity and commonsense. Interviewing provides numerous advantages over surveying, notably the opportunity of the researcher to pursue a discussion until mutual understanding is reached, rather than assumed. Therefore, indepth interviews rather than surveys provide the basis of case study research.

The research protocol was developed to first, introduce the study - gain an imperative for participation - and second, to provide direction to the interview based on the preprepared questions. The questionnaire included in the protocol also contained prompts for discussion (Berdie & Anderson, 1974; Hoinville & Jowell, 1982). Despite the need to approach each interview "as a unique and distinct entity" (Carroll & Johnson, 1990, p. 38) common principles and practices were expected across participants - particularly across those in the same value system.

A pilot version of the research protocol was tested with three participants in another land-based industry - export cut-flowers into Japan. It was not found necessary to amend the protocol.

The research protocol, presented as Appendix One, provided an invitation to participate in the study. The Z-form Model was introduced, and a brief explanation

provided. The Model was subsequently used as a reference point for discussion throughout the interview. A succinct description of the study's concepts was presented in the protocol. It was considered expedient to distance the study from the ongoing and repetitive review process of producer boards conducted, largely, by proponents of free-market economics. The researcher requested industry involvement for the completion of the study, and reassured participants they would subsequently receive a model of the firm's international value system and a discussion of how well it performs.

The questionnaire - included in the research protocol - consisted of both open-ended and discrete questions, and prompts designed to facilitate discussion so an indepth understanding of the subject value system could be developed. The questionnaire was presented in two parts. Part A was designed to identify and describe the firm's current position within the value system, defined by hard (capital) investments and recurring transactions (using the Z-form Model to assist). Part B was designed to identify and describe the firm's relationships with other firms in the value system (or competing/complementary/service and support systems), defined by soft (time and people) investments. The objectives of the second part of the questionnaire were to first, explore and understand the nature of business relationships in an attempt to resolve the atmosphere of conflict or cooperation. Second, to then explore the attributes of the firm's relationships with other firms (this section contained probes such as data conduit, influence, adaptations, and strength relating to specific aspects of network theory).

The initial firm within each value system was selected with care. In each instance a *hub firm* (one that was assumed to dominate the value system) was selected and either the chief executive officer (CEO) or managing director (MD) interviewed. This initial interview was used to identify the scope of the firm's activities, likely participants for the study, and also provide a conduit for access. Interviews were conducted with firms, or at least their proxies, on either side of the transaction wherever possible, that is, both parties in the dyad. Much of the data was recognised as being difficult to *quantify*, therefore, it was considered essential that a balance of views between adjoining and non-adjoining firms was sought.

A word of caution was included in the research protocol with respect to the effects of statutory legislation on the configuration of the value system. It was stated as

being necessary to identify whether practices and relationships exist because of or in spite of legislation. In such value systems it was necessary to *get beyond* the effects of statutory legislation, an objective that required detailed examination of business relationships irrespective of the presence of societal marketing boards.

### **5.5.1 Access to cases**

The researcher's experience in New Zealand's land-based industries was drawn on to identify suitable case study firms within the meat industry. As discussed in Section 5.4.1 selection within the pipfruit industry was determined by access to the NZAPMB. Other considerations were geographical proximity, and diversity of operations within the meat industry. It was intended to conduct interviews with participants representing all stages of the value system up to the international consumer. Access to all New Zealand-based participants in each value system studied was pursued and eventually obtained. Foreign participants, or New Zealanders responsible for adjoining and subsequent stages in the international location were also interviewed. International participants were interviewed while visiting New Zealand.

Participants were initially contacted by phone to solicit their involvement. The research protocol and questionnaire was then mailed (in some instances an abbreviated protocol and questionnaire was distributed within an organisation), or content discussed in detail. Only when the industry participant had had the opportunity to consider the research protocol was their participation sought. A suitable time was then confirmed for the interview. The initial interview lasted some 45 - 60 minutes, subsequent and more detailed discussions were generally completed in 60 minutes but on occasions extended to 2 - 3 hours (commonly with producers). Forty-two participants in ten case study value systems were interviewed. The majority of the participants (27) represented domestic stages, the balance (15) represented stages in the international location. Neither the number of participants nor the number of case study value systems was predetermined. The pursuit of access and conduct of interviews continued until the production of categories (refer Section 5.5.2) and hence concepts was considered to have been exhausted. The ten case reports, seven in the meat industry and three in the pipfruit industry, are presented as Appendix Two.

Interestingly only one potential participant declined the opportunity to be involved in the study (a recently acquired foreign owned subsidiary sought after to develop the concept of complementarity). The response may be attributed to the credibility of the researcher and supervisor amongst participants, in addition to the appropriateness of the study.

### 5.5.2 Transcription and coding

Interviews with participants in case study firms were taped, and field notes recorded - commonly amounting to modifications and interpretation of the Z-form Model included with the research protocol. All interviews were transcribed<sup>59</sup> into a word-processing document for subsequent analysis. Miles and Huberman (1994) regard this process as problematic because other data sources such as diagrams, reports, memos, and field notes are not readily included in the transcript. Therefore, the transcript represents only one of a number of data sources available from each case study. The transcript, however, provided the *core* data for analysis; field notes tended to support transcript documents while reports were used to assist in identifying stated strategies, activities, and performance.

Miles and Huberman (1994, p. 58) recommend that researchers using an inductive method adopt Strauss and Corbin's (1990) technique of systematic coding and then synthesis. Strauss and Corbin provide a stepwise method to maintain a balance between what are perceived as the noncomplementary processes of creativity and science. Strauss and Corbin's process was adopted by Coviello (1994) in her study of network relationships among high technology entrepreneurial firms, and Prebble (1995) in his study of franchising. The same process is adopted for inductive theory building in this study, portrayed as the arc J in Figure 4.1.

Step one of data reduction is referred to as open coding (Miles & Huberman, 1994). The process includes the labelling of phenomena, grouping phenomena into categories, and then developing categories in terms of their characteristics and dimensions. Phenomena is an alternate term to Glaser and Strauss's (1967) term

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<sup>59</sup> Strauss and Corbin (1990) recommend that researchers need only transcribe as much as needed.



properties, in that both phenomena and properties exist at a first level of abstraction from empirical evidence. The process of grouping phenomena into categories is a second level of abstraction and signifies the beginning of the continuous development of concepts. At this stage, there is no attempt to relate categories together.

Strauss and Corbin (1990) list several techniques for open coding including the analysis of discourse by paragraph, sentence, or line-by-line. The technique adopted for this study (supposedly it has no bearing on the result) was analysis by paragraph in preference to either sentence or line-by-line. Analysis by paragraph provided a greater continuity to the interview transcript. For example, the discussion of phenomena such as closed system, structure, and change was seldom conveyed within a line of type - a somewhat arbitrary measure of the interviewee's speech.

Strauss and Corbin (1990) disrupt their presentation of the process of data reduction with a review of the necessity of theoretical sensitivity. The review is drawn, largely, from Glaser's (1978) text, *Theoretical Sensitivity*. Theoretical sensitivity refers to a researcher's state of mind, and attitude towards various sources and interpretation of data. The critical factor at this stage of the analysis is to let the data speak for itself (Glaser & Strauss, 1967), rather than interpreting the data in terms of phenomena and concepts more familiar to the researcher. Therefore, every effort needs to be made towards the maintenance of an open mind - theoretical sensitivity. One result is that the phenomena and categories will be described in terms familiar to the participants rather than terms familiar to the researcher. Each paragraph of taped transcript was categorised as a phenomena. Common phenomena were then grouped into categories and labelled with terms or phrases adopted by the industry participants. To be sure, some of these labels were offered directly by participants during the interview, for example, coordinated supply and dependency. Others such as connectedness were developed during the course of the interview to capture a specific meaning. In this manner a total of 38 categories and properties were identified from the 42 interviews.

The second step of data reduction recommended by Strauss and Corbin (1990) is axial coding. Axial coding refers to the development of concepts beyond the properties and categories developed in step one. The data is, therefore, being drawn through an

increasing level of abstraction - reduction. The specification of the context, the specific set of characteristics that pertain to the phenomena, and their conditions are stated as the outcome of axial coding. This step is used to determine Whetten's (1989) temporal factors, as discussed in Section 4.3.1, the poles of which were deliberately sought (Eisenhardt, 1989) through the appropriate selection of cases (Yin, 1989a; Gummesson, 1991). The results of axial coding are presented in the following section.

The third step is selective coding (Strauss & Corbin, 1990). This step is recognised as the departure from data reduction to integration - synthesis. Selective coding, an ambiguous term, therefore, represents the initial generation of theory. Strauss and Corbin claim that "integration is not much different from axial coding. It is just done at a higher more abstract level of analysis [bold type omitted]" (p. 117). However, the process is markedly different: output from the first steps is identified as phenomena (properties) and concepts. The process is restricted to data reduction at increasing levels of abstraction. Selective coding refers to the synthesis of emergent theory through specification of relationships between concepts. Whether this marks a higher level of abstraction from reality than the development of concepts, or whether this is a different process altogether is ill recognised by the authors. The results of selective coding are also presented in the following section.

Strauss and Corbin (1990) provide a further five steps for the completion of theory generation. The latter steps include the validation and refinement of theory - the process of theory testing. The first steps are relevant to the development of theory in this study, namely, the explication of a story line<sup>60</sup> relating subsidiary concepts around the core concept by "means of the paradigm" (p. 118), and relating concepts at the dimensional level. All three attempt to refine the process of developing theory. In doing so Strauss and Corbin provide themata (Holton, G., 1979) to guide the inductive process. The effects of themata on the inductive process were identified in Section 1.4 during the brief discussion of Einstein's model of the philosophy of science.

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<sup>60</sup> *Story*: A descriptive narrative about the central phenomenon of the study

*Story Line*: The conceptualization of the story. This is the core category.

*Selective coding*: The process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development.

Empirical results from step one are presented in the form of categories - the outcome of labelling and identifying phenomena, grouping phenomena into categories, and then developing categories in terms of their characteristics and dimensions. The complete process described by Strauss and Corbin (1990) is one of developing concepts by axial coding through increasing abstraction from the data followed by the identification of propositions by selective coding between concepts. The end result ought to resemble, figuratively speaking, the essential components of a theory.

## 5.6 EMPIRICAL RESULTS

**M**ILES AND HUBERMAN (1994) recommend that results are presented in the form of graphic displays in preference to pages of *extended text*. Graphic displays are an “organized, compressed assembly of information” (p. 11) that facilitate the presentation, analysis, and synthesis of data. The use of graphic displays permits the presentation of data at intermediate stages of data reduction. The inductive process adopted by the researcher is, therefore, open to scrutiny, in a fashion not dissimilar to the presentation of results from quantitative analysis such as standard errors, T-tests, and F-Tests.

Notwithstanding the recommendation from Miles and Huberman (1994) to present data in a graphical form it is, however, first necessary to present a complete list of categories derived inductively from properties (Glaser & Strauss, 1967) and/or the phenomena (Strauss & Corbin, 1990) derived from the interview process. Categories identified through discourse analysis from the meat and pipfruit industries’ case studies are first presented in the form of an explanatory effects matrix (Miles & Huberman, pp. 148-149). As explained in the previous section the categories are drawn inductively largely from first level analysis of interview transcripts, supported by field notes, and reports including archival material. The matrix is designed to provide clarity to the

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*Core category: The central phenomenon around which all the categories are integrated”. (Strauss & Corbin, 1990, p. 116)*

“domain in conceptual terms [italics omitted]” (p. 148). No attempt has yet been made to synthesise concepts (axial coding) or to link categories (selective coding).

The complete explanatory effects matrices from both industries are presented as Tables 5.5 and 5.6. All the categories - as a result of open coding - are presented alphabetically in the first column. The tables' second column refer to the researcher's assessment of the concepts' attributes by the industry participant. The use of the category, and its contribution in the context in which it was discussed are assigned a value; strongly positive (++), positive (+), neutral (0), negative (-), and strongly negative (--). The third column presents a succinct definition of the category. An explanatory note is provided in the fourth column. Quotes from the case study industry participants are provided to assist the explanation and development of the category's characteristics and dimensions. The quotes are also used to illustrate the effects of open coding, that is, the reader has access to the raw data set without being unnecessarily exposed to hundreds of pages of extended text. In that respect the tables serve to reinforce the trail for subsequent researchers to follow. Duplication between the two tables *has not been avoided* to ensure that the sources of each category, divergence, and convergence between the studies is duly recorded.

A total of 38 categories were identified from the ten case studies conducted in the two industries. Of these categories, five are unique to the meat industry, and one is unique to the pipfruit industry. The balance (32) are convergent categories - common to both industries. Apparent reasons for the divergences in categories between the two industries, either the absence of a specific category or the interpretation of a category, are provided in the explanation columns of Tables 5.5 and 5.6. Some additional divergences between the case industries occurs in the value assigned to participants' consideration of the category, that is, differences in the value of some categories are attributed to the two industries. Whereas the pages of extended text, field notes and reports may be considered raw data the categories reported in the explanatory effects matrices represent the first level of abstraction.

Table 5.5. Explanatory effects matrix of first level categories from the meat industry case studies.

Category	Assigned user value	Definition of category	Explanation
Actor/participant	0	The decision maker responsible for management of a firm, activity, or connectedness.	The generic term actor is used to describe active decision makers, in terms of upholding a value system perspective, as the "processor", "exporter", "importer", or "distributor". Participant is used to imply a more passive role as generally, but not always, "farmer", and "broker", "customs", "MAF", "USDA". Synonymous with Håkansson and Johanson's (1992) term actor, described in Section 3.5.4.
Agreement	+	A verbal, informal agreement in the absence of contracts that has or is expected to be maintained to the benefit of both parties.	Entered into by both adjoining and non-adjoining actors in the value system. Most often refers to attributes associated with product, product flow, and money. A precursor to connectedness.
Branding	+	Differentiation of product by the actor.	"We take our brand through to the customer". A means of differentiating product but not necessarily by country of origin. Always refers to the source that either "lays down" or sources product to specification. Packager labels product for end-user. Brand promotion is often undertaken jointly by integrated processor, NZMPB, GIB, and foreign participants.
Change	++	Adaptation by an actor in the value system to better meet customer's needs. Adaptations are manifest by forms of added value.	Respondents view adaptation as "change" across a wide scope of activities which may amount to "small changes such as packaging requirements", and "tailored cutting", through to the presentation of new products requiring substantial investment. Change results in some form of added value activity and is often accompanied by the loss of flexibility. As identified by Easton (1992) change refers to adaptation procedures and is correctly attributed to the level of investment in a business relationship or the expected return from a business relationship.
Closed system	++	The actors literally close the value system to those outside the current configuration (see structure).	Respondents consistently attempt "to close the value chain [sic]" to other entrants, particularly "[our] NZ based competitors". In closed value systems connectedness is developed to the stage that actors seek innovation and change from those firms participating in the value system rather than pursuing resources offered elsewhere. Downstream participants in the meat industry actively seek to close their own value systems to external actors by comparison upstream stages are rarely closed. The opposite situation prevails in the pipfruit industry.

Table 5.5 continued. Explanatory effects matrix of first level categories from the meat industry case studies.

Category	Assigned user value	Definition of category	Explanation
Commodity product	0/-	Product flow consists of commodities. (Considered neutral by integrated processor, negative by specialists).	<p>"Commodity product markets" are <i>maintained</i> to absorb variability in product quantity and quality, i.e., large scale inconsistency. Markets for commodity products (lamb carcasses) are often served by weak connectedness. A discussion of the sources of variability in land-based products was presented in Section 4.3.</p> <p>Complementarity ought to enhance the performance of the value system because "the entire product" or line of product is sold (refer to the discussion of temporal factors in Section 5.3, notably product). The relationship between the complementary actors is one of neutrality, however, the supplier "must manage the relationships" to ensure that the complete product line is purchased. Renown derogatively as collaboration. The extreme form of complementary agreement is regarded by the Commerce Commission as collusion ("Court action begins", 1995; Norman, 1995) and may result in forms of price fixing<sup>70</sup>.</p>
Complementarity	+	The distribution of product, information, goods, and services by more than one participant at a single stage of the value system that does not impinge on each others' success. Includes a complementary agreement between participants at the same stage of the value system to establish common prices, packaging, or market specifications.	

<sup>70</sup> The Commerce Commission instigated legal action in October 1995 against thirty-three (33) actors allegedly involved in price fixing in the North Island livestock market. Barton (1995) reported that the Commerce Commission's actions were far from objective, consequently one company director was arrested and charged with obstruction.

Table 5.5 continued. Explanatory effects matrix of first level categories from the meat industry case studies.

Category	Assigned user value	Definition of category	Explanation
Connectedness	++	Connectedness between actors in a value system that may be either independent of, or in addition to contracts. One notable outcome of connectedness is the <i>suppression</i> of what may otherwise be perceived as market transactions between actors in the absence of integration. (The term connectedness is used to distinguish from other phenomena and categories that contribute to business relationships).	"Relationships cannot be measured by accountants - it is all about people. These things can't be measured which is why accountants hate them. They don't show up on a balance sheet yet they add immense value to the firm" (refer to personal relationships). Actors involved through connectedness are consistently regarded as "clients" rather than buyers and or sellers. Connectedness signifies a deliberate (active) attempt by one or both actors to get <i>closer</i> for their mutual benefit. There may be instances when a business relationship is pursued by one actor and result in disparate dependency (see dependency). Connectedness is commonly developed through "evolution rather than revolution". Respondents considered that if "relationships are too <i>fixed</i> " there is a reduction in the rate and opportunity for change to the detriment of both actors. Hence connectedness is considered dynamic (refer to change). Strong connectedness between actors will tolerate limited product inconsistency, for example, one downstream respondent accepts inconsistency without "causing a fuss".
Contract	-	Legal binding contract for the supply of goods and services at a prespecified standard, preagreed price, and designated time.	Despite the intent to bind suppliers of goods and services contracts are seldom if ever enforced in court, "we won't be the first to enforce them".
Coordinated supply	++	An attempt to reduce seasonality (discussed in Section 4.3) at a stage, say processor, or distributor.	"The client wants his order filled every week of every month, they aren't interested in seasonality of production - that's our problem". However, few land-based producers supply product even on a monthly basis. The desired aggregate effect is continuity of supply throughout the year to the end-user. Product is sourced "domestically through contracts", and out-of-season premiums, and or can be sourced internationally.
Data	0	Similar to information flow without any expectation of response from the data recipient.	Relationships, spot-markets, and product flow create data. Some data is distributed to adjoining actors in the absence of relationships, say from processors to producers.

Table 5.5 continued. Explanatory effects matrix of first level categories from the meat industry case studies.

Category	Assigned user value	Definition of category	Explanation
Dependency	-	Dependency of one actor/participant on another.	"We are becoming increasingly dependent on ... [the distributor], that's one of the costs of the relationship we have established". Dependency most often occurs between adjoining stages of the value system and may be described as being either mutual or disparate (a continuum exists depending on the relative degree of dependency). If the relationship dissolved the dependent party knows they would suffer short term financial difficulties in the absence of pursuing alternative supply or market arrangements. Management of the relationship becomes increasingly important attracting further <i>soft</i> investment. Disparate dependency is indicative of bargaining power and occurs when there are numerous firms at an adjoining stage - either suppliers, or buyers - competing with one another, or the value of the business to one actor is disproportionately small.
End-user	+	The pursuit and development of relationships with the end-user in preference or in addition to those with intermediaries. Intermediaries are most often adjoining firms in the value system.	Respondents were observed to reach beyond intermediaries firstly, to provide additional stability and second, to gather information of the added value contribution of intermediaries. Intermediaries may remain on-line to product flow prior to the establishment of product flow direct to the end-user. Relationships with the end-user appear to further enhance the integrity and strength of the value system. One respondent described end-user as follows, "we would never cut... [the importer] out, however our relationship with... [the distributor] tightens up the system. [The distributor] can then see us and what we are about". On the other hand "the writing is on the wall for... [intermediary]. Product flow direct to end-users reduces the added-value <i>sink</i> effect that intermediaries have on the value system. There is some incidence that the notion of end-user also works in reverse, i.e, end-supplier. Upstream actors considered it "a danger if we don't put our face in front of farmers, they may think they are conducting business with.... [the intermediary]".



Table 5.5 continued. Explanatory effects matrix of first level categories from the meat industry case studies.

Category	Assigned user value	Definition of category	Explanation
Failure	--	Failure of the value system to extract and repatriate wealth to the benefit of New Zealand participants.	Proponents of failure consider that "you don't need to own the entire value system". Wealth can be distributed to the satisfaction of actors by "managing relationships". Failure of the value system may result in a temptation to invest outside of core businesses, or unnecessarily in an offshore location. Symptomatic of the relatively noncoordinated nature of the meat value system. Failure is not an option for the pipfruit industry given its current configuration and, therefore, is only likely to be encountered between growers, packhouses and perhaps coolstores.
Flexibility loss	--	Flexibility is eroded as firms adapt to each others' requirements.	The pursuit of added value reduces the ability of the firm to shift product between markets. The loss of flexibility is related to dependency, and is regarded as one of the costs associated with providing added value. For example, "historically flexibility has been so vitally important and the thing that everyone is wrestling with and I don't think they can get their head around is the fact that to take advantage of the opportunities in the marketplace to add value and so forth they have to relinquish flexibility. And they are fighting an internal battle, 'I don't want to do that because it removes options', which is the trading mentality, yet 'I want to achieve those things'. They can't reconcile the two. You have to make a commitment to one or the other. Not necessarily across the whole business but certainly with respect to that particular market".
Increased responsibility	+	Reflects increased costs, risks, liability or preparation met by one actor.	Actors sought increased responsibility and the associated risk with the view of capturing greater wealth.
Information flow	++	Information can be returned from all stages of the value system. Information flow is multidirectional, more so in the case of strong business relationships and/or multiple connectedness.	There is an expectation from the information source (actor) that there will be a response to the promulgation of information - unlike data. "Farmers will respond to information providing it is presented in a fashion they can do something with it". Therefore, information is regarded as an active management tool. All stages in the value system can contribute to information flow, i.e., they are all on-line.

Table 5.5 continued. Explanatory effects matrix of first level categories from the meat industry case studies.

Category	Assigned user value	Definition of category	Explanation
Level of consistency	-	Inability to supply product quality and or quantity to a buyer's specifications.	Inconsistency often occurs through no fault of the actors, refer to the discussion of the unique attributes of land-based industries (Section 4.3). On occasions inconsistency is a result of mistakes. One respondent described the effect of this source of inconsistency, "the strength of the relationship ensures that these mistakes do not destroy our business".
Long-term	++	Considerably longer than daily market price.	Explained as "you may have to forego money today to get money tomorrow, [despairingly] so few people recognise this. The French are just as bad, wanting to make a dollar today with scant regard for tomorrow". The ability of a business relationship to absorb returns less than the spot-market in the short term on the expectation of receiving greater income in the future.
Money flow	++	Occurs in the reverse direction of product flow. Prices based on the expectation of realised return less costs, and rents.	Money flow is related to the ownership of product at various stages of the value system: who owns it, and who is responsible for it. Some stages in the value system have the capability to administer money flow, in an off-line function, e.g., processors on-behalf of exporters without acquiring product from producers.
Monitoring	+	The formal evaluation of the outcome as a feedback for the benefit of decision makers (actors) within a stage.	Results from monitoring are distributed to others as information, hence monitoring is a precursor to change and information flow.
On-line/off-line	0	Used to distinguish between those stages of the value system participating in added value activities that do/do not physically handle product.	Producers, processors, and packagers are on-line to product flow. Procurement agents, some exporters, and some marketing functions are described as off-line to product flow. Differentiation does not occur in the pipfruit industry because the current configuration ensures all stages are on-line.

Table 5.5 continued. Explanatory effects matrix of first level categories from the meat industry case studies.

Category	Assigned user value	Definition of category	Explanation
Open competition	--	Competition is recognised between value systems rather than the result of asymmetrical bargaining power between adjoining firms within a value system.	Actors in managed value systems (see value system strategy) will <i>not</i> supply product to their customer's competitors, "the cardinal rule is <i>never</i> to supply your customer's competitor". A value system strategy is to minimise competition within the value system at the expense of competition between value systems by closing the value system.
Personal relationships	++	That element of a business relationship conducted at a personal level.	Personal relationships were described as accounting "for 30-40% of the business in Northern Europe. But in the South [Peninsula] it would be 90%". There is substantial other evidence to support the role of personal relationships. For example, suppliers were observed to have photos of clients' families on their desks, and speak with passion about golf and fishing with clients. The degree of personal relationship within a business relationship appears to be, largely, contingent on culture.
Product flow	0	Product flow is the physical flow and handling of goods.	There are stages of the value system responsible for the physical handling of product such as the land-based producer, processor, and distributor; these stages are on-line to product flow. Product flow is unidirectional, from producer to consumer (except in instances of product inconsistency when product may be returned or redirected).
Services	+	Firms in value systems, commonly, provide additional services to buyers and sellers as a means of enhancing business relationships.	In addition to "not buying lamb from anyone else. Why would I?" services are provided upstream and downstream. "We provide short term finance and chilling and freezing capacity for buyers". A processor may assist with a producer's seasonal finance of beef supplied to contract, considered attractive with beef due its longer production cycle.
Specialist	0	Participant at one stage of the value system who won't - rather than can't - integrate either upstream or downstream into adjoining stages of the value system.	Equity is seldom held by the specialist beyond their stage in the value system. Specialists are the antithesis of integrated organisations. Specialists as such are not recognised in the pipfruit industry due to its integration, despite the reconfiguration of the value system upstream, refer Appendix Three, and value systems in the Asian market resembling consecutive specialists in the form of distributors (Figure A3.10).

Table 5.5 continued. Explanatory effects matrix of first level categories from the meat industry case studies.

Category	Assigned user value	Definition of category	Explanation
Spot-market	--	The pursuit of the best net price on the day, acceptance of the highest bidder, no affiliation, no loyalty, no regard for the long term success of the value system.	Denotes an absence of connectedness. The seller may be regarded as a price taker and "accept that we may not be getting the best deal [in the long term], however, we have a service to provide our client [say the farmer]". While it exists in the pipfruit industry the spot-market is actively avoided, for example, ENZA International forward commits the entire forecasted crop.
Stability	++	Additional stability developed within business relationships between two actors by <i>multiple linkages</i> involving more than one actor in each organisation.	"We are trying to lock-in with these guys". An actor may deliberately pursue connectedness with several individuals at various positions in another firm, for example, relationships between a marketing manager and regional marketing manager in one firm with the general manager, or director of fresh and frozen foods and the meat or produce buyer in another. Therefore, connectedness ceases to be dependent on a specific individual.
Stage	0	An explicit stage in the value system as identified in the Z-form Model.	Note that not all stages are <i>on-line</i> with product flow, as was implied during the introduction and discussion of the Z-form Model in Chapter Two. Specialists related to their stage in the Z-form Model. Integrated organisations viewed the model with similar ease, "... does that, and then the importing function is completed by .... in our subsidiary".
Structure	+/-	The value system is structured either by imposing contracts or by developing connectedness between adjoining actors. (The outcome is considered positive, the necessity of some of the measures negative)	Some connections require greater structure than others, say contracts between farmers and the processor to supply "on time and in full". These contracts are, however, seldom enforced (see contracts). "We won't be the first to enforce supply contracts, but someone must".
Technological advantage	+	A specific advantage that is pursued due to economies, or lack of economies of scale, the uniqueness of product, service etc...	While regarded as transitory participants endeavour to protect technological advantages as long as is economically possible. Technological advantages may, therefore, result in a competitive advantage to the value system or at least to the actor holding the technological advantage.

Table 5.5 continued. Explanatory effects matrix of first level categories from the meat industry case studies.

Category	Assigned user value	Definition of category	Explanation
Tension	--	A symptom that either one or both parties in a business relationship have concerns as to its success. Tensions also exist between complementary actors.	Respondents were reluctant to be drawn into discussions of tension, particularly tension relating to complementarity. Tensions resulting from connectedness were relieved by comments to the effect "I tell them what to do with their prices [laughing], and then we reach agreement". The final outcome of increasing tension may be the dissolution of the business relationship but preferably the rationalisation or reduction of tension via information, increased rewards and so on. Tension arises from sources external to the relationship, in addition to those within.
Trust	++	Trust refers to the expectation of certain behaviour by one actor from another.	Some participants resolve trust by supplying complete, or near complete information. Morgan and Hunt's (1994) discussion of the definition of trust is equally applicable to the use of trust by case study actors: trust refers to the "perceived outcome" (p. 23). Anderson and Narus (1990) defined trust as the actors "belief that another company [actor] will perform actions that will result in positive outcomes for the firm as well as not take unexpected actions that result in negative actions" (p. 45). Further, an actor may be pursued because "we considered we could trust him", even in the absence of connectedness between the two. Trust was not mentioned by any of the actors in the pipfruit value systems studied (refer to personal relationships).
Value system strategy	+	The deliberate generation and distribution of wealth amongst participants in the value system.	Strategy was stated "to involve all industry participants in the long term satisfaction of customer needs". The implication is that value systems do not necessarily work by chance, however in not all cases is connectedness transmitted from producer to international consumer.
Wealth distribution	+/--	The process of distributing wealth in the value system. (Considered positive if the intent is to distribute wealth, negative if the intent is to withhold wealth: capture rent).	One respondent aptly described the process of wealth distribution as "the cake divided by cooperation within the value system rather than by squabbling".
Wealth generation	++	The generation of wealth in the entire value system.	Hence, "the value system creates the cake" that is subsequently distributed cooperatively.

Table 5.6. Explanatory effects matrix of first level categories from the pipfruit industry case study.

Category	Assigned user value	Definition of category	Explanation (in addition to Table 5.5).
Actor/participant	0	The decision maker responsible for the management of a firm, activity, or connectedness.	Synonymous with the explanation of actor in Table 5.5.
Agreement	+	A verbal, informal agreement in the absence of contracts that has or is expected to be maintained to the benefit of both parties.	Entered into by both adjoining and non-adjoining firms in the value system, most often refers to attributes associated with product, product flow, and money.
Branding	++	Branding of fresh and processed product to enhance consumer recognition and conversion.	"New Zealand is a highly credible source of foodstuffs but the NZ brand is worthless. The most important reason for creating our own brand was we could control it. We could give it the character we wanted to give it. We were very concerned that people were selling frozen slabs of meat in the same supermarkets under the same brand as our apples". Inherently linked to partnership selling - relationship marketing. Perceived to add value. Consistent branding is conducted by all participants in the pipfruit value system, even growers promote the brand.
Change	++	Adaptation by an actor in the value system to better meet customer's needs. Changes are manifest by forms of added value, particularly packing and plant husbandries. Some of these may be incorrectly perceived as limited.	One example is the provision of PLUs (product look-up codes) by ENZA New Zealand (International) in the North American market. A second example is "the pioneers with Royal Gala and Braeburn made so much money that growers are prepared to try new ideas. They can switch from one variety quite quickly, the downside isn't so great". Also attributed to the level of investment in connectedness. Changes result in some form of added value activity. One significant catalyst for change has been the restructuring of the value system between the NZAPMB and the producer.
Closed system	++	The actors close the value system to those outside the current configuration (see structure).	To close the value system to international competitors.

Table 5.6 continued. Explanatory effects matrix of first level categories from the pipfruit industry case study.

Category	Assigned user value	Definition of category	Explanation (in addition to Table 5.5).
Commodity product	--	Product flow consists of commodities.	The pipfruit industry strategy is to discourage commodity production, by returning to growers realised market prices. ENZA New Zealand (International) actively discourages the production and exporting of commodity products, except in circumstances when those commodities such as Red Delicious and Granny Smith, are used to augment product lines.
Complementarity	++	The distribution of product, information, goods, and services by more than one participant at a single stage of the value system that does not impinge on each others' success.	Exists in the form of suppliers (refer to the discussion of temporal factors in Section 5.3, notably product) say Zeus and ENZA New Zealand (International). Complementarity also occurs between coolstore suppliers. Complementarity throughout the value system is, therefore, centrally controlled by ENZA New Zealand (International) and not left to chance, except that pursued by end-users seeking two product suppliers, say Sainsbury.
Connectedness	++	A relationship between actors in a value system that may be either independent of, or in addition to contracts.	Connectedness signifies a deliberate (active) attempt by one or both actors to get <i>closer</i> for their mutual benefit. There may be instances when a business relationship is pursued by one actor and result in disparate dependency (see dependency). Connectedness is maintained in the absence of coordinated (year-round) supply by the lengthy development of sophisticated supply agreements.
Contract	+	Legal binding contract for the supply of goods and services at a prespecified standard, preagreed price, and designated time.	Despite the intent to bind suppliers of goods and services contracts are seldom if ever enforced in court. However, one respondent commented "what is the point of having contracts if you aren't going to enforce them?" Contracts exist in meat value systems almost as a precursor to connectedness. By contrast forms of contract prevail throughout the pipfruit value system irrespective of expectations or the strength of connectedness.
Controlled supply	+/-	The selection and control of product volume and quality for specific market requirements.	Driven by the need to meet specific market requirements because ENZA international <i>endeavours</i> not to use commodity businesses and spot-markets.

