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**Catching the “Third Wave”:**  
**A comparative institutional analysis on the evolution of trade**  
**and New Zealand's food and fibre sector**

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

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## Abstract

Over the last 80 years three key institutional events have significantly changed the way New Zealand trades – the signing of the General Agreement on Tariffs and Trade (GATT) in 1948; the establishment of the World Trade Organization in 1995; and, and the breakdown of the rules-based trading system from 2017. Despite these shifts, New Zealand remains a globally competitive exporter, particularly in terms of its food and fibre products.

The aim of this research is to determine and explain, in depth, the specific reasons that New Zealand's food and fibre sector has remained successful relative to its competitors, despite the dominant trade theory predicting the contrary. This comparative institutional analysis was done by re-examining key trade and domestic policy. The emergence and identification of the resultant institutions and the accompanying institutional logics was then developed into a predictive tool through which future behaviours, opportunities, and outcomes may be identified. This tool is referred to as the dominant logic matrix and in it, these key events are used as bookends for three dominant logic waves: Wave One (1948-1995), Wave Two (1995-2017), and Wave Three (2017-current), with two identifiable transition periods between each.

The dominant logic in New Zealand's food and fibre sector has already evolved three times in the last eight decades, which can only be observed with the benefit of hindsight. To remain successful for the next 80 years, and beyond, New Zealand's food and fibre sectors will need to use the signals of change observed today, and the retrospective observations from Waves One and Two, to accelerate the whole food and fibre sector's transition to a Wave Three world.

The dominant logic matrix developed from the research is presented as Table 1 (overleaf). The key attributes identified from the research are listed in the first column, and the institutions that emerge from them within each wave are revealed in each of the three subsequent columns: Wave One; Wave Two; and, Wave Three. The two transition periods, as discussed in the research, are also represented in columnal form. Their relatively narrow width being indicative of the absence of institutions, and emergence of change.

## The New Zealand Food and Fibre Sector's Dominant Logic Matrix

<b>Attributes</b>	<b>Wave 1</b>	<b>T1</b>	<b>Wave 2</b>	<b>T2</b>	<b>Wave 3</b>
<i>The world view</i>	Centralised social ethos		Laissez-faire		Unity
<b>Institutional market structure</b>					
<i>The lens</i>	Imperial development		Productivity and efficiency		Global guardianship
<i>International environment</i>	Sovereign-based trade		International rules-based trade, FTAs and MNCs		Collective civil society
<i>Relationship nexus</i>	Government to government		Business to business		Business to consumer
<i>Values of civil society</i>	Socialism and egalitarian		Capitalism		Growing division between socialism and capitalism
<b>How governments operated</b>					
<i>Market access</i>	Government to government		Bilateral FTAs and business-owned relationships		Multilateral FTAs embellished by mutual prosperity
<i>Trade</i>	Quotas and subsidies		Open, rules-based trade		Mutual prosperity and wellbeing
<i>Market structure</i>	Institutionally constrained markets		Open, unconstrained markets		Socially constrained markets
<i>Protectionism</i>	Protectionist		Tariffication		Semi-protectionist
<i>Control</i>	Government control		Corporate control		Consumer control
<i>Integrity system</i>	Government public standards		Industry private standards		Consumer responsive private standards
<b>How agri-businesses responded</b>					
<i>Business model</i>	Single trading entities legislated by government		Deregulated hyper-competitive corporates		Consumer responsive value chains
<i>Source of capital</i>	Debt and equity – imperial and government-supported		Debt and FDI – free market		Values-based – consumer, corporate and pension funds
<i>Source of scale</i>	Volume-based scale		Efficiency-based/profitability scale		Market and consumer-based scale
<i>Wealth creation</i>	Arbitrage of subsidies and market protections		Operational excellence		Strategic product leadership and customer intimacy
<b>The resulting domestic environment</b>					
<i>Knowledge</i>	Public knowledge		Industry knowledge		Modern science, mātauranga Māori, and shared IP knowledge
<i>Innovation</i>	Centralised for public benefit		Privatisation of public knowledge		Collaborative value chain model
<i>Data ownership</i>	Public good		Private good		Network good
<i>Communications</i>	Snail mail		Electronic mail		Social mail

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## List of Abbreviations

ANZFA – Australia New Zealand Food Authority

APEC – Asia-Pacific Economic Cooperation

BAU – Business as usual

CER – New Zealand-Australia Closer Economic Relations Trade Agreement

Codex – Codex Alimentarius Commission

COP21 – 21<sup>st</sup> Conference of the Parties

COP26 – 26<sup>th</sup> Conference of the Parties

COVID-19 – Coronavirus

CPTPP – Comprehensive and Progressive Agreement for Trans-Pacific Partnership

DIRA – Dairy Industry Restructuring Act

ECSC – European Coal and Steel Community

EEC – European Economic Community

EU – European Union

FAO – Food and Agriculture Organization

FDI – Foreign direct investment

FTA – Free trade agreement

GATT – General Agreement on Tariffs and Trade

GDP – Gross domestic product

GFC – Global financial crisis

GHG – Greenhouse gas

GST – Goods and Services Tax

HCIA – Historical and comparative institutional analysis

IMF – International Monetary Fund

IP – Intellectual property

MNC – Multinational corporation

NZD – New Zealand dollar

NZDB – New Zealand Dairy Board

NZKMB – New Zealand Kiwifruit Marketing Board

OECD – Organisation for Economic Co-operation and Development

OIE – World Organisation of Animal Health

Psa – *Pseudomonas syringae* pv. *actinidae*

PVR – Plant Variety Rights

SDG – Sustainable Development Goal

SME – Small and medium-sized enterprises

SPE – Single point of entry

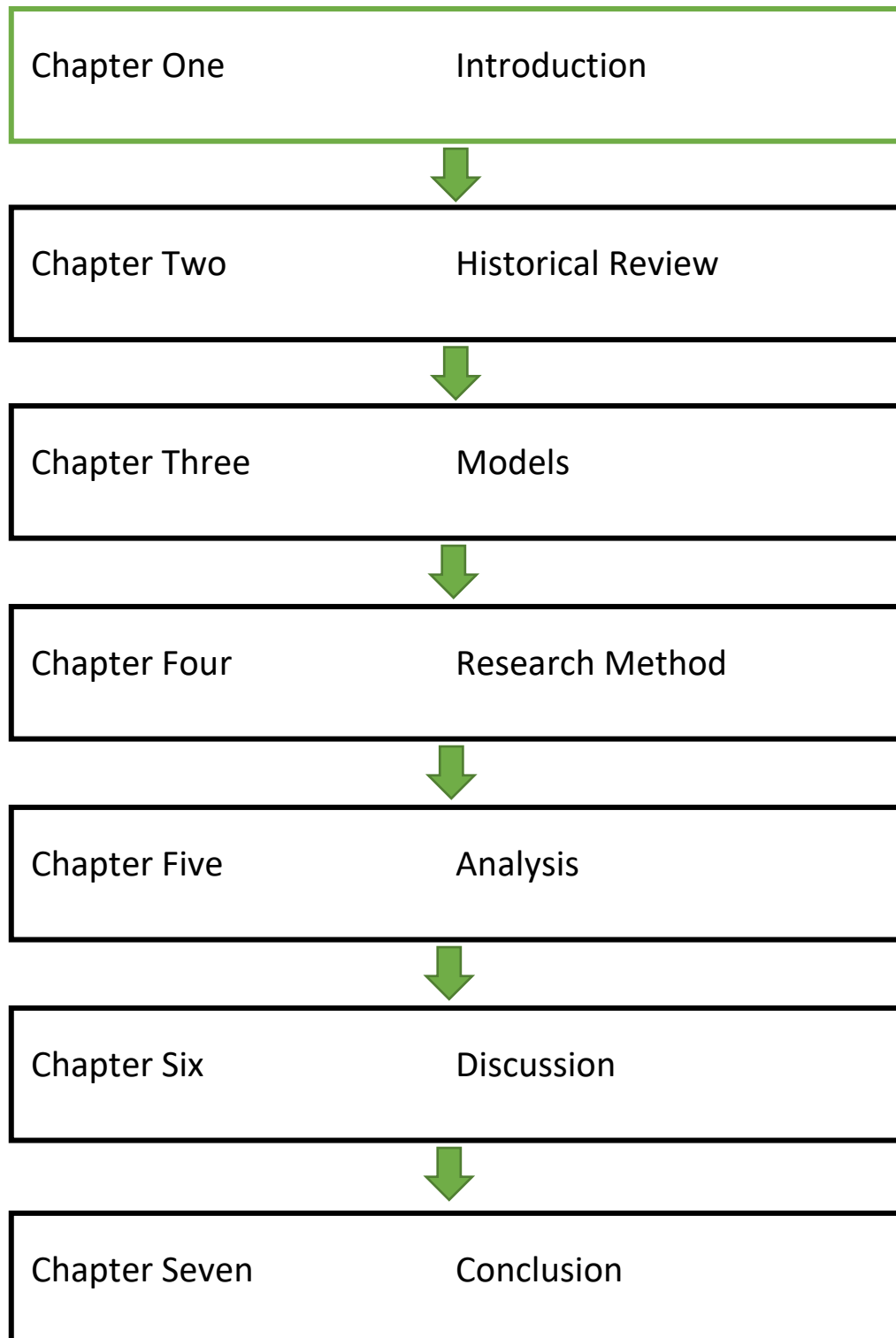
TPP – Trans-Pacific Partnership Agreement

UN – United Nations

WHO – World Health Organization

WTO – World Trade Organization

## Chapter One: Introduction



## 1.0 Introduction

Increased globalisation and trade complexity, such as, that observed in seasonal primary industries, has introduced new challenges for New Zealand exporters. Trade theory from as recently as 30 years ago lacks detail and, as such, is fast becoming irrelevant to modern, global businesses, such as, Zespri and Fonterra. The international environment has changed significantly since the post-war era. What is being observed, empirically, is not necessarily supported by traditional models. The individual predictive ability of these models is missing and their usefulness for small, resource reliant, exporting nations like New Zealand is lacking. New Zealand has a comparative advantage in pasture-based systems and this advantage has led to First World standards of living. So, how has New Zealand become so successful selling trade commodities, such as, milk powder, despite trade theory saying otherwise? This Chapter offers a historical account of trade theory and provides an overview of the research including the problem, objectives, questions, and the significance of the study.

## 1.1 Trade Theory

Trade theories date back to the late 18<sup>th</sup> Century with Adam Smith's book *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776). Smith claimed that peoples' natural instinct to look out for themselves leads to prosperity and that people actively promote the public interest through the pursuit of their individual economic choices without doing so deliberately. Over the next two centuries trade theory evolved from Smith's view that by way of self-interest, prosperity would be created. Ricardo (1817) proposed a theory that international trade is governed by comparative advantage, as opposed to absolute advantage, because countries focus on what they are best at (where they have a comparative advantage) and both sides are better off. The Heckscher-Ohlin theory (1991) took this further and, in essence, states that countries with plentiful capital and scarce labour tend to export more capital-intensive products and import labour-intensive products, and vice versa, because countries should specialise in areas of competitive advantage using their relatively abundant factors. These theories provide the foundation and understanding of international trade theory that largely remained unchanged up to and immediately post World War II. Attempts

to 'grow the pie' without constraints and keep growing it through relative and factor conditions confirmed that growing wealth for individual level actors is increasingly difficult. With the two exceptions of farmers markets and roadside stalls, in virtually no other goods-exchange does the farmer or grower sell directly to the end consumer. Hence, farmers and growers are both reliant and dependent on building and maintaining relationships, at the industry level at a minimum, through to international businesses within genuinely global enterprises, within which they may or may not have some form of capital ownership (McDermott & Scrimgeour, 2016).

More recent models, such as, Porter's Single Diamond (1990) and Rugman and D'Cruz's Double Diamond (1998) do not incorporate or explain the full the gambit of complexities faced by companies who engage in international business today. They also assume a perfectly competitive or near perfectly competitive market which is rarely the case. These models have worked in some cases to explain the success of the United States of America, for example, but also failed because they were not designed in a way that meant they could be applied in a truly dynamic, global context or adapt to a changing world. The Double Diamond Model came the closest to explaining trade with its key insight being its ability to act as a mirror showing reciprocity between two trading nations, especially those that had a common geographical land border. But despite this, the theory has languished for decades, perhaps due to assertions in the model that assumes a constant environment. By contrast Sharpe's Three Horizons Framework (2013) may be useful to explain and account for what the international business models lacked – change. The model begins with change as being a constant and attempts to identify credible pathways to change.

#### 1.1.1 Applicability to New Zealand

New Zealand, a small trading nation, typically scores poorly in these models (Porter's in particular) but is extremely competitive on trade and exports globally, even in the face of significant institutional changes. There are undoubtedly challenges to designing an accurate model which will stand the test of time when dealing with globalisation. This complexity is

made even more difficult when companies are dealing with seasonal, perishable products, the sale of intellectual property (IP), and global markets and consumers, as is so often the case in New Zealand's food and fibre sector (Ministry for Primary Industries, 2021a). So why can the success of New Zealand's food and fibre sectors not be adequately predicted or explained by the models? A different approach is needed to assess why some companies succeed today, while others alongside them do not. One way to consider this is to undertake a comparative institutional analysis, using grounded theory methodology, of key trade events that marked the periods of these significant changes: the General Agreement on Tariffs and Trade (GATT) in 1948; the establishment of the World Trade Organization (WTO) in 1995; and, the breakdown of the rules-based trading system from 2017. These key trade events mark the beginning of three very different trade institutions, of which, each had a significant impact on international trade and the resulting domestic environment in New Zealand.

## 1.2 Research Objectives

The success of New Zealand's primary industries on a global scale suggests that the models previously used in trade theory are not applicable in all countries and their production situations, and that another range of factors must be complementarily occurring domestically and/or in specific international markets to achieve this level of sustained high performance. This success appears to span several primary products, many of which are commodities of which New Zealand has no ability to set the price and has limited processing and/or product transformation capacity (Yadav, 2022; Parker, 2014). This empirical study attempts to determine the specific reasons that New Zealand's primary industries have adapted to significant global changes and remained successful. Key international trade events dating back to the 1940s will be identified and discussed as well as their implications for New Zealand and its food and fibre sector, down to what can be understood at the individual farmer and grower level. These key international trade events, or institutions, will be investigated through a comparative institutional analysis to better understand the dominant logics and the emergence of historical institutional logics throughout the last eighty odd years.



The aim of this research is to determine and explain, in depth, the specific reasons that New Zealand's food and fibre sector has remained successful relative to its competitors, despite the dominant trade theory predicting the contrary. This analysis will be done by re-examining key trade and domestic policy. The emergence and identification of the resultant institutions and the accompanying institutional logics is then developed into a predictive tool through which future behaviours, opportunities, and outcomes may be identified. This research is grounded by the following research hypothesis:

*“That the identification of historical institutional logics will conform to dominant change models through which the future may be understood.”*

This study intends to further build on existing literature in international trade, respective to New Zealand's primary industries, by comparing trade institutions (events) at a national, industry, and individual business unit (farm, orchard, or agribusiness) level. This research aims to collate this information into one document and use it to explain New Zealand's global success to date, and any changes needed to remain successful in the future.

### 1.3 Approach to Research

This study is a comparative institutional analysis of New Zealand's food and fibre sector that explains New Zealand's response at a national, industry, and individual firm level. Four key metrics are used throughout the thesis: annual gross domestic product (GDP) per capita; the primary sector's annual contribution to total GDP; the primary sector's annual contribution to export earnings; and, the total nominal value of primary sector exports. Between 1977 and 2005, New Zealand's GDP grew by an average of 2.5% per year (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). GDP per capita reached US\$41.4 billion in 2020 which was slightly down from US\$42.8 billion in 2019 and US\$44.6 billion in 2014, New Zealand's ever GDP per capita (World Bank, 2022). Despite a slight fall between March 2019 and March 2020, in December 2020 GDP actually expanded by 1.23% and nominal GDP hit US\$56.8 billion (CEIC, 2022), of which New Zealand's continued ability to export and sell primary industries played a significant role (StatsNZ, 2020). Agriculture's share of GDP was 14% in 1965-66, significantly higher than 5.7% in 1986-87.

Between 1977 and 2005, the primary sector grew by an average of 3.6% per annum and by 2004-05 was responsible for approximately 18% of GDP, of which the gross value of farm gate production contributed 4.5%. Although the primary industries' relative contribution to GDP decreased between 1977 and 2005, it occurred when the transport, communications, tourism<sup>1</sup>, and education<sup>2</sup> sectors were all experiencing significant growth. More recently in 2018, agriculture contributed approximately 5.65% to GDP. Agriculture exports represented over 90% of total exports in 1959-60, which dropped to near 60% by 1985-86. This trend has continued, although at a much slower pace. During the period of high subsidies in New Zealand in 1979-80, agriculture production made up 61% of total merchandise trade exports. This dropped significantly to 38% by 2005-06. Agriculture and horticulture export receipts totalled NZ\$16.3 billion in 2005-06, which was 55% of New Zealand's total of NZ\$27.7 billion at the time. The composition of agricultural export products changed dramatically between 1979 and 2006. Meat and wool contributed to the bulk of agriculture exports in the former years, whereas dairy and meat made up majority of the latter. The shift occurred with merchandise exports too, which reflected farmers' efforts to move to producing more profitable products (e.g., fruit, vegetables, and dairy products) (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). What was observed in New Zealand proved that subsidies and protectionism lead to producer-side distortions, such as, lower product quality and resource misallocation. Liberalised trade supports better product and market development, while allowing imports of the best international technology to produce these goods, but the presence of subsidies did not facilitate this (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). In the year to 30<sup>th</sup> June, 2021 the food and fibre sector was responsible for over 80% of New Zealand's merchandise exports, with the sector's growth exceeding that of other sectors for nine consecutive years (Ministry for Primary Industries, 2021b). Food and fibre export revenue<sup>3</sup> is forecasted to hit a record NZ\$50.8 billion in the year ending June 2022 (Beehive, 2021b).

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<sup>1</sup> Which is closely linked to the primary industries and includes New Zealanders who visit other regions even if for personal reasons.

<sup>2</sup> Particularly tertiary.

<sup>3</sup> Nominal figure.

## 1.4 Thesis Organisation

This thesis contains seven chapters. A review of the relevant history and its literature is presented in Chapter Two. The literature review identifies and describes key international trade events over the past eight decades, including each events' impact on New Zealand, the food and fibre sector, and farmers and growers. What is apparent in the literature is that while most of the events are well documented individually, the linkages between them have seldom been made explicit. The relevant literature suggests that New Zealand made the most of early market access to Australia and Europe (especially the United Kingdom), and that a comparative advantage in producing primary exports led to high levels of productivity and success in these industries at the time. The most relevant models and their applicability to New Zealand's trading behaviour, including benefits and limitations of each, are discussed in Chapter Three. This includes Porter's Single Diamond Model (1990) and Rugman and D'Cruz's Double Diamond Model (1998). The research methodology used to conduct the study is described in Chapter Four. How the findings are explicitly linked to the models examined in the previous chapter is then discussed. Chapter Four also includes an explanation of the context, the reasons for choosing this particular methodology, and the process for undertaking the research. Analysis of, and findings from, the research is presented in Chapter Five. Linkages to Chapters Two and Three are highlighted and explored in greater depth by comparing institutions. This rich information, and what it means for New Zealand's food and fibre sector, is further analysed and discussed in Chapter Six where a new framework for dominant logics is also presented. Chapter Seven provides concluding statements, the contribution to knowledge, and implications of the research on the literature and New Zealand's food and fibre sector. There are limitations of both the methodology and the findings, and these are highlighted. Finally, further research opportunities are identified.

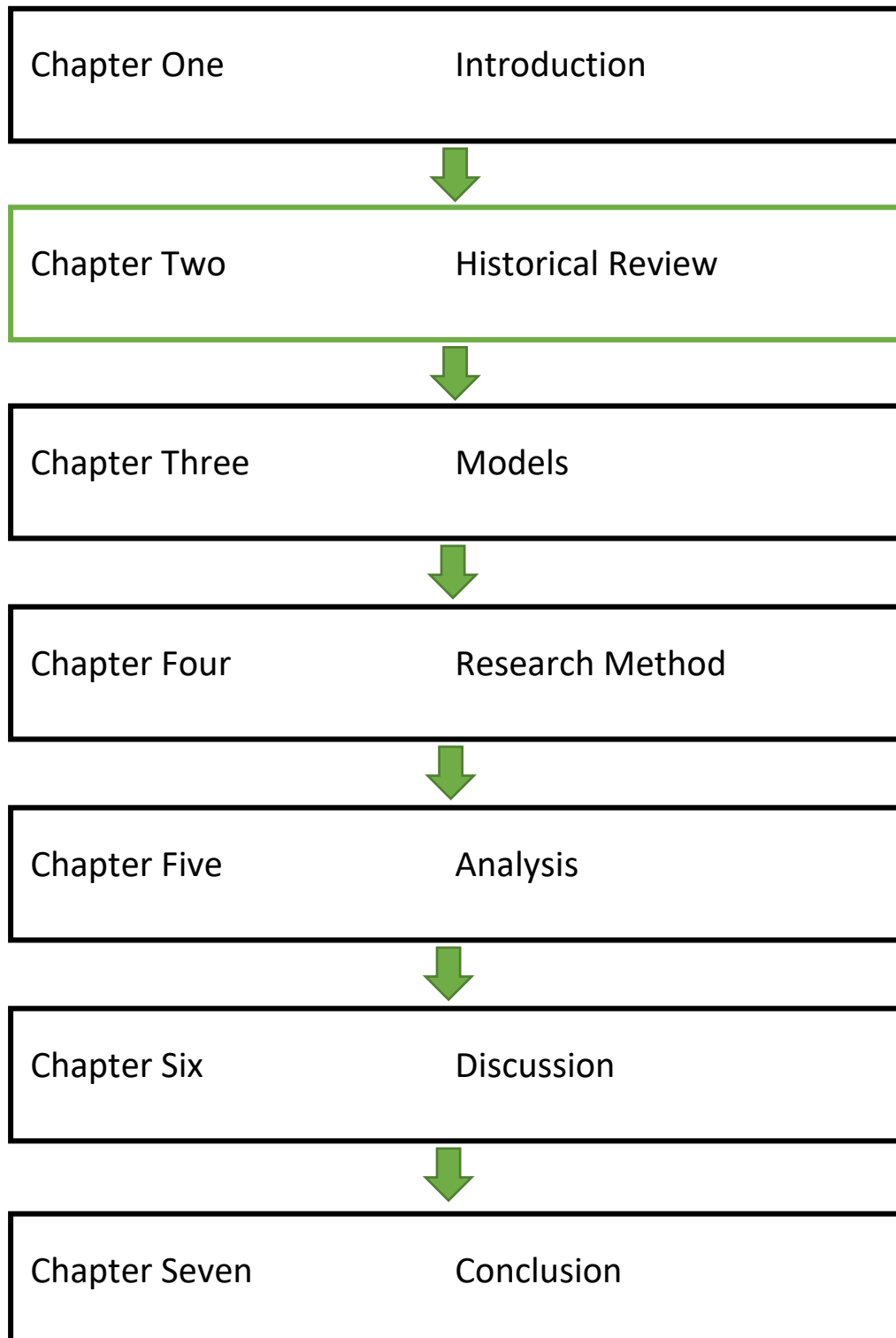
The research, as presented in this thesis, follows a predictable linear form. The reality of its conduct was something quite different. The number of iterations between the material presented in Chapter Two and that which emerges in Chapter Five (and Six) were not reliably recorded. Suffice to say that over a twelve-month period of engagement it must have exceeded the twelve monthly meetings. What follows is the 'best assessment' of the

development of the matrix, one in which the account is dutifully recorded in a manner that attempts to resolve the inductive-deductive dilemma.

## 1.5 Summary

This chapter sought to outline the key research problem, questions, and objectives. It identified the importance of the study along with the structure of the thesis, a comparative institutional analysis of key global trade events in the context of New Zealand's food and fibre sector, and the impacts of those events on farmers and growers within these industries. The next chapter presents a historical review of these events, dating back to the signing of the GATT in 1948 and the responses of governments, industries, and those on farm.

## Chapter Two: Historical Review



## 2.0 Introduction

Key institutional trade events, including (but not limited to) the signing of the GATT and the establishment of the WTO, have had significant impacts on international business. Each of these events also had substantial flow-on effects to the New Zealand economy; the primary industries; and, individual farmers and growers. This chapter identifies and describes the impacts and responses of successive governments, industries, and individual farmers and growers resulting from each of these key events and their respective impacts in a linear, chronological order. The chapter begins with the signing of the GATT in 1948 and provides a history through to the breakdown of the rules-based trading system in 2017. A passing reference to the coronavirus (COVID-19) pandemic is then provided. The chapter is not a conventional literature review, but rather, a historical account, and a degree of subjectivity has been used to reduce these events to a manageable, meaningful level to inform the research. This process was undertaken using an 'inside-out' approach, meaning, it began by examining individual farmers and growers before identifying the external events in international trade that had a demonstrable impact on farms and orchards. There have been several studies on globalisation and international trade published in New Zealand since 1948 and many events to have occurred over the last eight decades. However, since the focus of this research is based on key institutional trade events and the subsequent impact of these events on New Zealand's food and fibre sector, anything outside of this scope will not be reviewed in detail and will only be referred to as is appropriate.

### 2.1 1948: The Post-War Era and Signing of the General Agreement on Tariffs and Trade

The post-World War II period was a time of tight government control due to concerns around economic, social, and food security as nation states attempted to rebuild from the impacts of war. Despite these constraints, international trade in the post-war period saw remarkably rapid expansion (Briscoe, 1975), marking the beginning of a new era for the global economy. International trade was viewed as essential to economic growth, and policymakers shifted away from the more typical 'isolationist' policies seen during the war period. The two decades

immediately following World War II saw international trade expand at its most rapid pace yet, and the growth of global trade over this time far exceeded the expansion of global output. Throughout this period, trade also began to liberalise as barriers erected during the wartime period were removed through political agreements, such as, the GATT, an agreement that covers the international trading of goods (World Trade Organization, 2021a). Throughout this period the United States of America along with the United Kingdom were widely regarded as the economic powerhouses of the west. Russia dominated the east, while Japan's global dominance began to rise as American businesses took advantage of the impending economic boom. The early development of the 'Four Asian Tiger nations', referring to the high-growth economies of Singapore, South Korea, Hong Kong, and Taiwan was also observed. Despite this period being identified as one of gradual tariff reductions, the world's largest economies remained highly protectionist meaning that the growth of global trade occurred in a world with continued restrictions (Terborgh, 2003) and trade remained primarily sovereign-based. With a few exceptions in the east, this institutional market structure was largely socialist and egalitarian and reflected a centralised social ethos, the world view at the time. As well as occurring globally, this trend was also observed in New Zealand. Throughout the 20<sup>th</sup> Century New Zealand's economy which was founded on its competitive advantage of pastoral production began to thrive. Better on-farm innovations combined with strong export returns increased the nations' prosperity and productivity (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006).

### Government response

From the late 1930s and through the post-war period, New Zealand's welfare state was based on a combination of liberal and social-democratic principles. Overall, the policy regime mixed universal and targeted benefits, with extremely high taxes of up to 66%. By 1950, New Zealand was ranked the world's third-wealthiest country per capita. Although considered modest by Organisation for Economic Co-operation and Development (OECD) standards, New Zealand's welfare costs doubled from the 1950s onwards as more people became eligible for government support. Government control, and the strong imperial relationship held with the United Kingdom, meant that New Zealand business was largely financed through imperial debt and government supported equity (Macmillan, 1973). This varied between industries,

as some remained New Zealand owned, however, even they were still largely supported by the government in some form.

### Industry and farmer response

As a sovereign-based trader, New Zealand was essentially a farm for the United Kingdom in the early days of the post-war era, producing as much of whatever commodity was desired. The United Kingdom had long been New Zealand's strongest trading partner and bought all New Zealand's dairy products and meat throughout World War II and for many years after. However, the variety of traded goods was slowly beginning to expand, and this consumption pattern gathered steam in the 1960s. The United Kingdom reduced to taking only half of New Zealand's exports, dropping to a third by the early 1970s, and continuing to fall after that. New Zealand farmers produced whatever the United Kingdom required them to, filtered through industry bodies and exporters. New Zealand was still a largely agriculture-based society, however, horticulture was beginning to grow (Fresh Facts, 2000).

## 2.2 1971-1982: New Zealand Regulates

After decades of riding the 'booms and busts' of the global trading environment, farmers and growers eventually asked the government to regulate them to remove the income fluctuations, coordinate exports to the United Kingdom, and deal with global trading competition. As a result, the government decided to regulate many of its industries, including the food and fibre sector, between 1971 and 1982. The agriculture and horticulture industries were incredibly important to New Zealand's economy. As well as forming the basis of many rural communities these industries also underpinned a surprising amount of commercial activity in urban centres. The 1975 economy was growing, albeit only slowly. It remained heavily controlled by the government through regulation, relied to an unsustainable extent on pastoral exports to the United Kingdom, and was inflexible, inflation prone, and slow to respond to technological advances and opportunities (Sinclair, 1999).



## Government response

The government – one which was dominated by farmers – agreed that change was needed and created nine producer boards that spanned the primary industries and were enabled by various legislation, presented in Sinclair's (1999) Table 2.1 below.

Table 2.1. Establishment dates of New Zealand's primary sector producer boards.

Name	Legislation	Export monopsony status
New Zealand Apple and Pear Marketing Board	Apple and Pear Marketing Act 1971	Export monopsony
New Zealand Meat Producers Board	Meat Board Act 1997	No monopsony
New Zealand Game Industry Board	Game Industry Board Regulations 1985	No monopsony
New Zealand Pork Industry Board	Pork Industry Board Act 1997	No monopsony
New Zealand Raspberry Marketing Council	Raspberry Marketing Regulations 1979	Monopsony over export and domestic marketing of New Zealand produce
New Zealand Hop Marketing Board	Hop Marketing Regulations 1939	Monopsony over export and domestic mark
New Zealand Kiwifruit Marketing Board	Kiwifruit Marketing Regulations 1977	Export monopsony
New Zealand Dairy Board	Dairy Board Act 1961	Export monopsony
New Zealand Wool Board	Wool Board Act 1997	Export monopsony

Source: Sinclair, G. (1999). *Costs and benefits of producer board deregulation*, New Zealand Treasury Working Paper, No. 99/04. New Zealand Government, Wellington.

## Industry response

A common funding source for industries is a 'commodity levy fund' which industry bodies collect and disseminate to activities for industry good. There is a wide range of commodities for agricultural and horticultural products, and a proportion of each is spent on research and development. The rest goes towards education, extension, quality control, and marketing and promotion (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). Employees of these producer boards were relocated to key export markets to build relationships with supply chain partners and to gain a greater insight into international consumers and their consumption habits. As relationships were still centrally held and largely dependent on who you previously had relationships with before

and during the War, it was important for these to be maintained to ensure market access was as free and open as possible. Having employees in-country was the easiest way to do this. It was still incredibly difficult to guarantee shelf space but industries, using their in-market staff, worked hard to make this happen at all costs.

### Farmer response

For the benefits it brought, the request to regulate put intense constraints on farmers and growers, as government and producer boards at times controlled both production and commodity price. Even then, the government did not think the future of New Zealand was in agriculture and horticulture but instead, in manufacturing. This belief led to tariffs and quotas being added to nearly all imports in an attempt to raise the costs of these goods and make New Zealand-based manufacturing more competitive. This locked out offshore competition; appeared to protect jobs; and, artificially and kept unemployment extremely low until the late-1970s. Much of this employment was sustained through agricultural income from exports and the trade barriers erected during this period built unnecessary costs into the economy. Before 1984, New Zealand's primary industries had a productivity increase rate of only 1% a year (Lambie, 2005). Slow, tedious and at best only incremental gains.

## 2.3 1972–1973: The United Kingdom's Admission to the European Economic Community and the Oil Crisis

The GATT's inability to solve Europe's trading complexities, combined with the realisation that moving collectively was a more efficient way of doing things, eventually lead to the creation of several regional protection organisations, such as, the United Nations (UN), the International Monetary Fund (IMF). It also led to the European Economic Community (EEC) in 1957 – formally the European Coal and Steel Community (ECSC) and now the European Union (EU) – which established a common tariff among France, Italy, Belgium, the Netherlands, Luxembourg, and West Germany. Although New Zealand's attachment to Britain had begun to show signs of weakening in the 1960s, it still came as a shock to some commentators when the United Kingdom opted to join the increasingly successful EEC, which

it deliberately had not joined until this point due to its pre-existing trade agreements with other Commonwealth countries, such as, New Zealand and Australia (Macmillan, 1973).

The Yom Kippur War between Israel and a coalition of Arab states in October, 1973 saw oil prices rise sharply from US\$3 to US\$20 a barrel, virtually overnight. New Zealand relied heavily on crude oil and, therefore, suffered significant consequences from the soaring oil prices as higher fuel costs led to higher freight costs, goods costs, wages, and retail prices. This oil shock – the first of two that decade with a second following in the late 1970s – greatly contributed to the domestic recession of 1976 (Ministry for Culture and Heritage, 2018).

### Government response

Government response during the period of intense regulation resulted in the defence of New Zealand with subsidies and regulations. In an attempt to keep New Zealand afloat the Prime Minister of the time, Robert Muldoon, imposed harsh restrictions on both wages and foreign currency. Tariffs were also put in place to protect local manufacturers from imported goods, and farmers received various subsidies to incentivise food production. Subsidisation continued to increase in an attempt to offset the government's import licensing and trade protection policies which kept exchange rates high and with it, cost of imports. Trading relations between New Zealand and the EU remained turbulent at times and as European producers continued to dump dairy products, such as, butter and cheese onto the international market, New Zealand's export agreement with the United Kingdom was at risk. While every government during the 1960s and early-1970s tried to maintain this valuable access to the European market, it desperately needed to do so through diversification. However, the Ministry of Agriculture struggled to move away from its traditional role of promoting traditional meat, wool, and dairy products (Nightingale, 2008b). By the end of the 1970s, New Zealand was still facing low returns for products. The combined effect of both the United Kingdom's admission to the EEC and the oil shocks weighed heavily on the economy.

To offset the increased oil costs caused by the oil crisis, which set off a wave of interventions to stimulate the export market, the government burnt gas from the Māui gas field in Taranaki. This, in turn, generated electricity and the accompanying condensate was extracted to be used as fuel (Ministry for Culture and Heritage, 2018).

### Industry and farmer response

New Zealand, widely acknowledged as the most vulnerable of the United Kingdom's Commonwealth trading partners, was given the option to veto the United Kingdom joining the EEC, but instead, it decided to focus its efforts on achieving the best long-term outcome for its exports. While achieving this for dairy, it came at the unfortunate expense of other key export products, such as, wool (and to a lesser extent lamb). As a result, butter exports received special treatment for the next few years and on the contrary, red meat faced tariffs of 20%. Eventually, tariffs were reduced in exchange for quotas and from the 1990s New Zealand began exporting chilled, rather than frozen, value-added meat products to Europe. This moved lamb from the commodity market to the luxury one, where it earned double the amount that frozen lamb did in Germany, Belgium, and France (Macmillan, 1973).

## 2.4 1983: The Signing of the New Zealand-Australia Closer Economic Relations Trade Agreement

With British and European trade still relatively unstable, it was a welcome relief on 1 January 1983 when the New Zealand-Australia Closer Economic Relations Trade Agreement (CER) came into force (though it was not officially signed until March). This built on the 1966 New Zealand-Australia Free Trade Agreement and was New Zealand's first comprehensive bilateral agreement, and one of the first of its kind in the world. As well as the flow of goods and services, the CER also enabled labour mobility between the two countries.

### Government response

When negotiating free trade agreements (FTAs) New Zealand attempted to seek out agreements that promoted trade liberalisation, upheld strong expectations on trade rules, and led to greater technical and economic cooperation. The CER includes free trade for all agricultural and food products, as well as a joint food standards authority to stop non-tariff barriers being erected (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). By 1990, no tariffs or restrictions between the two countries remained on trade. Not only did Australia become New Zealand's principal trading partner, but it also became its leading source of investment, though this was not necessarily reciprocated (New Zealand History, 2021).

### Industry and farmer response

Industries and farmers jumped at the chance to trade, without market restrictions, with New Zealand's largest trading partner at that time. As the CER allowed mutual recognition of goods and jobs, technical barriers to trade and restrictions on labour mobility were removed. The eventual harmonising of the Trans-Tasman food standards through the Australia New Zealand Food Authority (ANZFA) in 1995 led to even lower costs of compliance for industry, and fewer regulatory barriers (Department of Foreign Affairs and Trade, 2022).

## 2.5 1984: New Zealand Goes Bankrupt

After enjoying three decades at low unemployment (below two per cent of the workforce), a protracted period in the middle of the 1970s led to a rise in unemployment and an increase in net public debt. By 1980 New Zealand had dropped to the world's 19<sup>th</sup> wealthiest country per capita after the deathly combination of rising inflation and unemployment hit at the same time, and the loss of its guaranteed market after the United Kingdom joined the EEC (New Zealand History, 2021; Macmillan, 1973).