Table 5.6 continued. Explanatory effects matrix of first level categories from the pipfruit industry case study.

Category	Assigned user value	Definition of category	Explanation (in addition to Table 5.5).
Coordinated supply	++	An attempt to reduce seasonality (discussed in Section 4.3) at the aggregate level.	Year-round fresh pipfruit production is not economically feasible. Seasonal supply can be enhanced with controlled atmosphere (CA) storage and the acquisition of crop from alternate home-base locations.
Data	0	Similar to information flow without any expectation of response from the data recipient.	Refer to Table 5.5.
Dependency	-	Dependency of one actor/participant on another.	"We are completely dependent on... in this market. We have no knowledge of what goes on upstream". On the other hand "they could switch to South Africa or Chile, but they wouldn't. And they will never put all their eggs in one basket... They are dependent on us for good profit streams, and they are now dependent on us for reinvigorating the category [apples]". The same discussion applies as Table 5.5. Dependency appears to be valued in the pipfruit industry whereas some actors in the meat industry, not all, are only now coming to terms with dependency.
End-user	++	The pursuit and development of business relationships with the end-user.	Connectedness with the end-user appears to further enhance the integrity and strength of the value system "and is being pursued, particularly as the Americans are now seeking the sort of relationships we have had going in Europe for years".
Flexibility loss	-	Flexibility is eroded as firms adapt to each others' requirements.	Flexibility can be gained "by shifting added value activities closer to the end user". Flexibility is valued in the meat industry as product can then be readily shifted from one market to another. The structure of the pipfruit industry centralises flexibility, however, it also attracts criticism from detractors of producer boards who attribute management difficulties with issues of configuration.
Increased responsibility	+	Reflects increased costs, risks, liability or preparation met by one actor in the value system.	"If we don't put on PLUs we will be out of the market". In some instances increased responsibility may only serve to maintain the current distribution of wealth.



Table 5.6 continued. Explanatory effects matrix of first level categories from the pipfruit industry case study.

Category	Assigned user value	Definition of category	Explanation (in addition to Table 5.5).
Information flow	++	Information can be returned from all stages of the value system. Information flow is multidirectional, more so in the case of strong business relationships and/or multiple connectedness.	Refer to Table 5.5.
Level of consistency	-	Inability to supply product quality and or quantity to a buyer's specifications.	Refer to Table 5.5. Inconsistency appears to be better tolerated in the meat industry. However, inconsistency of product in the pipfruit industry is not often observed until an apple or pear is cut open.
Long-term	++	Considerably longer than daily market price.	Refer to Table 5.5.
Money flow	++	Occurs in the reverse direction of product flow. Prices based on the expectation of realised return less costs, and rents.	Refer to Table 5.5.
Monitoring	+	The formal evaluation of the outcome as a feedback for the benefit of decision makers (actors) within a stage.	Refer to Table 5.5.
Open competition	--	Competition between value systems rather than the result of asymmetrical bargaining power between adjoining firms within a value system.	Value system strategy is to minimise competition within the value system at the expense of competition between value systems. "We have one price, and only one price. Irrespective of who buys the product they pay the same price".
Personal relationships	+	That element of a business relationship conducted at a personal level.	Personal relationships do not appear to be as well developed or as highly valued in the pipfruit industry. Actors in the meat industry were particularly animated and endeared towards actors in adjoining, and non-adjoining stages.

Table 5.6 continued. Explanatory effects matrix of first level categories from the pipfruit industry case study.

Category	Assigned user value	Definition of category	Explanation (in addition to Table 5.5).
Product flow	0	Product flow is the physical flow and handling of goods.	Refer to Table 5.5.
Services	+	Firms in value systems, commonly, provide additional services to buyers and sellers as a means of enhancing business relationships.	Consists largely of promotional and distribution activities.
Stability	++	Additional stability developed within business relationships between two actors by <i>multiple linkages</i> involving more than one actor in each organisation.	Refer to Table 5.5. However, stability in the pipfruit industry does not appear as deliberate as in the meat industry.
Stage	0	An explicit stage in the value system as identified in the Z-form Model.	Refer to Table 5.5.
Structure	+	The value system is structured either by imposing contracts, establishing agreements or by developing business relationships between adjoining actors.	The intent is similar to that in the meat industry, i.e., to align product to market. However, ENZA International has to conduct structural arrangements on an aggregate (industry wide) basis. The pipfruit value systems are structured from land-based producer to end-consumer where appropriate (whoever that may be). By comparison the meat industry value systems are relatively unstructured. However, the need for structuring supply relationships is becoming increasingly accepted in the meat value system.
Technological advantage	+	A specific advantage that is pursued due to economies, or the uniqueness of product, service etc...	"As long as we have got the will we can be more innovative than anyone else in the industry. And we have seen that in the range of products we have got. We are the only industry in the world that is grafting to a fair degree". While regarded as transitory participants endeavour to protect technological advantages as long as is economically possible. Technological advantages may, therefore, result in a competitive advantage to the value system or at least to the actor holding the technological advantage.

Table 5.6 continued. Explanatory effects matrix of first level categories from the pipfruit industry case study.

Category	Assigned user value	Definition of category	Explanation (in addition to Table 5.5).
Tension	--	A symptom that either one or both parties in a business relationship have concerns as to its success.	Refer to Table 5.5.
Value system strategy	++	The deliberate generation and distribution of wealth amongst participants in the value system.	Enhanced by a value system wide, at least as far as the end-user, perspective of strategy.
Wealth distribution	++	The process of distributing wealth in the value system.	Coordination of distributive effects, focussed from the perspective of growers.
Wealth generation	++	The generation of wealth in the entire value system.	To be maximised in the long term. The NZAPMB's mission is to "maximise sustainable returns to New Zealand and pipfruit growers". Some of the meat industry value systems display system wide strategy to distribute wealth, others do not. By comparison more stages in the pipfruit value system display system wide strategy owing to the deliberate configuration onshore and management's select goals from the growers' perspective.

Despite deliberately pursuing cases to reflect opposing theoretical poles in terms of configuration and product the majority of categories are common to both of the value systems studied. This outcome is reassuring in that the nature and understanding of the value system has been developed beyond the structure imposed by legislation (attention was drawn to the researcher's concerns with respect to legislation in the notes accompanying the research protocol, refer to Appendix One).

There are some contextual differences in the definitions of categories between the two case industries reported in Tables 5.5 and 5.6. For example, the definition of complementarity in the meat industry confers the establishment of common prices, packaging, or market specifications between participants at the same stage in the value system. The definition of complementarity in the pipfruit industry infers the same concept but at a higher level of abstraction. Definitional differences such as this are not considered important. Where definitional differences exceed such tolerance alternate categories are presented, for example, controlled supply and coordinated supply in the pipfruit industry compared with coordinated supply in the meat industry. However, despite early concerns relating to product characteristics data gathering has been conducted, largely, *beyond* technological considerations.

The one category identified unique to the pipfruit industry is controlled supply. The five categories identified as unique to the meat industry are failure, on-line/off-line, specialist, spot-market, and trust. Controlled supply is directly related to the absence of the category spot-market. ENZA New Zealand (International) forward sells the entire anticipated export crop. Therefore, the spot-market is only used as a last resort - when supply spills-over market specifications (elaborated further in Chapter Six).

Failure, also related to the absence of the spot-market, is not an option for the pipfruit industry given its current configuration and is only encountered between growers, packhouses, and perhaps coolstores (as observed in the discussion of upstream reconfiguration in Appendix Two). All stages of the pipfruit value system were on-line to product flow: no distinction was made between on-line and off-line. Upstream reconfiguration of the pipfruit value system has effectively created specialists, particularly in the form of coolstore operators. However, none of the case study participants were

specialists hence absence of the category. Lastly, trust was not mentioned by the pipfruit industry participants during the course of any interview which does not suggest it was absent or even of less importance.

The second step of creating theory is axial coding (Glaser & Strauss, 1967; Miles & Huberman, 1994): the development of derived concepts from the categories presented in Tables 5.5 and 5.6. The derived concepts represent a higher level of abstraction than the categories. At no stage yet are linkages in the form of propositions made between the concepts. The process of further abstraction effectively reduces the number of categories/concepts contributing to theory, and may complicate the nature of some. Therefore, the process of developing concepts is ameliorated by parsimony on the one hand and mitigated by the potential loss of explanation on the other.

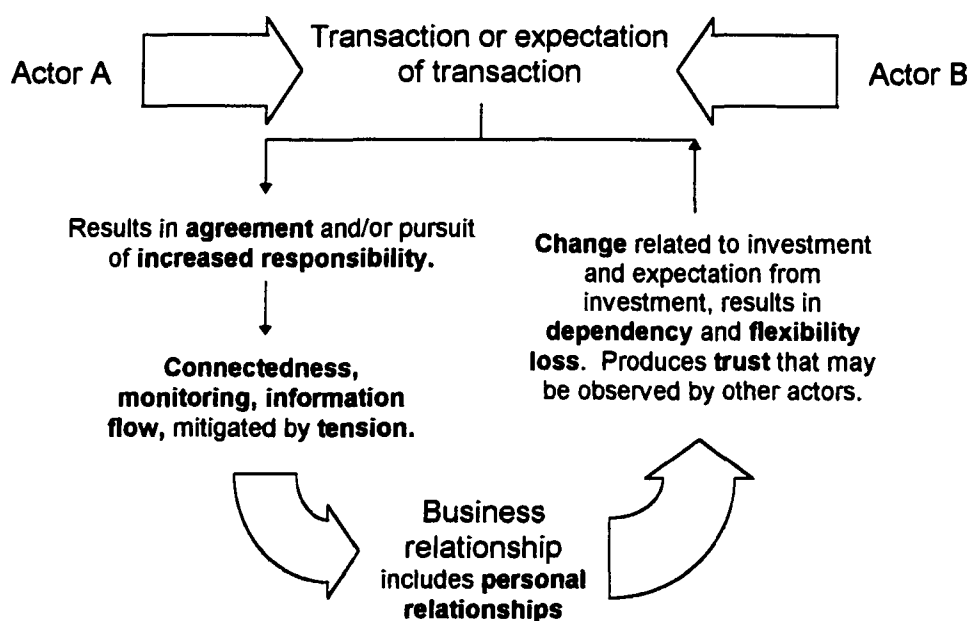
Two derived concepts immediately emerge from the contributing categories, they are *business relationships* and *organisations*. Note that the distinction between organisations and linkages between them was used to cleave the literature review into two themes (Chapter Three). Therefore, it should not come as any surprise that these same concepts emanate in an inductive fashion through data reduction of case research results.

Several categories contribute directly to business relationships and in part relate to stages of the relationship lifecycle, actors' commitment to relationships, and expectations and outcomes from relationships. Categories contributing to business relationships are agreement and increased responsibility in the form of precursors; connectedness, monitoring, information flow, internal sources of tension, and personal relationships as intermediary categories; and trust, dependency, flexibility loss, and change (adaptation) as output categories. The concept of business relationship is, therefore, similar to that described in Chapter Three.

Business relationships develop from an initial agreement between the actors, and eventually result in various forms of change. Sources of change include shift of the resource split held by the actors, the transformation of resources by each of the actors, alterations to activities between the actors and so on. In all instances the motivation for

change appears to be the pursuit of added value, namely the generation of wealth with some expected benefit in the form of improved wealth distribution. Business relationships, therefore, ameliorate risk commonly associated with commodities - discussed further in Chapter Six. A schema of the categories contributing to the derived concept business relationships is presented in Figure 5.4. The schema depicts business relationships arising from transactions or the expectation of transactions between actors. The schema is modified from the model of business relationships depicting adaptational procedures, Figure 3.16 (derived from Easton's (1992) review of industrial networks).

Figure 5.4. A schema depicting the categories contributing to the concept 'business relationship'.



The pursuit of stability by the development of multiple linkages between actors at different hierarchical levels in adjoining or nonadjoining organisations is an additional development of the business relationship: an extension, in the form of duplicity or multiplicity between organisations, to that depicted in the figure.

The concept business relationship is common to both case study industries. Trust, however, was not identified in the pipfruit industry as a category, which is not to say it was absent. Certainly the development of business relationships in the absence of

trust between actors appears unlikely. However, the apparent less reliance on trust in the pipfruit industry may explain, in part, the relative increase in various forms of contract.

The second derived concept to emerge is the organisation. Again a number of categories can be readily attributed to organisations. Actors and participants partake in the value system by way of their role in organisations. Some organisations are specialists, while others are integrated through several stages of the value system. Those organisations observed to pursue business relationships sought increased responsibility, and either held or were prepared to develop some form of technological advantage.

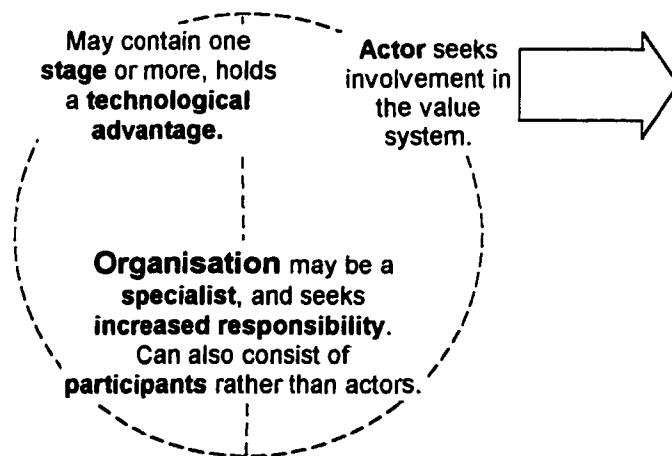
The term technological advantage is not used to insinuate the possession of high or precision technology. For example, a land-based producer's ability to fulfil supply contracts is sufficient to imply that he or she holds some technological advantage that is sought by an adjoining processor. That advantage ensures the producer is not confronted with the necessity of selling that produce on the spot-market. The derived concept organisation is presented in the form of a schema, Figure 5.5, which depicts the relationships between each of the contributing variables.

If participants, rather than actors are responsible for the organisation, no attempt will be made by the organisation to be involved in the value system through either connectedness or discretionary integration. The organisation is unlikely to hold any form of technological advantage, instead producing commodity products. Therefore, participants can be viewed as management in organisations contributing to spot-markets whereas actors contribute to more cohesive value systems.

The third derived concept to emerge through data reduction concerns the interviewed participants' collective efforts to structure the value system. In all cases, both within each industry and across the two industries, the intent of structuring the value system was to attempt to manage supply. Or considered alternatively, to "lay down" product specifications in terms of quantity, quality, and timings in order to mitigate vagaries of supply exacerbated, largely, by biological variability (as discussed in Section 2.2). Therefore, the necessity for value system structure between adjoining organisations diminishes as product approaches the consumer. Invariably initial efforts in

structuring the value system rely upon contracts in the absence of connectedness. For example, strategies involved use contracts to coordinate supply in the meat industry, notably between producers and processors or exporters, and control supply in the pipfruit industry by imposing on producers market driven submission standards. Figure 5.6 depicts the development of the derived concept *value system structure*.

Figure 5.5. A schema depicting the categories contributing to the concept 'organisation'.

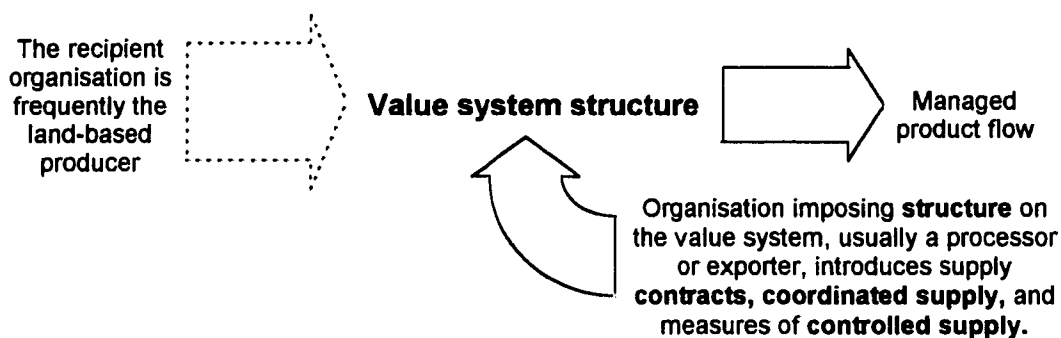


Structure is often applied to the linkage between the land-based producer and the first stage processor, hence the note in Figure 5.6 that the upstream organisation is often the land-based producer. However, the concept value system structure was also applied to linkages beyond the producer such as the linkage between the coolstore and ENZA (New Zealand) International. The concept is, therefore, most often but not exclusively found between producers, A, and first stage processors, B.

The intent of structure, in the broadest sense, is to procure product to market specifications and, therefore, minimise product grading once it is procured. The producer or any other supplier then bears production risk and the buyer minimises wastage. Structuring the value system, therefore, enhances the creation of wealth, and may lock organisations in to the subsequent process of wealth distribution.



Figure 5.6. A schema depicting the categories contributing to the concept 'value system structure'.



The distinction between organisations being either on-line or off-line to product flow, while important in a descriptive sense is not necessary to maintain through the development of emergent theory. Those organisations off-line to product flow can be viewed as providing services rather than goods, whereas those organisations on-line to product flow contribute goods at various stages of the value system. Porter (1980, 1985) provides some guidance by referring to both goods and services as goods, he too recognises the distinction but does not consider it necessary to have it upheld. Therefore, product flow, services, and on-line/off-line contribute to the concept *product*.

The remaining raw categories, as presented in Tables 5.5 and 5.6, and the four concepts are now divided into antecedent, intervening, and outcome variables (Miles & Huberman, 1994). The objective of classifying the categories and concepts in order of procession is to assist with the development of a causal network. A causal network is used to depict the relationships and direction of relationships between variables. The causal network, therefore, denotes the transition from axial to selective coding. The classification of the residual first level categories, and the four concepts - business relationship, organisation, value system structure, and product - into one of the three processional classes is presented in Table 5.7.

The specification of antecedent variables, commonly a source of business risk, is tempered by the unique attributes of land-based agriculture (discussed in Chapter Two). Therefore, commodity product is classified as an antecedent rather than intervening category. Technological advantage was described as contributing to the concept

business relationship but may also occur as an antecedent category in which case it is embedded in the concept organisation. Conversely personal relationships may be viewed as an outcome category, to be sure sociologists would appear to classify them as such, nonetheless they remain a part of the concept business relationship. Long term is included only as an intervening category: intervening in that long term is a value system strategy that upholds a commitment towards the generation of wealth. The outcome of a long term perspective is better expressed as wealth generation by value system actors.

Table 5.7. Classification of raw categories and derived concepts into antecedent, intervening, and outcome classes.

Classification of category and concept		
Antecedent	Intervening	Outcome
Commodity product	Branding	Failure
Level of consistency	Business relationship	Wealth distribution
Organisation	Closed system	Wealth generation
	Complementarity	
	Data	
	End-user	
	Long-term	
	Money flow	
	Open competition	
	Product	
	Spot-market	
	Tension	
	Value system strategy	
	Value system structure	

Note: Derived concepts are identified with shading, raw categories remain unshaded.

At first glance it is tempting to condense the raw categories commodity product, level of consistency, and spot-market. However, some commodity businesses, a significant source of risk in land-based industries, were observed to be maintained with business relationships. For example, the integrated processors sale of lamb products to Spain involved well developed business relationships despite commodities being the basis of product flow. Further, some spot-markets are used to absorb non-commodity product when inconsistency occurs, for example, surplus product was reported to have been exported to the Caribbean that was otherwise destined for North American markets.

Two remaining categories with strong claims as antecedent variables classed, however, as intervening require explanation. Open competition remains outside of the value system and while data emanates from both organisations and structure data also occurs in an ambient manner. Data is considered ambient because it also arises from spot-markets and open competition outside of the subject value system.

In the fashion of industrial networks the first intervening dependent concept to be considered is business relationships between adjoining or nonadjoining organisations in the value system. As identified previously business relationships result from agreements, cooperation, stability, trust and personal relationships between organisations. Some business relationships harbour a degree of tension while in others little, if any, tension appears to exist. All of these independent categories relate to personal and organisational interactions and describe characteristics of a sociological dimension between actors. At another, more physical level business relationships give rise to monitoring, information flow, change, flexibility loss, dependency, and technological advantages.

Providing organisations have a long term perspective a value system strategy may be designed or emerge through one organisation or collaboratively from several organisations in the value system. In turn, two consequences of value system strategy are value system structure which includes contracts, and controlled and/or coordinated supply. Other consequences include the development of relationships with end-users, branding, complementarity, long term and closed system.

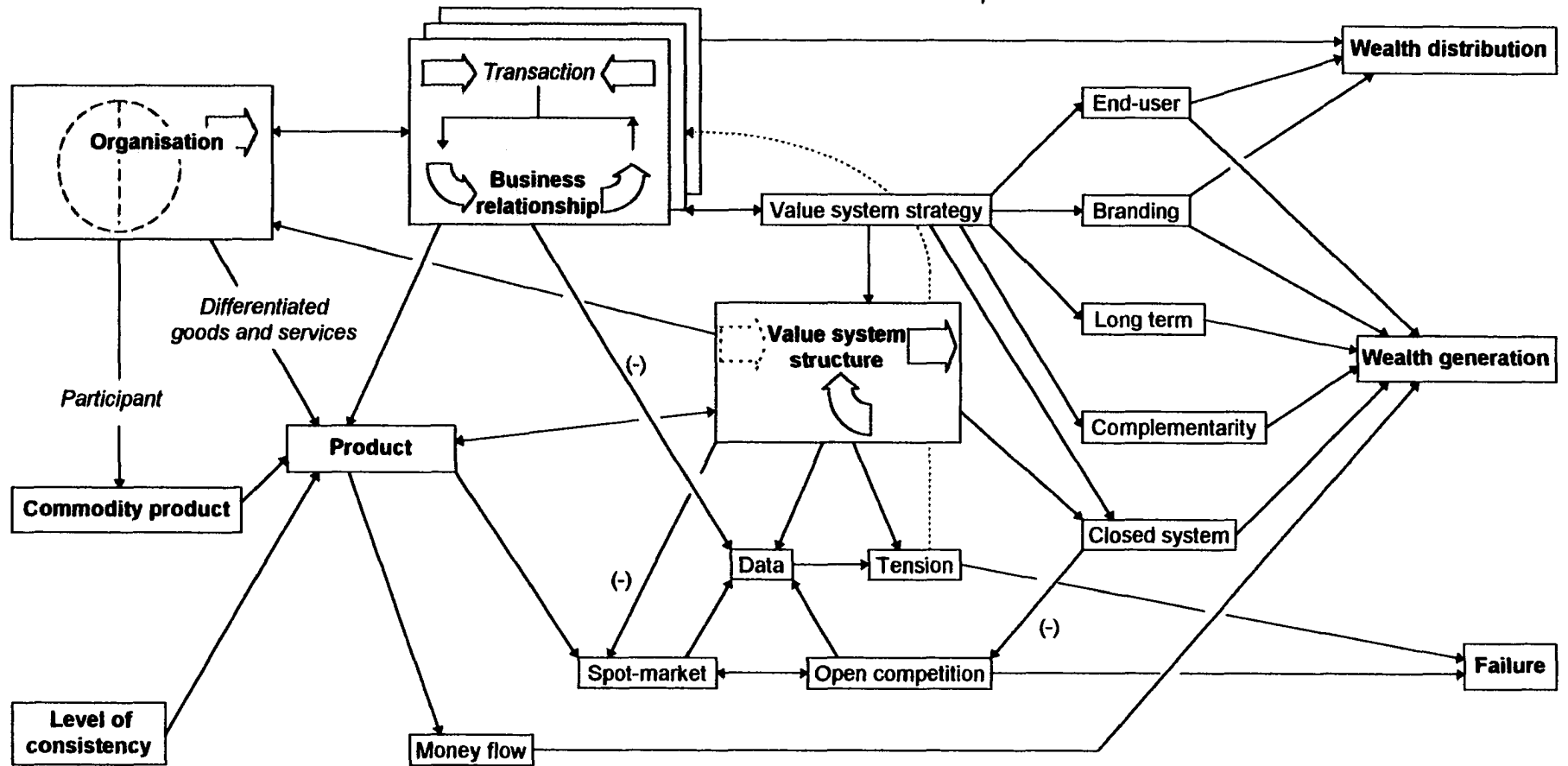
Outcome categories must include wealth generation, and wealth distribution. Long term and money flow contribute to wealth generation. Inevitably failure must also be classified as an outcome category, that is the value system fails at the expense of some or even all the intervening variables. Organisations then have to rely on antecedent or intervening variables to reestablish more appropriate management and configuration. The relationship between wealth distribution and wealth generation appears confused. Activities relating to the generation of wealth and its subsequent distribution are, in some value systems, near indistinguishable. In others there appears a clear demarcation between generation and distribution. Inevitably in these latter value systems

configuration is not left to chance. The relationship between wealth generation and wealth distribution, at this stage both considered as outcome categories, is discussed in full in the following chapter.

The transition to selective coding marks the departure from data reduction to theory generation. However, to claim that the process was conducted in a linear stepwise fashion would be misleading. A causal network (Goetz & LeCompte, 1984; Miles & Huberman, 1994) of categories developed from the meat and pipfruit industry case study categories and concepts is presented as Figure 5.7. The causal network is a graphic representation of an emergent theory of the configuration and management of New Zealand's export-dependent land-based value systems. Antecedent variables (bold) are aligned on the left, intervening in the centre and outcome variables (bold) aligned on the right. Relationships between each are depicted as arrows denoting the direction of causation. Where one category or concept suppresses another the relationship is identified as being negative, (-). Derived concepts are depicted in the form of shaded icons. Raw categories are depicted as boxed text.

Once portrayed in the form of a causal network common relationships between several categories are used to validate the potential development of an additional concept. The development of a fifth concept, by way of a second iteration of axial coding, emerges when consideration is given to the relationship among value system strategies. The categories end-user, branding, long term, complementarity, closed system, and the derived concept value system structure are six value system strategies employed by the interviewed participants in the case study value systems. A concept value system strategy, encompassing the five categories (above) in addition to the concept value system structure (six in all), *may* be used to describe the deliberate or emergent configuration or management of a value system.

Figure 5.7. Causal network of categories and concepts derived through case industry data reduction.



Antecedent variables

Intervening variables

Outcome variables

Inverse relationships are denoted by (-)

To be sure, the specification of the six value system strategies as a single concept is parsimonious, but conducted perilously at the expense of explanation. As was evident in the literature review the discussion of business strategies is not rewarding in the absence of D'Aveni's (1995) hypercompetition frameworks. D'Aveni's framework provides a much needed diagnostic tool for identifying step-wise progression away from and inevitable return towards the state of (near) perfect competition. A state where organisations compete on price and quality.

Sixteen raw categories remain in the causal network. These categories have yet to be collapsed upwards into derived concepts by the process of axial coding. Their expression and recognition as individual categories describing a concept retains the powers of explanation at the expense of parsimony. The resistance to amalgamate the observed value system strategies into a single concept has been discussed. The retention of the balance as raw categories, ten in all, is explained in the following section. The antecedent variables can all be regarded as concepts, the intervening variables (money flow, spot-market, data, open competition and tension) also need to be maintained individually and regarded as concepts without further data reduction. The outcome variables wealth distribution and wealth generation pose a dilemma which is discussed in full in the following chapter. Failure, in the terms described in Table 5.5 remains a concept in its own right. Therefore, for the balance of the discourse no further distinction is made between derived concepts and raw categories.

The emergent theory is developed in the following section. Each of the concepts and relationships depicted in the causal network (Figure 5.7) are discussed - in addition to the definitions and explanations provided in Tables 5.5 and 5.6. The emergent theory is discussed in terms drawn exclusively from the empirical evidence and supported by the contributing literature. Chapter Six presents a full elaboration and expansion of the theory. Empirical concepts are related back to the literature review, and contributions from the literature synthesised into theory of the middle-range.

## 5.7 AN EMERGENT THEORY

**O**RGANISATIONS IN VALUE SYSTEMS create differentiated products from land-based goods and/or a diverse range of services. Organisations also produce commodity products that are indistinguishable others in the market place. Commodity products provide organisations a source of business risk whereas the process of differentiating products appears to reduce such sources of risk. These antecedent organisations need not be recognised solely as land-based producers (Stage A). The antecedent organisation could be located at any one of the stages, A to G, in the value system. Product transfer between adjoining, or nonadjoining organisations is accompanied by money flow.

The second source of product to the value system is from the concept commodity product. As discussed in Chapter Four land-based producers, largely, contribute commodity products to value systems and spot-markets. Those producers who are able to provide differentiation at the farmgate through the adoption of some technological advantage are the exception rather than the rule. Therefore, the closed value system must accommodate commodity products; the spot-market being the alternative. The sale of commodity products on spot-markets is the greatest source of business risk confronting participants in land-based value systems.

The third and final source of product in the causal network results from the level of consistency. Sources of variability in land-based production were identified and discussed in detail in Chapter Two. The retention of level of consistency as an antecedent variable was discussed in the previous section, suffice to say that this variable appears to be one of the catalysts for the imposition of value system structure. Hence a two-way arrow is used to depict the relationship between product and structure. One important role of processing, manufacturing and packing is to minimise inconsistency: ameliorated by supply management imposed through value system structure.

To summarise, there are three sources of goods in the causal network (Figure 5.7) first, that from organisations second, that from commodity products and third, that resulting from biological inconsistency. Equally important is the distinction between

differentiated and undifferentiated products. Organisations contribute products of both natures to the value system. Differentiated goods are often related to some technological advantage and can be ascribed to a particular organisation whereas commodity products are undifferentiated, their source being inconsequential, therefore, they are purchased at marginal cost. Inconsistency is also a source of both forms of product - differentiated and undifferentiated goods. However, differentiated goods produced as a result of biological inconsistency rarely command premiums and appear to be temporarily treated with commodity status.

Business relationships may be developed on the expectation of transactions between adjoining organisations, initially even in the absence of goods. Business relationships may also develop during the course of regular and frequent transactions between adjoining organisations. The development of business relationships is, however, not confined to adjoining organisations. Nonadjoining organisations holding a broader perspective of the value system may develop business relationships with end-users. Note that the definition of end-user is not confined to the international consumer but relates to the organisation's perspective or ability to influence a portion of the value system. Therefore, a producer may [incorrectly] consider an exporter, C, the end-user whereas an integrated processor, B-C, may consider the international distributor, F, the end-user.

The category of end-user can also be applied backward, that is upstream towards producers, A. Exporters seek business relationships with producers, international distributors and marketers are also observed to seek business relationships with nonadjoining producers in the home-base location. Importantly, the concept of end-user describes *reaching* on behalf of a particular organisation. There appear to be five reasons for the pursuit of end-user business relationships. First, end-user relationships accelerate change in the value system. Second, they provide a source of information upstream or downstream. Third end-user relationships are used to mitigate bargaining power held by adjoining organisations. Fourth, they reduce business risk confronting all of the intervening participants. Finally, there are instances where intermediary organisations are gradually *removed* from the value system by the successful development of end-user relationships.



One outcome of business relationships is the distribution of wealth between partaking organisations. Contributing literature was reviewed in Chapter Three and, largely, remains unhelpful in reconciling the distribution of wealth between organisations. Empirically, wealth distribution appears to be ameliorated by business relationships and mitigated by bargaining power. However, the division of wealth is also subject to external forces such as the spot-market, open competition, and data despite a business environment created where trust displaces tension (refer to Section 3.5). The business relationship is, therefore, not conducted in complete isolation from open-competition or the spot-market. In fact, these external data sources were observed to provide change to the nature of transactions. So while market suppression in the value system is effectual, the market (open-competition) remains to actuate the relationship. Market *residue* in the form of data is ambient, the relationship seemingly permeable to external influence.

Business relationships suppress data because transactions are internalised within the relationship. Organisations outside of the business relationship or nonadjoining connected organisations are simply not privy to the nature of the transaction. For example, competitors have no way of learning how much an importer pays for product sourced from an integrated processor or a specialist exporter. On the other hand the spot-market creates data that is available for consumption by all organisations. Data provides a source of tension to business relationships, depicted as the dotted feedback loop from external sources of tension (refer Figure 5.7).

Product is traded on the spot-market. As noted in Table 5.5 the spot-market is also used as a sink for differentiated product that defies consistency. Therefore, the spot-market should not be considered as the recipient of commodity products alone. The spot-market provides a source of open competition and similarly the pursuit of open competition appears to create spot-markets (this issue is discussed in more detail in the following chapter). The spot-market and open-competition are both sources of data which in turn compounds tension. An organisation's performance in the spot-market indirectly serves as a source of tension for its existing relationships, and serves to ensure that the performance of those relationships is kept in perspective. Similarly, open-competition between value systems does not preclude organisations from disrupting existing business relationships held by competitors and potential buyers or suppliers.

Justification for the maintenance of the six value system strategies as discrete concepts was presented in the previous section. The strategy end-user has been discussed, the remaining five strategies are now further elaborated. The most obvious value system strategy is the imposition of structure - the most common behaviour of societal marketing boards. Section 5.6 provided a discussion of the concept and intent of value system structure. Value system structure has a direct and immediate affect on organisations, notably those organisations upon which structure is imposed. The organisation then responds, as sought, by providing product to the value system in a form required. Providing specifications are sufficiently *tight* the value system may then be no longer encumbered by commodity product: hence the negative effect of structure on the spot-market, denoted in Figure 5.7 as (-). Organisations contributing product through some form of value system structure reduce reliance on spot-markets.

Commitment to value system structure, as say participation in contracts, was observed to be one precursor for business relationships. The relationship may be observed to then supersede the constraint of contracts. A further intent of structure is to close the system, that is to ensure that organisations and their goods are committed to the value system rather than participating in open-competition. The imposition of structure also contributes to tension between the adjoining organisations. In some instances tension overwhelms resilience of structure and the value system then temporarily fails.

The third value system strategy, following structure and end-user, is branding. The category of branding hardly needs further explanation in this context. Watkins (1986) claims that it is difficult to define the concept of the brand. Kominik (1995) in reviewing Thirkell's study of branding New Zealand's land-based products noted that "brands were an umbrella concept that captured a benefit relevant to customers, like crispness or colour" (p. 23). The intent of branding land-based products is to remove their commodity status. The pipfruit industry has developed the brand ENZA<sup>71</sup>, and all the case study meat exporters market product under their own brands, often

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<sup>71</sup> Pope, the retiring chairman of the NZAPMB, cited in Tocker (1996a) stated that "I take tremendous pride in the brand. We moved toward branding at a time when we were told, even by our customers, that it wasn't possible. But in New Zealand agribusiness we really led the way" (p. 23).

accompanied by the NZMPB's Rosette mark used as a quality certification. One obligation of branding products is greater control over the supply of goods. Therefore, investment in brands visible to customers upstream necessitates a value system-wide strategy of supply management (discussed further in Chapter Six). Branding is expected to generate wealth as commodity status is removed and in doing so reduces end-users' bargaining power: benefiting the distribution of wealth in favour of the brand owners.

Long term refers to a perspective held by organisations in the value system. In that respect long term is also embedded in the concept business relationship. Long term as a value system strategy implies commitment to an end-user through one or more business relationships. The capture of wealth resulting from change, the development of technological advantages, the suppression of the spot-market, and resistance to open-competition are only expected to be realised in the long term.

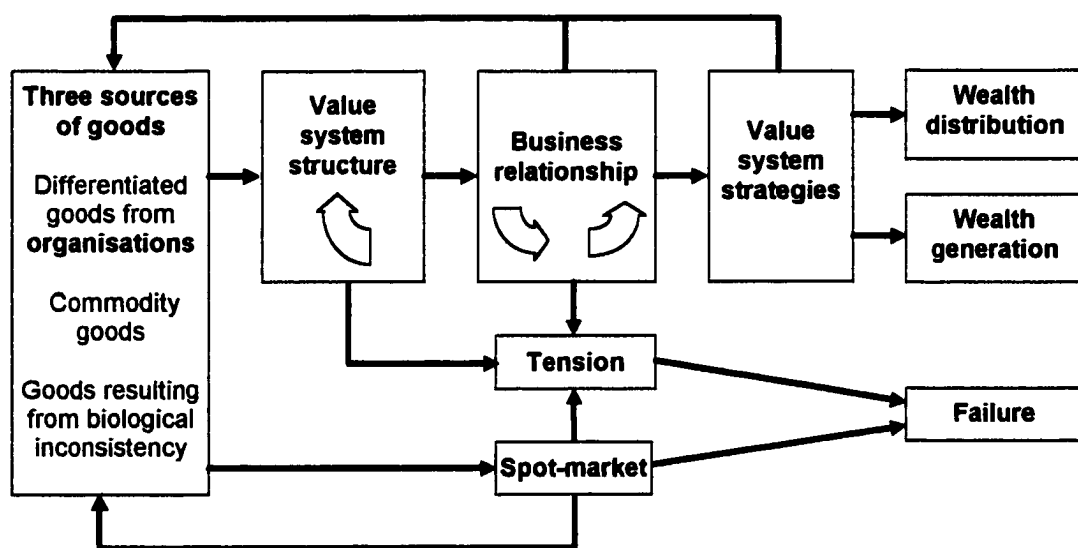
The fifth value system strategy implemented by participants in the case study value systems is complementarity. The management of complementary organisations at a particular stage creates advantages for the value system. In effect neutrality supposedly exists between the complementary organisations, all product is acquired reducing wastage and potential reliance on the spot-market. Therefore, complementarity enhances the generation of wealth. However, were synergies to develop between organisations holding a complementary position they could impose constraints on the supplier through *collective* bargaining power.

The final value system strategy to be discussed is closed system. New Zealand's international pipfruit value systems were closed prior to reconfiguration (refer to Appendix Two, Section A2.4). The intent of the coolstore operator as a new entrant is, however, to return the value system to its previously closed state, the only net change being a shift of the ownership but not necessarily control of resources. Similarly, the venison value system was closed from producer to international consumer without reliance on legislation. The integrated processor's value systems, in those markets reported in Appendix Two, are closed downstream. Those same value systems are relatively open between the processor and the land-based producer. The intent of closure is to assist in the generation of wealth by effectively suppressing competition. All

linkages in the value system are then bridged by business relationships through which change can advance.

The causal network, derived from empirical evidence, included concepts and the relationships between them. The causal network is a model of concepts relating to the configuration and management of land-based value systems. A simplified version of the causal network developed is presented as Figure 5.8. The objective of presenting a simpler, clarified version of the network is to focus further discussion. The abridged version only depicts concepts and relationships critical to elaboration of the theory.

Figure 5.8. Abridged causal network depicting critical value system concepts and relationships: Model of land-based value system strategy.



The causal network needs to be interpreted in a cyclical fashion. Each *pass* or cycle through the model, from antecedent to outcome variables, describes a state of the value system. The state changes from cycle to cycle, due to prior effects and the addition of both new and emerging exogenous or endogenous effects. Feedback loops from outcome variables to antecedent variables, omitted for the sake of clarity from Figure 5.7, are depicted in Figure 5.8. Such feedback loops provide linkage to the value system's next state. The cycles are then linked by seamless value system strategies. Therefore, value system strategies cease to be contingent on an individual organisation, despite having been initiated and developed by a single organisation. Accumulated

cycles through the model ought to lead to an *advanced state*, recognised by progressive convergence of the value system - rapid or gradual - to a steady state.

There are two opposing forces embedded in the value system. On the one hand there are adhesive forces which account for the integrity of closed value systems. On the other, there are debilitating forces such as tension, spot-markets, and open-competition that expose the value system to failure. The processes of generating wealth and equitable wealth distribution contribute to adhesion. However, inequitable distributive effects or inadequate generative effects contribute to debilitating failure forces. The more cycles of causal networks in the value system required to account for product flow the more opportunities there are to generate and distribute wealth. Note that this refers to the number of opportunities, not the level of wealth generated or distributed (this argument is resolved in Section 6.3). Also, the more cycles or stages in the value system, the greater is the exposure to failure forces.

This section has provided a thumb-nail sketch of the emergent theory, however, a number of issues remain unresolved. First, the causal network depicts the distribution and generation of wealth as two discrete outcome variables yet they are intrinsically linked. Second, the causal network could be cleaved into those categories and concepts attributed to closed value systems creating wealth and those attributed to value systems accompanied by spot-markets. Concepts such as the spot-market, commodity products, and level of consistency are, therefore, characteristics associated with land-based product that inevitably accompany value systems.

The case study industries were selected so as to explore value systems with opposing theoretical poles: in terms of integration, and the nature of product. Despite this selection the majority of concepts and the relationships between them were found to be common to both industries. However, several distinctions between the two industries remain, and these are upheld throughout Chapters Six and Seven. The nature of other New Zealand export-dependent land-based industries is not sufficiently divergent from those studied to suggest that extension of the theory to them is inadmissible. Whether these concepts can be applied elsewhere is explored in the following chapter.

## CHAPTER SIX: ELABORATION AND APPLICATION

### DEVELOPMENT AND EXTENSION OF THE THEORY

*You would think by now we would have figured out a simple plan to compete in the world, but we haven't. We didn't four years ago, and we still don't. Every other country has a plan to manage its trade; we're the only dinosaurs left who maintain the myth that "free trade" really exists. We hope that somehow things will automatically straighten themselves out, that some invisible hand will wave the magic wand of the free trade market. Talk about innocents abroad! When it comes to trade, we have become the patsies of all time..*

Lee Iacocca. (1988). *Talking Straight*.

#### 6.1 INTRODUCTION

**A**N EMERGENT THEORY of the configuration and management of New Zealand's export-dependent land-based value systems was presented as the conclusion to Chapter Five. The theory was developed by a stepwise process of data reduction. The phenomena identified from the case study research was reduced into categories and then concepts. Relationships between the concepts were identified and their direction determined and denoted in the form of vectors. Concepts and relationships were then presented graphically in the form of a causal network (Figure 5.7) and in abbreviated form as Figure 5.8.

The aim of Chapter Six is to provide a receptacle for recording intuition and perceptions experienced during the research process<sup>61</sup>. The chapter provides an advance and application of the theory beyond that developed exclusively from the case study research. The intention is to attempt to apply the theory to other productive and extractive land-based value systems. The chapter is submitted as a series of near self-contained arguments. The

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<sup>61</sup> Bourgeois (1979) includes metaphysical elaboration as a step in his prescribed research process to provide the researcher an opportunity to share intuition as described in the research philosophy, Section 1.4.

discussion of the synthesis of theory from the causal network is presented in Section 6.2. Section 6.2.1 provides a discussion of factors affecting the performance of the value system such as differentiation, the role of the spot-market, and failure. Significant behaviours of the value system, in particular the role of business relationships, the perception of end-user, and value system strategies, are then described. The relationship between the generation of wealth and subsequent wealth distribution is discussed in Section 6.2.3. A comparison of the capacity of alternate configurations to impose value system strategies and the subsequent affect on distributive and generative effects is then presented. Section 6.4 provides a discussion of the research implications on non-agrarian resource-dependent value systems. Theoretical contributions drawn from Chapter Three are identified, the theory is then represented as modifications to the Z-form Model.

## **6.2 SYNTHESIS OF THE THEORY**

**T**HIS SECTION PRESENTS A DISCUSSION of the development of the causal network through a functionalist (see Section 2.1) description of the configuration and management of value systems. The Z-form Model is then reconsidered from the view of improving configuration and management for the benefit of participants based, but not necessarily located, in New Zealand.

### **6.2.1 Value system performance**

Factors affecting the performance of the value system are described and discussed in this section. Specific attention is paid to the differentiation of goods, the role of the spot-market, and the interpretation of failure.

#### **Focus on differentiation**

Throughout the presentation of empirical results and development of the causal network an implicit distinction has been made between two forms of value systems. First, there are those value systems that generate and distribute wealth and second, there are those that destroy wealth: wealth being observed as economic rent resulting from

some form of competitive advantage. The creation and destruction of wealth refers to both the process and the *opportunity* to invoke the process. There are systems responsible for the flow of product from the land-based producer to the international consumer that fail to create wealth: participants receive marginal revenues equivalent to marginal costs, invariably participants are also exposed to significant business risks. These systems are characterised by spot-markets (discussed in the following section), weakly developed relationships, and the sale of undifferentiated commodity goods. These characteristics may also be present to a far lesser extent in what are otherwise well developed value systems, notably the sale of commodity goods accompanying differentiated goods. On such occasions business relationships are so well developed that buyers will alleviate difficulties associated with the supply of inconsistent product. Throughout this chapter attention will be drawn to the ability of these characteristics to destroy value. Their presence is tolerated where value systems prevail; tolerated through knowledge and acceptance of the attributes of land-based production. However, dominance of these characteristics reduces participating organisations to the recipients of variable, residual income.

One consistent feature of the goods exchanged through the case value systems, irrespective of whether the product was meat or pipfruit, is differentiation. Differentiation in this context encompasses all of the competitive strategies available to a firm as identified by either Porter (1980) or Johnson and Scholes (1993). Organisations consistently position themselves and their goods as having identifiable traits necessary to distinguish them from other organisations and their goods. Although such behaviour is not always successful it is, however, intended. Spot-markets prevail in the absence of business relationships between organisations; when the value system is burdened with goods resulting from biological inconsistency (production risk); or when organisations fail to differentiate themselves and their goods from those elsewhere. Under such circumstances the organisation may be considered to have failed (failure is developed fully in a subsequent section; see also Ghoshal and Moran, 1996). The suppressed *market* between two organisations committed to a business relationship is excluded from this assertion because in all respects except organisational ownership the transaction is internalised. In such circumstances price setting is negotiated by adjoining actors.



Factors affecting price setting have, in the absence of value system strategies, been largely considered solely in terms of bargaining power.

The emergent theory does not associate value system strategies with undifferentiated products, spot-markets, and weakly developed relationships. Porter (1990) was correct in claiming that traditional views of international trade such as the Heckscher-Ohlin theory explain such transactions. By contrast, organisations in closed value systems seek to create differentiation. Interestingly, differentiation is not limited to the goods themselves but is extended to the organisations, management, and how those organisations conduct business, something ignored by proponents of generic strategies.

In the absence of differentiation there is no reason for mutual investment in business relationships. Differentiation, like technological advantage, is not necessarily glamorous, sophisticated, or high-tech. Differentiation in land-based value systems may be as subtle as bringing product to market “three to four weeks earlier than the competition” (quote from industry participant). Differentiation of land-based value systems better explains coherency than does technological advantage because technological advantage is restricted to research, development, transfer, and transience.

### **Role of the spot-market**

The benefits to cooperatives gained by suppressing the spot-market, particularly between producers and first stage processors and/or exporters, was embedded in the Z-form Model in Chapter Four. Specifically, that the benefits of a cooperative production and processing base are greater than the benefits supposedly stimulated by competition for product among multiple (or even few) buyers at the first stage processor. One important distinction between this study of New Zealand’s land-based value systems and others is the insistence throughout of export dependency. Competition, if still considered desirable, ought to be conveyed to the international location, preferably at the culminating point of closed value systems, considered between Stage G and H in the Z-form Model. However, the benefits of additional competition from parallel value systems should not be left to chance.

The case study organisations were observed to suppress or at least thwart the spot-market by closing their value systems. Spot-markets are relatively low transaction cost mechanisms but they are quite inappropriate for differentiated goods and services. However, competition for a product, providing there is a shortfall, supposedly results in an increased price being paid. Competition is also postulated to stimulate innovation and investment because organisations seek to develop and capture margins through technological advantages and differentiation temporarily unavailable to their competitors. In New Zealand the pursuit of competition has assumed ideological status, sometimes at the expense of common sense<sup>62</sup>. D'Aveni's (1995) model implies that competition forces prices down because as opportunities for differentiation decline competition shifts from quality to price. There is limited ability to differentiate land-based products upstream, therefore, producers are more often, but not exclusively, confronted with competing on price rather than quality. Price is forced down as sellers compete for buyers. The attraction of societal marketing boards is that competition is removed among producers. Even a cursory glance at Porter's (1980) model of five forces affecting industry profitability implies that such results are to the benefit, rather than detriment of industry participants.

One significant effect of societal marketing boards is to shift the location of competition in the value system. Aggregate supply mechanisms shift competition to the international location instead of dissipating producer wealth between adjoining stages of the value system on-shore.

Spot-markets were used by the industry participants to *absorb* biological inconsistency and inconsistency of land-based product (sources of production risk,

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<sup>62</sup> Case in point, the New Zealand Rugby Football Union developed a player transfer scheme to control the aggregation of talented players amidst New Zealand's top provincial teams. The proposal attracted the attention of the Commerce Commission who described it as substantially lessening competition (Knight, L., 1996). Without some form of control the wealthiest provincial unions have the ability to accrue whatever players they wish. In doing so, not only is competition ultimately destroyed - no side can beat the province with the deepest pockets - but the entire provincial competition (money earner) is further reduced. The objective of the NZRFU's scheme was to uphold competition, the Commerce Commission's ideology effectively destroys it, allowing one province to aggregate the entire All Black team. An outcome that will do little for provincial gates.

Postscript: The Commerce Commission Chairman conceded after a three-day hearing to the NZRFU's proposal and acknowledged that the public benefits of the transfer system outweighed competitive detriments (McMorran, 1996).

described in Chapter Two). At the aggregate level spot-markets coexist alongside closed value systems. One opportunity available to organisations is to minimise their reliance on the spot-market. All product other than that which is inconsistent could be delivered to the international consumer through closed value systems, only inconsistent product need be delivered through spot-markets. Therefore, opportunities to add value exist as long as goods within planned levels of production and meeting desired quality dimensions are sold in an undifferentiated form through spot-markets using weak business relationships.

A distinction needs to be recognised between the role of the spot-market at the aggregate level and that of the individual organisation. Small scale organisations with structured supply relationships only use spot-markets when those relationships fail. Small scale participants, therefore, have the ability to avoid selling undifferentiated goods on the spot-market. Large scale meat processors were not observed to have developed the full extent of structured supply relationships. Indeed their continued propensity to maximise throughput negates the likelihood of achieving 100% structured supply. Scale processors also maintain an obligation to producers to accept all goods submitted within coarse grade standards.

Spot-markets are deliberately created when competing value systems appear to be becoming too comfortable. Organisations in the New Zealand meat industry were observed to deliberately disrupt competitors' business relationships in what are otherwise closed value systems. On such occasions the generation of wealth and its subsequent distribution was viewed as being excessive: competition prevails and a spot-market is temporarily created. The competing processor benefits from the capture of wealth even if aggregate wealth creation is eroded. Sadly, such behaviour is not always in the best interests of producers who are temporarily recipients of lower product prices.

### **Interpretation of failure**

Failure was defined as the inability of the value system to extract and repatriate wealth to the benefit of New Zealand participants (refer to Table 5.5). One industry participant explained that organisations ought to be able to extract adequate wealth from business relationships without integration. The participant considered that vertical

integration beyond specialist capabilities (core competencies) was testimony to failure of the value system. Satisfactory business relationships, therefore, depress the need for integration with or beyond the adjoining stage. The outcomes of such relationships appear to pass *adequacy tests* - whether objective or subjective - maintained by either organisation: the adjoining organisations distribute wealth to their mutual satisfaction.

Competitive advantage, as quoted from Porter (1985, p. 3), was described as the “value a firm is able to create for its buyers that exceeds the firm’s cost of creating it”. A decade ago Porter observed that competitive advantage is becoming a function of how well an organisation can manage the value system. The statement is interpreted in the context of this study as;

- how to develop and impose strategies on all organisations in the value system from land-based producer to international consumer.

But while competitive advantage is the ideal position for an organisation to achieve it is not a necessity. Organisations can survive in the absence of economic rent, the result of competitive advantage, instead being rewarded with the receipt of marginal revenues equivalent to marginal costs<sup>63</sup>. At worst the organisation is providing the value system undifferentiated goods and services - perfect competition. This condition, in the context of this study, is becoming increasingly untenable. Perfect competition is to be avoided because it does not meet adequacy tests for the generation of income.

Neither Porter (1985) nor D’Aveni (1995) distinguish between generative and distributive effects. Their consideration of generative effects is from the perspective of a single organisation, wealth distributed for the benefit of that organisation. Likewise Normann and Ramirez (1993) and later Wikström and Normann (1994) viewed the distribution of wealth from the perspective of a central organisation around which others are configured. The literature on collaborative business relationships, in all its guises, fails to address the distribution of wealth between organisations. At the very least Porter, unpretentiously, attributes wealth distribution exclusively to relative bargaining

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<sup>63</sup> D’Aveni’s (1985) model, if applied as a diagnostic tool, would suggest that the organisation has exhausted opportunities to compete on price and quality.

power. Yet surely a value system strategy to generate wealth inevitably will fail in the absence of attention to equitable distributive effects. In that respect some attributes of international value systems are similar to the transnational solution (Bartlett & Ghoshal, 1989): there must be interdependency between organisations. Without interdependency the value system will fragment, there remaining little reason for its continuance and participants will no longer receive profits from sources of competitive advantage.

All the case study value systems included either structured relationships or business relationships. No value system was integrated from land-based producer to the international consumer, although several came within one or two stages of complete integration. The less integrated value systems - those based on specialist organisations - contained up to four or five sequential business relationships, all taking principle positions, to account for product flow from Stages A to H in the Z-form Model.

Participants claimed that wealth can be distributed to the satisfaction of actors by “managing relationships”. Under such circumstances adjoining organisations are not inclined to pursue vertical integration within the particular value system. However, they were often observed to pursue vertical integration elsewhere, implying that failure had either occurred, or its likelihood was being avoided. Reasons for failure relate first, to the inequitable distribution of wealth. If distributive effects are not satisfactory to one organisation, providing that organisation has the ability, it will integrate or pursue business relationships elsewhere. Reasons for failure also relate to the inability of the value system to generate wealth. However, at the aggregate level some failure ought to be accepted - how else does the market accommodate inconsistency?

### **6.2.2 Significant behaviours**

Significant behaviours of organisations in closed value systems are now discussed. Commitment to business relationships, internalisation of data, the perception of end-user, and the six value system strategies are elaborated upon. This section then marks a shift from the functionalist paradigm - description - to the radical humanist paradigm - the basis of recommendations for improvement.

## **Role of business relationships**

The nature of observed business relationships is similar to those reviewed in the literature on collaborative linkages (Section 3.5, in particular see Easton, 1992). The *elements* of the case study business relationships were presented diagrammatically in Figure 5.4. A more sociological interpretation of business relationships is beyond the scope of the study. However, it is interesting to note the relative difference in importance held for personal relationships between actors in the two case industries.

Business relationships reduce transaction costs and provide a conduit for added value activities. The costs associated with business relationships are the loss of flexibility and dependency, particularly as the relationship enhances change and reduces risk. Change in the form of endogenous activities, goods, resources or exogenous factors commits the organisations to continued exchange. Many actors were struggling to come to terms with strong business relationships: "... [what] I don't think they can get their head around is the fact that to take advantage of the opportunities in the marketplace to add value and so forth they have to relinquish flexibility". Some participants in the industry are, therefore, confronted with the pursuit of added value and associated loss in flexibility on the one hand, and retention of flexibility through the sale of commodity products on the other. A surprising dilemma to witness in an industry that is supposedly mature: if maturity is measured in terms of longevity. However, the industry appears to be immature when considered in terms of added value. Clearly, further opportunities to generate and distribute wealth reside in the meat industry's value systems.

Business relationships internalise data that would otherwise be available from open-competition and spot-markets. However, data remains available at each end of the value system: retail prices at G, and land-based production and returns, A. The financial performance of farmers throughout developed and developing nations is reported in the public domain. Few other sectors attract the same degree of ongoing scrutiny as agricultural production. Agricultural information commonly is used for policy hence its collection remains the responsibility of government agencies (refer to Section 2.2.6, trade barriers). Wright (1989) reviewed the sources of such information in New Zealand and the implications for agricultural policy developed from such sources. Data sources such

as the NZMWBES, MAF Policy, the LIC, and weekly base meat schedules provide a coarse<sup>64</sup> view of farm financial performance. Reid, McRae, and Brazendale (1993) identified shortcomings of the NZMWBES data, shortcomings that hinder understanding of hill country farm performance. Therefore, the interpretation of value system performance from such data sources is likely to be fraught with error.

Relative value system performance in terms of component inputs and outputs can be determined from output prices at A and consumer prices at G. Intermediate linkages conducted in spot-markets provide additional data. But when intermediate linkages are bridged by business relationships or suppressed through integration assessment is problematic<sup>65</sup>. In the absence of such data proponents of competing value systems and commentators on value system performance resort to output prices. Relative output prices may not be related to relative transfer prices because transaction costs are significantly reduced by internalised modes of organisation.

### **Perception of end-user**

The concept of end-user needs to be recognised as multidirectional. End-users may be defined in terms of either geographical or cultural proximity. For example, a land-based producer may incorrectly consider an exporter the end-user, not through lack of managerial perspective (see Figure 3.1), but simply through the difficulty and expense of developing business relationships with organisations located off-shore.

There are several significant considerations of the concept end-user. End-user provides a specific form of multiple connectedness often requiring organisational *stretch* (Hamel & Prahalad, 1994) to a non-adjointing stage in the value system. End-user connectedness invariably reduces the relative bargaining power held by intermediary organisations. In that respect business relationships with end-users implies industrial network connectedness to parts of land-based value systems. End-user can also be applied as a management tool. For example, actors from organisations in the

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<sup>64</sup> Coarse in as much as the information is often dated, suffers from aggregation and is not presented in terms of the objectives that farmers are trying to achieve. The implicit assumption of all such data sets is that profit maximisation prevails.

international location are regularly brought to New Zealand. While in New Zealand “they are given the New Zealand experience”, in addition to observing upstream stages of the value system and speaking to producers. Seldom will business relationships develop between such end-users and producers, it is not in the interests of intermediate organisations to allow it. However, it does provide a conduit for information and catalyst for change. In that respect some forms of end-user contact may be better viewed as partial relationships: partial in that they are bereft of personal relationships.

### **Value system strategies**

Six value system strategies were identified during case research: end-user, structure, branding, long-term, complementarity, and closed system. Chapter Five provided a discussion of the strategies based on empirical applications. Amalgamation of the six strategies into a single concept was resisted. The methodology (Miles & Huberman, 1994; Strauss & Corbin, 1990) leaves the cessation of data reduction at the researcher’s discretion. In this instance explanation has been maintained at the expense of parsimony. The six value system strategies identified through case research may not be exhaustive. However, the list provides scope for assessing the relative development of strategy between value systems and opportunities for further improvement.

The motivation behind structure is to bet manipulate unique attributes of agricultural production, particularly those relating to vagaries in dimensions of supply. Attempts to structure value systems rely on incentives for producers to align themselves with processors. The producer is then expected to provide a differentiated product, often adopting some form of technological advantage (the caveats on the use of both terms remain) for a specific market: the attributes of product flow being modified.

At an aggregate level supply management introduces tension between large scale and small scale meat processors. Small scale processors have the ability to impose stringent requirements on producers, compliance with these requirements is then rewarded with prices above those prevailing elsewhere. Inconsistent production, beyond

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<sup>65</sup> See Sullivan & Scrimgeour (1995) for the sorts of assumptions that invariably are made.



that agreed mutually through structure, will then be submitted to large-scale competitors at no cost to either the producer or the small-scale processor. Large scale processors appear to uphold the obligation to accept all livestock submitted for slaughter, despite some producers having submitted their *better* lines to competitors. Small scale processors are subsequently upheld as industry innovators, providing evidence that supply management in the meat industry (or pipfruit) is merely a matter of contracts and associated incentives. The service large scale processors provide land-based producers, critical at the aggregate level, being ignored.

In some instances structure may be considered a catalyst - antecedent variable - to business relationships. However, the number of producers supplying livestock to any one processor, from 600 to 10,000, precludes relationships between producers and first stage processors from being as well developed as those observed downstream. Only under exceptional circumstances, and through no fault of their own, will producers establish strong business relationships with an adjoining processor. For example, one of the case study lamb finishers was described as a notable exception, “[he is] the only farmer we’ve ever had up here”. The prescription of business relationships between *all* sequential stages, therefore, needs to be modified when considering value systems at the aggregate level. Business relationships between land-based producers and first stage processors need to be regarded in subtly different terms. Providing the processor establishes observed values supply relationships appear to proceed in a manner similar to business relationships. The outcome of both relationships being change, the loss of flexibility, suppression of transaction costs and ultimately the generation of wealth. However, in the absence of values producers will show marked resistance to voluntary participation in structured supply.

Structure implies a significant improvement to traditional means of procurement (via company representatives). The Boston Consulting Group (1994) reported that there is virtually no vertical cooperation between producers and processors<sup>66</sup>. Despite the number of producers precluding the development of strong business relationships, processors are reported to employ in excess of 750 procurement agents, and only some

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<sup>66</sup> The Boston Consulting Group’s claim that there is virtually no horizontal cooperation between processors does not, however, bear scrutiny (refer to Table 5.5 for the definition of complementarity).

50 staff in export markets (BCG). While these figures do not account for marketing staff based in New Zealand the apparent imbalance is well argued. Staffing amongst processors naively reflects the number of sellers and buyers at adjoining stages rather than opportunities to add value (see Lorigan and Harman's (1990) data, Table 6.1).

Relationships between suppliers and processors in the meat industry are unlikely to be conducted in a manner similar to those between processors and exporters, importers or distributors. The strength of relationships in the pipfruit industry between producers and the NZAPMB (see Appendix Two, Figure A2.9) is testimony to the difficulties involved with many suppliers. However, the presence of a societal marketing board ensures that strong political relationships are upheld between producers and the Board alongside parallel but weaker supply relationships. Supply relationships at the producer, therefore, appear to be contingent on structural strategy.

Some respondents strove to develop long-term value systems dependent on the development and maintenance of several business relationships. Long-term is then a characteristic of strategic value systems. However, it is manifest by the acceptance, albeit reluctantly, that income in the short-term may be foregone. Long-term reflects persistence in a market, with a buyer, adaptation, and subsequent change to achieve a system-wide intent. The characteristic of long-term common to other value system strategies is that it reflects a system-wide intention: an intention that extends beyond the confines of a particular business relationship.

The development of branding, as a value system strategy, is more extensive in the pipfruit industry than the meat industry: extensive when measured by the number of stages that participate in the development of the brand<sup>67</sup>. In the meat industry proprietary brands are augmented by generic promotion activities by the NZMPB or the GIB. However, downstream organisations maintain business relationships with exporters and specific actors rather than their brands. The case study meat organisations have relatively weak brands. Where strong brands exist, as in other industries, business relationships appear to proceed independently of personal relationships.

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<sup>67</sup> For example, growers, A, through to sales, marketing and customer service, G, develop and uphold the branding of goods in New Zealand's international pipfruit industry.

Differences in the development and adoption of brands between the two industries appear to be due to two reasons. First, because distributive effects have been resolved all actors in the pipfruit value system willingly partake in the development and maintenance of the brand - like any other investment. Second, growers have real interest in branding because the international consumer receives the same product that leaves the orchard. The nature of the meat industry, largely, precludes producer interest in branding goods at the farmgate because farmers sell lambs, they do not sell a finished product. However, producers involved in the farmer-owned company selling heavy weight lambs in the US displayed ownership of their brand. In this case the feature common with the pipfruit industry is that distributive effects were resolved, that is, pursuit of generative effects was considered beneficial to producers.

The strategy of complementarity can be extended well beyond the constraints imposed by the appropriate definition in the explanatory effects matrices (refer Tables 5.5 and 5.6). Complementarity in the empirical sense was defined as the distribution of product, information, and goods and services by more than one participant at a single stage of the value system that impinges positively on each other's success.

The multinational organisations also displayed complementarity between alternate sources of goods, namely complementary goods were exported from countries other than the home-base location. Further, organisations used complementary markets to absorb complete product lines. In this respect ENZA (New Zealand) International faces a dilemma. ENZA's international subsidiaries compete amongst themselves for some varieties of New Zealand pipfruit, notably Royal Gala for which there is global demand. Competition for fruit is balanced by the need for complementarity between the subsidiaries to ensure that the entire crop is sold - an obligation to stakeholders. Therefore, the dynamics between the HQ and subsidiaries approaches that recommended by Bartlett and Ghoshal (1989) as the transnational solution. Interdependence between the subsidiaries is maintained through global branding, and centralised corporate services<sup>68</sup>.