### Government response

The harsh controls under the Muldoon Government between 1975 to 1984 eventually led to people resenting the imposition of the state on their lives and voter preference change was imminent. Labour took government in 1984, and New Zealand experienced both financial and fiscal crises that same year. The former government had accumulated large deficits borrowing money from overseas and there was none left to spend. Unfortunately, but not unsurprisingly, the top-down pricing strategy created with the producer boards ignored market forces, and this too, in turn, contributed to high inflation (Lambie, 2005). 1984 saw the government devaluing the New Zealand dollar (NZD), which had an immediately positive impact on exporters as a lower NZD led to higher returns. Despite Labour's traditionally socialist roots, this period saw the introduction of the 'Rogernomics' era, named after Finance Minister Roger Douglas, which radically reformed the free market. Not only did the government reduce the size and role of the state in individual's affairs it also restructured and corporatised government agencies, began selling off assets to private investors, abolished most economic controls, and removed farming subsidies. As government support for agriculture was being phased out, and government agencies began to charge for previously funded services, such as, quarantine, animal health inspections, and farm advisory services, the next six years were extremely challenging for farmers and growers. Despite all these large-scale changes, New Zealand continued to attract foreign direct investment (FDI), which was actively encouraged under successive governments (Nightingale, 2008a).

### Industry and farmer response

The artificial support seen in previous decades was never to last as agriculture and horticulture products were changing rapidly. Although they continued to dominate the export sector, their contribution to gross domestic product was declining. A decline which may have been even more rapid without government support (Nightingale, 2008a).

## 2.6 1985: New Zealand Adopts a Chicago School of Economics Approach

The Chicago School of Economics approach was a multi-domestic response that began under President Ronald Reagan and was also adopted by Prime Minister Margaret Thatcher. The School's economic theory is that a free market best allocates resources in an economy, and little to no state intervention leads to greater economic prosperity. In the case of the United States of America, more than 50% of its duties were removed by the middle of the 1950s. However, this liberalisation was far from rapid and it was not until the late 1960s that other nations began to significantly reduce their tariffs. In New Zealand, it was later still. These liberalisations opened up the free market internationally and domestically.

### Government response

By the early 1980s, with market liberalisation beginning to occur around the world, and after countries, such as, the United States of America had begun to liberalise decades earlier, government support for the primary industries was only 30% of the total output produced from farming (Nightingale, 2008a). The high taxes severely constrained innovation and were also later cut to 33 cents on the dollar in 1998 – one of the lowest rates in the OECD at the time – which increased the after-tax share of income. A high level of unemployment, among other things, led to financial market liberalisation and the NZD was floated in 1985 (Easton, 2009).

### Industry and farmer response

After the NZD was floated, investors were increasingly attracted to New Zealand due to the higher interest rates enjoyed here. This influx of FDI increased the NZD's value but reduced exporters' returns (which were paid in the United States Dollar) and therefore, returns to farmers (Nightingale, 2008b).

## 2.7 1986–1994: The Uruguay Round and the Cairns Group

As a result of multiple rounds of negotiations, the GATT evolved and the final – and largest – round was the Uruguay Round which eventually led to the creation of the WTO. Trade and market access were now largely dictated by the free market world, which was enabled by the formalised rules-based trading system. The Asia-Pacific Economic Cooperation (APEC), a regional economic forum created to capitalise on the rising interdependence of the Asia-Pacific region, was also established (in 1989) (Asia-Pacific Economic Cooperation, 2021).

### Government response

The Cairns Group, of which New Zealand was a key member, was created in 1986 as part of the Uruguay Round's GATT negotiations. Named after the Australian city in which it was established, it reflects Australia's pivotal role in the group's establishment. It is a coalition of 19 agricultural export economies that together account for over 25% of total global agricultural exports (The Cairns Group, 2022). Since 1986, member countries have continued to advocate for further liberalisation of globally traded agricultural goods that provides real, sustainable benefits to the developing world (The Cairns Group, 2022).

### Industry and farmer response

As the negotiations occurred at the highest level of government, engagement with industries and farmers was limited. However, these groups and individuals reaped the rewards of increased market access and the benefits of the implementation of this agreement led to dairy farmer incomes recovering at an accelerated rate through the 1990s (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006).

## 2.8 1987: The Plant Variety Rights Act

Domestically, the Plant Variety Rights (PVR) Act was passed in 1987 to align New Zealand's PVR standards with the 1978 International Convention on the Protection of New Varieties of Plants (UPOV Convention). This convention provided the principal international agreement



for IP protection over plant varieties and established the International Union for the Protection of New Varieties of Plants (Ministry of Business, Innovation & Employment, 2022a). A PVR grants the holder the exclusive right to produce and sell propagated plant material of a new variety and is a form of IP. To be granted a PVR, the plant must be new; distinct; uniform; and, stable. An acceptable name for the variety is also required (Ministry of Business, Innovation & Employment, 2022b). While the passing of the PVR Act does not directly relate to international trade, its importance to the protection of New Zealand's proprietary apple and kiwifruit varieties, and the role it played in aligning New Zealand's standards with global standards, warrants its inclusion in the historical review.

### Government, industry, and farmer response

Though the government created the legislation the large organisations, particularly in the horticultural industries, were the ones who benefited the most from it, and in turn, their growers. This was enormously important for New Zealand as before then, the full value of the IP could not be captured from the consumer. The maximum length of a PVR is 25 years, and most of the value in it is generated towards the end of the PVR's lifetime. For pipfruit, T&G Global owns the EU PVR for Jazz and Envy. For kiwifruit, Zespri owns the PVR rights for SunGold and RubyRed. This guards the quality of it and in turn, generates dividends back to Zespri (and T&G Global) shareholders. PVRs require immense forward planning as breeding new varieties can take between 10 to 15 years. Farmers and growers were ultimately open to PVRs, as even though they cost more, the value of having them for protection could not be understated. Even today, demand for licences, such as, for SunGold kiwifruit, far outstrips supply. This has caused licence prices to surge with the 2022 licence release reaching a record high of NZ\$800,000 per hectare for the variety (Radio New Zealand, 2022). As well as quality the licence also helps to control supply, and ensure the market is not flooded, thus keeping demand ahead of supply and pricing strong.

## 2.9 1987: The 1987 Stock Market Crash

The economic boom created by global market liberalisation in this period ended abruptly in 1987 when the stock market crashed. After a period of constant growth, many companies who over-extended themselves went bust. The impacts included small 'mum and dad' investors who subsequently deserted the share market. The share market languished for another 15 years (Maclean, 2015). Despite the Labour Government pursuing its economic policies, the party lost the next election to a National Government who continued privatising state assets and reducing benefits by both maintaining existing policies and introducing new ones which further limited the state's involvement in New Zealander's lives and the economy (Te Papa, 2021). However, many New Zealand producers did not factor exchange rate risks into their business, which had damaging and last impacts for producers, particularly coupled with high levels of debt (Easton, 2009).

## 2.10 1995: The Establishment of the World Trade Organization

The WTO was officially established at the beginning of 1995, but as it evolved from GATT, its trading system effectively dates back to 1948. It does, however, differ from GATT. Where GATT mainly deals with goods trading, the WTO and its agreements also cover the trade of services and IP (World Trade Organization, 2021c). One of the WTO's key functions is to help its members resolve any trade disputes that may arise. The tribunal, known officially as the WTO Appellate Body, is a standing body of seven members who hear appeals in disputes between WTO members. It needs a quorum of three members to hear any new appeals. The WTO currently has 164 members, with over 30 of these having joined since 1995. Being a member of the WTO has had a notable impact on trade and economic growth for those economies, regardless of their actual economic size, in both goods and services exports. This has been aided by better market access, and increased predictability and transparency, which is also enabled by the WTO and rules-based trade (World Trade Organization, 2015). Overall, the establishment of the WTO was built on the previously seen benefits under the GATT. GATT and/or WTO membership increased international trade (for member countries) by approximately 72% relative to domestic sales, trade between members by 171%, and trade between member countries and non-member countries by around 88% (in part due to a

decrease in the uncertainty previously seen with trade policy). The WTO is also better at promoting trade with non-members, compared with GATT. While GATT/WTO promoted trade between all economies, the impact was felt most in developing ones (Larch, Monteiro, Piermartini & Yotov, 2019). From 1995 onwards, most developed or developing nations had significantly increased contributions to global value systems. This resulted in a geographically diverse manufacturing base, fostered by improved communication technology and lower trade costs.

### Government, industry, and farmer response

Eventually, it became obvious to some in the industry that relying on government support in the form of subsidies was simply not effective. While supporting the industries financially, New Zealand was becoming uncompetitive globally. In response, the government liberalised agriculture first, and much of the rest of the New Zealand economy over the next six years (Lambie, 2005). New Zealand worked to remove all market distortions and protectionist subsidies, and it has largely remained this way ever since, which allows for interesting trade negotiations. Like the GATT negotiations, this occurred at a government level, but led to flow on benefits to industries and farmers. When the free market opened up, it became evident that the first mover could do well if they controlled the market position effectively, but the fast 'second follower' could also do well because of the likely lack of IP protection. They could also take advantage of the previous spending from the first mover on market access, supply chain systems, marketing and promotion, and education. While this and other trade negotiation discussions were promising, what really mattered to individual farmers and growers was whether or not the demand curve had shifted to the right, which was about more than just opening up market access.

### 2.11 1995: Agenda 2000 – Reform of European Union Agricultural Policy

As a result of the WTO creation, Europe began reforming their agriculture policies with 'Agenda 2000', which was traditionally very heavily subsidised. The reforms aimed to increase the EU's competitiveness of agricultural goods on both the domestic and international

markets; ensure fair incomes for farmers; simplify and decentralise agricultural legislation; improve food safety standards; and, integrate environmental considerations. They also aimed to strengthen the EU's position for the WTO's next round of negotiations and stabilise agricultural spending at its 1999 level. This required new regulations and monitoring for compliance against these. While interventions were kept at the same levels or reduced, it was still proposed that these would be partially offset by increases in direct aid to farmers with the view of improving overall competitiveness globally and domestically. Ideally, this aimed to reduce the risk of returns to overproduction, which was costly if it could not be sold (EUR-Lex, 2022).

## 2.12 1997: The Kyoto Protocol

At the same time that trade was further liberalising, the Kyoto Protocol was adopted on 1<sup>st</sup> December, 1997 and after enduring a complex ratification process, finally entered into force on 16<sup>th</sup> February, 2005. The Kyoto Protocol, intended to operationalise the UN Framework Convention on Climate Change, has 192 parties. It is based on the principles of the Convention but only binds developed economies, as there is wide recognition that they are supposedly responsible for high greenhouse gas (GHG) emissions (both China and India are excluded). This signified a shift in the way trade was being considered by governments, mainly in developed countries (United Nations Climate Change, 2022).

## 2.13 1999–2001: Deregulation of New Zealand's primary industries

In anticipation of the Doha Development Agenda (also known as the Doha Round), New Zealand started to deregulate, as Canada and others wanted New Zealand's perceived advantages of single trading desks removed. The Doha Round of WTO negotiations was first launched in November, 2001. This is where the agricultural negotiations started, as it was included in the work programme for the first time. Unsurprisingly, it was also the most contentious topic. The clash between protections in developing countries and developing economies' market interventions and the myriad of trade protections, such as, subsidies, tariffs, quotas, and other safeguarding mechanisms made the situation even more complex.

That said, there was a formal decision to phase out export subsidies, but it did not target domestic subsidies, which remained high (Sinclair, 1999).

### Government response

Most of the primary industries were deregulated from the end of the 1990s onwards. By 1997, agriculture contributed 5.6% to New Zealand's GDP and was responsible for just over half of the country's export value. Despite these retained successes, the government yet again viewed agriculture as a sunset industry. The government was also reforming the public service after the Fiscal Responsibility Act 1994 which led to a reduction of government-provided services (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). The Ministry of Agriculture and Fisheries became primarily concerned with agriculture policy and regulation and the research sections of the Department of Agriculture and Department of Scientific and Industrial Research were split to form Crown Research Institutes which needed to compete for both state and private funding to continue to function (Nightingale, 2008b).

### Industry response

The producer boards had different outcomes from deregulation, as presented in Table 2.2 below. Nearly all boards were gradually deregulated and either disestablished completely or transformed into other cooperatives. It remained this way for some time, with all but kiwifruit and wool accepting the new fate and making the most of the new legislation and the institutions it enabled. In the case of pipfruit, however, deregulation opened up intense (ridiculous) competition which the industry was not prepared to deal with and this led to the near cannibalisation of the apple industry (Stevenson, 2001). Deregulation and the subsequent industry restructuring that came after enabled more competition, undistorted, which led to increased responsiveness to market signals (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006).

Table 2.2. Transitions of New Zealand's primary sector producer boards.

Name	Legislation	Year of deregulation	Successor
New Zealand Apple and Pear Marketing Board	Apple and Pear Marketing Act 1971	2001	ENZA Limited
New Zealand Meat Producers Board	Meat Board Act 1997	1998	New Zealand Meat Board
New Zealand Game Industry Board	Game Industry Board Regulations 1985	2001-2002	Deer Industry New Zealand
New Zealand Pork Industry Board	Pork Industry Board Act 1997	Did not deregulate	New Zealand Pork
New Zealand Raspberry Marketing Council	Raspberry Marketing Regulations 1979	1999	No successor
New Zealand Hop Marketing Board	Hop Marketing Regulations 1939	2003	New Zealand Hops Limited
New Zealand Kiwifruit Marketing Board	Kiwifruit Marketing Regulations 1977	Did not deregulate	Zespri
New Zealand Dairy Board	Dairy Board Act 1961	2001	Fonterra
New Zealand Wool Board	Wool Board Act 1997	2001	None until 2021 when the Primary Wool Co-operative and Wools of New Zealand Ltd merged

Source: Adapted from Sinclair, G. (1999). *Costs and benefits of producer board deregulation, New Zealand Treasury Working Paper, No. 99/04*. New Zealand Government, Wellington.

## Farmer response

There were heavy costs and benefits to deregulation, which impacted the farmers and growers themselves (Sinclair, 1998). After government support ended, farming responsibility returned to the farmer, as did the ability to produce goods that would satisfy the end consumer. This was observed blatantly in the red meat sector, where millions of lambs were rendered down for the fact there was no market for them. Farmers were getting NZ\$6 per lamb (Lambie, 2005). Deregulation did, however, have the added benefit of reducing costs farmers had to pay for imported materials, and especially in the dairy industry, it made some primary industries more competitive internationally (Nightingale, 2008a). Eventually, farmers and growers began to match their agriculture production to what was appropriate for the land they were farming – previously, mismatches had caused resources to be used inefficiently, and it was difficult to get costs low enough to be competitive. As a result, the

national sheep flock reduced by 42% (decreasing from 70 million to 40 million), while still managing to maintain roughly the same (if not more) quantity of lamb and other sheep meat being produced. The national dairy herd, on the other hand, increased in alignment with market signals for milk protein products from three million cows to more than five million cows. That said, profitability had long been on a steady decline. Some producers that were highly geared and indebted from previous decades now faced severe liquidity problems. Though this was for several reasons, the most notable was due to the general decline in global commodity prices, which was still most of what New Zealand was producing (Sinclair, 1999). However, after the reforms, the primary industries experienced productivity increases of nearly 4% per year. Although this caused immense stress and pressure on farmers and growers at the time, it is widely acknowledged it made them more efficient and competitive. New Zealand became one of the most unregulated economies on the planet (Lambie, 2005).

Over the 20<sup>th</sup> Century, absolute salaries and disposable incomes rose eight times. As well as greater spending power and life choices, this brought about many other benefits as a result including healthier lifestyles where people lived longer, improved education, and employment conditions with fewer hours and increased job security. Despite these vast improvements to livelihoods, some began to question if the main objective of economic policies, and measurement of a country's financial performance, should be more than simply its production and consumption.

#### 2.14 2003: The Dairying and Clean Streams Accord

Unfortunately, the deregulation of the primary industries was unsuccessful in offsetting consequent externalities of production and this narrative began to attract domestic attention. The Dairying and Clean Streams Accord was designed in 2003, alongside several other projects and strategies, to both support and improve the dairy industry's social, environmental, and economic performance. Its purpose was to provide a statement of intent and framework for achieving actions that promoted sustainable dairy farming. The 'dirty dairying' campaign by Fish and Game New Zealand, which highlighted the water pollution in rivers, lakes, and

streams due to intensive farming practices, acted as the catalyst for the accord. It also responded to the changes that were being observed at a global level around environmental legislation and these discussions were timely, if not overdue. While this accord does not directly relate to international trade, it illustrates the pressure that, as a result of externalities, was beginning to build domestically, which warrants its inclusion in the historical review.

### Government, industry, and farmer response

The Dairying and Clean Streams Accord was an agreement that was co-signed in 2003 between Fonterra, the Ministry of Agriculture and Forestry, the Ministry for the Environment and Local Government New Zealand (on behalf of the regional councils). It intended to provide a framework that allowed these organisations to work together and collectively bring about positive change. The accord set out five targets for dairy farmers including installing nutrient management systems, fencing regionally significant wetlands, and compliant effluent discharges.

Industry made reasonable progress on the accord over the decade since it was signed. It expired in 2012 and was replaced, after consultation with industry, in 2014 by the *Sustainable Dairying: Water Accord*. Farmers had mixed responses to the accord, but it indicated that something needed to change if they wanted to keep selling their products to increasingly discerning consumers (Ministry for Primary Industries, 2011).

### 2.15 2008: The New Zealand-China Free Trade Agreement

When China joined the WTO in 2001 it paved the way for its own economic rise and just three years later, China surpassed Japan as the leading Asian exporter. It then proceeded to overtake the United States and Germany in 2007 and 2009 respectively and became the world's leading exporter. Now a rising global superpower, China required more inputs and natural resources which contributed to an increase in crude oil and other primary commodity prices (World Trade Organization, 2015).



## Government, industry, and farmer response

New Zealand entered into its FTA with China in 2008 – a world-first for any developed economy – and with it came a unique advantage. Since the signing of the NZ-China FTA, New Zealand witnessed substantial increases in bilateral trade with China (Verevis & Üngör, 2019). Before the FTA, in 2007, New Zealand's total exports to China were valued at NZ\$3 billion (StatsNZ, 2018). Within five years of signing the FTA, in 2013, China became New Zealand's largest export market surpassing Australia for the first time (Statistics New Zealand, 2013). Exports by volume rose to over 32% and NZ\$20 billion by value in 2021, over double that of Australia, New Zealand's next largest export market (Sense Partners, 2021). In the same period, New Zealand imported NZ\$17 billion worth of goods from China (NZ China Council, 2021). In 2013/14 exports to China were 200% higher than what they likely would have been without the FTA. New Zealand's total commodity exports were also 22% higher with the FTA (Verevis & Üngör, 2019). The food and fibre sector took advantage of the first modern FTA between China and any developed nation and New Zealand achieved first-mover advantage in securing shelf space for its exports. The timing of the FTA was significant in achieving this level of export sales as China began to liberalise in line with its WTO obligations. New Zealand supplies over half of China's total dairy imports and a significant amount of its total wood (14%), meat (8%), and fruit (4%) imports (NZ China Council, 2021).