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<sup>68</sup> Extraordinarily, kiwifruit growers have recently prevented their Board from participation in similar multinational activities. A group of growers opposed the NZKMB selling fruit grown in the Northern Hemisphere (Riordan, 1996), thereby preventing buyers from acquiring fruit of consistent quality year-round.

The strategy of closed system was discussed in full in the previous chapter. It is sufficient to recall that the intent is to minimise both competition - bargaining power - and transaction costs between organisations within the value system. Once a closed system is achieved the value system is then in a position to compete with others through open-competition. Closed systems display accelerated rates of adaptation and change, more so in the presence of end-user connectedness.

Collectively the six strategies provide critical dynamics to the value system, hitherto ignored in descriptive interpretations of the Z-form Model. These dynamics also provide the basis of a prescriptive interpretation of the model. The common end-user relationship developed by the case respondents was between the integrated processor (B/C) and/or exporter (C) and the provider of marketing, sales and customer service (G). Additional end-user relationships were observed between producers and exporters (constrained by geographical proximity), and on occasions producers and international buyers. Recognition of end-user relationships in preference to others with nonadjoining organisations reduces the number of *effective* business relationships to be pursued. End-user business relationships in the Z-form Model are depicted in Figure 6.1. Notwithstanding the difficulty of land-based producers establishing strong business relationships with organisations downstream opportunities were exploited by some of the case respondent producers.

The role of structure is to formalise supply management to better meet end-user requirements. Relationships developed through structure are not likely to contain all elements of a business relationship. The effect of structure is to suppress the spot-market between adjoining organisations, creating a seamless transition between adjoining organisations: depicted between the producer and the first stage processor in the figure.

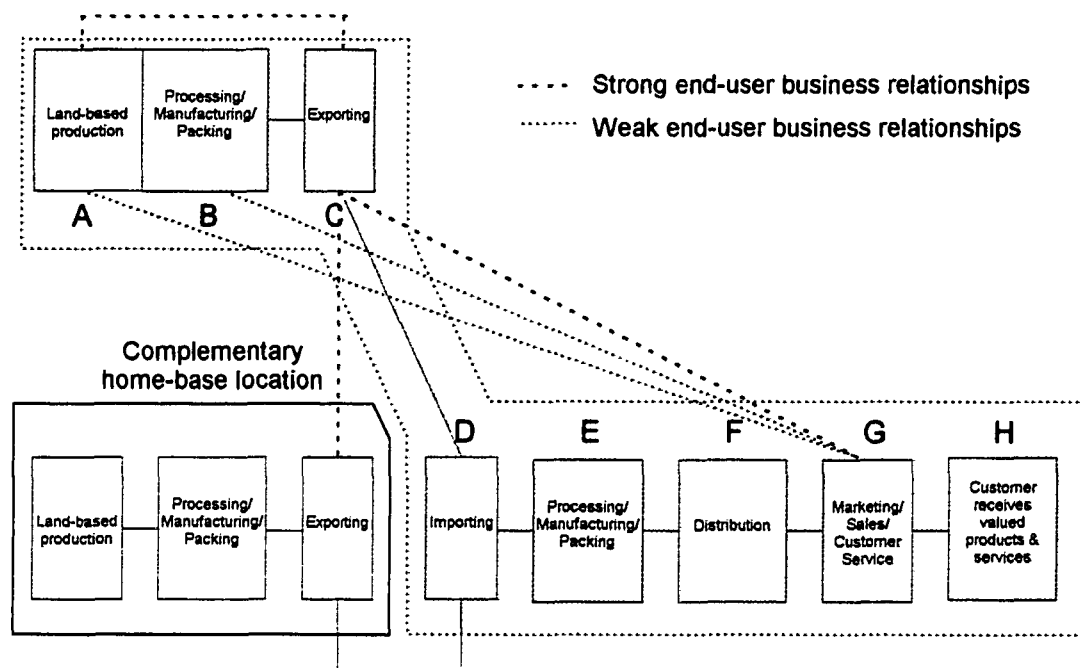
Figure 6.1 depicts end-user connectedness (dotted lines) as a value system strategy between New Zealand producers and exporters with organisations in the home-base, alternative home-base and international location. The relationship between the land-based producer and the first stage processor, often the location of structure, is

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While such opposition may be perceived as eliminating risk, it displays ignorance of international business and the demands of the international consumer.

distinguished from others. One form of complementarity, sourcing goods from alternate locations, is also depicted.

Figure 6.1. End-user and structure as value system strategies in the Z-form Model.



### 6.2.3 Distributive and generative effects

The idea and distinction between distributive effects and generative effects was first introduced in Chapter Two. This section reintroduces those ideas and provides a comparison with the empirical concepts developed through data reduction in Chapter Five. The intention is not to test the idea by referral to the evidence gathered during case study research but to inductively expand upon the idea. An introduction to generative effects and distributive effects amongst a range of New Zealand's export-dependent land-based industries is provided.

Some case study participants made a clear distinction between what they considered as generative and distributive effects. Other respondents viewed the generation of wealth and how it is subsequently distributed as bundled, rather than mutually exclusive, concepts. In these circumstances the bundling was by virtue of an

organisational rather than value system consideration of the effects. Distributive effects refer to apportionment of wealth between organisations in the value system. That this process is inadequately addressed in the literature was noted in Section 5.5. Within the context of this study attention was paid to generative and distributive effects within a value system. Clearly, however, the context is not limiting. Generative and distributive effects may accrue from any form of practice.

The application of generative strategy in the meat industry is inconsistent. The series of cases in the meat industry provided a range of perspectives on generative effects from the land-based producer through to the international end-user, G. The generation of wealth through added value was observed to range from broad value system strategies to narrow, relatively discrete, organisation based strategies. The breadth of strategy amongst meat industry cases, in terms of the value system, was not observed to coincide with any particular configuration. Whereas in the pipfruit industry, the strategic intent of wealth generation is to “maximise sustainable returns”, the focus of the strategy is long term, and the strategy to achieve added value is system wide. In addition, specific strategies may be applied at particular stages of the value system.

The process of distributing wealth in the value system was said to refer to division of “the cake” (see Table 5.5). In the pipfruit industry the coordination of distributive effects is focussed, although not exclusively, from the perspective of contributing growers, “... returns to New Zealand and pipfruit growers”. New Zealand is also recognised and upheld by the organisation as a stakeholder by virtue of the legislated export monopsony. Some of the meat industry studies display a value system-wide strategy to distribute wealth while others do not. Value system strategies ranged from the supposed equitable distribution of wealth by all organisations between the land-based producer and the end-user; by a specific organisation - land-based producer or integrated processor; or, capture of distributive effects by organisations owned and located in the international location. By comparison, more stages in the pipfruit industry consistently display a value system-wide strategy for the distribution of wealth.

Observation that the NZAPMB’s *raison d’être* is to distribute wealth to growers does not explain the vagaries of approach towards this strategy in the meat industry.

Attributes of the industries, as identified in Section 2.2, are not so dissimilar that distributive effects should be accorded such inconsistent importance. At the same time however, it would be fatuous to dismiss the importance of value system-wide strategy as one outcome of industries granted producer board status. In fact the CEO of the NZAPMB stated<sup>69</sup> that “we can afford to do things as an industry that individual exporters can’t do, as long as we have got the will to be more innovative than anyone else in the industry”. By contrast opportunities open to the NZKMB, as noted in the previous section, remain ignored despite the availability of adequate resources.

In the abridged causal network, presented as Figure 5.8, no relationship was depicted between generative effects and distributive effects. In some of the case studies the two effects appeared as a joint outcome (*bundled*), whereas in others intent was discharged to their separate achievement. Irrespective of the strategic intent an organisation must uphold some adequacy test to determine whether the outcomes of generative effects and distributive effects are satisfactory. Is the organisation and/or value system creating adequate value, and is the organisation and/or value system capturing sufficient wealth? It is necessary to consider the performance of the organisation and the value system as both can be managed; and herein lies the essence of strategic management. Organisational capabilities (current and future) refer to endogenous factors, the external environment refers, largely, to the value system in which the organisation operates.

A brief discussion of the relationship between distributive effects and generative effects amongst other export-dependent land-based value systems is now presented. The discussion is maintained in general terms. The examples are selected to identify alternate relationships that appear to exist between the two effects. Attention is then redrawn to the specific case studies (as described in Appendix Two).

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<sup>69</sup> The statement was not offered as an *ipse dixit* - a dogmatic statement resting on the speaker’s authority. To the contrary, the CEO added that innovation can be “seen in the range of products..., and it is not just products, its products, services, and processes”. The statement is supported by acknowledgment that ENZA (New Zealand) International is responsible for reviving interest in pipfruit as a product line amongst UK multiples.

International trade in dairy products, like the two industries considered in this study, is small relative to global production. Only five percent of dairy production is traded internationally, the balance (95%) being consumed in the country of origin (NZDB, 1991). New Zealand produces 1.5% of global dairy production, eight million tonnes annually of 475 million tonnes of wholemilk (NZDB). The greatest proportion of New Zealand's production, some 90%, is exported (NZDB, 1992a). The large scale of New Zealand's dairy exports account for a quarter of the international trade (TRADENZ, 1992). The EC accounts for a further 56% and the balance (19%) of dairy products traded internationally is largely from the USA, Canada and Australia (NZDB). The long term success of the dairy industry in New Zealand, therefore, is dependent on exporting dairy produce.

The first proprietary dairy company was established in 1871 (NZDB, 1991) and the first cooperative in 1882 (Ward, 1975). By 1893 there were over 200 dairy factories in the North Island. Exports of dairy products began in 1897 when Anchor brand butter took first prize in the Melbourne Exhibition (Duckham & Masefield, 1971). By the early 1920's cheese and butter factories were substantially of larger capacity than those in Denmark or the Netherlands thereby achieving economies of scale which largely negated the cost of transport to major markets (Grigg, 1974).

The New Zealand dairy industry is vertically integrated from farms through processors, the exporter, to foreign manufacturers and distributors (NZDB, 1992b). The current configuration has been in place nationally since 1923 when "the Government acceded to the industry's request" (Ward, p. 51) for a national cooperative organisation. The *cooperative period* extended from 1882 until the late 1970s. Since 1978 this configuration has enabled the pursuit of generative effects. Prior to 1978 the NZDB exported largely undifferentiated commodity products. Since 1978, the NZDB<sup>70</sup> has invested in added value activities, much of which is located in the international location.

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<sup>70</sup> The NZDB was established as a statutory board under the *Dairy Board Act of 1961* (NZDB, 1991). The Act empowers the NZDB to "purchase, market and control all dairy products manufactured in New Zealand for export" (NZDB). The NZDB determines the mix of products and markets which it believes will maximise returns to producers and the industry. While cooperatives determine their own "preferred product mix" the NZDB encourages them to manufacture products most in demand by providing premiums (or penalties), using a differential system of payment (NZDB). The differential system effectively aligns the cooperatives' production with the product mix desired by the NZDB.



The NZDB's mission is "to be the world's leading marketer of dairy products" (NZDB, 1991). Marketing efforts are focused on "pursuing long-term secure business opportunities which maximise returns to [New Zealand] farmers" (NZDB). Among the central goals of the NZDB is the development of branded consumer products and the "sale of specialised dairy based products and ingredients" (NZDB). The NZDB is pursuing an "added-value" strategy with the eventual aim of selling all New Zealand "produce milk at the top end, by value, of the international market" (NZDB, 1992c). Additionally, the importance of the dairy industry as a leading contributor to national economic growth will be upheld (NZDB, 1994). The NZDB has annual revenues (NZDB, 1995, 1996) in the order of NZ\$5bn (1996, \$5.3bn; 1995, \$5bn; 1994, \$4.977bn; 1993, \$5.054bn) which, on this basis, would rank the organisation 350th in the Fortune 500 (Fortune, 1996), and 18th in the US food industry (behind Chiquita Brands International and Hershey Foods). Thereafter, comparisons are relatively meaningless<sup>71</sup> as the NZDB's structure and mission is to maximise returns to producers rather than to maximise profit per se.

Parker (1992), the NZDB's Deputy CEO, stated that "a low cost competitive strategy was not likely to succeed in international commodity markets". The primary weakness of supplying a perfectly competitive market, failure to attract rent, is recognised by the NZDB in their pursuit of value added activities. Bulk products are being branded and differentiated and other services such as guarantees, replacement policies and finance are also being provided. Currently some 60 percent of the NZDB's total export income from the New Zealand dairy industry is derived from added-value products (NZDB, 1992c). To exploit the added-value strategy the NZDB has invested in some 95 subsidiary companies of which 65 are located offshore (NZDB, 1992b).

The New Zealand dairy industry endogenously created a value system configuration with specific attention to distributive effects. Equity amongst land-based producers supplying product to cooperatives, largely for ideological reasons, was the principle objective in terms of wealth distribution. Because distributive effects have been considered producers are supportive of additional investment for the long term generation of wealth.

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<sup>71</sup> Despite efforts to the contrary, for example, Sullivan and Scrimgeour (1995) attempted to compare the efficiency of the industry using financial ratio analysis with Nestlé S. A.

Invariably the pursuit of generative effects requires the allocation of scarce resources between alternative uses. Decisions relating to capital investment or consumption must be made to ensure that the process to add value continues. If all net revenue were to be distributed to New Zealand dairy farmers the Board's activities would be constrained and eventually would lose competitive strength. Therefore, the decision to distribute or invest must be addressed by the NZDB and processing cooperatives (on behalf of dairy farmers) on a regular and frequent basis. First, to ensure that land-based producers returns are maximised thereby securing supply (NZDB, 1991) and second, to ensure that sufficient capital is retained for investment beyond the farm gate. The value system is suitably configured to enable investment downstream. Intermediary cooperatives also have the capacity to withhold NZDB distributed funds for investment in on-shore processing.

The investors - land-based producers - endorse the pursuit of generative effects as ultimately they are, supposedly, the sole beneficiaries. Simplistically, wealth from generative effects is distributed in their favour. Invariably critics of the NZDB (e.g., Hussey, 1992, 1993) confuse value system management with configuration, that is they postulate that management difficulties encountered in the pursuit of generative effects would be resolved by altering configuration - dissipating distributive effects. They fail to recognise that attention to distributive effects enables the Board to pursue generative effects in the first place.

The course pursued by the kiwifruit industry near parallels that of the dairy industry, given the constraint of marketing a single perishable product. The New Zealand Kiwifruit Marketing Board was formed in October, 1988. The NZKMB was granted sole rights to export the crop to all markets other than Australia. The lack of confidence in the existing structure was exacerbated by falling grower returns, increased crop volumes, and competition from other countries.

Prior to late 1988, and sale of the 1989 crop the central industry organisation was the New Zealand Kiwifruit Authority (NZKFA). The NZKFA was established in 1977 with the objective of maintaining production and marketing standards. Exporters were granted licenses by the NZKFA. The number of exporters was controlled and their activities standardised. The objective of issuing licenses was to ensure that producers

were well served by exporters, and provide coordination between exporters in the market place - in the absence of a marketing board (NZKFA, 1984).

Returns from each exporter were pooled among their participating growers, irrespective of size<sup>72</sup>, market or quality. Kiwifruit was delivered to importers on consignment. Importers were often confronted with more than one exporter of New Zealand kiwifruit, and importers were known to sell direct to other distributors. In the absence of other competitors, and with relatively small volumes of fruit this system appeared adequate. However, by 1987 New Zealand kiwifruit growers were receiving declining nominal prices for fruit, paying increased interest rates, and confronted with enormous increases in worldwide production (Journeaux, 1988, 1989). Consequently, in 1988 the NZKFA commissioned Coopers and Lybrand to conduct a full review of the marketing structure (Coopers & Lybrand, 1988).

Coopers and Lybrand (1988) reported that there was little incentive for exporters to excel, the only incentive being to avoid consistently worst performance. Performance difficult for growers to assess given the timing and nature of crop payments - final payments often reached growers after the following crop was submitted. Innovations, what there were, were rapidly adopted by the whole industry and market discipline was absent. Coopers and Lybrand observed that the shortcomings in the industry were structural. After a series of submissions and recommendations to government the Minister of Agriculture took the unprecedented step of polling growers directly. Kiwifruit growers were found to be in near unanimous support of a marketing board (3001 in favour to 569 against) (New Zealand Kiwifruit Report, 1988).

The New Zealand Kiwifruit Marketing Board was established with the assumption that only by having control of the total crop from farmgate to the point of sale could cost savings and consistent returns be achieved (Honeybone, 1988). In the absence of attention to distributive effects growers, exporters and importers maximised short-term profit within each stage of the value system; A, B or C of the Z-form Model. With the imposition of a marketing board added value activities were introduced such as

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<sup>72</sup> The only exception to the pooled price was a \$2.00 disincentive for small fruit (size count 46).

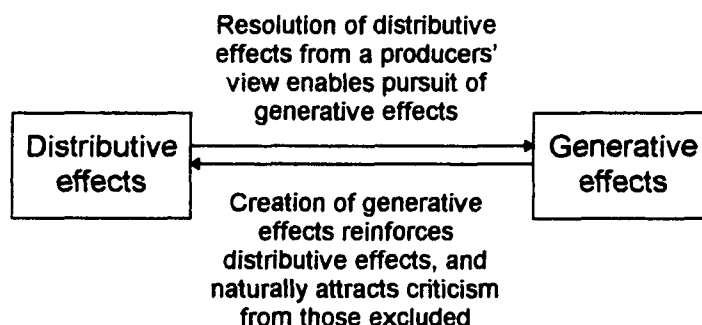
market specific packaging, branding, sophisticated storage, and supply management. Only since attention has been paid to distributive effects has the industry pursued value system-wide generative effects. Grower concerns such as those reported by Riordan (1996) of further participation in generative effects through multinational activities are irrational.

The NZAPMB is similarly in a position to pursue generative effects because distributive effects have been resolved. In this case the critical mass and coordination of the NZAPMB enables the development of long term strategic options such as branding what were commodities, the development of new varieties, and the long term pursuit of relationship marketing. The configuration of the pipfruit industry provides equitable sharing of risk amongst producers, and equitable loss of income in lieu of expected returns. As with New Zealand's dairy industry and kiwifruit industry the pursuit of generative effects is a relatively recent phenomena. Prior to the mid-1980s the NZAPMB was maintained largely for ideological reasons. Since then the NZAPMB has pursued the development of differentiated products, the control of distribution, branding, and innovations. The CEO summarised the value system strategy as follows:

What we have tried to do for our stakeholders is ensure the application of strategies to achieve a competitive advantage, based on these four platforms [summarised above] is sustainable through whatever environment we live in. Obviously the overriding principle is to maximise returns to growers, that is why we want a competitive advantage.

Configuration of these three industries - dairy, pipfruit and kiwifruit - ensures the equitable disbursement of distributive effects amongst participating land-based producers. In all cases resolution of distributive effects from the producer's perspective supports the pursuit of generative effects. The outcome of generative effects are then redistributed. Ownership of stages in the value system by non-producers is all but suppressed, exceptions include shipping and some packing and coolstorage in the pipfruit industry. Therefore, both generative and distributive effects accrue to the land-based producer, admittedly to the exclusion of other organisations. A model depicting the relationship between distributive and generative effects is presented as Figure 6.2.

Figure 6.2. Relationship between distributive effects and generative effects in value systems where distributive effects are first resolved.



The relationship between distributive and generative effects eventually becomes mutually reinforcing. However, in the case of New Zealand's dairy industry there is emerging evidence that the resolution of equitable distributive effects is now, in some circumstances, suppressing the pursuit of additional generative effects. The industry's pricing model - the mechanism through which cooperatives are paid by the Board - is serving to reduce investment in added value processing onshore. Cooperatives are, therefore, not individually rewarded for the pursuit of competitive advantage.

Consideration is now drawn to alternative relationships between distributive and generative effects. Organisations substantially foreign owned have been avoided throughout this study. However, Heinz (Watties) provides a useful example for the further discussion of relationships between distributive and generative effects. Heinz, through their New Zealand subsidiary Watties, only need be concerned with distributive effects to the level of satisfying producers, that is their [Watties] marginal cost ensures continuity of supply.

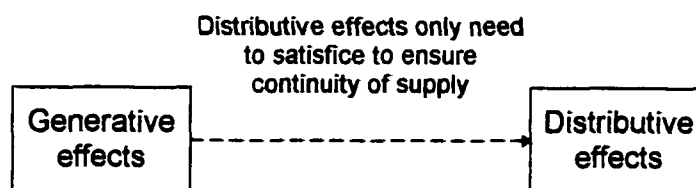
The configuration of the Heinz value system: many land-based producers in New Zealand, A, supplying an integrated multinational processor, C through F, is such that Watties only needs to pay growers sufficient to acquire crop to specification - marginal cost. If Watties were concerned with distributive effects beyond marginal cost they would establish long term supply relationships with producers to encourage long-term investment. As is, there are sufficient producers confronted with sufficient land-use and enterprise choice decisions to court annually, that is, the short-term contracts offered for

short-term crops are sufficient to obtain supply. However, when alternate land uses include alternate processors Watties may pay prices just greater than marginal cost.

The generative effects, for Watties benefit, are at least greater than the costs of maintaining minimal distributive effects, that is the total cost of supply management is less than the benefit to be obtained through those generative effects created. Supply management may be one of their core competencies (Radford Group, personal communication, January, 1996). Other positive attributes of New Zealand's supply are low cost, high quality products, green image, counter seasonal supply and export focus (Lucas, 1993): sadly fruit and vegetable supply in New Zealand is considered low cost.

Heinz's strategy for the Watties brand in Asia is to select a discrete number of relationships, identify opportunities to add value, develop that capability and deliver value quickly, and maintain control of value delivery (Lucas, 1993). Downstream in the value system reside 5% (trading companies), 20% (repackers), and 12% (wholesalers) markups (Lucas). Therefore, developing business relationships with the end-user to the extent that intermediaries are circumvented will enhance generative effects for the benefit of Heinz. However, there remains little incentive to forward these benefits in the form of distributive effects to New Zealand's land-based producers. This arrangement provides few opportunities to producers who wish to be regarded as more than suppliers of low cost product, namely, to establish the opportunity to participate in profit sharing (distributive effects). Of course it can be argued that Heinz's downstream value system activities provide opportunities for producers to offer product, that otherwise would not exist. The relationship between generative effects and distributive effects in the absence of a commitment to the distribution of wealth is depicted as Figure 6.3.

Figure 6.3. Relationship between distributive effects and generative effects in the absence of ideological commitment to the distribution of wealth.



A brief history of the New Zealand meat industry was presented in Chapter Five. In general terms generative effects amount to added value processing, packaging, and the provision of services. Some of the industry participants had developed all of the value system strategies. Distributive effects beyond those accrued by independently owned organisations are presumably accommodated through the substantial shareholding land-based producers have in the industry. Approximately 90% of the processing, and exporting industry is, in various guises, farmer-owned (Mathias, personal communication, May 1995). Shareholdings have largely been acquired by the NZMPB on farmers' behalf, and returned to farmers as shares in lieu of cash rebates. Land-based producers' shareholding in the meat industry is, at best, considered passive.

The meat processing sector is confronted with a similar dilemma as Watties: the disincentive to reward producers any more than marginal cost. There are few regional processors, and numerous producers supply a largely undifferentiated product. And until recently there has been little incentive for producers to align themselves with processors. However, as described in the case study reports, processors seeking added value solicit goods to predetermined specifications: the heart of the industrialised model introduced in Section 2.8.5. Therefore, one result of processors pursuing added value downstream is to strengthen supply relationships with producers.

In New Zealand supply management between producers and first stage processors has traditionally been *solved* by legislated producer boards. The meat industry has been besieged with demands for similar intervention, the most recent submission being from Smith and Cresswell (Tocker, 1996b; Ward, Smith, & Cresswell, 1995). However, to date, no submissions identify where opportunities for generative effects lie, and how, if these are captured can distributive effects be apportioned to New Zealand owned organisations.

Lorigan and Harman (1990) conducted a study of the New Zealand lamb value system through the UK carcass market. The authors analysed profit and loss statements, and balance sheets from farmers, processors, importers, foreign processors, and retailers. A summary of Lorigan and Harman's findings by sector is presented as Table 6.1. While the results cannot be upheld as being definitive (see Hergert & Morris, 1989) they

certainly steer attention towards the need for increased participation in specific value system stages in the international location. Unfortunately, participation in these same activities was considered a source for the loss of flexibility and the creation of dependency between processors and end-users.

Table 6.1. Financial performance of each stage in the New Zealand lamb carcass to UK market value system (1989 data).

Financial parameter	Land-based producer	Integrated processor	Importer	Processing, and packaging	Distribution and retailing
Net profit (NZ\$)	\$105m	\$18m	\$43m	\$42m	\$343m
Value (NZ\$)	\$448m	\$965m	\$1.66bn	\$2.2bn	\$3.27bn
Net profit as % of sales	23.4	1.8	3.6	1.9	10.5
Total capital employed (NZ\$)	\$7.7bn	\$746m	\$127m	\$300m	\$945m
Sector ROI	1.3	2.4	34	4	36

Note. From *The Value Chain for New Zealand Lamb - Finding the "Profit Links"* (p. 3) by G. B. Lorigan and B. Harman, 1990, London: The Greenfields Group Ltd.

Lorigan and Harman (1990) attribute profitability in each sector to the competitive structure of the industry at that stage of the value system. The authors conducted structural analysis in terms of Porter's (1980) five forces model by sector. Profit links were identified as the importer and multiple retailer, with returns on investment of 34% and 36% respectively<sup>73</sup>. Lorigan and Harman correctly concluded that ownership of consecutive links from the home-base location "may not yield the best return on capital (which is in short supply)". Decision makers in the farmer-owned company distributing heavy lambs in the US market (Appendix Two, Section A2.1) reached the same conclusions by *assembling* a lamb carcass at US retail prices. The challenges for the meat industry are threefold. First, to resist calls for statutory intervention second, create generative effects in the magnitude of 21% ROI (weighted

<sup>73</sup> The median return to investors amongst Fortune 1000 food companies over the decade ending 1995 is 17%. On this basis the food industry in the US is ranked 9th of 26 industries (Fortune, 1996, p. F-24). The industry's median return on equity for the year ending 1995 was 21.4% (ranking 6th) regarded as the single most important financial ratio as it gives investors a "handy gauge with which to measure management performance" (Teitelbaum, 1996, p. 173); return on assets 7.0% (7th), return on revenues 4.2% (21st), and return to investors 31.0% (ranking 25th).



average of downstream sectors in Table 6.1) and third, distribute those effects to the benefit of New Zealand participants.

The NZMPB has sought to enhance both generative effects and subsequent distributive effects by investment in value added activities such as The New Zealand Lamb Company - Canadian based offshore packing, distribution and marketing operation. Such investments have been conducted as arms-length transactions on behalf of New Zealand producers, the funds for such activities being drawn from livestock levies. Processors do not, however, appear to be obliged to reward farmers' equity holdings in the manner of dividends.

The case research farmer-owned company (Appendix Two, Section A2.1) addressed generative and distributive effects near simultaneously. The company established end-user business relationships in the international location. Intermediate stages in the value system were then contracted to provide specific services to meet market specifications. Early proposals considered by the company included investment in the processing sector. These proposals were eventually discarded as services such as processing, and logistics could be acquired on the open market. Business relationships on the other hand had to be developed by the participants. The same difficulty confronted AFFCO, only on a considerably larger scale. AFFCO's response was to purchase the international meat trading business, Mathias Meats<sup>74</sup>, thereby securing international business relationships and expertise that would otherwise take decades to develop (Lowe, personal communication, October 1996).

The New Zealand meat industry has for decades focussed on the acquisition of livestock to the detriment of market and product development. In the absence of ideological commitment to the equitable distribution of wealth between participants in the home-base location acquisition between processors remains competitive. Clearly, generative effects reside in the international marketplace (refer Table 6.1) yet the industry still, largely, procures supply competitively. There remain disincentives to

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<sup>74</sup> Mathias Meats has foreign offices in Melbourne, Singapore, Hong Kong and Seattle. In addition to New Zealand meat products the company trades poultry from South America to Asia, pork from Canada to Asia, and red meat from Australia to Asia.

returning distributive effects captured in the international location for fear of creating further rounds of procurement wars irrespective of generative effects - unless those stages are directly owned by upstream participants, namely foreign ownership of land.

In the absence of generative effects discretionary investment in the industry by producers, or for that matter processors, is irrational. In this industry situations of open-competition between parallel value systems not only suppress investment and hence generative effects but also restrain the distribution of wealth. Organisations such as processors are then confronted with a further dilemma, that of acquiring sufficient capital to pursue added value processes downstream. However, were the value system capturing generative effects realised from downstream activities (D, E, F, G) processors may not seek ownership from producers, preferring instead to be the sole beneficiaries of wealth. Small scale specialist organisations operating at discrete stages of the value system can, therefore, capture generative effects and have little incentive to distribute wealth beyond the ability of their competitors, including scale operators encumbered with inconsistent supply.

The discussion raises a number of issues worthy of further consideration. One is the lack of understanding of the relative effectiveness of various form of configuration such as cooperatives, integrated companies, industrial networks and spot-markets to first generate wealth and then to distribute wealth in the value system. Do any of these value system configurations offer substantial advantages in terms of distributive or generative effects? However, prior to considering the effectiveness of alternate forms of configuration four features of value systems must be upheld.

First, competitive advantage should be domestically registered, although not necessarily domestically located. Registration in the home-base location does not necessarily imply complete ownership, but must provide control and a mechanism for the capture of wealth. If organisations fail to manage sources of competitive advantage they will receive no more than satisficing distributive effects, irrespective of their willingness to contribute to generative effects.

Second, the international linkage is not consistently treated as unique. In some of the case value systems it is “just another link between the grower and the market”. This view of international business appears to be prevalent throughout New Zealand’s export-dependent land-based industries. New Zealand’s dependency on international markets, and consequently managers’ views of international business, provides a marked contrast with that portrayed in the United States. Whereas US academics, industry commentators and practitioners uphold the international linkage as being unique their NZ counterparts take it for granted. The international linkage does, however, impose some unique cultural, logistical, sanitary, and regulatory constraints. These constraints may be overcome better by some forms of configuration than others.

Third, given the nature of New Zealand’s land resource many participants have few land-use choices, and they also have the ability to retrench and absorb declining real income for significant periods of time. Thus, performance of value systems at the farmgate level is likely to be masked in the short to medium term so that rigorous analysis of farm-level performance may be fraught with difficulty.

Fourth, the performance and recommendations for New Zealand’s export-dependent land-based value systems can be conducted at two levels; that of the individual organisation and/or product; and, at the industry level on an aggregate scale. What may be appropriate for an individual organisation may be quite unsatisfactory for application at the aggregate level. Therefore, the challenge for each industry is to best manage the unique industry-wide attributes of agricultural production that are largely ignored by individual organisations.

To summarise, management of the source of competitive advantage and a mechanism to repatriate wealth say through company *registration* in the home-base location is desirable. The international linkage appears to be of considerably less significance than anticipated at the outset of the study. Farm performance is not an accurate or consistent measure of the performance of value systems in the short term. Finally, the performance of alternate value systems needs to be considered at both the individual organisation and aggregate level.

### 6.3. APPLICATION OF THE THEORY TO ALTERNATE VALUE SYSTEM CONFIGURATIONS

**T**HE OBJECTIVE OF THIS SECTION is to compare alternate value system configurations. The extreme configurations are identified as a vertically integrated monopsony on the one hand, and a non-integrated value system reliant on spot-market transactions on the other. Between the two reside numerous configurations which include industrial networks of specialist organisations, and multi-stage organisations such as integrated processors bounded by structured supply relationships with producers. The capacity to impose value system strategies from each of the configurations, and the subsequent enhancement of distributive and generative effects is now considered.

Attention has already been drawn to the absence of discussion of wealth distribution among adjoining, non-integrated organisations. Industry participants suggested that the process is ameliorated by change (adaptation see Easton, 1992), and tangible commitment to the business relationship (Morgan & Hunt, 1994). The relationship is, however, still influenced by open-competition from parallel value systems and the spot-market. Therefore, the levels of wealth accrued by each organisation will, to some degree, be assuaged by levels achieved elsewhere. This confirms the validity of industry structural analysis (Porter, 1980) and industry-wide analysis of profitability.

Spot-markets were normally avoided by the case study organisations, although they were used by the integrated processor to *absorb* inconsistent supply. Spot-markets have few redeeming features other than that the organisation avoids resource dependency by retaining flexibility at the discretion of the actor. Spot-markets provide organisations with data, and appeal to the *gambler's instinct*. More importantly, spot-markets suppress the development of generative effects because in the short term there is little incentive for change. Further, distributive effects accrue near exclusively to the organisation advantaged by asymmetrical bargaining power.

Structuring supply is a strategy to configure specific linkages in the value system. The extreme form of this strategy is marked by the monopsony producer board where all

linkages in the home-base location benefit from structure. At the other extreme are contractual relations between adjoining independently-owned organisations. Structured supply relationships such as those between producers and the integrated processor described in Appendix A2.3.2 (venison to France) offer considerable advantages over spot-market transactions. Notably, structured supply reduces transaction costs, initiates the development of resource specificity, and appears to be one precursor for business relationships (accepting that the overwhelming numbers of both producers and consumers effectively precludes them from participation at the aggregate level). Structured supply internalises data, organisations being in near direct or direct contact. Because benefits outweigh costs structured supply enhances generative effects over the spot-market. Distributive effects may, in some circumstances, also be enhanced as organisations have the opportunity to assume greater responsibility for their goods. However, when small numbers bargaining exists contractor organisations in weak positions will remain rewarded with satisficing returns.

Industrial networks developed through connectedness with end-users, is the next step towards internalising the value system. Jarillo (1993) identifies the industrial network as the preferred configuration in the presence of high transaction costs and high integration costs. Industrial networks such as that described in Appendix A2.2 (lamb to Germany) provide a number of advantages over structured supply relationships. Importantly, end-user connectedness provides a conduit from which to mitigate intermediaries' bargaining power. Synergies within networks accelerate change and differentiation to the benefit of all organisations, including consumers. Transaction costs are reduced and resource specificity is developed further than in cases of structured supply. Therefore, networked forms of configuration have tangible advantages over structured supply and the spot-market. However, from an intermediate organisation's perspective connectedness between buyers and suppliers may be a disadvantage. Connectedness is a disadvantage if the cost of reduced returns, through the mitigation of bargaining power, is greater than the benefits achieved.

The critical issue is whether networked forms of configuration in export-dependent land-based value systems have inherent advantages over further integration, that is can a network improve both generative and distributive effects better than

integrated forms of configuration? Integration provides a means of *ensuring* that distributive effects are captured. Bargaining power and, therefore, the asymmetrical retention of wealth is expected to remain within the network despite end-user connectedness.

Whether networks have the ability to improve the generation of wealth over an integrated organisation is an issue that will be contingent on the goals of management and the cost structure associated with product flow. For example, Porter (1985) stated that one potential source of an organisation's competitive advantage lies in creating synergy between activities within the value chain. It is unlikely, although not impossible, that these synergies are developed to the same degree by adjoining organisations, irrespective of the strength of business relationships. Conversely, it remains management's obligation to ensure that those synergies are developed and not squandered in the integrated organisational form (see Andrews, 1987; Hamel & Prahalad, 1988; Hamermesh, 1990; Prahalad & Hamel, 1990). Integrated organisations, as described by Chandler (1962), Sloan (1963) and Ansoff (1965) also ensure that benefits captured from sourcing alternative land-based products to enhance product lines and extend the length of supply are captured.

One consideration of networked value systems is the ownership of competitive advantage. Until now New Zealand registered participants have been recommended to manage the source of competitive advantage (see previous section). However, there are likely to be value systems where net wealth is greater when an internationally registered organisation holds the source of competitive advantage - by virtue of scale, knowledge, learning, location, resources or whatever. In these value systems the role of New Zealand participants is to sustain that competitive advantage by supplying differentiated goods and services. The supply of differentiated goods and services ensures that participants receive prices greater than marginal cost. Further, supply relationships will evolve creating dependency on behalf of the international organisation. The challenge confronting New Zealand registered participants is to ensure that their goods and services are not replicated by competitors. In doing so, they too will have developed a source of competitive advantage - eventually resulting in mutual dependency.

The capacity of export monopsonies, vertically integrated processors, industrial networks of specialist organisations, and spot-markets to impose each of the six value system strategies differs markedly. To be sure the six value system strategies derived from empirical evidence is not exhaustive. Other strategies such as the management of competitive advantage, and the capability to source product from alternate home-base locations also need to be considered. All of the case study value systems included at least two forms of configuration. For example, on no occasions was the NZAPMB observed to maintain complete integration from producer to international consumer. Similarly, the integrated processor's value system of retailing lamb in Denmark is dependent on the contractual supply of lamb. Therefore, the case value systems display relative rather than absolute levels of integration. Nevertheless, it is useful to consider the effect that alternate forms of configuration have on the opportunity to impose value system strategies. Management and the shareholder group are sympathetic to the pursuit of value added activities. In this respect the export monopsony producer board ought to be at a significant advantage (refer to the discussion of the NZKMB in the previous section for the opposing view). At the other extreme are spot-market transactions which hold no redeeming features. Spot-market transactions preclude the opportunity to impose any form of value system strategy.

In terms of relative integration vertically integrated processing and non-integrated industrial networks hold intermediary positions between monopsony boards and spot-markets. The integrated processor, who in this study commonly completed processing, B, exporting, C, and importing, D, has a superior capability to impose select value system strategies over industrial networks. First, the integrated organisation has a stronger capability to develop brands by virtue of retaining ownership of sequential stages of the value system. Second, the integrated processor's value system is easier to maintain in a closed state, again by virtue of fewer organisations. Third, the integrated operation has a stronger capability to manage sources of competitive advantage, again for similar reasons. Finally, the integrated organisation can source products from alternate home-base locations. Here lies the importance of the international linkage: Organisational capability to exploit sources of competitive advantage that are located internationally. A summary of the capacity of each of the configurations is presented in Table 6.2.

Table 6.2. Capacity of alternate value system configurations to impose value system strategies.

Value system strategy	Predominant value system configuration			
	Monopsony producer board	Vertically integrated processor	Non-integrated industrial network	Spot-market
Branding	✓	✓	✗	✗
Closed system	✓✓✓	✓✓	✓	✗
Complementarity	Internalised	Internalised	✓	✗
End-user	✓	✓	✓	✗
Long term	✓	✓	✓	✗
Structure:				
Individual value system	Does not exist	✓	✓	✗
Industry aggregate	✓✓✓	✗	✗	✗
Management of competitive advantage	✓	✓	✗	✗
Alternate sources of product	✓	✓	✗	✗

The number of ticks denotes a subjective assessment of the relative capability of alternate configurations to impose a specific strategy.

The capacity to impose strategies consistently across a value system appears to decline as the number of organisations responsible for product flow increases. That is not to suggest that a single-organisation value system will be more consistent in imposing strategy, but rather that it has the capacity to do so. For example, all organisations in the case study value systems were observed to pursue various forms of differentiation.

The interpretation of case study differentiation in the form of Johnson and Scholes's (1993) competitive strategies - the strategy clock - assists in the identification of sources of tension between organisations in the value system. In one case value system a land-based producer was adding value at increased cost: a strategy of focussed differentiation. An adjoining intermediate organisation was adding value at decreased cost (hybrid), while the subsequent organisation was again adding value through increased cost. In effect the intermediate organisation was enjoying an increasingly profitable position in the value system and the burden of cost was being shifted to adjoining organisations. Not only is this example indicative of inconsistent strategy but it is also symptomatic of asymmetrical bargaining power.



Similar inconsistencies in the imposition of competitive strategies may exist in an integrated organisation. However, in an integrated organisation it remains management's prerogative to cross-subsidise the performance of one stage with that achieved in another. In a non-integrated value system the costs of differentiation are shifted to organisations with less bargaining power. Therefore, there remains a need for additional transparency in industrial networks to avoid tension.

The capacity to impose value system strategies consistently across adjoining organisations is, in itself, a source of competitive advantage. Further, the capacity to do so must have a direct relationship on the generation of wealth, and opportunities for subsequent wealth distribution. The export monopsony ought to provide stakeholders with greater wealth than other forms of organisation simply because the configuration has a greater capacity to impose consistent value system strategies. The integrated organisation again has the capacity to deliver advantages over industrial networks. Spot-markets have no capability to deliver generative effects.

The objective of the following section is to extend the emergent theory of value systems to minerals, fisheries, and forestry. The configuration of the three New Zealand industries is discussed in general terms, generative and distributive effects are resolved.

#### **6.4 EXTENSIONS OF THE THEORY: NON-AGRARIAN**

**T**HE MINING, FORESTRY, AND FISHERY INDUSTRIES in New Zealand are characterised by a wide diversity of value system configurations. Each industry has fully integrated value systems owned by multinationals located in either the home-base or international location. Similarly, each industry contains numerous privately owned ventures at each stage of the value system. At the equivalent stage as the land-based producer, A, organisations are as discrete as individual prospectors, privately owned trawlers, and farm woodlots. Similarly, in the international location the interface with the consumer responsible for the provision of marketing, sales, and customer service, G, is provided by multinational retailers alongside locally owned hardware stores, fishmongers, and jewellers.

Multinational publicly owned wood processing firms procure logs from forest owners. Throughput in this form is secondary to logs from their own forests, held as land-owners, leasees, or through cutting rights. Similarly, multinational fishing companies acquire fish on the spot-market and through contracts with independent fishermen, in addition to owning their own fleet of trawlers. The mineral extraction industry is no different. Large scale processors purchase minerals, in New Zealand this largely consists of gold, iron and coal, from independently owned sources alongside their own claims. Of note, however, is that all large scale operators in all these industries are fully integrated upstream. They are not solely dependent on inputs from sources external to the organisation. In fact in the mineral and forestry industries the majority of inputs are provided by integrated sources.

Consideration of these industries in terms of generative and distributive effects is no different from their agrarian counterparts. Distributive effects accrue to those organisations with asymmetrical bargaining power even in the presence of structured supply management. Generative effects benefit from the same configurations as those summarised in Table 6.2, except that in the mineral industry there are internationally accepted daily commodity prices for raw material. The price of gold at US\$380.65 per ounce (The Dominion, 1996), therefore, benchmarks the entire industry from producer to retailer. The ability to add value to goods made of gold is limited to the application of workmanship beyond the value of the raw material. However, unlike the goods considered in this study, metals can be stored indefinitely and have near endless capacity for recycling. But while a *ceiling* is placed on generative effects it also protects distributive effects to the benefit of those organisations devoid of bargaining power.

One consistent feature of these industries that differs from pastoral agriculture is the ownership of production by the processing sector. Ownership of production ensures access to product. In these latter industries the processing sector is resource dependent, plant is located in areas where it has little alternative uses, and invariably suffers from sunk costs. These considerations are, however, not unique to the fishing, forestry and mining industries - the dairy and meat industries spring to mind.

The dairy industry in New Zealand has resolved dependency between the production and processing sector. Ownership of the two sectors is common, long since brought about by the near immediate perishability of milk and the need for increased bargaining power in the international location. Despite farmers' considerable ownership of the meat processing sector, production and first stage processing are managed as separate industries. As the meat industry pursues added value activities product specifications will continue to be refined. Tighter grading standards will serve to increase the *perishability* of livestock, lambs more so than deer or beef. Therefore, in the near future farmers will not be able to withhold livestock from processing. However, currently there remain few incentives for either sector to integrate.

The history of the US automobile industry provides a synopsis of the arguments for integration versus networks. The industry was, simplistically, highly integrated in the past. For example, Ford owned rubber plantations in South East Asia, and glass manufacturing plants in the US. By comparison the automobile industry is now less integrated in that parts such as brakes (Taylor, 1994b) are commonly provided by OEMs (original equipment manufacturers). Most manufacturers recognise that key components such as the engine, gearbox and body are sources of competitive advantage and, therefore, retain their manufacture in-house. However, "the next generation of manufacturing may take Detroit out of the business of auto production and into the realm of coordinating superproficient suppliers by what's becoming known as the virtual factory" (Taylor, p. 48). But while opportunities reside for OEMs, General Motors saved US\$4bn in 1992 and 1993 by price cutting and negotiating huge volume discounts (Taylor, 1994a) by imposing their bargaining power on suppliers.

In addition to disintegration manufacturers in the automobile industry have reduced the number of OEMs. No longer is management concerned about the need to play one supplier off against another. Focus on price, long discarded by the Japanese, at the expense of "quality, innovation, logistics and product development" (Steele, 1995, p. 7) is not conducive to the development of strong business relationships. The "average number of suppliers to European car assemblers" has fallen from 1200 in 1990 to 850 in 1993 and is "predicted to fall to 425 by 1997".

Not only are there advantages to be gained by disintegrated organisational forms but there are further advantages to be gained by reducing the number of suppliers. The mode of mutual prosperity and dependency is considered far superior to “adversarial competitive relationships with many small suppliers” (Steele, 1995, p. 7).

There are several implications of this paradigm shift for New Zealand’s export-dependent land-based value systems. First, the number of producers imposes a constraint on the development of strong business relationships - short of the massive aggregation of farms. Second, reluctance to commit to strong business relationships downstream is symptomatic of the insecurity to supply goods - exacerbated by knowledge of variability in production due to dependency on biological systems (risk). Third, commitment to supply large organisations in the international location requires critical mass in the home-base location and, may, necessitate the acquisition of complementary or supplementary goods elsewhere.

## CHAPTER SEVEN: CONCLUSIONS

### METHODOLOGICAL CONSIDERATIONS, FURTHER RESEARCH AND RECOMMENDATIONS

*Within hours, even within a modest number of minutes, the film would merge with reality. I would be riding up that avenue, and by that single act I would be sealing off forever the four most eventful years of my life. Any minute now ... The End.*

Ted Simon. (1980). *Jupiter's Travels*.

#### 7.1 INTRODUCTION

**C**ONCLUSIONS ARE FIRST PRESENTED in terms of the methodology used for the development of the theory. A discussion of the iterative, eclectic and dynamic nature of the research methodology is provided, and limitations to the methodology identified. Prescriptive considerations developed during the study are applied to the Z-form Model in Section 7.3. Significant literary contributions are then identified. Section 7.4 provides a brief discussion of contextual variables exogenous to the theory. The theory presents the basis of an acceptable paradigm for the study of configuration and management of export-dependent land-based value systems. Application of the theory need not necessarily be confined to land-based industries, as was evident in Chapter Six, nor those emanating from a small country. The role and scope for further research is reviewed. Hypotheses are presented to provide direction to and encourage the pursuit of ongoing research in our land-based industries. Lastly, and by no means least, recommendations are provided for practitioners.

This chapter is not an attempt to draw to a close research on the subject nor to provide a definitive methodological guide for the future. The aim of the chapter is to summarise the theory relative to the Z-form Model and identify paths for continued

fruitful research that will benefit both practitioners and the continuing development of contributing academic disciplines.

## 7.2 REVIEW OF METHODOLOGY

**T**HE METHODOLOGY USED IN THIS STUDY is creative theory building. A conjoint approach to theory building was developed. Contributions from both deductive theory building from the literature, and inductive theory building from empirical evidence were used in the process. Two important issues relating to the process of theory building, as adopted for this study, were raised in Chapter Four. First, a mechanistic issue: how to combine contributions from both literary and empirical sources and second, how much of each contribution is necessary for effective theory building.

In 1967 Glaser and Strauss provided an alternate research methodology. Subsequent to their original publication, *The Discovery of Grounded Theory*, there have been a series of informative texts providing guidance to researchers with creative desires. The work of Miles & Huberman (1994), Gummesson (1991) and Strauss & Corbin (1990) contributed to this study. However, Glaser and Strauss are considered by this author to be central contributors to inductive theory building in the social sciences and associated disciplines.

Although there is much ado in the business and sociological literature about inductive (grounded) and deductive theory building the distinction, if pursued too far, only serves to hinder progress. Put simply, it doesn't appear to matter what sources of evidence are used. It is significantly more important to determine the value of contributions against some broad framework, in this case the Z-form Model, rather than whether they are from one particular source or other - literary or empirical. However, the distinction does become useful when confronting a research problem. In the absence of appropriate literature the researcher is first confronted with the need for inductive research. Only at the completion of a initial iteration is the researcher in a position to begin referring theory to empirical evidence. Familiarity with the nature of the research problem *and* relevant literature at the outset may enable the researcher to develop theory deductively, or to even test theory as a first iteration. However, it should be recalled that there is a near vacuum of commentary on food industries in the

business literature. Without a grounding in the productive biological sciences (agriculture and horticulture) the researcher may well be dependent solely on anecdotal evidence.

Combining sources of theory was not difficult provided the contributions were not mutually exclusive, through inconsistent temporal boundaries, and they were offered at similar levels of abstraction. The degree of contribution from each source appeared dependent on a number of issues but importantly on the relevance of subject matter and generalisability. Although the context of this study is unique, empirical data sources were of immediate relevance - supporting what in hindsight was a tedious process of case selection. Selected contributions from the business literature, referred to at the conclusion of the following section, were found to be generalisable to land-based industries.

The theory building process provided sufficient structure to ensure that the creative process is repeatable and that the process is void of speculative leaps. The unique attributes of New Zealand's agricultural production provided themata that were used to filter and guide the inductive process. The distinction between value system strategies imposed by individual organisations and those imposed at the aggregate level was also recognised and upheld. Importantly, the unique attributes ensured that commodity product and level of consistency were maintained as antecedent variables in the causal network. The typical presence of many producers and few first stage processors, and biological variability - in all its manifestations - forces the independent recognition of individual and aggregate value system strategies.

The research has been conducted from the perspective of organisations located in the home-base location. Within the home-base location a producer's perspective on value systems has been maintained, particularly with respect to the relationships between generative and distributive effects - notably the accrual of wealth by producers. However, that need not constrain the theory, in a prescriptive sense, from processors and exporters because it is in their interest to also accrue the benefits of generative effects. Evidence supports the contention that unless distributive effects are equitable participation in generative effects is limited. Therefore, similar value system strategies are expected to be designed or emerge irrespective of the stakeholder group.

The theory's temporal (Whetten, 1989) boundaries are New Zealand's export-dependent land-based value systems during the mid-1990s. Consideration of other industries as value systems appears a useful extension of the theory. Further, the relationship between generative and distributive effects is a useful diagnostic tool from which to consider linkages - competitive or collaborative - between any two organisations. Significant elements of the theory are, however, contextually constrained. The relationship between commodity products, levels of consistency, and some attributes of organisations are unique features of agricultural production, particularly pastoral based agriculture. Therefore, the causal network cannot always be applied to other value systems without recognition of unique endogenous attributes.

Building theory with the constraint of falsifiability (Bacharach, 1989) is at odds with the development of any paradigm, invariably tools and techniques for measurement follow from the development of good theory (refer Section 4.3). Bacharach's remaining criteria for evaluating theory is utility. The scope of categories/variables was observed to extend beyond the case study industries, although the scope of concepts/constructs is in some instances limited clearly to land-based agriculture. However, concepts relating to the value system and value system strategies are not similarly constrained. For example, the concept of business relationships, failure, organisations, open-competition, spot-market, the six value system strategies, wealth distribution and wealth generation appear to hold explanatory and predictive potential for value systems elsewhere. In that sense the theory has utility (meeting Bacharach's criteria), albeit at the expense of parsimony.

### **7.3 THE THEORY AND THE Z-FORM MODEL**

**T**HE THEORY OF VALUE SYSTEMS was, in part, developed from the descriptive interpretation of the Z-form Model. Having developed concepts and propositions during the course of study such as value system strategies it is now appropriate to revisit the model and apply those considerations in a prescriptive (normative) sense. As stated in Section 6.3 the critical stages of the value system to manage are those where competitive advantage resides. The numerous configurations encountered across both industries and markets suggests that the location of competitive



advantage is not consistent amongst land-based value systems. Further, competitive advantage can be created, and just as equally dissipated. Therefore, management's role in the value system is to either capture, create or sustain competitive advantage, a role that explicitly requires the need for change.

Management must avoid being *locked* into industries that do not have the potential for competitive advantage (e.g., buggy whips or cartwheels). Therefore, management must create an environment of continuous change (Strebel, 1994). Administrative heritage is claimed to impede larger organisations before smaller organisations (Bartlett & Ghoshal, 1989). The implication is that industrial networks of smaller organisations potentially have a greater capability for continuous change, by virtue of the size of each organisation, than either integrated organisations or societal marketing boards.

Greater opportunities to differentiate land-based goods occur downstream from home-based production and primary processing. Additional processing, tailored packaging, marketing, point-of-sale promotion and innovative retailing are all mechanisms through which goods can be differentiated, value added and competitive strategies developed. Some of these mechanisms can be conducted from the home location providing business relationships are established with end-users. In this case the actual location of secondary processing and packing will be determined largely on the basis of cost. Clearly, one of the intangible costs being reconciled by some organisations is the loss of flexibility. However, as discussed in the previous sections those organisations are not likely to be confronted with that dilemma for long - they will cease to exist. Failure to differentiate goods to end-user specifications amounts to dependency on spot-markets and weak business relationships, none of which create value.

Providing the relative bargaining power of intermediate organisations can be reduced, or better still negated through end-user connectedness, there appear few real advantages of integrating adjoining stages of the value system. But in the absence of relief from bargaining power the organisation will only receive returns sufficient to ensure continuity of supply. The buyer has no incentive to pay more. The costs of integration through additional stages needs to be assessed, the analysis being no different

from other business decisions. However, the global trend towards fewer retailers with greater bargaining power does not auger well for New Zealand exporters and distributors. Therefore, the only real avenue open to exporters and distributors is the establishment of strong business relationships with end-users. Unfortunately, multiples have the beneficial end of business relationships and are in a position to apply asymmetrical bargaining power. Yet there is evidence that multiples will accept a smaller trading margin from suppliers of preferred goods and services demanded by the consumer than those extracted from the suppliers of commodity goods (e.g., ENZA International in Britain).

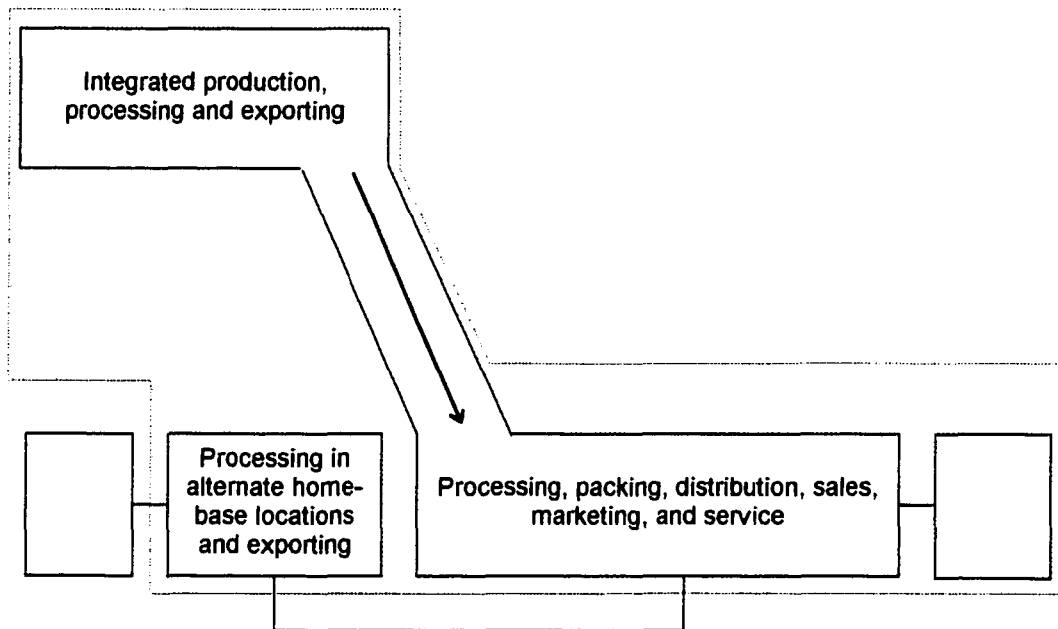
Land-based producers are confronted with the choice between numerous upstream configurations to avoid selling goods on the spot-market. The sale of goods on the spot-market represents failure, failure to generate wealth; failure to differentiate goods; failure to develop some form of technological advantage; and, failure to show managerial attention and perspective beyond the organisation's stage of the value system. This configuration, while available is neither plausible nor sustainable hence the *industrialisation* of agriculture.

Configuration through structure and business relationships provides an opportunity to differentiate goods and some scope for participation in the subsequent distribution of wealth. The distribution of wealth, however, will be influenced by both relative bargaining power and the proximity of open-competition between value systems. Configuration through structured supply and shareholding provides a simple means of capturing the distribution of wealth. The land-based producer, therefore, is both supplier and stakeholder, rewarded for the sale of goods through structured pricing and the generation of wealth through dividends.

The capture of legislation for the maintenance and establishment of societal marketing boards appears to be the preferred configuration of many producers. Producer cooperatives and export monopsonies ensure that competition for goods is not dissipated in the home-based location, producers receive all distributive effects, the scale of such organisations enhances bargaining power, and the resolution of distributive effects enables the pursuit of generative effects. The optimal configuration of an export-

dependent land-based value system, one interpretation of the transnational solution, is depicted in Figure 7.1.

Figure 7.1. Normative configuration of export-dependent land-based value systems: The transnational solution.



As noted in Chapter One the NZKMB was established by government *during* the current shift towards a free-market economy. However, the NZKMB was established at little cost to the then current participants<sup>75</sup> (producers and exporters), when the industry was confronted with failure. The meat industry, focus of a current argument for government intervention, is not confronted with similar circumstances. The industry earned a tax-paid profit of \$34m, \$120m, \$150m, and \$160m [estimate] in 1993, 1994, 1995 and 1996 respectively (Hall, 1996). The current value of assets located in New Zealand is estimated as some \$680m representing a return of 23%, currently comparable with that reported in the US food industry (see Footnote 84). The fully integrated value system from producer to end-user is the only means of ensuring that *all* generative effects, wherever they currently occur and where they may occur in the future, are

<sup>75</sup> Two respondents made comments to the effect that, “you can get on the phone and be exporting horticultural produce tomorrow... all it takes is fax jockeys”.

distributed to organisations located in the home-base location - providing of course that is where ownership is held.

Several of the case study value systems approach this ideal configuration, the differences being less than full ownership of downstream activities, and/or non-integrated production and processing. Less than total integration does not represent or necessitate failure. Linkages between organisations can be progressively improved, to the benefit of both parties, by structure, and business relationships. However, dependency on business relationships at any stage of the value system creates the need for end-user connectedness. In the absence of end-user relationships intermediary organisations, wherever they are located in the value system, have the ability to extract distributive effects in the short term, more so when open-competition is provided by similarly poorly configured value systems.

The single most important issue confronting participants in New Zealand's export-dependent land-based value systems is selecting which stages to own or control. New Zealand participants must first own/control/manage the stages where competitive advantage resides, knowing that over time the sources, and hence location of competitive advantage may change. Failure to develop adequate foresight (Hamel & Prahalad, 1994) of the value system stages and linkages responsible for future sources of competitive advantage will result in the erosion of bargaining power for these participants.

The research objective was to develop a theory of the configuration and management of New Zealand's export-dependent land-based value systems. The Z-form Model provided a framework for considering both literary and empirical contributions. The Model was first elaborated with the unique attributes of land-based industries and then the effects of relevant literary contributions, a process described in Chapter Four. The empirical contributions were observed to underpin both configuration and management, providing six value system strategies that either create value or enhance subsequent wealth distribution. Literary contributions have been drawn through the study to support the empirical contributions and assist in both descriptive and normative interpretations of the Z-form Model. Lastly, it is necessary to identify those key

contributions to facilitate the paths of future research. Only now that the end-point is approached is it fair to position the study in terms of specific disciplines.

Key literary contributions were drawn from three disciplines: international business, strategic management, and agribusiness. Influential contributions from international business include Ghoshal and Bartlett's (1989) text, *The Transnational Solution*. Their perspective of the attributes of various structures remains at the core of the modified Z-form Model.

Key contributions from strategic management include D'Aveni's (1994) text, *Hypercompetition*; and Porter's (1985) text, *Competitive Advantage*, in which he summarises his earlier works, and reports his view of relative bargaining power. Hamel and Prahalad's (1994) text, *Competing for the Future*, represents their interpretation of new age strategic management, and again summarises most of the earlier contributions published in the *Harvard Business Review*. Johnson and Scholes's (1993) interpretation of generic strategies as the strategy clock is useful but their perspective benefits when considered in conjunction with that from D'Aveni. Strebel's (1994) change arena provides a powerful tool from which to interpret the forces of change, namely, that the desired position of an organisation, value system or industry is one of sustainable competitive advantage - a position approaching near continuous change. Lastly, and perhaps most significantly, is the published work from the IMP group (Easton, 1992; Ford, 1990; Håkansson & Snehota, 1995) which describes and operationalises the development of the industrial networks approach.

Agribusiness, a unique application of strategic management, provided the ground from which to consider production, processing, packing, distribution, marketing and consumption of land-based goods and services as a seamless activity. Of note are the plenary works on commodity systems by Davis and/or Goldberg (1956; 1957; 1968) and the industrialisation of agriculture from Godwin and Jones (1971). More recent works on tighter vertical coordination in US agriculture are offered by Barkema, Drabenstott, and Welch (1991) and Sporleder (1992).

## 7.4 CONTEXTUAL VARIABLES EXOGENOUS TO THE THEORY

**N**O SPECIFIC ATTENTION has been directed at GATT, VRAs (voluntary restraint agreements), quotas, and the plethora of trade barriers, restrictions and phytosanitary regulations that encompass much international trade in agriculture. Although the empirical contribution to the study was conducted in the presence of such agreements on no occasion did any respondent mention intervention or barriers to trade. The theory development has been reported on the basis that the paradigm prevails, irrespective of interventionist policies and trade barriers. Trade barriers, including those into Japan, are neither insurmountable nor perhaps of much relevance to closed value systems.

The relative level of producer subsidy equivalents, the OECD's measure of support to land-based producers, in select countries is presented in Table 7.1. Steele (1993) reports that the total subsidy per OECD farmer in 1993 was the equivalent of some \$20,000. In New Zealand the total producer subsidy amounted to \$1,400 during the same year. Agricultural policy in the EC effectively "insulates growers from the realities of international markets" (p. 2), as it does in Japan, and to a lesser extent Canada and the United States. Therefore, New Zealand producers have to compete in foreign markets against heavily subsidised domestic production. It is fortunate that, at least with perishable goods, New Zealand has advantages in terms of seasonality.

Table 7.1. Relative levels of producer subsidy equivalents in select countries and free trade blocks for 1993.

Country or Free Trade Block	Producer subsidy equivalent (%)
Japan	70
EU	48
Canada	32
USA	23
Australia	9
New Zealand	3

*Note.* From *Single Desk Selling in the Export of Apples and Pears From New Zealand*, (p. 2), by M. Steele, 1995, Bedfordshire, UK: Cranfield School of Management.

A further issue exogenous to the theory is the role of the state. Intervention on producers' behalf, at producers' insistence, has been acknowledged and evaluated. The statutory powers granted to export monopsony producer boards such as the NZAPMB, the NZDB and the NZKMB have been observed to benefit producers in terms of first, distributive effects and second, generative effects. In the absence of attention to distributive effects the pursuit and participation in generative effects appears constrained, if not limited. These interventions are viewed as a means of achieving configuration and structure, not as an inherent part of configuration or structure.

The prevalent governmental ideology in New Zealand of free-markets and open-competition was briefly summarised in Chapter One. Alternative ideologies are available to the government that, at first glance, offer better opportunities for economic development (see Hampden-Turner & Trompenaars, 1994). Wilks (1990) summarises alternate views of the state as follows:

The Anglo-Saxon cultures of the United States and the United Kingdom are biased towards an individualistic free-enterprise model of strategy that denigrates explicit reliance upon the state. By contrast, the traditional nationalism of the French and German states, and the developmental role of the Japanese state, have given to the Anglo-Saxon world's major competitors industrial cultures in which the enlisting of state resources is seen as a natural and important part of strategic management. (p. 131)

National approaches to strategy can, therefore, be heavily distorted by what is locally regarded as culturally legitimate. From this perspective the classical and evolutionary emphasis on markets and profitability, to the exclusion of state resources and national interests are simply the product of very particular historical and social circumstances. True to this fashion, Porter (1980) subsumed the role of Government in his five forces model of factors influencing the profitability of industry, and recognised Government as being of only relatively minor importance in his diamond theory (1990).

Lastly, the role of industry leadership (Patterson, Greeny, McMillan, & Switzler, 1996) in the value system has unintentionally been ignored. Specific organisations provide

leadership, akin to that expected from hub firms. The key characteristics of leadership displayed by participants in the case study value systems appeared to be foresight - in terms of what properly configured value systems could achieve - and absolute commitment towards the personal investment required for success. Only then were adjoining and non-adjoining participants likely to share in the development of closed value systems.