## 2.16 2015: The Sustainable Development Goals and the Paris Agreement

The 17 Sustainable Development Goals (SDGs) were born at the UN Conference on Sustainable Development in Rio de Janeiro and agreement was reached on the 2030 Agenda, a plan of action for people, planet, and prosperity as well as strengthening peace in partnership. The SDGs, intended to be a people-centred set of universal targets and goals, are to be implemented by 2030 as part of the Agenda (United Nations Development Programme, 2022). Later that same year, and after two decades of bringing almost all countries together for global climate summits, the 21<sup>st</sup> Conference of the Parties (COP21), held in Paris, led to the establishment of the Paris Agreement. By then, climate change had gone from a fringe issue to a key global priority. COP21 saw every country agreeing to work collectively to restrict global warming to 1.5 degrees make funding available to deliver on this

and other ambitious aims. With that, economies committed to presenting their own national emissions reduction plans, and the Paris Agreement was born. They also agreed to present an updated plan every five years setting out their highest possible ambition at that time (COP26, 2021).

### Government, industry, and farmer response

New Zealand was a signatory to both the SDGs and the Paris Agreement but to achieve what these commitments set out to do, it needed to do things differently. The Dairying and Clean Streams Accord 2003 had already been superseded by the Sustainable Dairying: Water Accord in 2014, however, to effect significant change meant a whole-of-systems effort. The He Waka Eke Noa – Primary Sector Climate Action Partnership was formed in 2020 to support farmers and growers to protect, restore, and sustain the natural environment, and enhance their own wellbeing as well as that of future generations. He Waka Eke Noa is a partnership between industry, Māori, and government. The partnership's work, to implement a framework by 2025 to reduce GHG emissions from agriculture, aims to assist with building resilience into the sector to cope with the effects of climate change. As New Zealand's largest emitting sector, it is also being increasingly asked for by the New Zealand public. In 2022, the government released New Zealand's first Emissions Reduction Plan. This plan outlines the actions that New Zealand must take to significantly reduce its emissions and is one of the steps necessary to meet its net-zero GHG emissions goal (Ministry for the Environment, 2022).

### 2.17 2017: The Breakdown of the World Trade Organization and Rules-Based Trading System

After the United States of America's presidential election in 2017, a drastic shift occurred in international trade. The rules-based trading system, which New Zealand relies so heavily on, was at its most vulnerable since its inception in 1995. This came after the United States put a block on new appointments to the Appellate Body of the WTO. With two of the three judges retiring, the body could no longer hear new appeals. Due to its size, New Zealand is a fierce supporter of the rules-based trading system. As it is much smaller than most of its trading

partners it relies on an international governing body to ensure trade is genuinely free and open. New Zealand has had several successful WTO appeals. Canada's dairy export scheme and the United States of America's steel imports are two cases of this (Beehive, 2002; Beehive, 2003a). New Zealand has also been party to a number of additional cases, such as, Japan's restrictions on apple imports (Beehive, 2003b). While it is unclear what the future of the WTO holds (VanGrasstek, 2013), it is clear that New Zealand will continue to defend its existence.

## 2.18 The Coronavirus Pandemic

The COVID-19 source case is widely believed to be linked to the Chinese city of Wuhan. When the World Health Organization (WHO) declared COVID-19 a pandemic on 1<sup>st</sup> January, 2020 after the first publicly recorded case on 31<sup>st</sup> December, 2019 other development was temporarily stalled as countries mobilised to protect their own citizens. Due to the highly infectious nature of the virus, state and country lockdowns were rolled out around the world in an attempt to stop the spread of the disease and limit the number of infections and deaths. As food producers, New Zealand fared relatively well, even after imposing some of the strictest lockdowns seen in the western world. As a result of the need to strengthen and sustain New Zealand's food and fibre sector, the government launched its *Fit for a Better World* strategy, a roadmap to accelerate the productivity, inclusiveness and sustainability of New Zealand's food and fibre sector. The roadmap targets adding NZ\$44 billion to export earnings, reducing biogenic methane emissions to 10 percent below 2017 levels, and employing 10 per cent more New Zealanders into the food and fibre sector workforce by 2030. While the indicators are showing that progress is being made towards achieving these three targets, the full effects of COVID-19 – economically, environmentally, and socially – remain to be seen.

## 2.19 Research Hypothesis

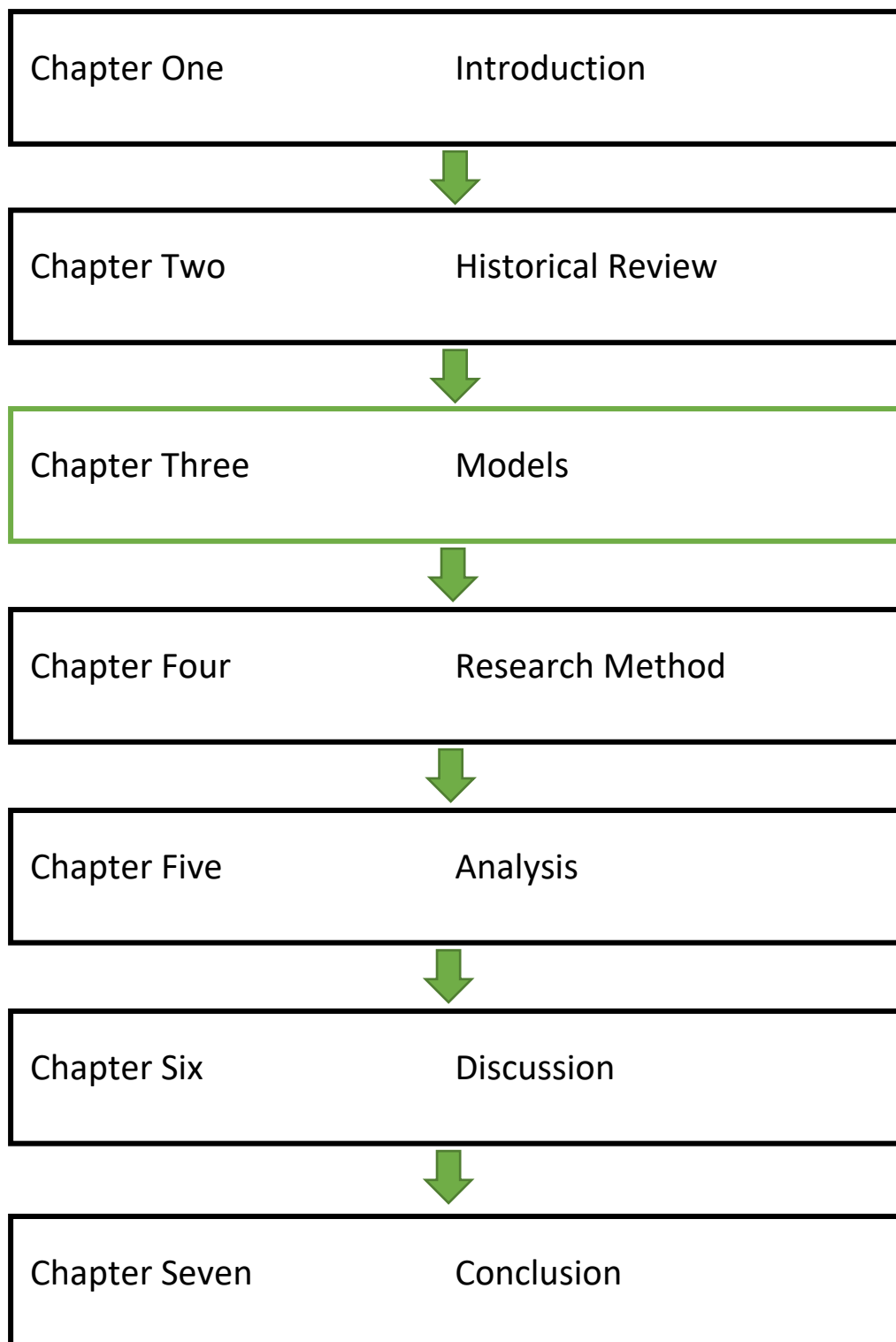
The world emerging is significantly different from that at the time of the GATT signing and subsequent WTO establishment. Some organisations either at individual farmer and grower level or industry-level societal marketing boards (Israeli & Zif, 1977) are already creating

and/or embracing a new world again. There are tensions in the current market that are yet to be resolved, for example, upholding PVRs across trading nations when they are honoured by one party and not the other. The resolution of these tensions, especially creating the proximity of a farmers' market between producers and consumers across the globe, appears to have shifted some (not all, and arguably far from all) participants into new spaces yet again. A new dominant logic appears to be emerging that is not yet a coherent whole. This new logic is an evolution of what was observed in the past and was caused by key institutional trade events. One potential way to describe the definitively different dominant logics is to consider it as three waves, as first identified by Professor Hamish Gow, Lincoln University and Chris Parsons, New Zealand Rural Leaders (personal communication, February 11, 2021), and two transition periods between them. However, this needs to be further analysed to assess if this makes sense, and in what manner.

## 2.20 Summary

There are volumes of literature on international trade since the last century, however, much of it is in a global context with less relevance to New Zealand directly. This chapter deliberately took an 'inside-out' approach and considered those key global events that had the greatest impact on New Zealand farmers and growers. Events such as the signing of the GATT, the establishment of the WTO, and the increasing concern around climate change are just some of these events. However, it was not just international factors that affected these farmers and growers. Actions taken by the New Zealand government, such as, the decision to deregulate the primary industries, were also felt intensely at the industry and farm level. Worked through chronologically, the collation of these events provides a strong image of the differing world views over time, and shows that despite all these changes, New Zealand has remained incredibly successful (though traditional international trade models would not predict this). This chapter identified and described a historical account of the most significant events since 1948. What follows in Chapter Three is the application of models and frames to make sense of why, despite its size, geographical location, and reliance on agriculture, New Zealand has defied the odds and remained globally competitive.

## Chapter Three: Models



### 3.0 Introduction

The aim of this chapter, which spans the literature and methodological gaps, is to introduce useful frameworks through which sense making occurs. The common frames that emerged as being useful are: Porter's Single Diamond Model; Rugman and D'Cruz's Double Diamond Model; comparative institutional analysis (including historical); and, and Sharpe's Three Horizon's Framework. This chapter is not intended to be an extension of Chapter Two, rather, a bridge between the context offered in Chapter Two and the understanding of how the context will develop in Chapter Four through institutional logics. In this Chapter the broad limitations of trade theory are introduced. The diamond models are observed to be tangible examples, with their inability to flex over time or identify New Zealand's success being two key limitations. The concept of comparative institutional analysis is then introduced as another way of viewing countries' and companies' success, failure, and general behaviours. Finally, a different framework that *can* account for changes over time, the Three Horizon's Framework, is presented and explained. Society's understanding of both trade theory and institutional logics has developed and evolved since the respective inception of each concept and as we seek greater tractability when undertaking comparative institutional analysis, the simplest rationale remains: to assess the past, present, and future over time. There are several models that can be used to track this but without exception, there are always three time horizons, no matter the model.

### 3.1 Limitations of Trade Theory

There are limitations to trade theory and the one most relative to this work is that it assumes that it is the nation state which is the actor, when in fact, it is largely the businesses within these nation states<sup>4</sup>. Individual firms then choose whether they will make use of a particular competitive resource bundle. It is at this point that international trade (and indeed, international economic theory) reaches the point where it no longer has adequate explanatory power because the physical business itself is typically conducted by multi-

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<sup>4</sup> There have been notable exceptions, such as, communist nations (i.e., Venezuela, Cuba, Albania, and during the Union of Soviet Socialist Republic's reign) when the state itself was the actor. Without exception, these regimes all failed.

national corporations (MNCs). Therefore, the continued explanation of the phenomenon requires a shift from international trade theory to international business theory, while still retaining some relevant attributes of international trade theory. While trade theory undeniably still holds value, it lacks explanatory ability: how does the individual firm respond?

International business models that try to depict an industry's ability to be globally competitive date back three decades. The models of most relevance to this research are Porter's Single Diamond Model (1990); and, Rugman and D'Cruz's development of this into the Double Diamond Model (1993). Other models of global competitiveness, such as, Moon, Rugman, and Verbeke's Generalised Double Diamond Model (1998); Cho and Moon's Nine-Factor Model (2005); and, Cho, Moon, and Kim's Dual Double Diamond Model (2008) were further evolutions of the first two. However, none of these improved the explanatory ability of the original model, so they remain beyond the scope of this research.

### 3.2 Porter's Contribution to Trade Theory

In 1980, Porter described the concept of competitive strategy and used this to outline how a company pursues a competitive advantage. Focusing on firm level analysis, he stated that a strategy will target either differentiation, cost leadership, or focus. These three strategies were generic and able to be applied to any business, although Porter suggested that firms should choose only one strategy, otherwise they risked wasting precious resources. Porter claimed that there were two basic types of competitive advantage – differentiation and low cost – that, when combined with the focus of activities that a business seeks to achieve its strategy, leads to above average industry performance (Porter, 1980). He later expanded on this, and in 1985, introduced the concept of competitive advantage at an industry level, its achievement represented by way of the Five Forces Model.

International competitive advantage whereby a nation state's factor conditions were considered critical to its relative success at an international level was next, and in 1990, Porter presented the Single Diamond Model of international competitiveness. Like other

contributions to trade theory Porter's book, *The Competitive Advantage of Nations*, is also based on Smith's *Inquiry into the Wealth of Nations* (1776). Like Smith, Porter argues that productivity governs wealth and that the roots of a nation's productivity lie in the competitive environment, both nationally and regionally. He claims that ultimately, international competitive advantage results from a combination of national circumstances and business strategy, and that conditions within a country may cultivate an environment in which firms are poised to attain this global competitive advantage. But it is up to organisations to make the most of this opportunity. He depicts this combination of state and business attributes in the form of a diamond model. This diamond model is made up of four primary determinants: factor conditions; demand conditions; firm strategy, structure and rivalry; and, related and supporting industries. Skilled labour and infrastructure are examples of factor conditions. Demand conditions are linked to the nature of demand for that industry's product or service in that country. Firm strategy, structure, and rivalry are conditions that govern how organisations are created, arranged, and managed, and how domestic rivalry functions. Related and supporting industries are the presence (or absence) of international competitive suppliers and related industries. Together, these four components add to the home country diamond which becomes the source of competitive advantage for firms who are based there. Porter observed that, either individually or as a system, the determinants create the environment where firms are established and compete (Porter, 1990).

Since its inception Porter's Single Diamond Model has been subject to much scrutiny by academics in this domain. The model was not perfect and had several limitations. Its key flaw was that it was less applicable to small, open economies, and especially those with significant land-based industries (or countries that are heavily reliant on resource industries) that *must* export most of what they produce. It also ignores inward FDI as playing an important role, excludes foreign subsidiaries as sources of competitive advantage, and fails to incorporate the true significance of multinational activity. Rugman and D'Cruz (1993) also claimed that over 90% of nation states, at the time of writing, are potentially unable to be modelled by the single diamond. Porter (1990) stated that industries highly dependent on natural resources were deliberately avoided, as he believed these industries did not form the backbone of advanced economies. If accurate, this is a significant weakness in the model and its



applicability, and significantly disadvantages resource-dependent economies, such as, New Zealand and Australia.

Despite the scrutiny, the Single Diamond Model holds relevance to today. It explains why large countries, such, as the United States of America, Japan, and some countries in the EU are successful, as they have a strong home base. It can also explain cases for smaller nations, such as, South Korea, where a low wage, high-tech, export strategy is in place. It also includes the role of services, which was excluded in other studies of international competitiveness. In the case of Norway, Luxembourg, and other countries with high GDP per capita, it provides rationale as to why something commonly occurring in nation states can cause them to be disproportionately wealthy compared to others. Porter is also correct in his focus on strategies of firms, as opposed to strategies of nations, and his recommendations to restrict government policy (industrial and strategic trade) and instead remove arbitrary restrictions on foreign policy to allow open and free markets. Overall, Porter's model brought together known determinants that shape a nation and promote or impede the creation of a competitive environment in a way that was understandable to businesses and governments.

As an industrial economist, Porter's first two big contributions in 1980 and 1985 were well received, and in fact, competitive advantage become the much-needed dependent variable for business research and practice – profitability relative to competitors. The Single Diamond Model was a natural extension of his thinking which, up to that point, had been remarkably sound. That said, it is entirely possible that in 1990, international competitive advantage at a nation state level could have been considered a bridge too far. It is important to remember that at the time, Porter was the only researcher studying competitive advantage, and his contribution remained conceptually appealing. The weakness could have been due to the simple complexity involved in modelling an entire nation state's competitive advantage relative to others.

The Single Diamond Model remains conceptually appealing as it compares the disparate wealth distribution between nations, but it lacks explanatory power. Despite Porter's best attempts in the Single Diamond Model, and his credibility with key global leaders including United States of America President Ronald Reagan and United Kingdom Prime Minister Margaret Thatcher, he was criticised heavily. However, it is hard to argue otherwise that his influence and research reinvigorated industrial competitiveness in the United States of America, United Kingdom, and eventually, New Zealand. For several years, no alternative model was proposed. It was not until 1998 when Rugman and D'Cruz built on Porter's model and developed the Double Diamond Model.

### 3.3 Rugman's Contribution to Trade Theory

The Double Diamond Model developed by Rugman and D'Cruz (1993) is an adapted version of Porter's model which attempts to make it more relevant in explaining Canada's international competitiveness. Canada scored poorly in terms of its home country diamond in Porter's model, yet as a nation, is increasingly successful. The Double Diamond Model builds on Porter's central theme which focuses on a firm's strategy and processes, which act as a source of competitive advantage. The case of Canada is not unique but has a few nuanced points that are worth noting, generally focused on the notion that it has a strong trade relationship with the United States of America, and as its largest trading partner (70% of Canada's total exports are to the United States of America), it means to succeed in the United States of America it must keep up with this competitive market for goods and services. Rugman and D'Cruz argue that this in turn leads to a North American diamond emerging, within which to be globally competitive, Canada must be successful. There is also an FTA between Canada and the United States, so in this case, the diamond is particularly unconstrained, which would not be the case in all trading relationships. Using a 'North America diamond' (and the benefits the FTA provides) can act as a basic unit of analysis for business decisions made by Canadian companies, as they are now in direct competition with businesses operating in the United States of America's diamond, where consumers are more demanding and supporting industries are more competitive. Rugman and D'Cruz (1993) argue that a double diamond, not a single diamond, is the best way to measure the

international competitiveness of nations even when they are also operating in small, open economies, and resource-based industries.