## 7.5 DIRECTIONS FOR FUTURE RESEARCH

**T**HERE STILL REMAINS THE ISSUE OF THEORY TESTING. Einstein (cited in Holton, 1979) regarded referral to empirical evidence as the last step in his EJASE model of science (depicted as Figure 1.2). Therefore, the procedure of theory testing represents closure, at least in terms of one creative cycle of science. One conclusion from this study is that extant knowledge of value systems is incomplete, and the knowledge of land-based value systems inadequate. Porter's (1985) recommendation for the management of value systems is yet to attract the attention of academics<sup>76</sup>. Value systems involve at least two organisations, therefore, the single organisation focus of strategic management is not necessarily a *comfortable* paradigm from which to pursue their examination. Alternatively, the examination of collaborative linkages between organisations, once the domain of the European industrial marketers (IMP Group), is now under increasing influence from applied sociologists. It would be a shame if the industrial networks paradigm was reduced to the study of business communication processes. Important issues requiring further research are now presented in the form of null hypotheses.

The relative performance of networked forms of organisations and integrated organisations needs to be resolved. The New Zealand meat industry provides rich examples of both. Distributive effects in the integrated organisation accrue solely to stakeholders, for example, employees, shareholders, buyers, and suppliers. Meeting the collective demands of the stakeholder group is a source of competitive advantage. In an industrial network distributive effects accrue to owners of several organisations (and all their subsequent stakeholders) but wealth is mitigated by relative bargaining power. That industrial networks



reduce bargaining power, particularly that held by intermediary organisations, has been resolved. Their effectiveness in terms of the equitable distribution of wealth relative to integrated forms of organisation, where equity is only relevant in terms of one organisation's stakeholders, is yet to be determined. This leads to the hypothesis:

H(1): That industrial networks do not distribute wealth to value system stakeholders as equitably as integrated forms of organisation.

There is a strong tendency for particular organisations within the value system to pursue integration. The pursuit of integration suggests that latent competitive advantages - whether generative or distributive - residing in the adjoining organisational stage are previously uncaptured. The remarkable indifference shown by meat industry processors and producers towards integrating their activities is indicative of the singular lack of competitive advantage at both stages in the value system.

The advantages of networks for generative effects are widely publicised as being superior to organisations operating in the absence of connectedness, namely, through spot-markets and weak business relationships. Networked organisations may achieve greater levels of generative effects than integrated organisations providing synergies, requiring a multiple organisational view of strategic management, are developed. However, the integrated organisational form benefits from reduced costs of management, transparency of transfer prices, brand management, the ability to minimise duplication in logistics, administration and so forth. Management must then enhance the synergies Porter (1985) attributes to the value chain. A further research issue worth exploring is the capacity of industrial networks relative to vertically integrated organisations to generate wealth; which may be expressed as follows:

H (2): That industrial networks do not have the capability to generate wealth as do value systems based on vertically integrated organisations.

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<sup>76</sup> Consider the quantity and scope of literature on value chains and five forces affecting industry profitability relative to value systems.

Opportunities for management reside not only in managing the value system activities but also in creating synergies within the value system. The decision confronting management then becomes one of what activities should remain outside the value chain but within the value system. The constraints on further integration in value systems, where capital is not necessarily a constraint, require further exploration.

Strategic management is artificially constrained by its single organisation focus. Six value system strategies have been identified during the case research and subsequent data reduction, a further two through elaboration and application. That those strategies, either deliberate or emergent, can be upheld by several collaborative organisations is beyond the current domain of the paradigm. Each of the eight value system strategies remain to be validated. A model hypothesis is presented in lieu of stating all eight value system strategies in the form of a testable null hypothesis

H(3): That the strategy end-user connectedness enhances value system performance in terms of generating value and distributing wealth to stakeholders.

## 7.6 VALUE SYSTEM SUCCESS DRIVERS FOR PRACTITIONERS

**V**ALUE SYSTEM STRATEGIES provide opportunities largely for the pursuit of generative effects. Individually each strategy has merits, however, difficulties arise in attempting to extend the strategies the length of the value system in the absence of attention to distributive effects. Distributive effects are more commonly resolved through configuration, rather than management. Organisations have little, if any, incentive to participate in value system strategies if they are excluded from their benefits. Strategy follows structure.

Six empirical value system strategies have been identified during the research. Two additional strategies have been developed through attention to the unique attributes of agricultural production and the literature on competitive advantage. Collectively they represent a powerful tool to enhance the generative performance of an individual value system. The difficulties associated in implementing the strategies at an aggregate level

have been noted. However, in the long term these difficulties are not insurmountable providing spot-markets, commodity businesses, and weak business relationships are maintained. However, the first *challenge* for the management of organisations in New Zealand's export-dependent land-based value systems is to minimise their reliance on the spot-market: spot-markets should be considered necessary to only accommodate inconsistency and no more.

Sources of competitive advantage need to be identified and the value system then configured in a manner to ensure that benefits accrue to New Zealand participants. All participants, or their respective federations as proxies, need to develop end-user connectedness. End-user connectedness provides an essential conduit for information and hence change and subsequent adaptation. It also provides a mechanism for reduction of buyers' bargaining power. In the absence of end-user connectedness organisations upstream in the value system will receive variable, residual income. However, in value systems where end-user connectedness is developed consumers could expect to receive, and pay for, the desired land-based goods and services that meet their expectations.

Structure will most often be applied at the stage of a value system where an organisation is confronted with relatively large numbers of suppliers, or where specific product attributes are sought. In this respect structure is directly related to end-user, because without appropriate structure the benefits to suppliers from end-user connectedness are limited. Branding needs to be established - and owned - value system-wide. Branding provides a means by which all organisations in the value system can participate actively. The second challenge then for participants is to extend the initiatives developed by organisations such as ENZA International to develop recognised and valued brands for land-based goods and services. Next, the value system must be closed. Closure provides a mechanism by which competition can be met from positions of strength, and new markets and opportunities exploited. Participants in these value systems must develop a common set of values that ensure the maintenance of closure. They need to avoid the temptation of disrupting the activities of participants in parallel value systems in pursuit of short-term gain, instead concentrating on improving the performance of their own activities.

The development of complementarity will ensure attention to the optimal *range* of products, markets and services available to an organisation at any stage of the value system. Clearly, in land-based industries spot-markets will, at the aggregate level, remain complementary to closed systems. More important may be alternative sources of product that complement seasonal production in the home-base location. Organisations should consider development of global sources of product, levered through branded, differentiated value systems. Finally, organisations in the value system need to maintain a long term perspective. The rate of change and adaptation is not only dependent on biological systems but on the establishment of business relationships, both of which are fraught with nearly continuous external influence.

The successful imposition of value system strategies must deliver to participants an internationally recognised source of sustainable competitive advantage. Only then should the configuration of the value system be considered. Some configurations have an inherently weak capacity to accept value system wide strategies. The imposition of some strategies will require a perspective of management different from that currently employed. Sources of competitive advantage need to be developed, or captured and these sources will invariably change. The imposition of value system strategies commonly requires stretch and leverage beyond current capabilities, in a change rather than static environment. Thus, the value system configuration should be designed to incorporate or support these specific strategic initiatives and positions.

Export monopsony producer boards may provide an advantageous platform from which generative effects can be pursued. This is an empirical issue, not one of defending the ideology. It is management's responsibility to ensure that their performance is at least comparable to nonlegislated counterparts. The debate about export monopsonies has often been conducted from the perspective of organisations wishing to participate downstream but limited from doing so by the presence of the board structure. Traditional economic viewpoints of maximising global wealth and efficiency are naive. Why home-based organisations should be concerned about maximising the wealth of those located in the international location, presumably at some cost to themselves, remains unanswered. Societal marketing boards provide producers relative bargaining power they could never achieve

individually. That this *clout* is the subject of such intense interest and debate only serves to vindicate their existence.

Success can be measured in terms of the generation of wealth and the distribution of wealth. Prior to this study no appropriate frameworks or theories were available for the study of export-dependent industries. The Z-form Model provided such a framework. The objective remained to develop a theory of the configuration and management of New Zealand's export-dependent land-based value systems.

Contributions to the research were drawn from numerous academic disciplines. Useful perspectives and understandings were drawn from the transnational solution, collaborative and competitive linkages between organisations, alternate views of strategic management and agribusiness. The theory was developed through a conjoint process of empirical evidence and contributions from the literature.

The empirical study contributed the causal network, but more importantly provided the source of six value system strategies. Consideration of other behaviours, the unique attributes of agricultural production, and an understanding of the transitory nature of competitive advantage provided a further two. This list of strategies is unlikely to be complete. Prior to this study business strategy was considered largely in terms of competition rather than collaboration between organisations. The literature on collaborative relationships has been, until now, largely devoid of a contribution from strategic management.

Throughout the study the observation that both generative and distributive effects reside in value systems, unlike the single organisation perspective of strategic management, has been upheld. This distinction was used to both interpret the behaviour of organisations and evaluate the application of theory. Most of the respondent organisations failed to distinguish between the two effects, resolution of distributive effects being provided, near solely, through alternate configurations. In this respect the monopsony board is supreme, provided that the producer perspective is maintained. It remains the challenge for the management of industries beyond those so configured to firstly, pursue generative effects with similar capacities and secondly, distribute wealth for the benefit of all participants.

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## **APPENDIX ONE: RESEARCH PROTOCOL**

### **James C. Lockhart**

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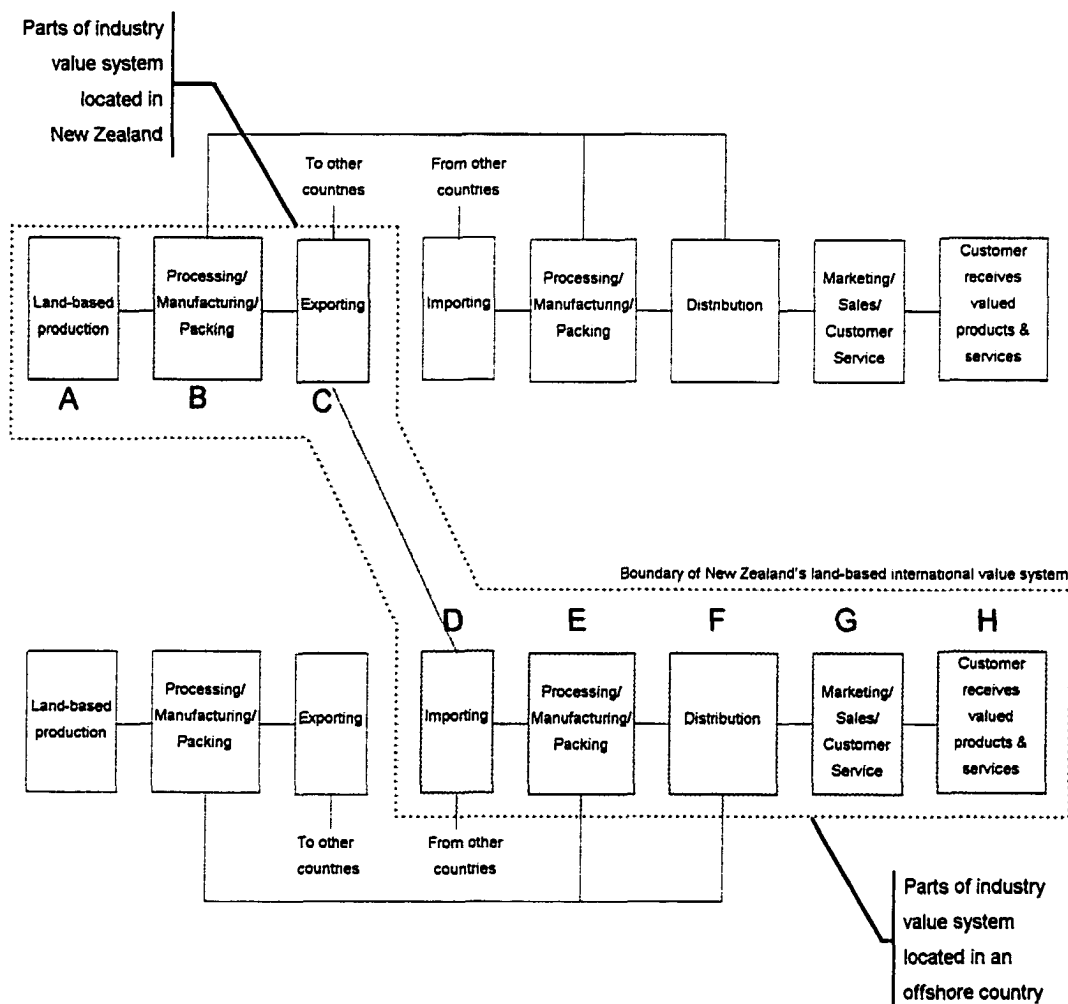
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### **Introduction**

Innumerable reviews of the agricultural sector have been completed during the last decade most of which examined legislation's impact on competition in the domestic economy. Why competition in the domestic market is regarded as necessary for successful international business remains circumspect. Recently the activities of the New Zealand Kiwifruit Marketing Board have been reviewed and the Commerce Commission has passed judgement on the future of Weddel's assets. In both cases the importance of creating opportunities to add value to land-based products in international markets has influenced findings. You are invited to contribute further to this research being conducted at The University of Auckland examining the relationships between firms and their trading partners within land-based value systems. A generic model of New Zealand's export dependent land-based value systems is provided as Figure A1.1.

The Z-form Model depicts a generic value system. Land-based activities, A, are undertaken predominantly in New Zealand. First stage processing/manufacturing/packaging is completed on-shore, B, prior to exporting, C. Of interest are the activities completed in off-shore countries; importing, D, off-shore processing/manufacturing/packaging, E, distribution, F, marketing/sales/customer service, G, and consumption of products and services by the foreign consumer, H. The boundary of New Zealand's export dependent land-based value system is shaded in the model. Each activity, A to G, represents an opportunity for participating firms to add value.

Figure A1.1. The Z-form Model of a New Zealand land-based international value system.



Value is not realised until the product is purchased by end consumers in the international market. The Z-form Model does not identify the extent of value adding activities that should be completed by each firm or likely boundaries between firms. The domestic market, which consumes relatively little product, is excluded from the study. Whereas opportunity to acquire foreign products, represented by the linkage between off-shore processing/manufacturing/processing (the foreign equivalent of B) and the activities completed internationally by New Zealand's value systems is included.

The role of New Zealand's firms in the land-based international value system, A to H, is to capture value realised in the international market place. Only when this value is realised, that is the product is sold for a sum greater than the costs can returns be distributed to up-

stream participants as either product prices, shareholder dividends or stakeholder wealth. The boundaries between firms are likely to be characterised by a range of market or hierarchical transactions. For example, the free market at one extreme, through contracts, licenses, and strategic alliances, to vertical integration at the other. The nature of these transactions will have a significant influence (determinance) on the extent of the firm's activities and, therefore, the firm's boundaries.

## **Research personnel**

This research is being conducted by James Lockhart as a PhD in International Business. Until early 1995 James was a Senior Lecturer in Farm and Horticultural Management at Massey University. During sabbatical leave to the USA, Europe and Asia in 1991-92 he learnt that on-farm production issues will not solve New Zealand's problems and opportunities in the international market place. On his return to New Zealand he then developed a PhD proposal part-time at The University of Auckland (while still lecturing at Massey) and is now completing his PhD full-time.

The research is being supervised by Professor Wayne Cartwright. Wayne contributed to the *Porter Project*, and in particular the review of the dairy industry. At the time Wayne was critical of the methodology used and the conclusions drawn. Since then many researchers have questioned the appropriateness of the methodology for countries outside of the USA. More recently Wayne, in conjunction with Richard Brookes, also of the Department of Marketing and International Business lead the market review of the NZKMB and has spoken at the Commerce Commission hearings in support of the closure of Weddel's assets. He is also engaged in ongoing research into strategies and structures for developing New Zealand's land-based industries.

## **Study concepts**

To date many studies of New Zealand's export dependent land-based value systems, as depicted in the model, have been conducted from the view that the free market, itself a largely theoretical concept, should prevail at each and every opportunity - a far cry from practice. For example, the market is immediately suppressed when a firm vertically integrates

to undertake activities that could otherwise have been purchased. Whether or not a firm's activities are governed by statutory legislation, another factor suppressing market forces, is unlikely to affect the nature of their relationships with other firms in the value system. Therefore, it is only when the *space* between firms is studied, say between off-shore processing and distribution (EF), that an understanding common to all of our land-based industries can be developed.

The approach used in this study, *industrial networks*, emphasises the important role that long-term stable relationships play in industrial markets. The industrial network approach attempts to understand the relationships among firms engaged in production, manufacturing, and distribution and the use of goods and services in what might best be described as an industrial system. Economic exchanges between buyer and seller are commonly more than a random collision: as is implicit in microeconomic models of the free market. Something more than simple transactions occur between firms. The stability of exchange between buyer and seller suggests that the relationship is significantly more than the one-off, arms-length, marketplace exchange. This approach recognises the enduring relationships developed between buyers and sellers, described as the space between firms (represented between firms' boundaries in the model). The industrial networks perspective appears to be appropriate from which to examine selected land-based industries featuring numerous participants at production, processing, internationalisation, and marketing stages of the value system.

The perspective is appealing because it attempts to explain relationships amongst firms in an industrial system from the view of the decision maker. All too often the decision maker is assumed to be subservient to the demands of contracts, alliances, and hierarchical control structures. For example, in the case of the free market the firm is, in theory anyway, confronted with an exhaustive decision choice problem at every purchase or sale. If this decision problem existed most decision makers would be quickly rendered inept - they would be soon overcome by the complexity of choice.

Added value strategies in land-based international value systems are likely to create both *generative* and *distributive* effects. Generative effects result from increasing value. Therefore, the achievement of generative effects is a prerequisite to investment. Investment

including the traditional view of hard investment in processing, packaging and distribution as well as the non-traditional view of soft investment in time and people. Generative effects result in either the consumption of higher priced goods, the consumption of greater volumes of goods or may result from cost reductions. The pursuit of generative effects may, however, be stifled by adverse distributive effects. Distributive effects refer to the capture of wealth by participants in the value system. Although value may be created by select participants (generative) it may accrue to others (distributive). Asymmetrical bargaining power, for example, is likely to result in the more powerful party being able to extract a greater proportion of value.

### **Industry involvement**

To develop the research we would appreciate an opportunity to identify and discuss your firm's position in the value system in which you operate and the nature and scope of the relationships between your firm and others: both upstream and downstream. During this initial discussion it would be necessary to solicit the involvement of your personnel responsible for procurement and marketing activities. A second round of interviews, at least, will then need to be completed with these personnel. It is our intention to interview personnel representative of the stages in the value system from A to G, and quite possibly H, where products and services change hands.

As a participant in the research you will receive a comprehensive model of your firm's international value system and a discussion of how well the value system performs. Particular attention will be drawn to the generative and distributive effects of value added strategies being employed by participants in the land-based international value system. The relationships between participants, initially within the boundary of the Z-form Model, will be described and discussed. Other relationships, particularly with input (packaging) and service (seasonal financing) sectors will, where appropriate, also be examined.

Few people in an organisation are likely to have a holistic view of the value system in which the firm operates. This is an opportunity to develop a holistic view objectively, rather than relying on prevailing, subjective, views based on selective experience. It would be



desirable for participating firms to contribute, partly or fully, to the field expenses (accommodation and travel) incurred by the researcher during the study.

## Summary

Value systems must be managed or they will fragment. Upon fragmenting participants lose the *opportunity* to capture value, an adverse distributive effect, which is only realised upon the consumption of products and services in the international market place. Failing to capture value renders the upstream participants in the value system beneficiaries to a residual and variable income. The value system can be managed in numerous ways. Three views can be postulated. First, one firm may pursue and maintain a dominant position in the value system (e.g., Heinz). Second, a group of firms may collectively manage the value system (e.g., lamb finishers-Progressive Meats-Davmet). Third, the value system may be managed by one firm vertically integrating its entire length (e.g., NZAPMB). Only by studying the relationships between firms, in any of the examples provided, will the nature and scope of their current activities be understood.

The research marks a significant departure from traditional approaches in agribusiness. Decision makers are identified as assuming responsibility for the success of the value system, rather than either legislation or the free market. If the value system is found to be fragmented there appear few opportunities to realise further value, i.e., benefit from *both* generative effects and distributive effects, unless alternate value systems are pursued. The results of the research will, therefore, benefit industry participants at all stages in the value system.

## Questionnaire

The open-ended questionnaire is to be completed in two parts, as part of a multiple case study. The two parts of the questionnaire are not to be regarded as mutually exclusive. From the first part the researcher is seeking to establish a traditional view of the firm, largely in terms of the firm's activities up to its boundaries. The researcher is trying to identify and describe the relationships between firms in first, the value system and second, outside of the value system from the second part of the questionnaire.

The researcher will endeavour to seek information from supporting documents, archives, materials and the media to support interview material. All interviews will be taped, transcribed and the contents then confirmed with the respondent, prior to analysis.

**Part A:** To identify and describe the firm's current position within the value system, defined by hard (capital) investments and recurring transactions (use Z-form Model to assist).

- (i) Identify the position of the firm and the extent of the firm's activities (A to H).
- (ii) Identify the resources used and the transformation processes completed at each stage of the firm's activities (A to H).
- (iii) Identify the ownership of activities and the ownership of product and services (A to H).
- (iv) Identify the nature of recurring transactions between the firm and other firms, both within the value system (A to H) and outside of the value system.
- (v) Identify competitors and collaborators at each stage of firm's activities (A to H).
- (vi) Identify decision makers, responsible for managing transactions, at the firm's boundaries.
- (vii) Identify the firm's goals and objectives (particularly the relationships between stakeholders, suppliers and buyers).

**Part B:** To identify and describe the firm's relationships with other firms in the value system (or competing/complementary/service and support systems), defined by soft (time and people) investments.

1. Explore the nature of relationships, in an attempt to resolve the atmosphere of conflict or cooperation.
  - (i) Is there complementarity of objectives?
  - (ii) Is there dependency?
  - (iii) Identify hard and soft investments in relationships.
  - (iv) Identify, and quantify investments that reduce the cost of recurring transactions.
  - (v) Identify person responsible for corresponding transaction in other firm.
  
2. Explore the attributes of the firm's relationships with other firms (this section will contain probes relating to specific aspects of network theory).
  - (i) Data conduit?
  - (ii) Influence?
  - (iii) Adaptations?
  - (iv) Strength?

- NOTES:**
1. The initial firm within each value system is to be selected with care. In each instance a *hub firm* (one that is assumed to dominate the value system) should be selected and either the CEO or MD interviewed. This initial interview should be used to identify the scope of the firm's activities, participants in the firm, and ought to provide a conduit for access.
  2. The survey must be conducted with firms, or at least their proxies, on either side of the transaction, i.e., representing the dyadic relationship. Much of the data will be difficult to quantify, therefore, it is essential a balance of views between firms is sought.
  3. It will be necessary to identify whether practices and relationships exist because of, or in spite of, legislation. It is necessary to *get beyond* statutory legislation, requiring a micro-level examination of the relationships.
  4. It is likely that an iterative process is required to identify the nature and scope of the firm's relationships. For example, while the nature of relationships may be directed by procedures developed by a marketing manager, a sales representative will provide the interface between firms.

## APPENDIX TWO: THE CASE STUDIES

### CASE DESCRIPTIONS AND VALUE SYSTEMS

*A safety check would reveal that there isn't a shopping cart that does not have all four wheels working. Unfortunately all four wheels are locked in stable directions. Three wheels want to shop and the fourth wants to go to the parking lot.*

*Erma Bombeck. (1978). If Life is a Bowl of Cherries - What am I Doing in the Pitts?*

#### A2.1 VALUE SYSTEM OF HEAVY LAMBS TO THE US MARKET

**L**AND-BASED PRODUCTION, A, takes place on a North Island hard hill country farm. The 211ha breeding unit is a typical small family farm in a summer wet district. The land class precludes much finishing, traditionally stock has been sold on the store market in forward condition. Some lambs, say 15%, are suitable for processing but the majority are sharefarmed on a finishing property elsewhere. The farmer owns shares in a farmer-owned and controlled exporting, and distribution company that markets chilled lamb predominantly on the western seaboard of the US.

Lamb is processed, packaged and stored by a processor on behalf of the farmer-owned company, killing charges are determined in advance, and conferred through mutual agreement between the processor, B, and the exporter, C. Procurement is directed by a company representative at the processing plant. Coordinated supply is maintained throughout the year by an administrator employed by the processor's procurement agency. Lambs are drawn from farmer shareholders participating in the scheme, and those shareholders who participate well in excess of their shareholding.

The land-based producer's goal is "to receive the amount paid by the consumer less the costs incurred of getting it [the lamb] into the marketplace". The farmer-company's goal is to "remove the big fudge between the market and the farmer; to try to get the farmer and the market closer together to supply product to order". Farmers, therefore, receive the entire sum the market produces less direct costs.

The farmer-owned company has identified and developed a niche market for heavy lambs (18-24kg carcass weight, 3-15mm GR<sup>77</sup>) sold directly to restaurants, supermarkets, and hotels. The one organisation owned by A is, therefore, integrated from C through G. There is very limited additional processing in the international market, E. Processing in the international location is completed only as required, rather than on a programmed basis. In effect the farmers are themselves exporters who contract the services of the company to coordinate supply, organise processing, import, distribute, and market the product.

The farmer-owned company was established as a cooperative of 98 members with four directors. The company has since been restructured as a company following the need for additional capital. Farmers hold a majority shareholding, the balance is held by other participants in the value system. To date, approximately 50% of the farmer-shareholders have supplied product.

Despite best efforts on behalf of the farmer-owned company there remain some 16 participants both on- and off-line in the value system between A and H including various transporters, brokerage agents, and government organisations (MAF, USDA) and so on. The farmer-owned company endeavours to only use owner-operated participants in the value system, and acknowledge that they prefer to seek services where an open market exists. The exceptions are the government organisations, shipping cartels, and the processor: competition amongst the two former participants can't be altered, only different services can be sought. The processor was selected on the basis of trust: Directors of the farmer-owned company considered they could trust the processor.

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<sup>77</sup> GR is a measure of fat depth over the rib, measured directly on the carcass.

All product is sold on the basis of owners' account. Farmers receive the balance of payment (some 30-40%) above that paid by competitive processors' schedules at the end of the financial year. Actors throughout the value system await information, and respond accordingly. They seek increased responsibility and expect to be rewarded for their effort.

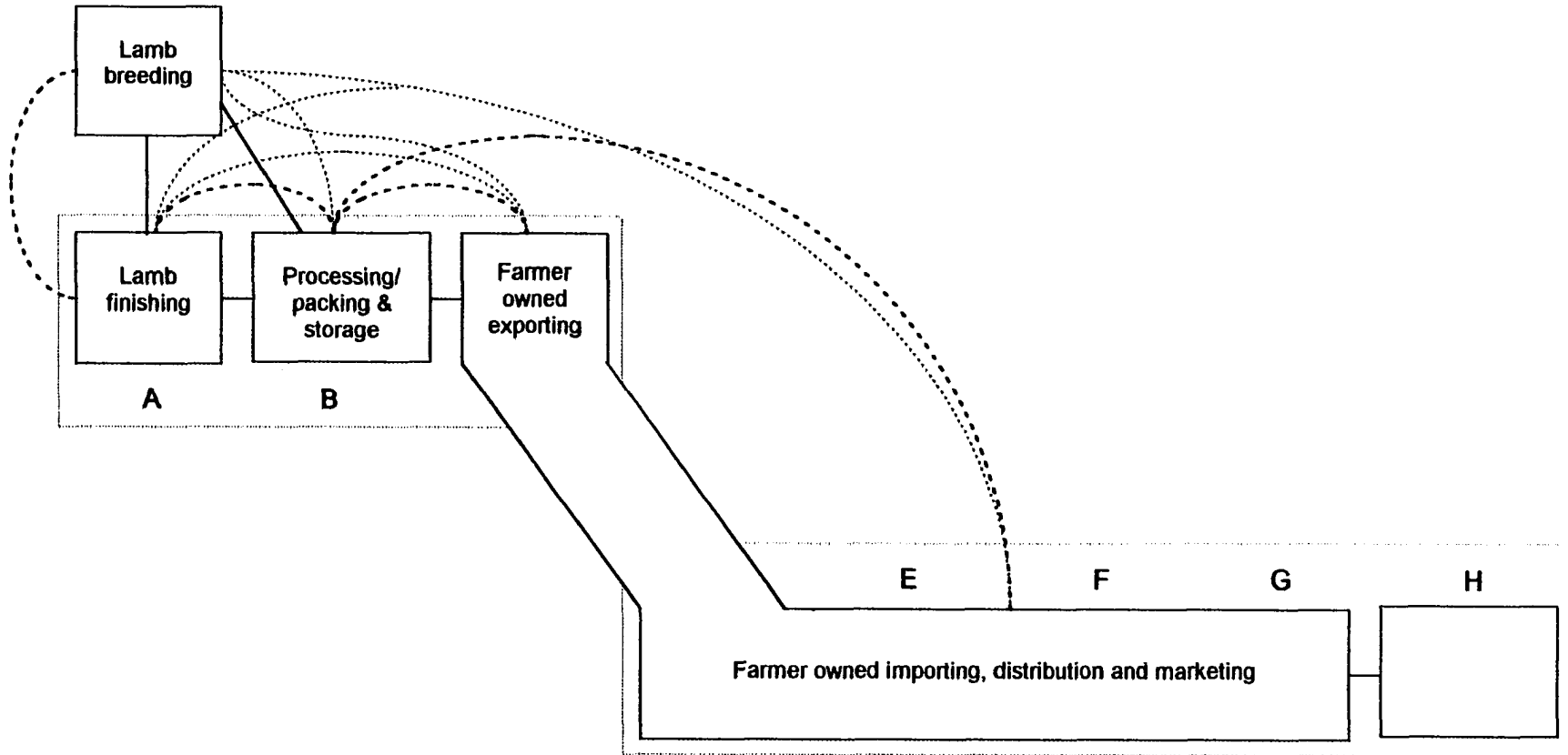
There are two competitors to the value system. They comprise first, other domestic processors and the live-export trade attempting to procure livestock and second, Australian meat exporters in the US. Australian meat exporters have a price advantage in the market due to subsidised air freight through their national carrier Qantas. The value system is relatively small scale, and tends to be ignored by other New Zealand based actors in the industry.

The value system, depicted as a modified version of the Z-form Model, is presented as Figure A2.1. The lamb breeder, finisher, processor, and farmer owned importer, distributor and marketer are on-line to product flow. The exporting function of the farmer owned company is off-line, however, home-base location activities include the coordination of transport to a port, brokerage, shipping, and inspection. Business relationships are depicted as dotted lines, in preference to solid lines depicting the movement of product flow: *strong* business relationships are depicted as heavy lines whereas weak relationships are depicted as light lines.

Despite farmer-owned and operated downstream operations the business relationships between farmer suppliers and the market are relatively weak. Information flow is commensurate with each of the business relationships. It is, however, an intention of the distribution function to provide suppliers with a detailed account of the cost of all activities within the value system, "but it won't be publicised". Such information would alleviate tensions currently held by suppliers.

The exporting stage, C, is integrated through to marketing, G, represented in the diagram as seamless stages. It should be recalled, however, that numerous actors and participants are involved in both off-line and on-line functions particularly during exporting/importing.

Figure A2.1. Z-form Model depicting a farmer-owned and controlled value system distributing heavy lambs in the US.





## A2.2 VALUE SYSTEM OF LAMB PRODUCTS TO GERMANY

**C**ONTINUOUS SUPPLY OF LAMB to the processor, B, is provided by a specialist lamb-finisher farming in Central Hawkes Bay. Land-based production, A, takes place throughout the lower North Island. The lamb finisher “sharefarms livestock on behalf of breeders”, and buys lambs on the spot-market. The system appears to be unique, resulting from five years of near continuous evolution and adaptation on behalf of the farm family. The farmer does not hold capital investment in the value system beyond the farmgate. He has, however, developed strong business relationships with the processor, the exporter, and a weaker relationship with a foreign importer and distributor.

Lamb is processed at a privately owned specialist plant. Procurement is contracted by the processor to an outside organisation with the objective of maintaining continuous supply - suppressing the effects of seasonality. The processor’s strategy is “to involve all industry participants in the long term satisfaction of customer needs”. The strategy is achieved through the weekly dissemination of information and publication amongst suppliers of long term schedules. The lamb finisher has a contract to supply a fixed quantity of lambs to the processor on a weekly basis. Incentives are paid by the processor to induce out-of-season supply, reward the fulfilment of contracts, and encourage farmers to draft their own livestock.

Exporting, C, is undertaken by a specialist who also does not hold assets outside of the value system stage. Processing and packaging is completed by the processor to specifications met by mutual agreement by all parties concerned - customer, exporter, and processor. Product, therefore, reaches the international customer in the form in which it leaves the processor. (Two other exporters also employ the services provided by the processor, one of which is the farmer-owned company described in Section A2.1. Collectively the three exporters take all the processed product. The three exporters have been *selected* to provide complementarity rather than create competition, although at times tensions exist between the exporters).

The exporter provides continuous supply (weekly or monthly) to customers in the international location. However, some variability in supply remains, described as “market driven intention, [mitigated by] procurement push”. Product is forward ordered, rather than supplied on a contractual basis, from the international location. The exporter maintains dialogue with other processors and exporters in the home-base location, notably marketers in one of New Zealand’s larger multiplant processing companies. In one instance the exporter has established a collaborative agreement with a major New Zealand based integrated processor and exporter so as to minimise competition in a specific market.

The importer and distributor is a 125 year old firm based in Hamburg. The firm, Gebr Kruse, imports red meats from the US, South America, Australia, and New Zealand. The importer then sells product to supermarkets, restaurants, and hotels in Germany. The importer maintained a strong business relationship with the processor and the exporter, and continues to maintain a weak relationship with the lamb-finisher despite taking business to another New Zealand exporter<sup>78</sup>.

The value system is not integrated, and contracts exist only between the land-based producer and the processor in an attempt to maintain structure. Despite the lack of integration the value system is structured and deliberately coordinated by all participants but notably the processor. The processor considers that investment beyond a specialist stage in the value system is symptomatic of failure: “you don’t need to own the entire value system”. Wealth in the value system is generated in response to the, near, free flow of information. Actors then adapt and respond in accordance to market needs, tempered by the ability of the value system to supply. The distribution of wealth beyond that retained by the importer, exporter, and that charged by the processor is influenced by competition elsewhere. Nonetheless, the processor has maintained a very stable supplier base amongst land-based producers for near a decade.

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<sup>78</sup> The importer sought product under better terms from Fortex. Fortex was subsequently declared bankrupt (Hall, 1994; Weir, 1994a, 1994b), the subject of an insider trading investigation (Booker, 1995), and the CEO found guilty of fraud.

The modified Z-form Model, depicting the value system, is presented as Figure A2.2. The meat importer and distributor sources product from other countries, including lamb from Australia. Depiction of business relationships conforms with the previous model.

### **A2.2.1 Mutton to Asian distributors**

The third value system studied is a development of the second model. In this value system the exporter has acquired a 49% share in an alternate processing company depicted as seamless stages of processor and exporter. The processor stage boundary is broken to denote partial ownership. The processor in the previous discussion does not have sufficient capacity or capabilities to supply all the exporter's requirements. The finishing farmer in the previous example provides two-tooth ewes directly to the processing company. Business relationships are maintained between the finishing farmer, the processing company's procurement agent, and the exporting office as depicted in Figure A2.3.

Business relationships between the exporter and the importer in the international location take the form of an "unwritten verbal understanding". The exporter has no desire to integrate forward as importation and distribution most often requires full product lines, that is red meats, white meats, game and fish.

The extent to which business relationships have been developed may be best explained by way of an example. Farmers supplying mutton for processing are generally paid on a net price (say \$20 per head). Payment on a net price places the risk on the processor, consequently the farmer receives less money because the processor carries the burden of variability in liveweight, fat cover, and animal health. The mutton finishing farmer, lower A in Figure A2.3, is paid by the processor on a liveweight basis: cents per kilogram carcass. In doing so the processor shifts risk onto the farmer and rewards the farmer with greater income. Further, the farmer knows what margin is available and can buy-in and finish mutton accordingly.

Figure A2.2. Z-form Model depicting chilled and frozen lamb products exported to Germany.

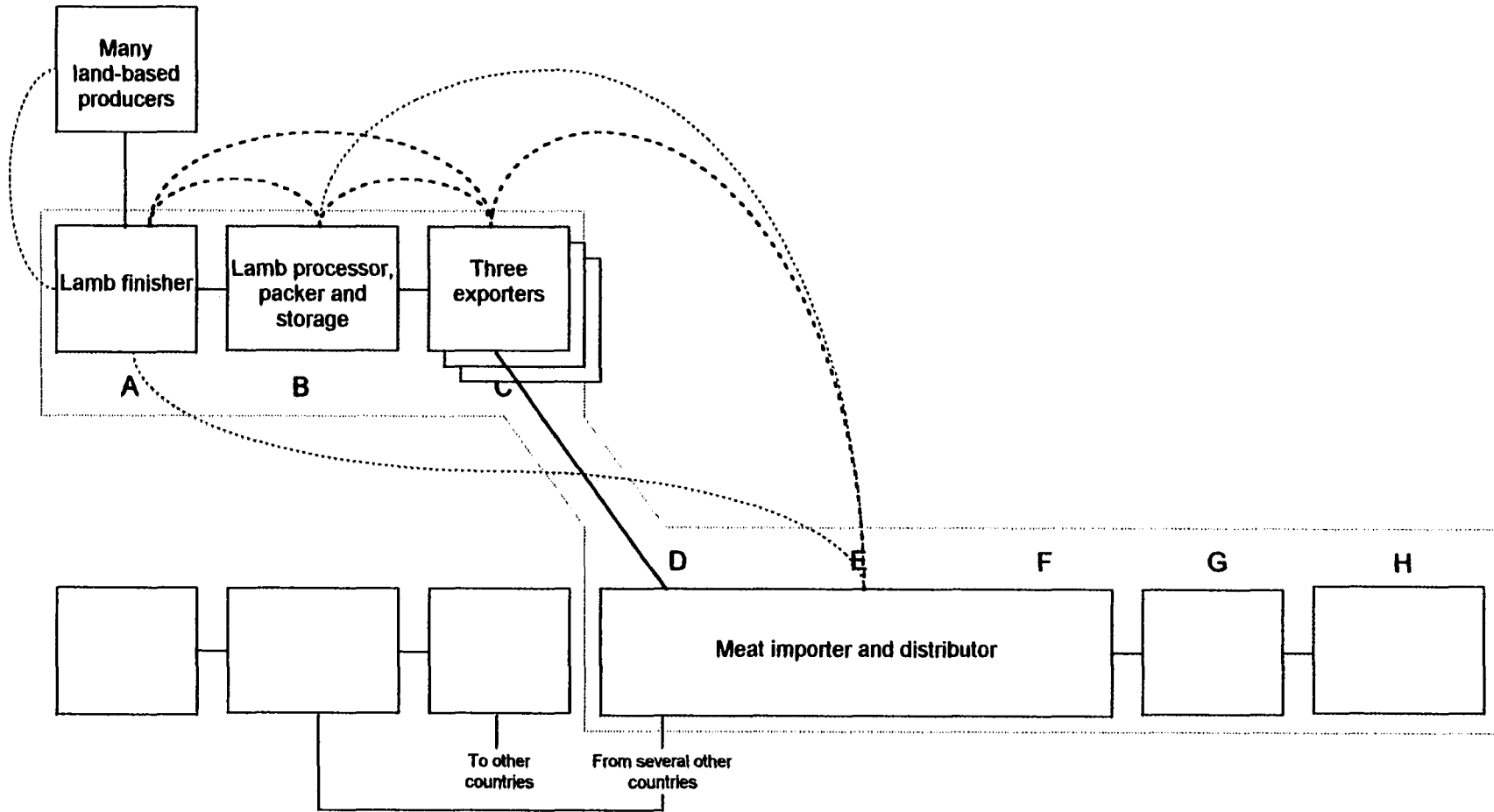
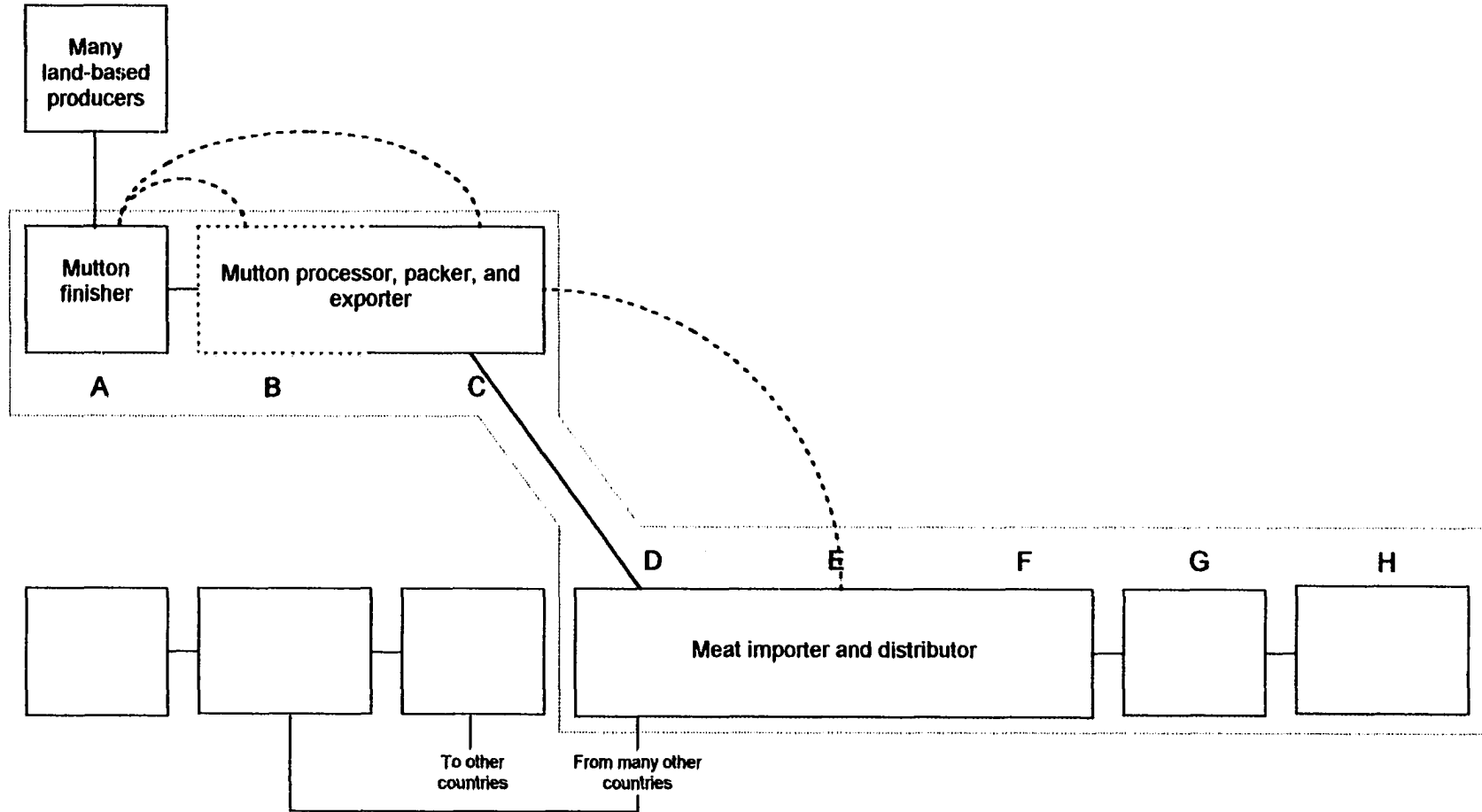


Figure A2.3. Z-form Model depicting mutton products exported to an Asian importer.



## **A2.3 INTEGRATED MEAT PROCESSING AND DISTRIBUTION VALUE SYSTEMS**

**D**ESCRPTIONS OF FOUR VALUE SYSTEMS involving an integrated multinational meat company are presented in this section. The four value systems cover a range of products, markets, and various stages of integration. The processor also supplies lamb and mutton carcasses on spot-markets in various international locations. While some of these sales have resulted in relatively stable business relationships they add little to the discussion that has not been reported elsewhere, in particular in Chapters One and Two. In fact, Porter (1990) may have been referring to the attributes of these transactions when he stated that “the capacity to compete in them is more explicable using classical theory” (p. 28). Concepts relating to configuration and management have been drawn from all of the processor’s value systems studied. Those concepts are reported in Section 5.5.2.

### **A2.3.1 Lamb products to France**

The land-based producer, A, has a weak relationship with the processor. The processor has endeavoured to structure this relationship with supply contracts which include various incentives. Not all product destined for France is acquired through contractual relationships, the balance is purchased from producers on the spot-market. Lamb production often takes the form of two-tier breeding and finishing similar to that reported in the previous section, although production for the Christmas market requires early finishing. The case study farm is a 414ha property located in a Hawkes Bay district that receives reasonable summer rainfall. All stock breed on the property is, therefore, finished for sale to processors. In some instances livestock contracts are entered into by the farmer, in others the farmer sells on the spot-market. The decision to supply on contract is based on the farmer’s expectation of market demand when livestock is ready for slaughter. The farmer has developed a business relationship with livestock agents employed by two processors, and stock and station firms (farm input industry).

Richmond Limited, the processor (B and C), was established in 1909 and formed into an unlisted public company in 1930. Shares are held by some 2,030 investors of

which more than 60% are owned directly or indirectly by farmers. The single largest shareholder is Primary Resources Limited (33.9%) - a wholly owned subsidiary of the NZMPB - a further 16% of shares are held by employees. Richmond is a fully integrated company controlling each stage of the value system, depending on the market, from procurement (between A and B) to marketing, sales, and customer service. Richmond “is committed to meeting the separate needs of North Island livestock producers and global consumers of meat and associated products through excellence in processing and marketing of quality products [Mission Statement]”.

The processor exports beef, lamb, mutton, and venison to 33 countries. The majority of beef is exported for processed beef products in North America. Lamb is most often exported frozen, chilled lamb is sent by sea, and air to North America, Asia, Europe and the Middle East. Richmond, like the exporters in the previous sections, has the capacity to export portion controlled lamb cuts: all labelling, “including supermarket bar-coding”, is completed in the home-base location. Venison, and deer coproducts are exported to North America, Europe and Asia. Richmond currently contracts venison processing, and packaging to another processor. In New Zealand venison is a game meat. The control and licensing of the industry is administered by the Game Industry Board. Game cannot be processed in the same plant as lamb, mutton, goat, or beef.

The company owns five processing plants - three beef, and two mutton and lamb - plus a tannery and fellmongery located, predominantly, in the lower North Island. Richmond has foreign offices in Britain (two), Brussels and Bahrain which provide a “direct extension” to stages of the value system located in New Zealand. One of the British subsidiaries (Richmond Lonsdale) is responsible for providing a basket of international products to their customers alongside NZ product.

The sole French importer, D, of Richmond products focuses business activity on importing lamb and venison from New Zealand and Australia - “Down Under”. The importer buys product from two other New Zealand processors in addition to Richmond. The strength of the business and personal relationships between Richmond and the importer is such that when Venison New Zealand collapsed (Riddiford, 1994) - the importer’s source of New Zealand venison - the importer encouraged Richmond to

diversify into the game meat industry (Powell, G., 1994; Lockhart, 1994a). Richmond ventured into venison to meet the competitive threat from other New Zealand venison exporters who were also in a position to supply lamb.

The distributor and marketer account for 50-60% of the imported meat trade in France. The distributor provides full product-line, top-end service to restaurants and hotels through some 30 distribution depots throughout France. The product line includes fruit, fish, white meats, vegetables, game meats, and red meats imported from all round the globe. In total some 900 products are distributed providing a complete service to the customer. The relationship between the distributor and the importer is also strong. For example, the distributor was confronted with cheap New Zealand lamb products when Fortex collapsed. The importer bore the brunt of the *dumping* by reducing the price of product that had already been sold to the distributor thereby ensuring continuity of the business relationship.

Marketing promotions in France for lamb are combined efforts between the processor, the NZMPB, and the importer (depicted in Figure A2.4 as partitions in the marketing stage). The GIB provides a similar role (funding) as the NZMPB for marketing promotions of venison. Competition in France, in addition to other European product, is provided by other New Zealand and Australian exporters. Although efforts by some New Zealand exporters are ignored because "the quality is not there". Competition appears to influence the distribution of wealth within the value system rather than impinging on the value system structure. Product flow and business relationships involving the supply of lamb to France by an integrated multinational meat processor is depicted in Figure A2.4.





### **A2.3.2 Venison products to France**

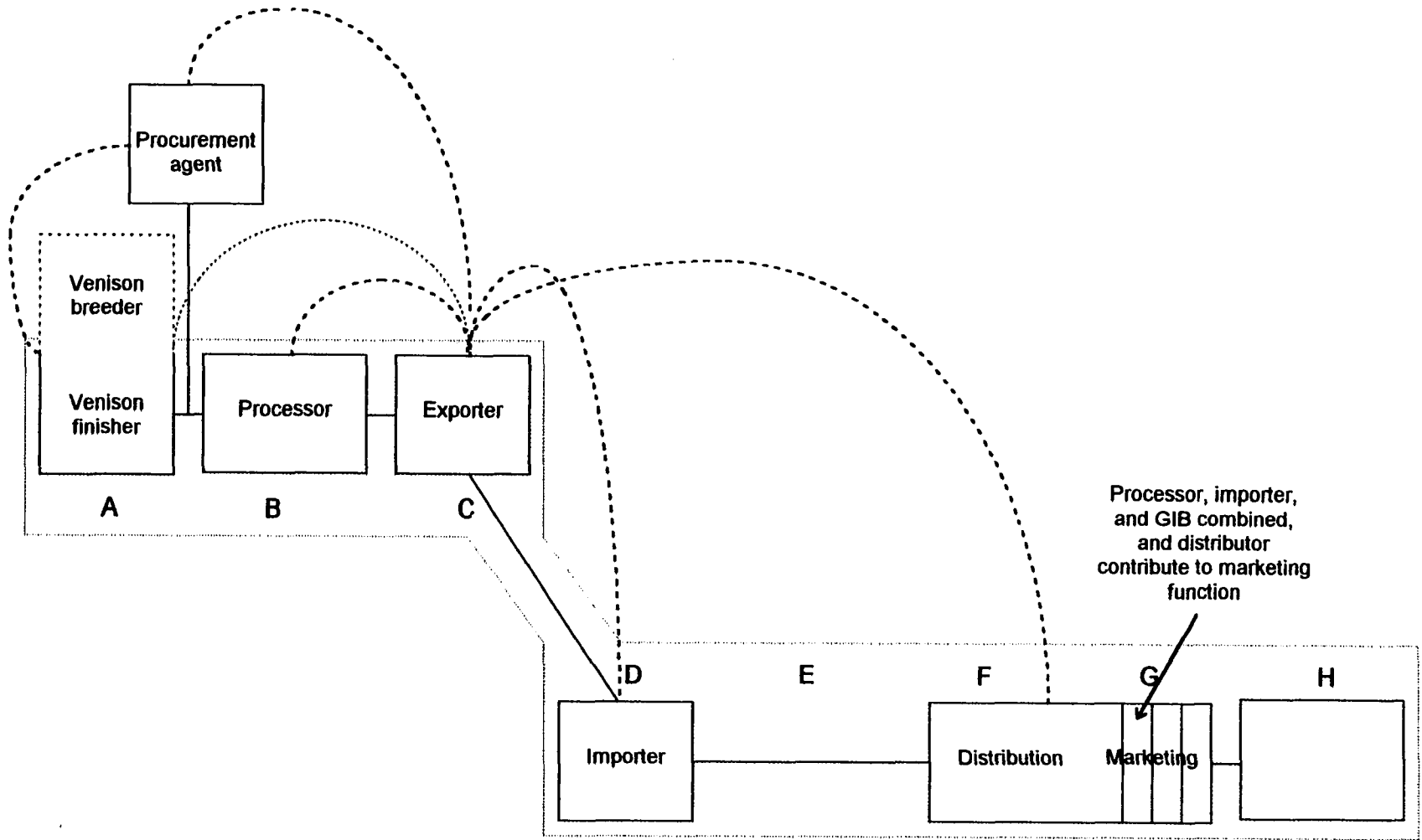
The exporter (in this case Richmond contracts out processing and packaging) has sought business relationships with a number of larger scale venison producers. A pair of land-based producers sharefarm venison with the finisher holding a 50% equity share in hinds on the breeding property. In most respects the relationship between the two farmers and the processor is similar to that described in Section A2.1. The equity position between the producers was developed to *ensure* continuity of the supply of weaners. The attractions of the equity relationship were stated to include tuberculosis (TB) accreditation, additional control over the selection of breeding and finishing stags, and the equitable sharing of all costs associated with finishing deer to slaughter. Venison is supplied to the exporter on contract, contracts are valued by the producers because they strengthen supply agreements and reduce product-price uncertainty.

Richmond have contracted procurement of venison to Wrightsons Ltd, a diversified stock and station firm. The deer farmers have a strong business relationship with the agent responsible for procurement and regard that relationship as being more important than that with the processor, “you could have the world’s best processor and if you have the world’s worst agent people wont deal with them”. Richmond considers it necessary to maintain business relationships with suppliers rather than absolve upstream responsibilities to contracted procurement agents. The land-based producers considered that Richmond’s existing marketing and distribution structure can only be beneficial to the generation and distribution of wealth from the value system.

The venison processor gets paid a killing fee for meeting Richmond’s specifications. Processing requirements, price, quality, yields, and packaging are negotiated in terms of an annual contract. The exporter provides strict cutting and packaging to meet the distributor’s requirements. Product flow downstream from the exporter and the nature of business relationships in the international location is identical to lamb (discussed in Section 3.3.1). The value system is depicted as Figure A2.5.

The procurement agent is critical to the success of the value system and has been depicted off-line of product flow. The strength of relationships is depicted as before.

Figure A2.5. Z-form Model depicting an integrated processor exporting venison to France.



### **A2.3.3 Lamb products to Denmark**

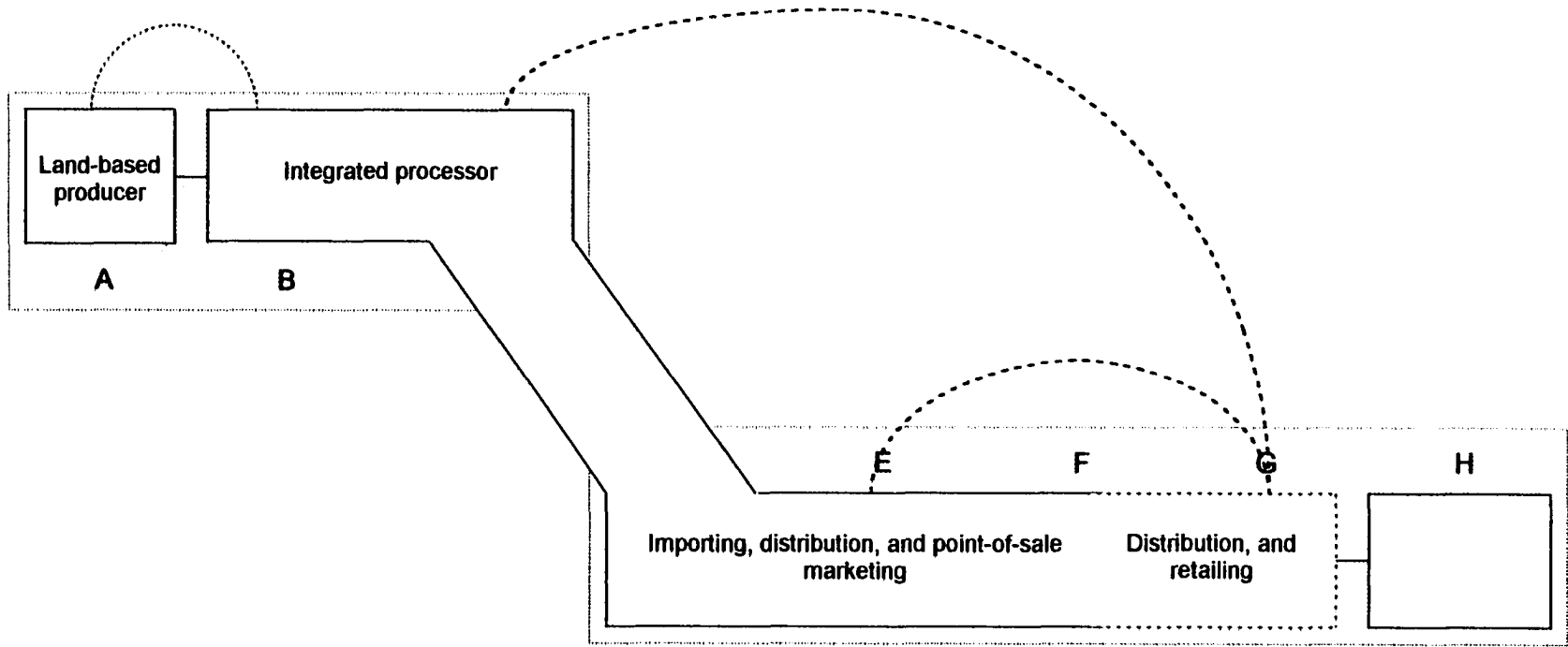
The processor owns some 35 display freezers located throughout Dansk: a Danish supermarket chain. The business has evolved in the form of a strong business relationship between Richmond and Dansk. Effectively Richmond are participating in the retail function, and contribute to customer service, marketing, and point-of-sale advertising and promotions in conjunction with the NZMPB. While there is no long-term exclusivity agreement between the actors both parties exhibit a long term intent.

Richmond Europe (the Brussels subsidiary) delivers product to the supermarket chain's central distribution facility. Mutual dependency has been created owing to the equity share in retailing held by the processor. The value system is effectively closed to the apparent discontent of other New Zealand exporters. For example, while other exporters "have not made a serious attack to break in and chuck us [Richmond] out", they have pushed lamb legs through a major retail competitor as a loss leader. Specifically, Richmond's lamb legs were sold by Dansk at D89Cr, competing supermarkets were selling similar NZ lamb legs at two (2) for D59Cr (the equivalent of NZ\$8.24 per leg - less than the prevailing price in New Zealand). However, Richmond state that it "is not as simple as pointing the blame at New Zealand competition". Unlike Richmond the competitors' NZ suppliers appear to have no influence over the retailer. The competitor's value system does not appear to be structured, and management of successive stages does not appear concerned with the repatriation of wealth to NZ participants. The Z-form Model depicting product flow and business relationships is presented as Figure A2.6.

### **A2.3.4 Lamb products to North America**

Richmond exports chilled and frozen mutton and lamb to North America where it is imported and distributed by the New Zealand Lamb Company. The New Zealand Lamb Co was established by Primary Resources Limited (PRL), an investment arm of the NZMPB, Richmond is now one of four NZ exporters with a controlling share.

Figure A2.6. Z-form Model depicting an integrated processor distributing, and marketing frozen lamb in Denmark.

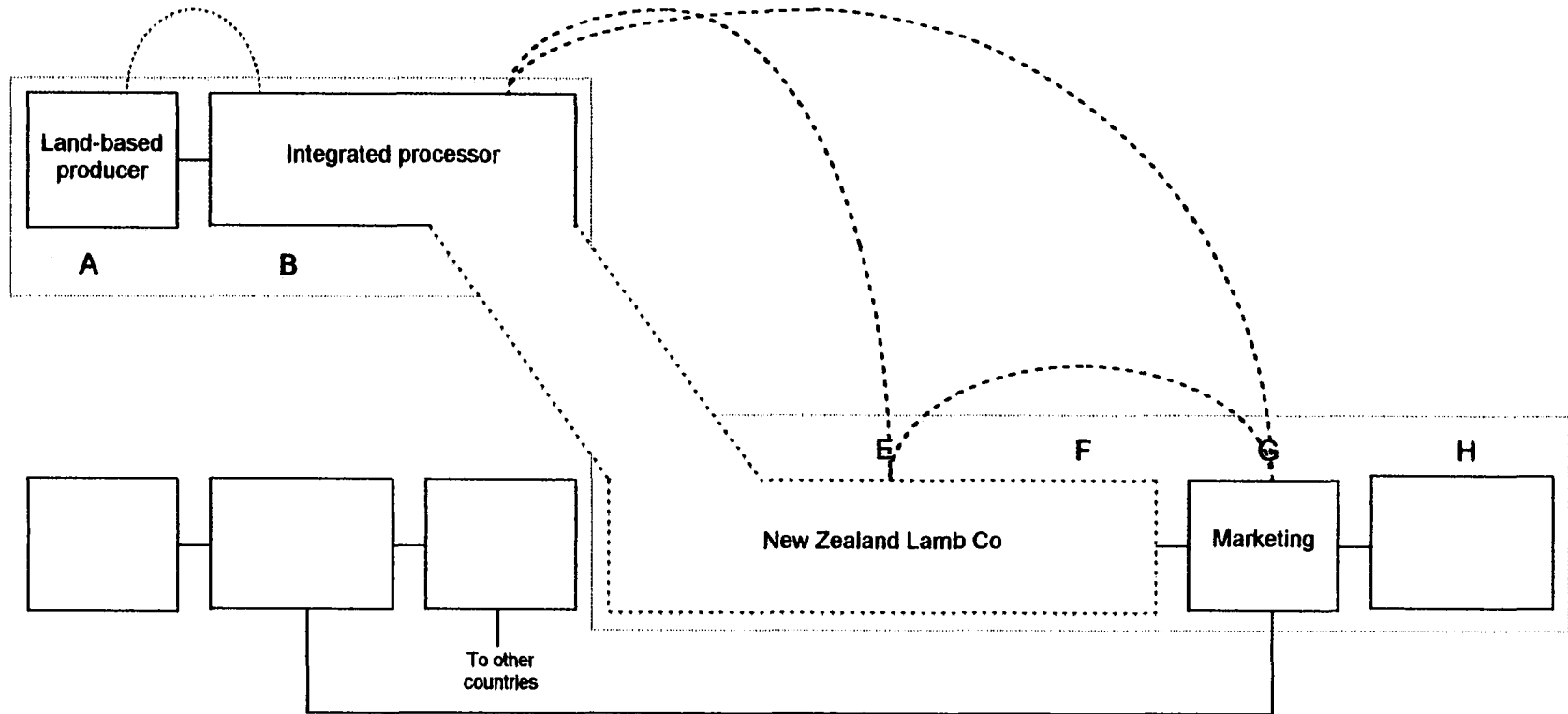


The New Zealand Lamb Company holds sole rights for the importation, additional processing, and distribution of NZ lamb and mutton in Canada, and is responsible for the majority of lamb and mutton products into the US. Some large NZ integrated processors, in addition to specialist exporters, do not participate in direct ownership of the Lamb Coy and export NZ product as competitors into the US. The Lamb Coy accounts for 50% of the lamb market in Canada, and has the highest market share in the US.

The NZ Lamb Coy effectively tenders supply of product to the majority shareholders - AFFCO, Alliance, and Richmond. Supply agreements can be regarded as complementary for frozen product, chilled product supply is negotiated separately. Richmond is establishing business relationships with end-customers of chilled product in the North American market. However, they currently have no direct liaison with consumers of frozen product. Competition is provided by Australia in both Canada and the US, and in the US competition is provided by Australia and other NZ exporters.

Richmond have contributed to promotion activities alongside The NZ Lamb Company. The Lamb Coy have established business relationships with retailers and end-users in both Canada and the US where lamb is marketed as 'New Zealand spring lamb'. The business relationships, product flow, and ownership of stages in the value system are depicted as Figure A2.7.

Figure A2.7. Z-form Model depicting an integrated processor exporting chilled lamb into the US and Canada.



## A2.4 NEW ZEALAND PIPFRUIT INDUSTRY'S VALUE SYSTEMS

**A** DISCUSSION of the generic configuration of the New Zealand pipfruit industry was provided in Section 5.4.1. The New Zealand Apple and Pear Marketing Board (NZAPMB) is, in effect, a grower-owned and controlled cooperative. Exclusive rights for the acquisition of export crop are upheld through legislation. Export licenses can, however, be granted for specific activities in the international location. The development, dissemination, and granting of export licenses to third parties is controlled by the Board to ensure that only those activities considered complementary proceed. ENZA<sup>79</sup> branded fruit are exported to 60 countries, returning some NZ\$556m in 1995. The Board maintains a price premium over other southern hemisphere exporters in near all markets in which it supplies fruit. The primary objective of the NZAPMB stated as their mission statement is to “maximise sustainable export returns to New Zealand and pipfruit growers”. The Board’s vision is to be the “world’s foremost pipfruit marketing organisation in order to achieve premium returns through an effectively integrated volume business and excellence in value creation, customer satisfaction and innovation”.