An unintended consequence of the Double Diamond Model is the hypothesis that it can be constructed deliberately and strategically between two nation states, without an adjoining geographical boundary, but instead through trade. However, the weakness remains that – like the Single Diamond Model – it is largely descriptive. This is understandable because it was framed through the lens of industrial economics, as it too predated institutional logics theory. This does raise the question of, if we were to re-examine the Single Diamond Model and the Double Diamond Model – and the fundamental thinking contributing to each of the factors – through an institutional logic lens today, would the two models have more value? Would institutional logics (or something very similar) emerge underneath the descriptions? For example, take the determinant ‘firm strategy, structure, and rivalry’ from the diamond models. From a New Zealand perspective, the dominant logic at the time the model was created was that it did not matter which industry was in question, the firm structure had to be a performance-based cooperative because it was assumed to be more competitive than something that was ‘privately’ owned. But farmers were often worse off because they did not have the capacity nor capability to deliver the outcomes being sought. This was observed through the Dairy Industry Restructuring Act 2001 (DIRA) which led to the amalgamation of several of the large dairy companies and the establishment of Fonterra, under the rationale outlined above. Now the industry is, arguably, trying to recover what has happened since. To his credit, Porter got close to using a more analytical model, as opposed to a purely descriptive one, and there could be value in re-interpreting these factors through the lens of institutional logics.

### 3.4 Comparative Institutional Analysis

Institutions, and the study of them, are useful to understanding the performance of diverse economies. Institutional analysis is the study of how institutions function according to both informal norms and rules, and formal legislation. It is used to understand how groups and

individuals create institutions, how they function in practice, and their effects on other institutions, people, and communities. Institutional change, therefore, explains changes in institutions, referred to as the expectations and rules governing interrelationships and societal development paths (Coccia, 2018). There are varying definitions of an institution which affects the perspectives being examined. In this thesis Grief's (2006) definition is used, being the most relevant to the field of research; a system of rules, norms, beliefs, and organisations that regulate social behaviour. Institutions then emerge as the tangible evidence underpinning industry participants from farmers and growers to the companies responsible for international business.

### 3.4.1 Historical Comparative Institutional Analysis

Historical and comparative institutional analysis (HCIA) can also be used to further understand the answers to questions, such as, why societies evolve in distinct trajectories, and why they commonly fail to adopt structures of more successful ones. HCIA is historical in that it uses the role of an institution's history to compare and analyse studies over time periods, relying on context-specific models for empirical analysis. HCIA is thus an analysis of the factors which determine the rules of society, the forces which make the rules self-enforcing, and the self-enforced constraints on behaviour emerging within these rules. Under HCIA government legislation and the rules, social norms, and values which emerge as a result are considered outcomes rather than contributing forces. HCIA also provides a foundation for studying institutional origins as a reflection of interactions among decision-makers in society and the dynamic environment within which they interrelate. At its core, HCIA's research strategy is an inductive, empirical analysis of the relevance of particular institutions (Grief, 1998). HCIA reveals institutions because it identifies those that change. This particular comparative institutional analysis compares institutions – in the form of key international trade events – and the flow-on effects these changes had globally, nationally, and at an industry and farmer and grower level. Traditional international business and trade models do not incorporate this level of change. However, the limitation of institutional analysis is evident, in that it seldom identifies the underlying behaviour that emerges from the institution – the institutional logics. This extension is discussed in Chapter Four.

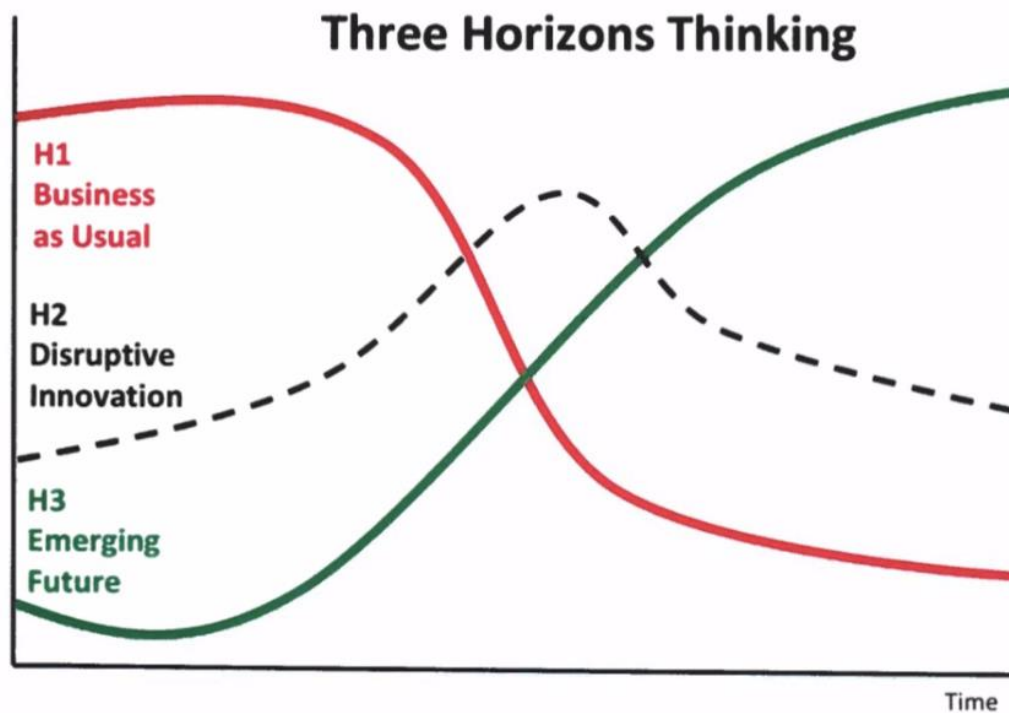
### 3.5 Sharpe's Three Horizon's Framework

Whether purely descriptive or with institutional logic theory built in, the lack of recognition that the nature, shape, and understanding all shift overtime remains a key constraint of the diamond models. Sharpe's Three Horizons Framework presents a way to examine, review and provide some structure (organisation) to the logics in the diamonds over time. Regardless of what model is used, the conventions of understanding are always described and bundled in terms of the past, present, and future. Sharpe's framework is an incredibly simple yet useful set of tools that helps to think cooperatively about the future and lead collective action to build a better one. While similar, it largely replaces other ones such as McKinsey's 20<sup>th</sup> Century Three Horizons model by Baghai, Coley and White in *The Alchemy of Growth* (2000), which assumed that breakthrough innovations would take years to develop. Technology defied that assumption, so it was found to be no longer relevant.

*The Patterning of Hope*, developed by Sharpe in 2013, shows each of the three lines in the framework represented as a view of the future over time and prevalence. All three horizons play a role in building a better future. The Three Horizon's Framework is presented in Figure 3.1. The first line, H1, illustrates business as usual (BAU) and is the dominant view of the world at that time. Eventually, BAU reaches its peak so no matter what scenario this framework is being applied to, H1 is always unfit for purpose in some sense. It starts to decline when the world begins to change, and it becomes a set of self-reinforced behaviours that no longer achieve desired results. The last line, H3, represents the collective vision for a viable future. Pockets of this vision are often seen in the present, but not enough that it is dominant yet. H3 is a better fit for the changing world. In the middle of H1 and H3 lies H2, the transitional period and entrepreneurial horizon of disruptive innovation. This line aims to address the problems seen in H1 and move the world towards H3 through a temporary pattern of innovative activities. Some of these innovations are successful in doing so (H2+) and some end up assisting with maintaining the status quo (H2-) as disruptive technology can simultaneously stimulate creative innovation and resistance in equal parts (until the new technology becomes accepted as normal). As long as any support for H1 is only temporary, the other innovations will help the world transition to H3. Though it remains imperfect,

understanding of three horizons can be interpreted in the past (BAU, which is effective, but needs to adapt), the present (something new has emerged which businesses are dealing with today), and the future (where an expectation remains that the future will be different again).

Figure 3.1. The Three Horizon's Framework.



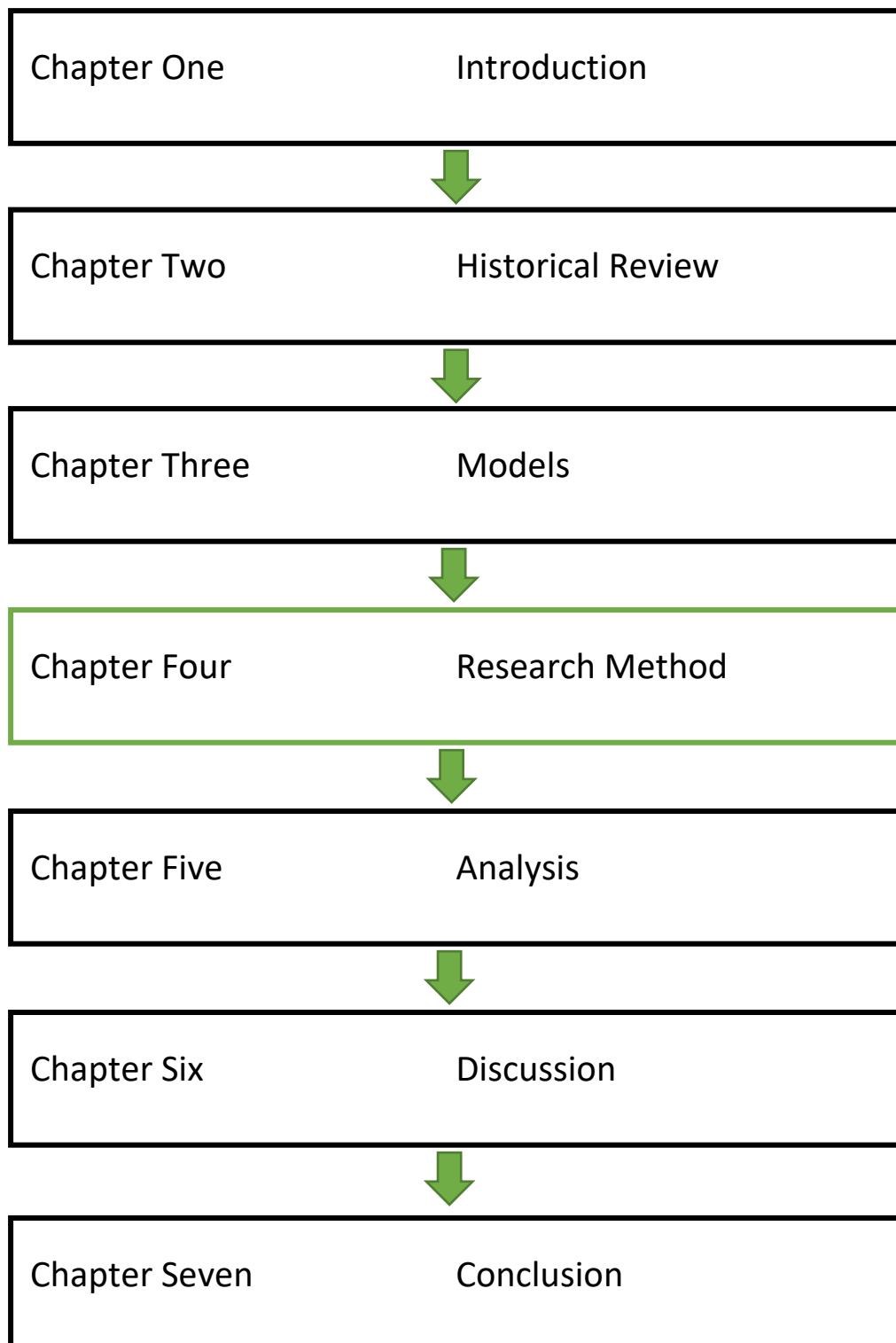
Source: Sharpe, B. (2013). *The Patterning of Hope*. UK: Triarchy Press Ltd. ISBN 978-1909470248.

### 3.4 Summary

These models and frameworks present possible ways to consider the past, present, and future. Though both diamond models did an acceptable job of investigating the current environment at their respective times, and every extension of each model took more factors into account, they do not accurately reflect the realities of the global trading environment and value chains today. It is clear there are limitations with international trade theory, particularly at a firm level, which is too 'micro' for the diamond models from which to draw any meaningful conclusions. This would indicate an absence of international economics in the primarily international trade models. The two diamond models also neglect critical parts of the produce business including seasonality (with the northern hemisphere production

complementing that of the southern), temporal and climatic conditions, expertise in growing the product, brand power, transferrable IP, and the value of mutually prosperous relationships. These attributes are important to New Zealand's primary industries, and their success over the last few decades. Change was not factored into these largely descriptive diamond models, and that is where the Three Horizons Framework might be better placed to predict the past, present, and future scenarios for businesses. Institutional logics are arguably implicit in the two diamond models, but this was not considered by the industrial economists at the time they were developed. This is largely understandable because the study of institutional logics occurred a decade later and by then, the logics had shifted from dependency on structures (1948-1995), to dependency on market access (1995-2017), to what is now a dependency on value creation (2017-current). Despite the assumption in the models that time is seemingly fixed, and situations and circumstances will likely remain the same, this is not what is observed in practice. This is the key weakness of the model, as even New Zealand has had to adapt twice because of key institutional changes. What emerges, therefore, is different dominant logics that can be mapped back to the institutions, and periods within which they occurred. The output is three time horizons. In the following chapter the approach to research is described and the concept of institutional logics is introduced.

## Chapter Four: Research Method





## 4.0 Introduction

This chapter presents a discussion on the research method. While the research predominantly takes a grounded (Glaser & Strauss, 1967) – inductive – approach, forays into theory testing – deduction – were necessary to identify, refine and begin to establish causality amongst the various institutional logics being explored. The broad attributes of the various institutions discussed in the preceding chapter are inevitably well known, however, recognition of their influence on decision making, namely consequences of the logics across the sector, is not commonly acknowledged. Considerable guidance was provided by Trish Reay's multiple works on institutional logics, especially Reay and Hinings (2009); and, Reay and Jones (2016). While Reay and Jones accept that the qualitative methods for investigating institutional logics are "not clear" (p. 441) they identify significant convergence amongst scholars towards three techniques: pattern deducing, pattern matching, and pattern inducing. Each of which are unlikely to be employed exclusively. Meaning that the convention of resolving the inductive-deductive dilemma at the outset of research is unlikely. The process instead required multiple iterations between data and concept building, and repeated refinement through dialectic testing, all of which ought to be governed by the components of good theory (Bacharach, 1989).

## 4.1 Institutional Logics

The study of institutional logics has emerged as a popular means of sense making amongst scholars. The first reference to institutional logics (using Google Scholar, Web of Science and/or Ebsco) is that by Granovetter (1973) in his influential work, *The strength of weak ties* (now cited 64,380 times). Granovetter proposed that the analysis of social networks provided a means through which micro- and macro-levels of sociological theory could be linked, relationships established, and causality proposed. Within two decades institutional logics were being used in an array of studies including: strategic management research (Xu & Xiao, 1980); the exploration of European identity (Burgess, 1982); upholding civil rights in Canada (Morton & Pal, 1985); and, constitutional design in Canada and Australia (Sharman, 1990).

At times the interpretation of institutions has been almost casually loose. Southall and Nagel (2009) use the terms organization [*sic*] and institution synonymously. At other times they are far better defined, especially by Friedland and Alford (1991) who identify institutions as “the basis of taken-for-granted rules guiding behaviour of field-level actors” (p. 232). Consequently, institutions emerge from the collective belief systems (Scott, 2001) of actors within a social network resulting from their commonly held schemas, rules, norms, and routines that establish “authoritative guidelines for social behaviour” (p. 2). The extension from the study of institutions per se to institutional logics (Thornton, Ocasio & Lounsbury, 2012) is, therefore, significant. Institutional logics are, “socially constructed, historical patterns of cultural symbols and material practices, assumptions, values and beliefs by which individuals produce and reproduce their material subsistence, organize [*sic*] time and space, and provide meaning to their daily activity” (p. 51). Consequently, the identification of institutional logics suggests a deeper and more thorough undertaking of inquiry beyond the superficiality of identifiable rules of behaviour, to the root cause of behaviour and/or influence over decision making itself.

Institutional logics are the basis for the unwritten rules, not the rules themselves, these typically being the institutions that guide the behaviour of individuals in an organisational field. They emerge from the principles, belief systems, and related practices which organise the particular field and assist with explaining the connections – or lack thereof – that then create a common sense of purpose and unity among the individual actors involved. It is unsurprising then that theorists in the field of institutional logics argue that these fields are organised by a dominant institutional logic, either on its own, or more than one that then compete against one another. In doing so a field is created that is stable but not necessarily static, being subject to change over time. That change may or may not be rapid. Observing changes in the institutional logics of a field is a means of determining the root cause of change, hence, the development of the matrix, and adherence to it throughout this study. Previous studies (e.g., McPherson & Sauder, 2013) have demonstrated that a new logic can be introduced to a field and rapidly become a dominant one, which then subsequently guides different behaviours of individuals in that field. In other cases, a new dominant logic does not completely dislodge the existing one (see Dunn & Jones, 2010). Two competing logics then

co-exist for an extended period. The proposition emerging in this study is that the sector is at the cusp of a Third Wave; that the transition between Waves One and Two is now identifiable and labelled Transition One; and, the struggle for influence being encountered across the sector is symptomatic of a second transition, referred to here as Transition Two. Some decision makers are creating, developing, and responding to Wave Three institutional logics, while others are unintentionally resisting that change as discussed by McPherson and Sauder, still firmly grounded in those of Wave Two.

Institutional logics, organisational fields, and institutional changes are closely related – conceptually and practically. Institutional logics connect institutions with actions, which is important to further the understanding of organisational fields by describing the logic that guides behaviours and assists with defining the field. Institutional change is then associated with a new logic for that organisational field. While competing logics often trigger a relatively short transition period until a natural resolution is reached, the sheer scale and complexity of the fields being explored in this research appears to result in protracted periods of change. Hence, the duration of the transition periods is to some extent identifiable and empirically defensible. Since the values and beliefs which suit the most powerful actors tend to win out and reflect the dominant logic, the field usually reforms around this outcome. Indebtedness amongst New Zealand dairy conversions, resulting in dairy farm debt accounting for 37% of all New Zealand's private sector debt is but one example (Reserve Bank of New Zealand, 2019).

While it is extremely difficult for actors not in positions of power to openly challenge a dominant logic there have been cases where a dominant logic has emerged slowly and discreetly. At that point it is then too late for the high-status actors to stop it, which highlights the two transition periods as being especially important to understand. Examples emerge in Chapter Six, particularly in New Zealand's red meat sector, that does not have a societal marketing board (Israeli & Zif, 1978) or its proxy (i.e., Fonterra) that tend to be resistant to such change. There have also been cases where two dominant logics have co-existed for a lengthy period, though this requires compromises from both sides to function effectively.

## 4.2 The Study of Institutional Logics

Reay and Jones (2016) codify the process of qualitatively capturing institutional logics. Three non-exclusive techniques are identified as pattern deducing; pattern matching; and pattern inducing. Each of these techniques and the relationship with one another are now discussed. The first technique, pattern deducing, uses reasoning or logic to seek out a pattern in the data and determine if an institutional logic is in use. It is highly analytical and is best used to examine language and vocabulary structures, combining word frequencies and relationships to define a system of cultural categories. In this technique, large amounts of qualitative data are converted to countable occurrences, often through computer programs, to reveal the existence (or otherwise) of a logic. This is critically important as without computers to process the data, it is far more likely that researchers would deduce patterns that do not empirically exist. More formal, structured, or mechanised techniques allow cognitive bias to be removed as much as is possible. This is especially important when dealing with qualitative data. The process of pattern deducing involves multiple sequential steps. Firstly, appropriate material relating to the context and actions of those being studied is identified before the text is prepared for coding and analysis. Researchers then develop a coding scheme (either inductively or deductively). The unit of analysis is subsequently defined, the numbers of units measured, and counts standardised for comparison. Both Dunn and Jones (2010) and McPherson and Sauder (2013) employed pattern deducing techniques in their respective research.

Conversely, the second technique, pattern matching, involves evaluating logics based on identifying actual data and comparing it to what may be regarded as being 'ideal types'. Using this technique researchers identify a pattern of behaviours which is associated with the ideal type of a specific logic before evaluating their own data to see how it fits with that (or another) ideal type. Thornton and Ocasio (1999), Thornton (2004), Thornton, Jones and Kury (2005) and Thornton et al. (2012) were central to developing the framework which determines the ideal types for each institutional logic, building on the concept from Max Weber and merging it with that of Friedland and Alford's (1991) understanding of societal logics. In that work five

institutional orders were identified: family; state; market; religion; and, capitalism. These five potentially conflicting orders are meant to encompass all of society, though a sixth order – professions – was later added by Thornton and Ocasio (1999). Their framework, as visually presented, places these institutional orders on the x-axis. It then places the components of logics, such as motivation and sources of authority that are representative and symbolic ‘elemental categories’ or ‘building blocks’ related to that specific institutional order on the y-axis. An example from Thornton et al. (2012) is that while motivation for the family logic is referred to as love and support, motivation for the market logic is profit. This framework forms a matrix with which both axes are combined, and contents of the cells form the ideal type behaviours for each of the logics. Empirical data is then tested in terms of closeness to these ideal types.

The third and final technique, pattern inducing, is commonly used with a grounded theory methodology and captures institutional logics by analysing qualitative data using an inductive, bottom-up approach. Direct observations and interviews are key to gathering empirical data which often includes personal experiences. Logics are then identified by analysing and grouping the text to show the behaviours and beliefs being guided by each and the attempts to draw on these logics being simultaneously symbolic and material. Due to the nature of the technique a lot of data is initially captured. The bottom-up approach – which is central to pattern inducing – allows patterns to emerge inductively which, through constant comparative analysis, can be compared to cases across the study or from other studies. This inductive process leads to many rewrites of the findings to make sense of the grouped data, but ultimately allows it to be grouped into meaningful categories which then unearths behaviour sets or patterns. Sitting within the interpretivist tradition (Weber, 2004; Bevir & Rhodes, 2012), pattern inducing is anchored in the belief that meaning and context are closely linked. The sole way to understand a social or cultural phenomenon being to analyse it from the inside. Reay and Hinings (2005) used a pattern inducing approach in their study of health care professionals in Alberta. Reay being both a clinician and an academic.

As this research is of comparative institutional analysis, the dominant technique used for capturing the institutional logics was pattern inducing. Although, it is not exclusively one of pattern inducing as the reach into and access to collaborators also resulted in elements of pattern matching. A summary of the three techniques, presented in the form of Thornton et al's (2012) matrix is included in Table 4.1 below.

Table 4.1. Three common techniques used to identify institutional logics.

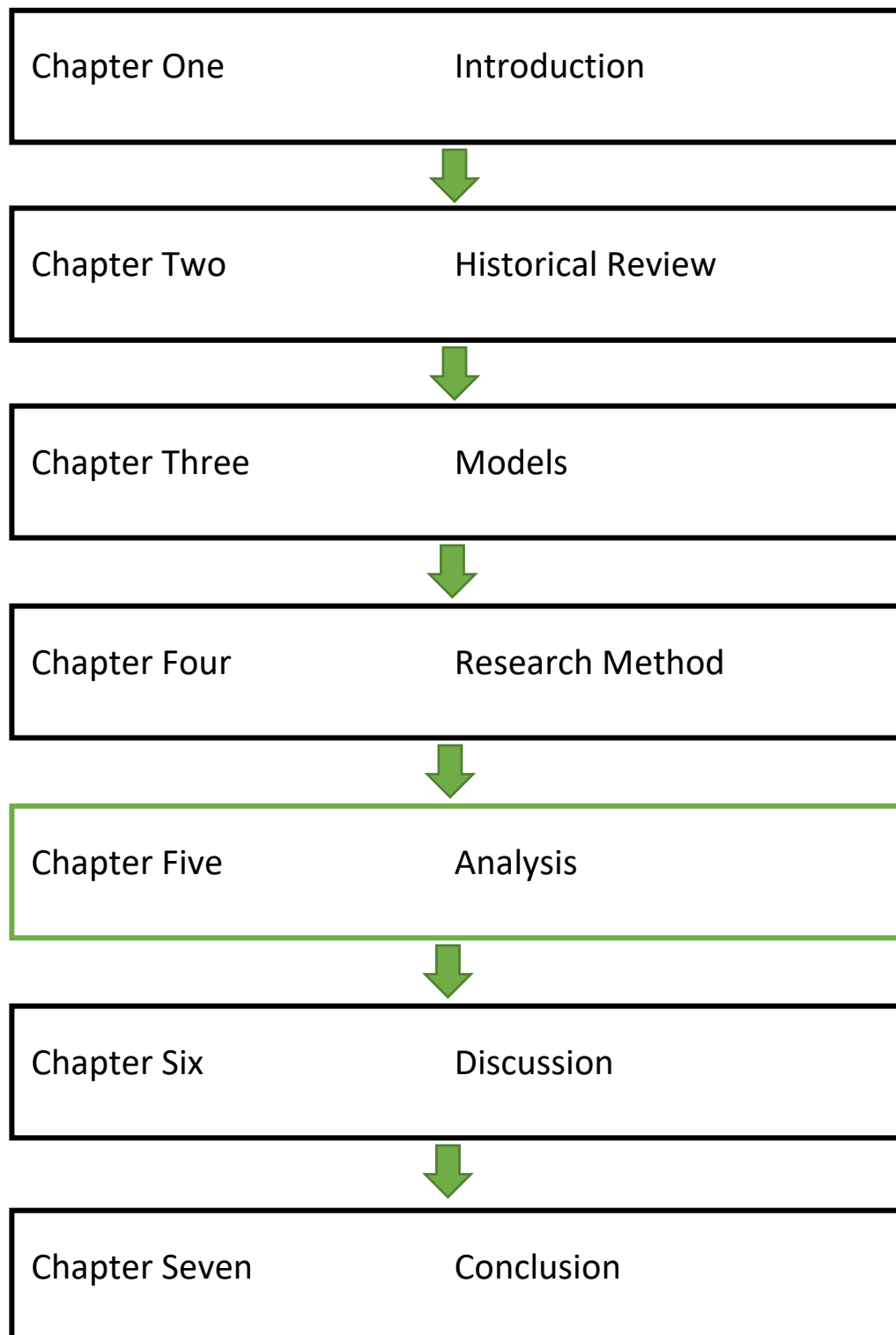
	Pattern deducing	Pattern matching	Pattern inducing
Description	Gather large volume of data (primarily text), convert text to countable occurrences, and use analytic methods to reveal patterns. Privileges analytic techniques	Identify patterns (ideal type of logics) from extant literature and then compare data to ideal type. Privileges existing theory and research	Focus on raw data using bottom-up process to identify patterns (logics) that can then be compared with extant literature. Privileges researcher
Ontology	Social world is constructed and historically embedded. These constructions empirically exist and create consequences, which can be pointed to and counted	Social world is constructed and understanding occurs with iteration between prior theories and empirical with current findings	Social world is constructed and language brings facts into consciousness. It plays a constitutive role
Epistemology	Semiotic structuralist	Analytic empiricist	Interpretivist
Research approach	Deductive and interpretation. Use analytic techniques to identify patterns and interpret patterns given deep knowledge of context	Comparison of deductive/theory driven and data	Inductive; grounded theory. Persuade through language (metaphor, analogy) and develop understanding to reveal patterns
How to assess meaning	Examine patterns that create semantic and referential meaning, including frequencies and co-occurrences of words and practices	Examine data associated with each predetermined category (pattern) to reveal meaning in comparison with ideal type	Examine and categorize text segments to reveal pattern based on underlying meaning
Unit of analysis	Words/phrases/images/objects and their relations	Field/societal sector	Text segments/quotes or excerpts
Methodology	Content analysis, observation	Any methodological technique	Ethnography; grounded theory
Software tools	NVivo, Atlas.ti, MAXQDA, WordCruncher Network packages such as UCINET, Pajek	Any qualitative software according to method chosen	NVivo, Atlas.ti, word processing (e.g. MS Word)
Challenges	Focus on breadth may reduce depth Overwhelmed by managing large data volume Fluctuating patterns may obscure insights	Need established context to identify typical (ideal type) May restrict new insights by starting from established theory	Generalizability due to restricted context Difficulty comparing across studies Difficulty in persuading reviewers that selection of quotes and examples is representative
Benefits	Captures historical changes and patterns over time Enables data reduction, representation, and visualization of patterns Facilitates analyzing larger volume of data Findings seen as more generalizable	Captures essential categories for comparison Facilitates consistent analysis across logics Facilitates comparison to other studies	Captures nuances of localized practices Data presentation retains rich context Captures actors' explanations of values and beliefs Facilitates theory development

Source: Reay, T. & Jones, C. (2015). Qualitatively capturing institutional logics. *Strategic Organization*, 14 (4), 441-454.

### 4.3 Summary

In this research the institutions were first grouped into waves which were compared against each other temporally, and then examined for consistency within each. The institutional logics were collated into categories relating to impacts on different groups of society: international citizens; government; industry; and, farmers and growers. How each of these groups reacted to the resulting environment as a result of data collection on Waves One and Two is detailed in the following chapter where an analysis of the institutional logics through Waves One and Two is presented.

## Chapter Five: Analysis



## 5.0 Introduction

This chapter provides an analysis of the research material that has been introduced to date. Chapter Two presented a historical review of the key global events that impacted farmers and growers in New Zealand over the past eight decades, bookended by the signing of the GATT in 1948 and the breakdown of the rules-based trading system in 2017. The question remains: were the behaviours identified by governments, industries, and farmers and growers largely predictable if the right tool had been identified? The key models and tools involved in this research were discussed in Chapter Three. The chapter identified the limitations of trade theory using Porter's Single Diamond Model and Rugman and D'Cruz's Double Diamond Model as examples, before introducing the concepts of comparative institutional analysis and Sharpe's Three Horizon's Framework as alternative frames to make sense of what was occurring. Chapter Four, the research method chapter, presented a brief discussion on the mostly inductive research method which offers more confidence from a methodological perspective. Chapter Five now explores the key events and impacts identified in Chapter Two, using the models and research method outlined in Chapters Three and Four, and attempts to analyse the material through the lens of institutional logics and the Three Horizons Framework. The chapter presents the results of this study and offers a different way of looking at these historical events and behaviours, by introducing a dominant logic matrix.

### 5.1 Wave One: Become a globally known producer

Wave One embraces the entire period from the signing of the GATT in 1948 to the establishment of the WTO in 1995. While the creation of the WTO in Geneva in 1995 replaced GATT as an international organisation, the GATT still acts as the WTO's umbrella treaty for goods' trade (World Trade Organisation, 2021b). Nevertheless, its signing marked a period of institutional change, the culmination of what subsequently emerged as Wave One, and the key defining feature of this Wave. The signing of the GATT in 1948 had huge implications for global trade – mostly all positive. GATT was effective in promoting bilateral trade between members which led to substantive increases in international trade of member countries, relative to domestic sales. It also increased trade between members and to a lesser extent,



between member and non-member economies, in large part due to the public good nature and reduction of uncertainty around trade policy (Larch et al., 2019).

Food scarcity issues following World War II increased the need for food, economic, and social security, which led to high levels of government protectionism. Even when other non-food product protectionism lifted, food protectionism remained, especially the staples of milk, sugar, flour, cotton, and rice. As the world moved out of the immediate post-war era, protectionism slowly began to decline, especially as market liberalisation was linked to massive economic growth, which the world desperately needed. Though there was minimal liberalisation directly after the war, West Germany's 1948 reforms helped to construct the foundations which enabled the 'Wirtschaftswunder' phenomenon in the 1950s, thus informing future liberalisations to come. The United States of America also began to liberalise in the same decade, and many other economies followed suit in the 1970s as a result of another high inflation period. The emerging neoliberalism saw the first wave of nationwide liberalisations, starting with Chile in 1975, which went against the usual protectionist measures previously employed. Economic crises continued to shock traditional communist economies, which led to similar economic market reforms in China in the 1980s. The second wave of liberalisations, which was more socially liberal than the first, appeared the following decade (Steger, 2010).

Globally, this was a time of creating for creation's sake, leading to a boom in the production of commodities and the exploration of new technologies and business models. At the time, these were still mostly regulated by governments who also held the key relationships with other countries and, therefore, their consumers. At the beginning of Wave One quotas, particularly in agriculture, were still widely used. However, several decades of operating in this artificially constrained market; a substantial fall in the terms of trade; an inefficient manufacturing sector; Britain's entry into the EEC; and, poor macroeconomic management eventually lead to a protracted period of low growth in New Zealand during the mid-1970s. This saw quotas being removed and tariffs introduced in their place; still much later than some

of the larger economies that liberalised earlier in the century (such as, the United States of America).

### Government action

The global food shortages of the 1950s saw incredible wealth for New Zealand, an agricultural nation. As recently as the late 1970s and early 1980s, the United Kingdom accounted for 14% of exports (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). When the United Kingdom joined the EEC, now the EU, it may have masked the somewhat unavoidable decline of New Zealand's primary exports caused by the combination of an increase in protectionism, meat diversification, and local dairy farms (Macmillan, 1973). On the other hand, the standardised Trans-Tasman food standards enabled by ANZFA of 1995 led to lower costs of compliance for industry, fewer regulatory barriers, and greater consumer choice (Department of Foreign Affairs and Trade, 2018).

New Zealand's success on the global stage was dictated by the respective government of the day, which fluctuated in terms of governing party and their philosophies throughout the First Wave. The high taxes needed to afford the increasing welfare payments were sometimes up to 66%. Eventually, taxes began to severely constrain New Zealand's ability to be innovative to the point where the system needed to change, and taxes were eventually decreased to 33 cents on the dollar. However, Goods and Services Tax (GST) was introduced in 1986 at 10% (Organisation for Economic Co-operation and Development, 2020) so although personal tax through income had decreased, GST replaced some of this which led to a marginal tax rate that was comparatively high. This rate continued to increase as GST rose to 12.5% in 1989. The 1984-1990 Labour Government became inherently more confident with using market mechanisms, which led to its radical market liberalisation programme referenced in Chapter Two. This work was initially reinforced by the next National Government but even they were proceeding more cautiously by the mid-1990s. A long recession was one consequence of these radical economic reforms and New Zealand's per capita GDP either fell or stagnated every year between 1986 and 1994; New Zealand's longest post-war era recession.

Interestingly, there is no definitive agreement regarding the exact cause of the recession. It could not be entirely attributed to the 1987 international share market crash, because other countries that had a crash did not stagnate like New Zealand. Even after the 1987 share market crash, the world economy continued to flourish so New Zealand did not experience intense external borrowing pressures or relative falls in export prices. Based on that, it seems the recession must have been a domestically generated slowdown. With that in mind, a common explanation as to why this may have happened is that the market and economic liberalisation was badly handled and managed, most significantly by over-valuing the exchange rate, which then subsequently stalled New Zealand's export engine. On the one hand, some people flourished in the new environment that 'Rogernomics' created. The stock market soared and property speculation took off, which was excellent for those who owned either of these assets. On the other hand, some lost their livelihoods as the government sector tightened and unemployment increased. Even for those who prospered, after the stock market crash of 1987 some investors also incurred severe losses (Te Papa, 2021).

There were many state-owned enterprises in New Zealand in the first half of this wave and, therefore, state-owned and controlled infrastructure. This forced collaboration, necessary to ensure decisions were centrally made and in the best economic interests of New Zealand, had flow-on benefits to private businesses across a wide range of industries.

### Industry response

In comparison to the other sectors, agriculture's reform was quick and severe due to its position as a large export earner. There were other support policies to protect domestic producers against competing importers, but this had the adverse effect of increasing the cost of consumer goods. Removal of these support mechanisms was eventually negotiated with industry bodies (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). Meanwhile, New Zealand employees of the various industry boards continued to grow and to maintain shelf space for exports in international markets. This was aided by the government's use of public standards, which it both created and audited and that, coupled with the 'New Zealand origin story', gave confidence to international

consumers on product safety. As this marketing and sales work largely happened offshore and was afforded by industry levies, it often went unnoticed and unappreciated by the industries themselves, who benefited from the work. The value that offshore staff provided was immense and the strong relationships formed by New Zealand employees in market meant many industries got preferred access for their products (J. C. Lockhart & H. R. Gow, personal communication, September 11, 2021). This knowledge, along with onshore research and development and innovation, was centrally funded and made available to anybody who wanted it, being funded for the good of the public. Industry bodies did well to disseminate this critical information to farmers and growers, which helped them to grow and farm better. At the time, before the digital technology age, information was held in physical form and was slower to disseminate. Data was publicly owned, for the public good, and it was protected and housed by government ministries or the respective industry producer board. This ownership structure meant that it was still controlled and ultimately owned by farmers, though published in aggregate form (J. C. Lockhart & H. R. Gow, personal communication, September 16, 2021). Communication was the same and was mainly done through traditional mail, comprising letters and telex machines. Travel was expensive and trade slow – largely by ship – which was yet another reason why having staff who lived in the markets, employed by industry organisations, was a huge advantage to those exporters (J. C. Lockhart & H. R. Gow, personal communication, September 11, 2021). Wealth in Wave One was created by providing a functional commodity, and New Zealand's primary industries were getting better at it, albeit artificially stimulated by production input subsidies and export monopsonies (J. C. Lockhart & H. R. Gow, personal communication, September 16, 2021).