The Board competes alongside producers, and fruit distributors in the domestic market which has been deregulated since 1994. Fruit processing facilities are owned by a Board *subsidiary* Frucor Holdings Ltd which has superseded the role of much of ENZA Commercial Holdings Ltd. Frucor Produce Ltd supplies the domestic fresh fruit and produce market, Frucor Beverages Ltd markets beverages on the domestic market, and Frucor Processors (NZ) Ltd produces fruit and vegetable juice concentrates.

Foreign subsidiaries are owned in Australia - Fruitmark Pty Ltd - and Chile - Zeus Service S.A.<sup>80</sup>. Fruitmark “deals in processed and dehydrated foods and juice concentrates” and Zeus, as discussed in Section 5.4.1, provides access to and packaging facilities for Chilean stonefruit, grapes, and pipfruit which is used to extend the Board’s

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<sup>79</sup> ENZA is the NZAPMB’s brand.

<sup>80</sup> As of 01 September, 1995 Zeus Service S.A. was the seventh largest exporter of Chilean fruit.



seasonal presence in the international marketplace. The Board also holds a minority shareholding (15%) in Oppenheimer, a US/Canadian fruit and produce broking and distribution network.

The New Zealand government, by providing legislative monopsony for exporting pipfruit, is regarded by the Board as a value system stakeholder. Hence the mission statement is somewhat broader in terms of identifying what otherwise may be considered the appropriate stakeholder group: shareholders (producers) employees, suppliers, and buyers.

While New Zealand has a comparative advantage in terms of pipfruit yields (t/ha) that advantage is eroded by costs such as land, labour, transport, distribution, and marketing. New Zealand is further from markets than other southern hemisphere producers, freighting a low value product that requires refrigeration. The single reason for exporting pipfruit from New Zealand is seasonality. New Zealand, and other southern hemisphere producers, provide fresh pipfruit out-of-season in northern hemisphere markets. The Board is, therefore, endeavouring to develop a sustainable competitive advantage. Four areas have been identified and are being developed to provide competitive advantage first, the production and marketing of a differentiated product. Currently some 80% of gross income is provided from products that are - or were - unique to New Zealand, "much of them home-grown in terms of varieties". Second, competitive advantage is achieved by control of *critical* areas of distribution<sup>81</sup>, particularly those stages - either on-line or off-line to product flow - that provide market knowledge, in addition to those providing a margin for producers. Third, branding must be registered and controlled by the Board. Clearly *New Zealand* is worthless in a deregulated export market. Therefore, the Board has developed a brand - ENZA - and given it "the character" they desired. Finally, competitive advantage is provided by constant innovation. The Board can afford to do things that actors as "individuals are unable to undertake".

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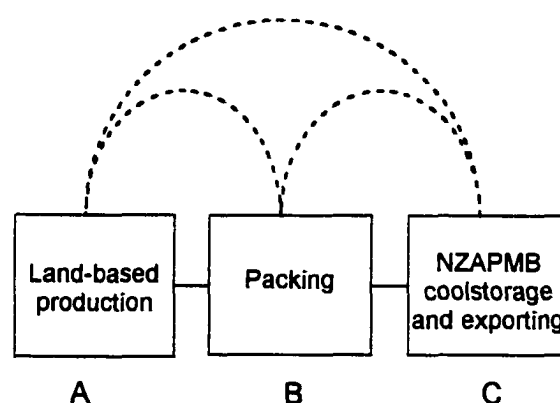
<sup>81</sup> During the 1980s the Board considered it necessary to control as far down the value system as possible.

The NZAPMB has tended to locate offshore marketing activities where apples are an industry namely Seattle, Kent, and Belgium. Ownership of infrastructure is restricted to the shareholding in Oppenheimer (trucks), and the Board wish to be seen as a customer to northern hemisphere land-based producers rather than as a competitor. Three New Zealand pipfruit value systems are discussed in the following sections: US/Canada, Asia, Britain, and Europe.

Upstream activities by the land-based producer, A, packaging and coolstorage, B, are similar for the supply of all markets. Minor differences do exist in terms of spraying and some packaging requirements. The only notable exception is the supply of some apples to the British market where packaging is completed offshore (Kent).

The Board is in the process of separating the coolstorage function from production and packaging. The nature of product flow and business relationships in the home-base location prior to ENZA International realigning the value system upstream are depicted in Figure A2.8. Coolstorage facilities were predominantly, but not exclusively provided by the Board (as was limited packing). One in ten producers had packing facilities in 1989<sup>82</sup> (Lockhart, 1990) and strong business relationships were maintained between all three stages as depicted in the Figure.

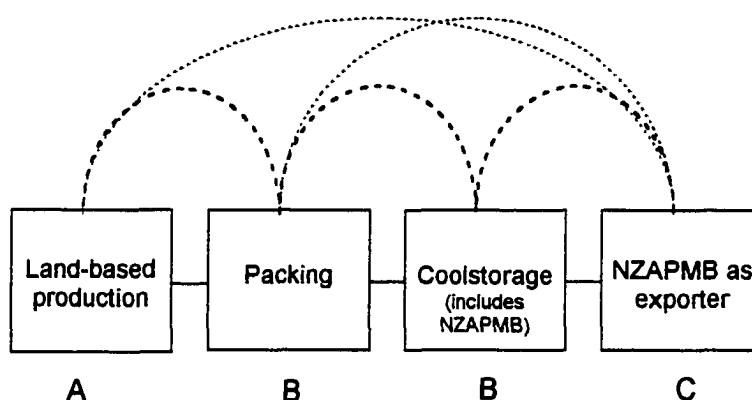
Figure A2.8. Historical product flow and business relationships between upstream stages of the New Zealand pipfruit value system.



<sup>82</sup> In 1994 there were 255 packhouses in Nelson and Hawkes Bay, by 1996 the number of packhouses had declined to 189.

The Board have subsequently sold-down all their packing facilities and are in the process of reducing their own coolstorage operations. Long term coolstorage is now sought on the open market. Product ownership will then change hands when product temperatures are reduced to 2°C. A temperature at which the Board “can do something to fruit” - shipping and distribution. The stages of product flow is similar to that depicted in Figure A2.8, however, the nature of business relationships is importantly different. The Board are structuring the value system to provide an effective interface with the coolstore operator. Coolstore operators will be provided with the opportunity to tender for the supply of pipfruit on a contractual basis. The coolstore operator is then expected to acquire packed fruit. In some instances production, packing, and coolstorage are integrated in others the coolstore interface upstream is with independent packhouses. The nature of business relationships and product flow in the restructured value system upstream of the exporter is depicted in Figure A2.9.

Figure A2.9. Desired product flow and business relationships between upstream stages of the New Zealand pipfruit value system.



The Board calls for four-year nonbinding tenders from coolstore operators. Coolstore operators are, in turn, provided with a guaranteed minimum return. But the real change in configuration is that the coolstore operator now has to acquire their own product. Therefore, third party coolstore operators have been provided an opportunity to invest in the industry. But because coolstore space is finite and production is both seasonal and variable risk has been shifted to the coolstore operator. Data exchange between the coolstore and ENZA is via modem, loading plans are provided by ENZA and the term supplier - in the pipfruit industry - no longer refers to the land-based

producer (grower). The Board will enforce performance specifications with coolstore and packhouse operators by charging initially by charging upstream participants for any additional costs incurred in the international location such as repacking. Because the value system was in the process of being restructured during the case work actual product flow was difficult to establish. The case grower and packhouse/coolstore operator were selected by the Board's local Operations Manager in an effort to provide realism, at the expense of continuity.

The case study coolstore operator has recently developed an integrated single-site packhouse/coolstore facility in Hawkes Bay. The coolstore operator has a contract with the Board, and is endeavouring to formalise agreements with growers through contracts. The contract with the Board ensures that the coolstore is loaded to the Board's specifications, inventory systems are in place, quality and atmospheric conditions are set and maintained, and packaging standards upheld. Effectively, the Board controls the coolstore's throughput. In addition to the contracts the operator has developed strong business relationships with the personnel at various levels in the NZAPMB's Hastings office.

The contract between the packer-coolstore operator and growers comprises a letter of intent, and are unlikely to be enforced in court. Growers are provided with a pricing schedule and an indication of what is expected from them. Considerable movement of fruit between alternate packhouses (estimated between 10-20%) occurs annually in Hawkes Bay and it is the packer-coolstore operator's intention to maintain continuity of grower base on an annual basis. The coolstore-packhouse operator intends establishing some form of field representative to maintain continuity of business relationships with growers throughout the year by providing an information system.

The grower, A, owns a 22ha family orchard in Hawkes Bay. Varieties planted include Royal Gala, Fuji, Gala, Braeburn, Buerre Bosc, Duyenne du Comice and Winter Nelis. Production per hectare ranges from 2,500 to 5,000 cartons depending on the variety (40-100 t/ha). The orchard was first planted in 1986, and the most recent plantings were completed in 1993. The grower has never had a "big relationship with the Board". The grower considers the Board a marketing organisation, and believes they

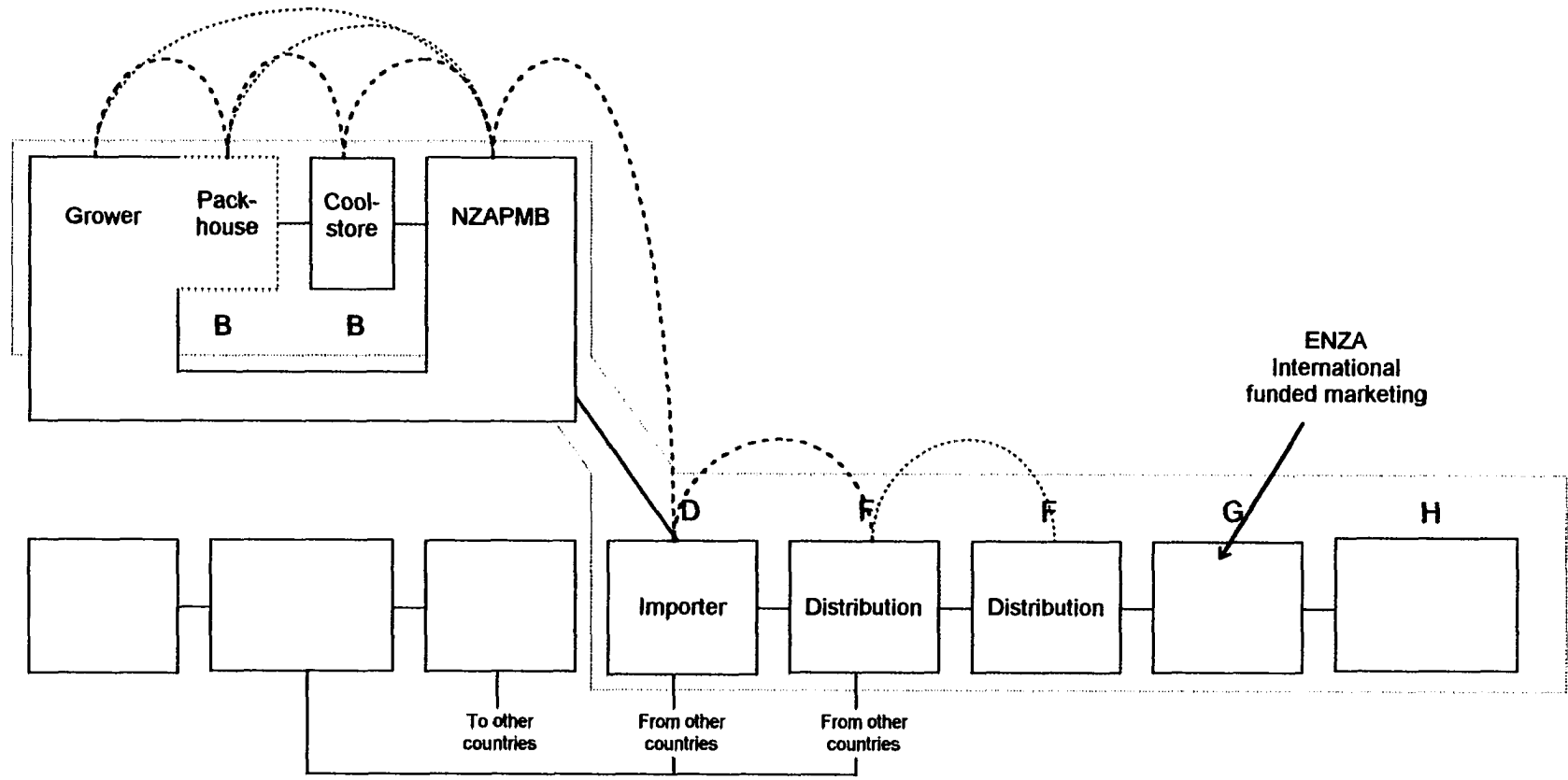
only need sufficient field services to ensure that fruit husbandry prior to submission meets post-harvest requirements. The grower distinguishes between two levels of relationships with the NZAPMB. Relationships with the Board occur at a *political* level, largely in terms of grower control and operational, in terms of supply and marketing requirements. The grower holds concerns about the quality of fruit often submitted to the Board and the lack of accountability downstream. The move to palletisation ought to enhance ENZA International's ability to monitor fruit and provide disincentives to growers submitting fruit with poor storage characteristics - large fruit from young trees.

Fruit is submitted to a packhouse, in which the grower has an equity share. The packhouse employs a consulting firm to provide growers with husbandry advice (some of which is provided free). The intent of the packhouse husbandry operations is to ameliorate difficulties by improving the quality of fruit submitted for packing. In doing so the packhouse and the grower benefit from reduced packing costs. The land-based producer, therefore, has a strong business relationship with the packhouse operator with a high degree of mutual dependency.

#### **A1.4.1 Apples and pears to Singapore**

The supply of apples to ASEAN countries is based on Singapore, separate supply relationships exist for China, Hong Kong, Japan, Taiwan, and Thailand. ENZA has a well established business relationship with two Singaporean importers. Until recently fruit imported into Singapore was subsequently exported into Cambodia, Malaysia, Philippines, Thailand and Vietnam. Despite all markets "having their own intricacies, the retail structure is similar in that is very fragmented". For example, the two importers supply ENZA products to a further 30-40 wholesalers. The product changes hands at the port, and from then on ENZA International has no responsibility and no control (but invests in advertising). The importer sells to panel of distributors/wholesalers for which the importer receives 4%, and the distributor receives 6% of the fruit value. The key business relationship is between ENZA International and the importer, D, no business relationships exist between ENZA and the next stage, F, as depicted in Figure A2.10.

Figure A2.10, Z-form Model depicting the pipfruit value system to Singapore.



Grower ownership of the NZAPMB is depicted as the continuous polygon between A and C in the figure. Third party coolstorage in deference to the restructured value system is depicted as a separate stage. The grower, as in the case study, is depicted having a partial share in packhouse facilities. The strength, or absence of business relationships is represented by the dotted curves as in the previous section.

Essentially “the distributors have been running the business for” the NZAPMB. ENZA won’t deal directly with the wholesalers because it is considered to difficult to manage from New Zealand<sup>83</sup>. The business relationship between the Singaporean importer studied exists with the NZAPMB, rather than employees. The importer Eng Cheong Peng Kee (Pte) Ltd (ECPK) has, in various guises, been buying NZ fruit for some 25 years. Despite the long term nature of the supply arrangement “the cost of production in NZ and the price we can sell it for are two unrelated issues”.

Prices in the Asian market are determined, largely, by US apple prices. The US export some 35-40m cartons to Asia annually (twice the entire NZ export crop). Distribution and retailing is very fragmented, depicted as two successive distribution stages, F and F, in the Figure. Adaptations between ENZA and the importer are ongoing relating to varieties and packing. Personal relationships exist to the extent that inconsistency is tolerated. Threats to the value system reside with the wholesalers. ECPK are not considered to seek alternative fruit to that supplied by ENZA they do, however, import complementary apples and pears from South Africa. Requests to ENZA for product supply by wholesalers is referred to the importer. Asian consumers appear to prefer purchasing fruit and produce from the wet market (street stands) or hawkers (who may consist of a bicycle and carton of apples) in preference to supermarkets. Hence the distribution channel - rather than the value system - is particularly fragmented.

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<sup>83</sup> During the field work ENZA International were in the process of evaluating alternative forms of servicing the Asian market from a Singapore location.

### **A1.4.2 Apples and pears to North America**

ENZA International imports fruit as ENZA Fresh Inc. Distribution to retail chain depots is provided by two distributors in addition to Oppenheimer. ENZA Fresh employs regional brand managers in the US/Canada market (who also market NZ kiwifruit). The regional brand managers provide partnership selling - relationship marketing - to the North American retail industry, akin to that developed in the EC. In doing so ENZA International is able to instil its own market discipline. All product is packed into 40lb<sup>84</sup> cartons in NZ. Requests for alternative packaging such as plastic bags have been thwarted by the USDA who won't clear bins. Therefore, there is no further packaging, E, in the market.

Historically relationships beyond the distributor have been relatively weak. Now ENZA Fresh is developing business relationships with end-users. The regional brand managers now participate in special eventing, advertising, and point-of-sale demonstrations. ENZA Fresh sponsors buyers' tours to NZ to provide key customers with an understanding of the NZ pipfruit industry. The NZAPMB's value system strategy in the US and Canada has been the combined development of the ENZA brand (supported by sponsorship of the Jules Vern Trophy and The Americas Cup) alongside partnership selling.

Competition is provided by out-of-season North American apples kept in storage, and other southern hemisphere producers. However, "the consumer is not impressed with apples" and competition is provided by home-grown summerfruits. Therefore, ENZA has to deliver a varietal mix that meets consumers' demands.

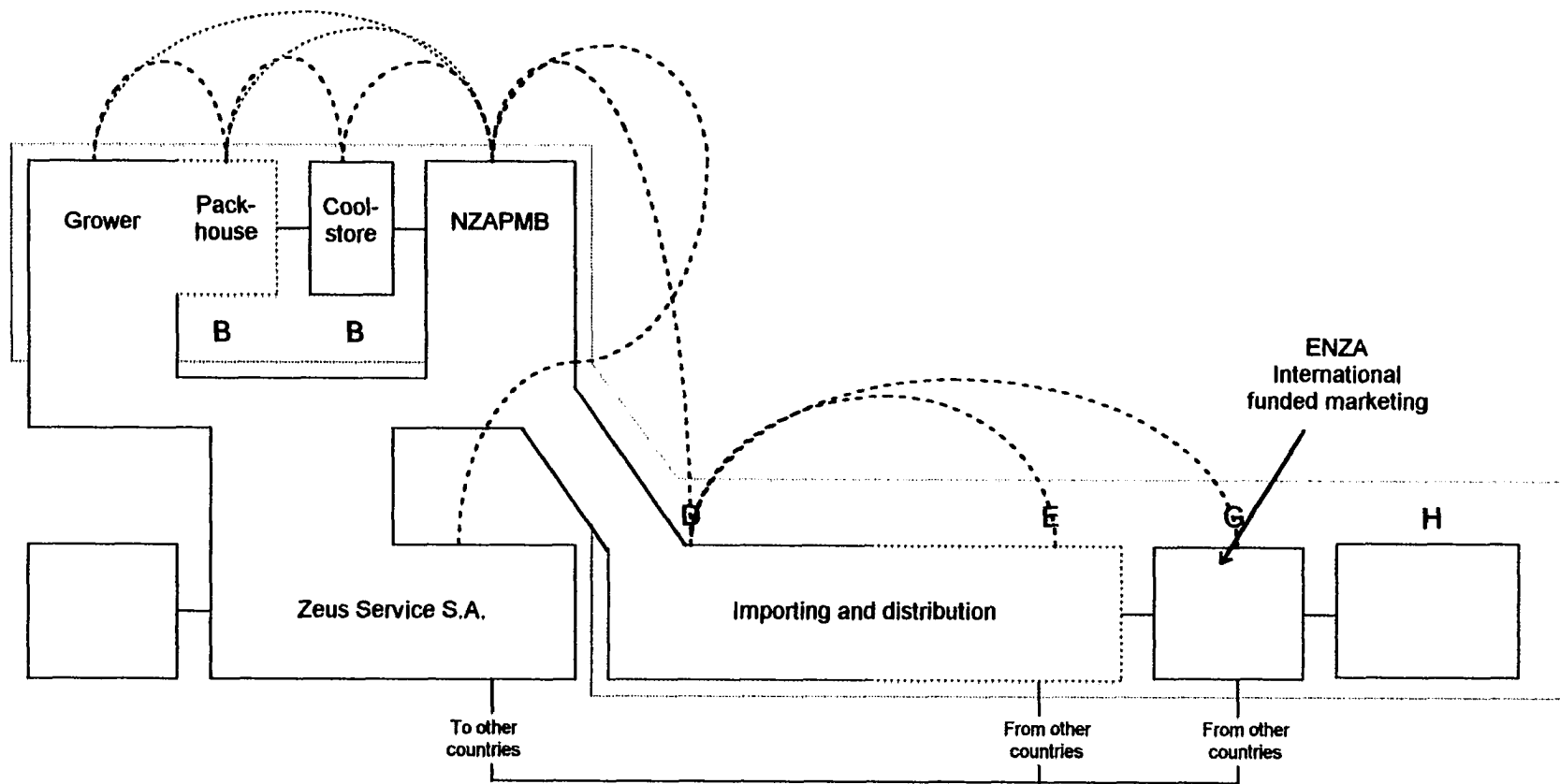
A modified Z-form Model depicting the NZ pipfruit industry value system in the North American market is presented as Figure A2.11. The notation is similar to that of previous integrated models. Access to Chilean fruit through the wholly owned subsidiary Zeus is represented as the continuation of B into the international location, which is in effect a MNE.

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<sup>84</sup> Some 10% smaller than a bushel.



Figure A2.11, Z-form Model depicting the pipfruit value system to US and Canada.



### **A1.4.3 Apples and pears to the UK**

The NZAPMB established the UK operation ten years ago, facilities include offices, and personnel. Repacking and packing requirements are contracted out to existing operations. In 1995 ENZA International exported 1,000 × 415kg bulk bins<sup>85</sup> to the UK, and a further 4,500 bins in 1996. Packing in the international location provides the same flexibility as if the Board were operating in the country itself. ENZA New Zealand (UK) Ltd is an appointed agent of ENZA International.

The strategy in the UK market is to sell to at the furthest point in the value system, that is to keep control of the product for as long as possible. In the UK there are two sectors first, multiples (national buying) and second, general sales (non-centralised buying, regional chains etc...). Multiples are either supplied directly or through a server (panellist/distributor). In the case of Tesco, who have 12 regional distribution centres (RDC), ENZA (UK) sells to the server who then delivers the NZ and Zeus products to the RDC along with “plums and vegetables concurrently”.

Long term business relationships are established between the end-user and ENZA (UK), almost in the absence of the server. A programme for the sale of produce is developed some four to five months prior to the arrival of the new season’s crop. Volumes, varieties, size counts, prices, and marketing activities are planned on a weekly basis. As the season approaches and variability between that forecast and the outcome in NZ is encountered the programme is modified. the programme is, therefore, managed to avoid inconsistency.

Competition to the value system is provided by other multiples, and South African and Chilean produce. During the last four years the major retailers have embarked on a supply reduction programme as the cost of having some 1,500 suppliers proved anticompetitive. ENZA (UK) has one wholesale price for each product. Additional services and activities are used to differentiate between the size of the account. Therefore, competition is reduced to that between retailers, at their own

behest, and other southern hemisphere suppliers. However, UK multiples appear unable to get the range of varieties required from other Southern hemisphere suppliers, at the same time the multiples appear reluctant to “put all their eggs in one basket” and source only ENZA branded pipfruit. New Zealand apples will be sold alongside South African but never the same two varieties in the same store.

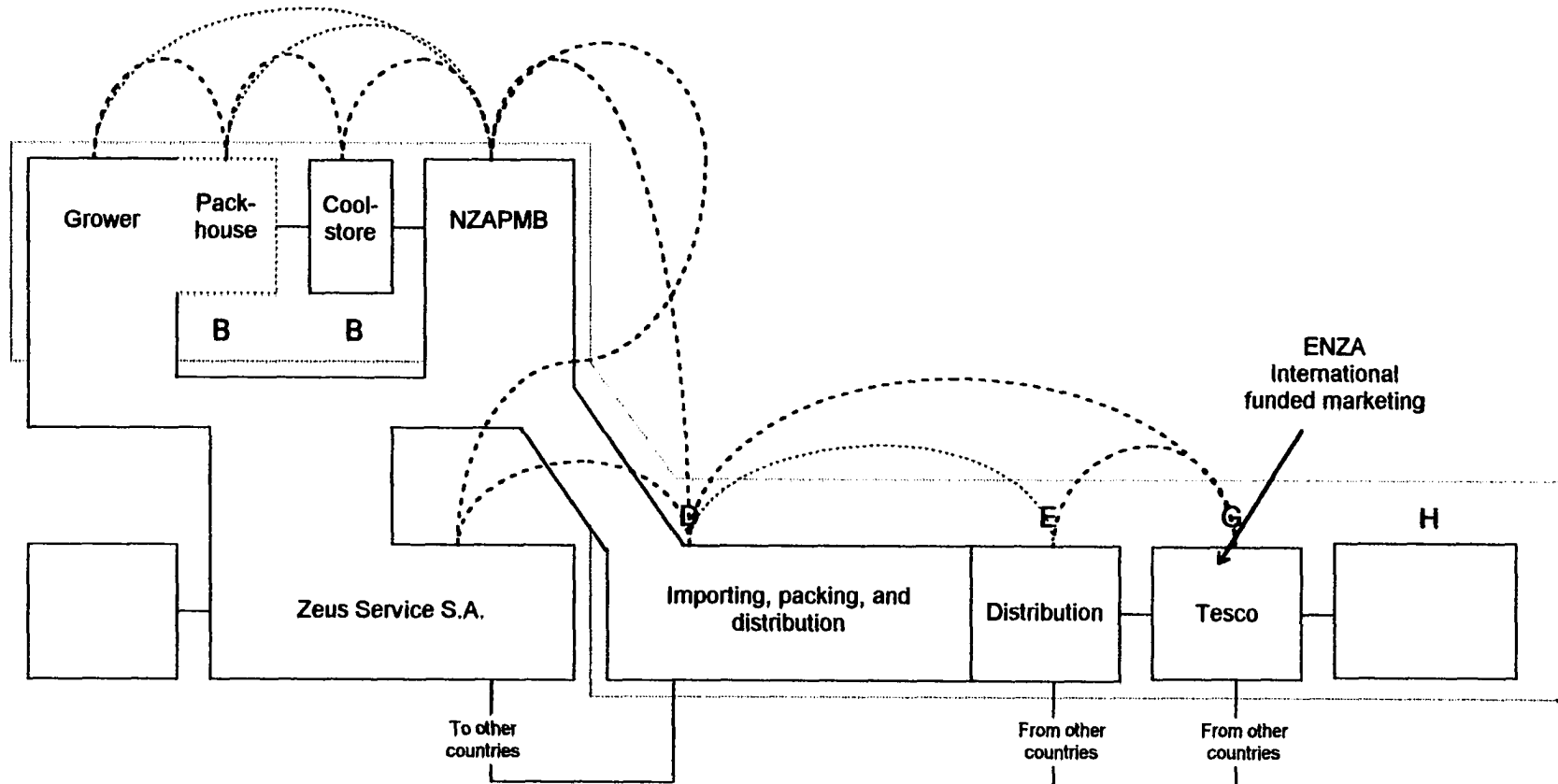
Mutual dependency exists between ENZA, the server, and the multiple. The multiples are dependent on the New Zealand apple industry “reinvigorating the category”. “Apple consumption in the UK is the lowest in Europe, it is lower than in the States, it is bloody abysmal, and it has been going down for the last 10-12 years. The reason that is happening is because the consumer is bored. We have researched them [apples], they are considered either red and soft or green and tasteless. ‘I eat them because someone once said they are good for me’; ‘I am a responsible parent and I buy them for my kids, but they hate them as well’; ‘we all eat them because we think we should’. However, if the multiple provides good products the reaction is astounding, conversion rates exceed 60-70%.

A modified Z-form Model depicting product flow and business relationships between the NZAPMB and its subsidiaries with Tesco is presented as Figure A2.12. The distribution stage is split between ENZA New Zealand (UK), the server and the retailer. Marketing is split between ENZA and the retailer.

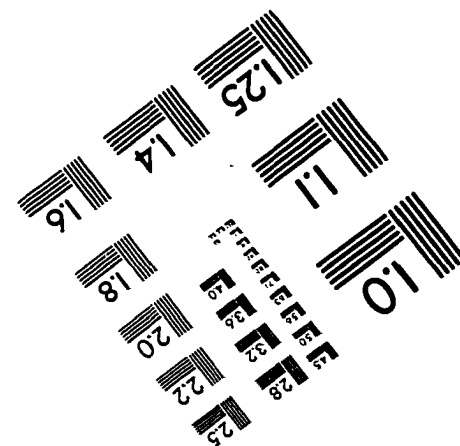
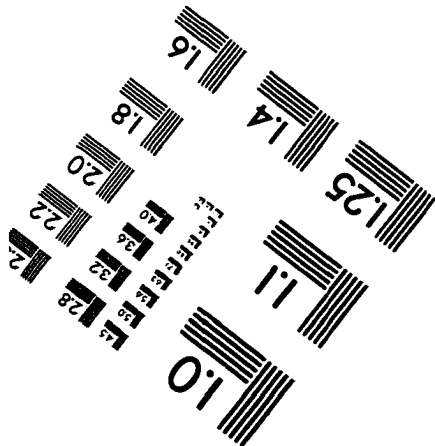
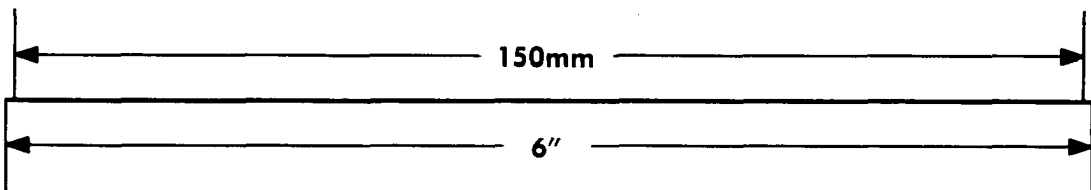
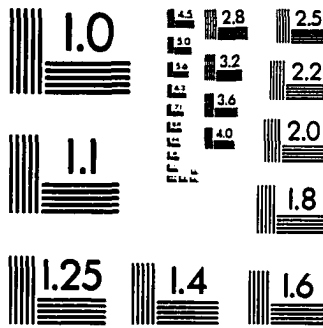
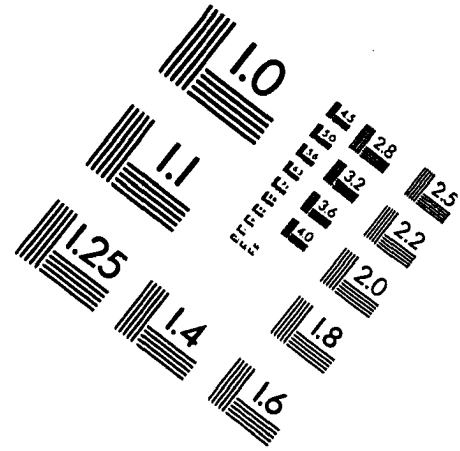
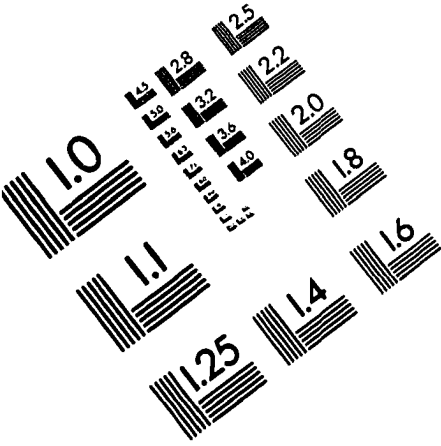
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<sup>85</sup> The bins are then sold to the UK pipfruit industry. The industry has the capacity to absorb 10,000 bins a year - the current expected limit of the bulk freighting operation.

Figure A2.12. Z-form Model depicting the pipfruit value system to UK.



# IMAGE EVALUATION TEST TARGET (QA-3)



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