While kiwifruit cultivation dates back to the early 20<sup>th</sup> Century, the commercial beginnings of the kiwifruit industry emerged in the 1960s. New Zealand remained the only country to export kiwifruit until the 1980s where its first mover advantage was lost. Due to the fierce competition between New Zealand's multiple exporters alone, prices were driven down which reduced profitability for growers and caused fluctuations in supply and demand (New Zealand Kiwifruit Growers Incorporated, 2019). Frustrated, kiwifruit growers held a referendum in 1988 and voted in favour of moving to a single point of entry (SPE) or single desk.

The history of the dairy industry dates back further than that of horticulture, to 1814 when Samuel Marsden brought the first three cows – a bull and two heifers – to the Bay of Islands from Australia. From the 1840s, most towns had dairy cattle, with larger herds near urban areas. But it was not until the 1870s that the first dairy co-operative was established and in 1881, William Bowron preached the notion that building dairy factories for the production of cheese would be hugely advantageous to New Zealand's economy. By 1920 there were 600 dairy processors, 85% of which were owned as cooperatives (Stringleman & Scrimgeour, 2009). In 1923 the New Zealand Dairy Control Board was established as a regulatory board with export monopsony status (National Library, 2022). By 1930 the number of cooperatives had decreased slightly to 500 (Philpott, 1937). The Dairy Production and Marketing Board Act, designed to consolidate and amend the legislation to acquire and market dairy products, was passed in 1961. This Act also established the New Zealand Dairy Board (NZDB) and defined its functions and powers (Food and Agriculture Organization, 1998). Despite early success in this market with staple dairy products, dairy exports struggled in Europe. Though consumer demand for 'spreadable' butter was strong, it was not afforded market access as it did not meet the regulator's specification for butter. This made adding value and creating better products – across dairy generally – increasingly difficult, and less appealing for more exporters (Lambie, 2005).

While the country's domestic industries in Wave One worked together internally, and relationships were strong as a result of collaboration, the system arguably left value on the table as interventions onshore were targeted at maximising the volume of output. The two key outcomes of the reforms were productivity growth for individual industries, and reallocation of resources to more productive industries. While labour productivity rose, the size of the workforce trended downwards (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006).

## Farmer result

Farmers and growers enjoyed government support for many decades in the form of fertiliser subsidies; concessionary interest rates; tax concessions; and, pest and disease control. These all helped to keep them globally competitive, and the support mechanisms reflected a close relationship between the governments of the time and New Zealand's farmers and growers (Nightingale, 2008a). The constant support meant they also, likely unintentionally, became expert arbitragers of subsidies and other artificial market protections. They were exceptionally good at working within the rules of the system, down to when they purchased new equipment, such as, utility vehicles (e.g., Landrovers) and maximising their balance sheet and bottom line while doing so. The policy reforms in 1984 provided potentially lower costs to farmers as the government phased out subsidies and after the reforms the number of commercial farms grew. While pastoral farms got bigger, those farms that had diversified into other industries got smaller (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). Over two decades, farmers and growers shifted from an environment with subsidies and heavy government involvement in agriculture (to the level of dictating the type and quantity of goods being produced) to a world without farming subsidies (Lambie, 2005). A summary of Wave One is presented in Table 5.1 below.

Table 5.1. Dominant Logic Matrix: Wave One.

<b>Attributes</b>	<b>Wave 1</b>
<i>The world view</i>	Centralised social ethos
<b>Institutional market structure</b>	
<i>The lens</i>	Imperial development
<i>International environment</i>	Sovereign-based trade
<i>Relationship nexus</i>	Government to government
<i>Values of civil society</i>	Socialism and egalitarian
<b>How governments operated</b>	
<i>Market access</i>	Government to government
<i>Trade</i>	Quotas and subsidies
<i>Market structure</i>	Institutionally constrained markets
<i>Protectionism</i>	Protectionist
<i>Control</i>	Government control
<i>Integrity system</i>	Government public standards
<b>How agri-businesses responded</b>	
<i>Business model</i>	Single trading entities legislated by government
<i>Source of capital</i>	Debt and equity – imperial and government-supported
<i>Source of scale</i>	Volume-based scale
<i>Wealth creation</i>	Arbitrage of subsidies and market protections

The resulting domestic environment	
<i>Knowledge</i>	Public knowledge
<i>Innovation</i>	Centralised for public benefit
<i>Data ownership</i>	Public good
<i>Communications</i>	Snail mail

### 5.3 Wave Two: Become the best producers in the world

Wave Two is defined as the period from the end of Wave One, the establishment of the WTO in 1995, to the breakdown of the rules-based trading system, in 2017. Arguably, the WTO's breakdown could span a longer period but for this research it is confined to 2017. The creation of the WTO, as well as increasing global concerns around climate change, are defining features of the Second Wave. International trade in Wave Two was drastically different to what had been previously observed in Wave One though it remained significant in developing and developed nations alike, particularly in agriculture, where developing economies maintained a comparative advantage (International Monetary Fund, 2001). Protectionism was on the decline, particularly in developed economies, as the world experienced a rapid explosion of trade agreements (thanks to the creation of the WTO). As the effects of economic, social, and food security concerns wore off, this period is observed for its 'laissez-faire' ethos. Trade, which had already experienced significant growth and expansion in Wave One and was increasingly seen as essential to economic growth, continued on this trajectory as economies across the world liberated and opened for international business. Trade experienced strong growth between 1995 and 2001, before finally booming between 2002 and 2008. It also led to the outsourcing of labour to other countries with lower labour costs, particularly in the east. This was then accompanied by increasing commodity prices. While trade rebounded strongly in 2010/2011 after the Global Financial Crisis (GFC) of 2008/2009, trade growth until the end of the Wave remained surprisingly weak. This was caused by a combination of factors – largely centred around the combination of rising oil prices, debt issues, and geopolitical tensions – which saw world trade growth slowing significantly (Lewis & Monarch, 2016).

Increasing productive efficiency through free and open trade was the dominant logic of the time and the system worked because of international rules-based trading, and regional

protection organisations, such as, the WTO. As a result, the way countries traded between themselves was transformed (Albertoni, 2021). The ethos of less state control and capitalism was that individuals could decide their own future. Globally, governments became less and less involved in international trade, except at the FTA level, as large businesses controlled what consumers would buy and from where. Only a few economies remained unliberalised. Free and open markets meant fewer quotas, subsidies, and tariffs, and MNCs thrived as a result. Some industries and businesses expanded through importing chemical, electrical, and transport products which were then used in finished goods, as was seen in some Eastern European nations. Others, such as, in East Asia significantly increased the portion of imported components in exported products. Many of these economies, such as, Cambodia, China, and Thailand have also benefited from investments in resources and infrastructure. The highest growth though, somewhat unsurprisingly, was seen in those countries that supplied the raw products required for industrial production, namely oil, mineral, and agricultural exports (World Trade Organization, 2015). Though trading partners remained similar to what they were in Wave One, key events, such as, China joining the WTO caused fundamental institutional changes. Rules-based trading and minimal government oversight meant Wave Two was dominated by MNCs who were able to operate as they wanted, within the framework set out by the WTO and other regional protection agencies, (such as, the UN). Overall, there was a large shift to far more liberal market structures, including in New Zealand, and a 'winner takes all' mentality was born out of the relentless pursuit of efficiency.

### Government action

In the past three decades in particular, New Zealand has been forced to adapt to this changing world (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). New Zealand's economy at the turn of the 21<sup>st</sup> Century was vastly different to even the last 25 years of the 20<sup>th</sup> Century. The 'Rogernomics' era, first seen in Wave One, carried through into this wave and after a heavy presence of artificial market instruments in Wave One, the Second Wave saw the eventual removal of agriculture subsidies, along with the commercialisation and privatisation of public enterprises (Easton, 2009) and market liberalisation. During the 1990s and 2000s, New Zealand was one of the most open traders in the world. This coincided with the government's decision to deregulate



the primary industries' producer boards. Despite being in a far better position competitively, the success of this liberalisation remains open to debate. While many argued that all the economic reforms were necessary, others viewed the measures as causing undue hardship by turning what was initially a 'fiscal deficit' into a 'social deficit'. Somewhere in the middle is the belief that while many of the market and economic liberalisation measures were needed to advance New Zealand's economy, the execution of these measures showed mixed results and the Labour Government elected in 1999 modified and reversed some of the more extreme measures, but continued to progress market liberalisation (Easton, 2009). By 2000, many concerns from the past 25 years had been addressed and economic growth once again began to accelerate (though some commentators attribute this to more workers as opposed to an increase in productivity). New Zealand's trade policymakers in the 2000s were largely focused on keeping all options open and put huge amounts of effort into negotiating with countries – either bilaterally or multilaterally – to gain reciprocal market access for New Zealand's industries and companies (New Zealand Foreign Affairs and Trade, 2022d).

This period of market liberalisation meant more opportunities to trade with other countries. Although, New Zealand's main trading partners and exports remained largely the same as before because it was easier to maintain existing relationships than forge new ones. It remained this way for some time. Australia, previously New Zealand's largest trading partner, remained a strategically important market (especially since the CER). The 2013 CER Investment Protocol, an ambitious agreement for investment, maintains the CER's status as one of the world's most comprehensive FTAs. This further reduced the cost of compliance and provided more legal certainty for trans-Tasman investors by screening foreign investments at higher thresholds (New Zealand Foreign Affairs and Trade, 2022c). The standardisation of food standards through ANZFA added to this status. The CER, ANZFA, and other mutual agreements between the two nations underpinned strong trans-Tasman trade growth. In 2014-2015 the total goods and services trade was valued at over NZ\$25 billion, and Australian investment in New Zealand was valued at four-times that (over NZ\$100 billion). Since the CER was signed in 1983, trade composition between New Zealand and Australia has radically changed reflecting changes in technology, domestic industry structures, market liberalisation, and (most notably) consumer demand (Department of

Foreign Affairs and Trade, 2018). The United Kingdom remained New Zealand's fourth-largest export market, and even after their assimilation into the EEC, historical links between the two countries remained strong (Macmillan, 1973). The economy continued to be an important market for New Zealand's primary products, however, it shared that position with Asia, Australia, the EU, and the United States of America (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). By the 2000s, after a previously challenging trade relationship, the EU had become an important ally, both politically and economically and was one of two key markets for New Zealand meat exports who, along with the United States of America, accounted for 50% of all exports by volume (Macmillan, 1973). It became New Zealand's third-largest trading market, behind Australia and China, and took a total of 16% of exports. Disagreements still occurred between the two "economies" but overall, relations remained positive. By 2018, negotiations for the New Zealand-European Union Free Trade Agreement had begun (New Zealand Foreign Affairs and Trade, 2022b). Wave Two also saw the signing of the New Zealand-China Free Trade Agreement in 2008. Throughout the wave, tariffs were eliminated for over 97% of exports to China, and China rapidly became New Zealand's largest export destination (New Zealand Foreign Affairs and Trade, 2018).

This was an era of global economic growth and to sustain domestic economic growth, New Zealand had to borrow significant amounts of money from overseas. New Zealand was yet again confronted with the realisation that its success was linked to the success of these markets when the GFC hit in 2008. This highlighted how little had *actually* changed over 200 years as New Zealand was still heavily reliant on overseas markets for export commodity returns and debt financing, as it had been for the past two centuries. The 2000s again brought to the fore the question of this reliance as a sustainable strategy.

### Industry response

With the removal of subsidies, tariffs, and quotas emerged a clear distinction between those industries and organisations who had relied on FTAs and those who were creating their own relationships and value propositions outside of these bilateral and multilateral agreements.

Overall, this new structure (or lack of) enabled more pure trading, and the benefits to those who embraced it became increasingly obvious. Commodities were still being produced in this Wave, but they were commodities with a better user experience for the consumer. Scale became efficiency and profitability based. This drove New Zealand's primary industries through its second phase, particularly dairy, and firms got bigger. These newly deregulated hyper-competitive corporates, such as, Fonterra, were poised to make the most of the impending economic boom. The agriculture sector benefited from the reforms as they enabled better utilisation of resources and an industry structure that allowed it to be more responsive to signals from the market. Total factor productivity growth almost doubled from the period of high subsidies to thereafter (1.5% & 2.5% respectively) (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). This hyper-competition led to two races being run concurrently – one relentlessly pursuing efficiency (e.g., Open Country Dairy and Talley's) and the other, differentiation (e.g., First Light Foods & Atkins Ranch). For the former, the purpose was to produce as much as one could, as fast as one could, and as efficiently as one could. It was all about absolute production, which led to flawed economics. There is a need for both – relentless efficiency and differentiation – as high levels of efficiency keep the whole industry honest and drives further efficiency. Efficiency gains were higher towards the end of the Wave than they were at the beginning, which is remarkable given how far industries had already come. As well as business models, supply chain models also became extremely competitive. Done swiftly (often through land-use change), this led to excess profits. Although, the true costs of production were not met by the producer and this relentless pursuit of efficiency created an array of negative externalities, at both a national and global level, which were not widely understood until nearer to the end of the Second Wave. It was not just MNCs who took advantage of rules-based trade as this system enabled smaller individual companies to undertake international business activities as well. This was beneficial for New Zealand, as nearly all its companies were small and medium-sized enterprises (SMEs). This bifurcation of large farmer and grower-owned co-operatives and small businesses, brought about by market liberalisation, arguably, has led to the loss of a 'middle'.

The invention of electronic mail, or e-mail, revolutionised global business, but particularly so in New Zealand due to the tyranny of distance from key markets including Australia. For many global competitors, their consumers are not 10,000 kilometres away, meaning they do not have to transport their products vast distances as do New Zealand exporters. Therefore, technological advances which broke down some of the barriers caused by dislocation from customers and consumers were ground-breaking and changed the global business market. The advances in communication technology and the internet coupled with the increasing affordability of travel meant that business could be conducted from home countries and there was less of a need for staff to live in-market. The relationships in-country, which New Zealand had spent a lot of time and effort building, were increasingly seen as less valuable. This meant a lot of offshore-based staff returned to New Zealand and a huge amount of in-market capability was lost, leading to the deterioration of some key relationships as a result. What was previously public knowledge, funded and controlled by the government was privatised and emerged as being owned by industries or large companies. The same happened with innovation and data ownership – where it had been public it was now privatised to and owned by firms (J. C. Lockhart & H. R. Gow, personal communication, September 16, 2021).

The Second Wave also saw the need to optimise markets as high levels of demand had been created in Wave One and deregulation meant there were too many markets for small ones to survive in. So, the industries needed a strategy to best meet consumer demand without overpromising supply. It became even harder to hold shelf space as, in addition to the effects of deregulation, increased global competition and affordability of air travel meant New Zealanders returned home and industries lost their in-market insights. Wealth was created through homogenous products that offered a better experience than they previously had, which was increasingly difficult in a world of hyper-competition, but ultimately became better for consumers. Concurrently, intensive domestic production had an increasingly detrimental impact on land, water, and air quality, and the agriculture sector's contribution to climate change and global warming was getting more attention than previously (see Dairying and Clean Streams Accord 2003). The change in view, either because the negative externalities were becoming more urgent or because more affluent countries began to notice, meant considerably greater attention was being paid to environmental concerns than ever before.

Land use changed from the 1980s, as a bigger proportion of land was now being used for horticulture and viticulture, while a similar proportion was retained in pastoral industries. The land used for pastoral industries, and the overall land suitable for agriculture, had been declining at similar rates. The growth in horticulture in the early 2000s was curbed, however, by weak international prices (as a result of oversupply) and the NZD appreciating. Because of this, fruit exporters faced high competition for kiwifruit (and other horticultural products, such as, wine and apples) in key international markets. To maintain and increase market share and profitability, these industries focused on improving quality standards and generating IP, which was enabled by the PVR Act (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006).

After the period of mass deregulation in the 1990s and early 2000s, kiwifruit growers successfully lobbied the government of the time to retain its SPE. Originally called the New Zealand Kiwifruit Marketing Board (NZKMB), in 1997 the organisation rebranded to Zespri, the world's largest kiwifruit marketer. The SPE allows Zespri to control supply, achieve economies of scale, monitor quality, and invest heavily in marketing and innovation to overall increase the value of its exports. These benefits make it extremely valuable to be a Zespri kiwifruit grower, as it allows for a certain amount of protection, and a huge amount of opportunity. While barriers in horticulture were lower than other primary industries, it was only when IP rights were gained that industries, such as, kiwifruit could fully capture this value. For a decade, Zespri and kiwifruit growers enjoyed good returns for Hayward (green) kiwifruit and the first proprietary gold variety, Hort16A, until *Pseudomonas syringae* pv. *actinidae* (Psa) arrived in the Bay of Plenty in 2010. By 2011, the disease had wiped out most of the Hort16A crop, and kiwifruit orchards were being sold for bare land prices as growers frantically tried to exit the industry (Greer & Saunders, 2012). While devastating to growers and those in the industry at the time, Psa eventually (unknowingly, at the time) stimulated the industry's acceleration through Wave Two. The industry saw the shift in consumer demand early, and due to the amount of marketing spend, observed the signals to move to a consumer-centric, values-based ethos.

Towards the end of the 1990s there were four dairy cooperatives remaining: the Waikato-based Dairy Group, Kiwi Co-operative Dairies, Westland Milk Products, and Tatua Co-operative Dairy Company (Stringleman & Scrimgeour, 2009). A few years later, the Dairy Industry Restructuring Act 2001 was passed and the two largest remaining cooperatives – New Zealand Co-operative Dairy Company Limited and Kiwi Co-operative Dairies Limited – merged with the NZDB to establish Fonterra, New Zealand's largest company. Fonterra is owned by 10,000 farmers and has over 20,000 employees. Its portfolio includes milk (fresh and powder), cheese, butter, yoghurt, and other popular dairy products. As a regulated industry, the industry structure is set by the DIRA (later updated in 2020). This Act created Fonterra Group Limited. There are four key aspects of the Act. It includes provisions to promote efficiency in New Zealand dairy markets through regulation of Fonterra's activities and ensuring a contestable market for domestic dairy products. When Fonterra was first created, it took over 96% of total milk production. To ensure a competitive domestic market DIRA also regulates Fonterra's farm gate milk price and the dairy export quota management system (as well as herd testing and the dairy core database) (Ministry for Primary Industries, 2020). Dairy farmers have been subject to turbulent returns ever since, as the domestic competition for supply remained as competitive as the international market for consumers. In 2014/2015, the dairy downturn hit and the whole milk price fell to NZ\$3.85 per kilogram of milk solids. The Waikato region alone lost almost NZ\$2 billion of dairy revenue (dropping from NZ\$4.2 billion to NZ\$2.4 billion between the 2013/14 season to the 2014/15 season). There were several possibilities for this crash. While the downturn seemed to be caused by the inevitable collapse of the low-value market for commodities and dairy processors' inability to adapt to value-add products (and in some part it probably was), the record payout of NZ\$8.40 the previous season saw an 8% increase of national milk supply and an extra 60 new dairy conversions in Canterbury alone. However, this expansion coincided with Europe's removal of quotas, leading to increased milk supply throughout Ireland and Europe as well, and global milk prices crashed as a result (Hickman, 2021). Dairy, as a whole, has spent longer in Wave Two. That is not to say all the industry has, Synlait is a clear exception.

Overall, the Second Wave saw more private investment into innovation and development of IP. But it resulted in a siloed mentality as industries became less collaborative. That,

combined with deregulation, meant the strategic, long-term view was often forgotten by industries as it became survival of the fittest and it was farmers and growers who were impacted most. The industries that did well were the ones with collective, industry-wide investment into IP, such as, Zespri.

### Farmer result

Wave Two was another growth phase for New Zealand and farmers and growers were happy as long as the overseas markets who purchased their products were also expanding. After carving out shelf space on the global trading stage, the primary industries' purpose largely shifted to becoming one of the most productively efficient farmers and growers in the world (Beehive, 2003c) and subsequent investment and business model decisions were based on this aim. The macroeconomic climate was much more stable by this point than in the 1980s, and farmer returns were more aligned to global market returns because of the freer market environment within which New Zealand operated. Although, this meant farmers took on more market risk. Not only did farm incomes recover when the subsidies were removed, in some cases, they were significantly higher than before. Farm prices followed the same trend (Australian Bureau of Agricultural and Resource Economics & Ministry of Agriculture and Fisheries, 2006). Farmers were making the most of the new market structures and did this through providing the large corporates with what the market was signalling – differentiated products at high efficiency *and* scale.

Unlike in Wave One where they relied on the industry body, processors attempted to directly communicate market signals more clearly to farmers and growers, leading to higher returns. They were innovative in a world of productivity gains and experimented a lot more than in Wave One where high taxes constrained people's ability and desire to be creative (though producers retained significantly less control). However, while income tax had decreased from its highest rates in Wave One, GST was again increased to 15% in 2010 (Inland Revenue, 2010). When combined with income tax of up to 33% for some, actual marginal tax rates for most people is around 48 percent. While this has less of an impact at a farmer and grower level because of the way farming businesses are often structured, it does have a large impact on

domestic consumers' disposable income and appetite to purchase New Zealand made products which are not always cheaper than imports. Farmers and growers on occasion had less access to knowledge as it became privately held and data ownership was lost (Sinclair, 1999). This did not stunt innovation completely, though. Technology was used to extend the shelf life of products from being seasonal to in some cases annual, however, this was done with private investment (as is the case for Zespri). A summary of Wave Two is presented in Table 5.2 below.

Table 5.2. Dominant Logic Matrix: Wave One and Wave Two.

<b>Attributes</b>	<b>Wave 1</b>	<b>Wave 2</b>
<i>The world view</i>	Centralised social ethos	Laissez-faire
<b>Institutional market structure</b>		
<i>The lens</i>	Imperial development	Productivity and efficiency
<i>International environment</i>	Sovereign-based trade	International rules-based trade, FTAs and MNCs
<i>Relationship nexus</i>	Government to government	Business to business
<i>Values of civil society</i>	Socialism and egalitarian	Capitalism
<b>How governments operated</b>		
<i>Market access</i>	Government to government	Bilateral FTAs and business-owned relationships
<i>Trade</i>	Quotas and subsidies	Open, rules-based trade
<i>Market structure</i>	Institutionally constrained markets	Open, unconstrained markets
<i>Protectionism</i>	Protectionist	Tariffication
<i>Control</i>	Government control	Corporate control
<i>Integrity system</i>	Government public standards	Industry private standards
<b>How agri-businesses responded</b>		
<i>Business model</i>	Single trading entities legislated by government	Deregulated hyper-competitive corporates
<i>Source of capital</i>	Debt and equity – imperial and government-supported	Debt and FDI – free market
<i>Source of scale</i>	Volume-based scale	Efficiency-based/profitability scale
<i>Wealth creation</i>	Arbitrage of subsidies and market protections	Operational excellence
<b>The resulting domestic environment</b>		
<i>Knowledge</i>	Public knowledge	Industry knowledge
<i>Innovation</i>	Centralised for public benefit	Privatisation of public knowledge
<i>Data ownership</i>	Public good	Private good
<i>Communications</i>	Snail mail	Electronic mail



## 5.4 Institutional logics and the Waves

The dominant logics apparent in Waves One and Two respectively create quite differing institutional logics. This would indicate that, though the study of institutional logics only began to appear this century, they were pivotal in guiding other behaviours during each of the waves. At the time of Porter and Rugman and D’Cruz’s key contributions to trade theory, research on institutional logics was not widely understood. However, with the benefit of hindsight, and since this area of research has developed, the logics that emerged are implicit when searched for amongst the respective waves. What were the common behaviours and responses to emerge as a result of the institutions?

For much of Wave One, New Zealand was essentially a farm for the United Kingdom, and then the EU, and the institutional logic of the time was that of heavy-handed centralisation. Government was the key actor and dictated everything about the primary industries – trading partners, key relationships, artificial support mechanisms, innovation, data ownership, and to a large extent, the source of capital. Nationally, New Zealand’s social welfare system was controlled in a similar way. As the guiding social behaviours, industries were less likely to innovate themselves, instead relying on publicly funded knowledge to be made available from the state’s tools and apparatus (i.e., universities, and ministries). From a collaboration perspective, however, there was a bigger incentive to work together for the greater good due to lesser competition, which led to benefits for the industries who made the most of this, such as, kiwifruit.

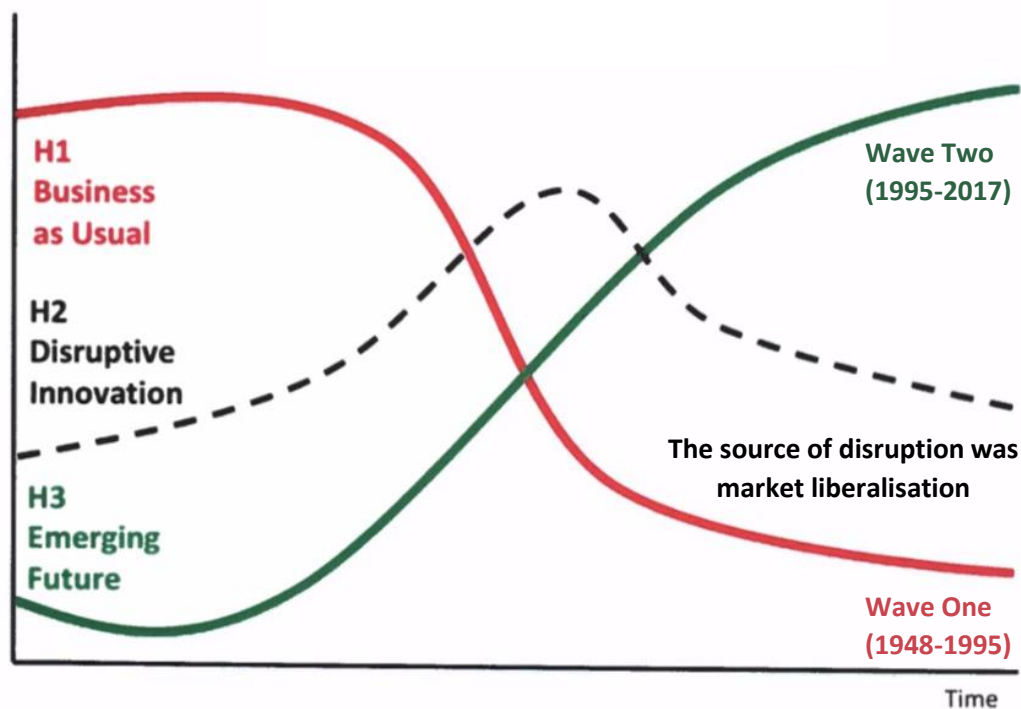
In Wave Two, state control was reduced significantly. This reduction led to a new era of globalisation, with MNCs beginning to dominate and companies competing with those around them, including the ones in their industry, after markets began to liberalise. New Zealand was still producing a lot of commodities, but protected varieties were emerging in horticulture. The institutional logic of Wave Two was focused on productive efficiency which was enabled through market liberalisation; less government control globally; and, an overall

'laissez-faire' ethos. Unfortunately, this relentless pursuit of efficiency meant there was little concern for negative externalities, which became more obvious as the wave continued.

## 5.5 Summary

This chapter presented the concept of different waves by mapping the behaviours of society to institutional logics and the Three Horizons Framework, of which two distinctively different periods emerged: Wave One and Wave Two. On the Three Horizons Framework, the identification of Wave One could represent 'H1' (BAU) at the time in which it was occurring. Following the same argument, market liberalisation is the period of disruptive innovation (H2). This period of disruptive innovation eventually resulted in free and open trade and unconstrained production and exporting but until that occurred, Wave Two could only be described as H3 (the emerging future). This is significant because it shows that New Zealand completed one full cycle of the Three Horizons Framework between approximately 1948 and 1995, as illustrated in Figure 5.1.

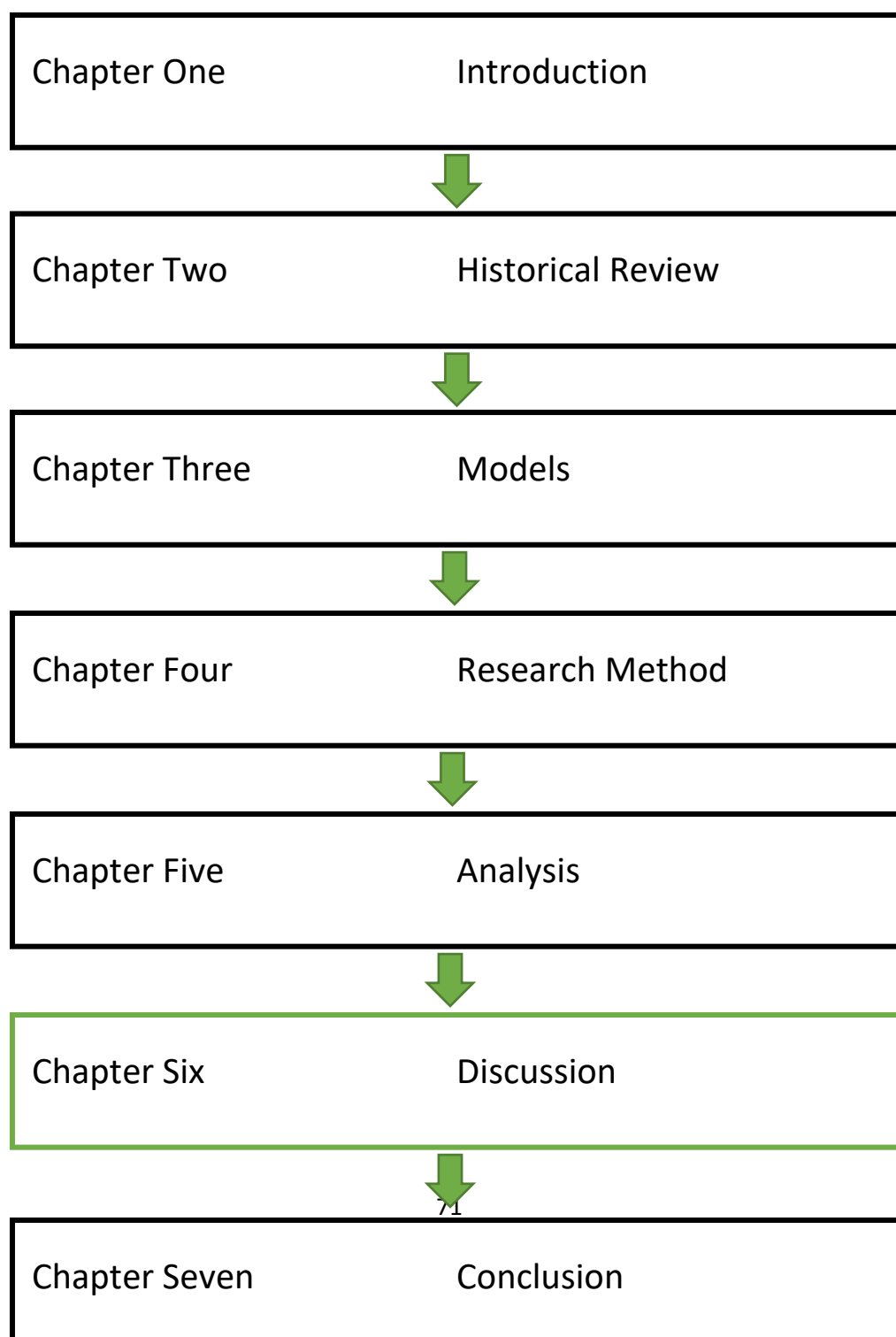
Figure 5.1. Adapted Three Horizon's Framework: New Zealand's first cycle.



Source: Adapted from Sharpe's Three Horizons Thinking.

So, what happens next? In theory, our Wave Two becomes Sharpe's H1 in the next cycle through the framework. That began in 1995, as free and open trade became the new BAU. The disruptive innovation of this cycle (or H2), its level of permanence, and the emerging future horizon (H3) is discussed in the following chapter, Chapter Six.

## Chapter Six: Discussion



## 6.0 Introduction

This chapter presents a discussion of the research findings. Chapter Five identified the appearance of two waves emerging from different dominant logics. Wave One was defined as the period between the signing of the GATT and the establishment of the WTO in 1995. This was a time of large and extensive control by central government. New Zealand's primary industries were regulated with societal export and/or marketing boards. Wave Two was then defined as the period between the WTO's establishment and the breakdown of the rules-based trading system in 2017. After the onslaught of deregulation across the primary industries, this period saw much of the control once held by government in Wave One effectively transferred to industries and private businesses. Chapter Five finished the key question of what the retrospective identification of the first two waves means for the future, and the waves' positioning on the Three Horizons Framework. Chapter Six acknowledges the differences of today's world, with consumers and society now leading the future signals for change. This raises the possibility of a Third Wave, and the emergence of this wave is now discussed. The chapter also proposes an alternative way to consider the Three Horizons Framework, through the identification of the two transition periods. It finishes with the presentation of a new framework to consider changes occurring over time in New Zealand's food and fibre sector – a dominant logic matrix.

### 6.1 Wave Three: Become the best producers for the world

The retrospective analysis of Waves One and Two provides confidence that a Third Wave is in the process of formation. Wave Three is based on a supported prediction, derived from the retrospective analysis, and is now difficult to ignore. The world is fundamentally different, and the key institutions (and therefore the associated logics) have changed since the world that was observed in Waves One and Two. To be successful in the Third Wave, New Zealand needs to position itself at the 'top end' by being environmentally and socially responsible producers, as well as producing the highest quality of proteins, fruits, and vegetables.

The breakdown of the rules-based trading order, increasing market sovereignty, and tackling the world's climate change challenge are the key defining features of this emerging wave which dates from the breakdown of the rules-based trading system in 2017 to some unknown future date. Since 2017, the United States of America has blocked the appointment and reappointments of several WTO Appellate Body members, which has gradually reduced the number of appointees and brought the work of the Appellate Body to a halt. This has caused a temporary demise of the ruled-based international trading system. Which is a concern because the rules-based trading order is in New Zealand's best interest (Coppel, 2021). Concurrently, a growing divide in society is appearing, and causing a division in the shared values of the commons. Despite disruptions to the world trading order and a growing divide, the Third Wave's dominant logic appears to be one of shared values and unity, and the realisation that what is best for an individual is not necessarily best for society. The increasing concern and attention given to climate change and global warming is a leading example of this phenomenon. Global consumers recognise that the previous two waves caused negative externalities, particularly concerning the climate, and as a result, that the world may be tipping out of balance. To date, this period has largely seen governments and businesses heeding the calls from consumers globally as the international environment is gradually shifting to one of a more collective civil society. As a result, Wave Three appears to be one dominated by consumer control where governments and businesses – after having previously retained control in Waves One and Two respectively – are now responding to the demands of consumers; from environmental legislation, to ethical supply chains (Kohan, 2021).

After two relatively quiet decades for the WTO, the last five years opposed the trend. International supply chains are deliberately being disrupted, trade barriers have increased, and rules-based trading is under the most strain it has seen since the 1930s. The breakdown of the rules-based trading system has potentially severe implications for global trade, especially if members retaliate unilaterally (Schneider-Petsinger, 2020). At its worst, this leads to increased protectionism, which was also observed in the post-World War II period. It is built from a shared pledge to open and free markets and underpinned by non-discrimination, transparency, and reciprocity. These three principles, which give a voice to all nation states irrespective of their size, are translated into rules and enacted through trade

agreements and country-level policies. The rules-based order has driven economic growth, increased standards of living and, in some cases, contributed to poverty reduction. As estimated by the World Bank Group and the World Trade Organization in their joint report *The Role of Trade in Ending Poverty*, the number of people deemed to be living in extreme poverty fell by approximately one billion (or half) between 1990 and 2015, of which improved access to trade played a key part (Bartley Johns, Brenton, Cali, Hoppe & Piermartini, 2015). It has also worked successfully to secure and maintain progressively lower trade barriers. However, despite the system's accomplishments to date, support for this global trading order is deteriorating. This was most clearly observed in President Trump's 2017 inaugural address when he declared that, "we must protect our borders from the ravages of other countries making our products, stealing our companies, and destroying our jobs", referring to the protectionist policies which would be seen throughout his 2017–2021 presidency (Coppel, 2021). Wave Three appears to be moving towards a world that is somewhere between the levels of protectionism observed throughout Wave One (extreme) and Wave Two (minimal) with the emergence of a different 'protectionist' driver. Social and consumer-based protectionism is starting to appear, and countries want to create employment and wealth for their own communities, rather than outsourcing. The past four years have seen the fastest escalation in protectionist measures since the rules-based trading order was introduced. This is a major cause for concern when countries not only start to question the trading order's value, but also undertake deliberate measures to try and weaken it, and risk abandoning it altogether (Coppel, 2021).

Though there is still disagreement at the global trading level, governments across much of the world are trying to work together to fight climate change. This cooperation was most recently observed at the 26<sup>th</sup> Conference of the Parties (COP26). The United Kingdom, partnering with Italy, hosted COP26 in 2021 which brought together parties in an attempt to accelerate action towards achieving the goals of both the Paris Agreement and the UN Framework Convention on Climate Change. Many saw this as the world's last and best chance to get climate change under control through global commitments and agreements. This was also one of the first major government-level global events to happen in person since the COVID-19 pandemic began, which forced global collaboration efforts for both relief aid and vaccines. That both

China and India, two nation states responsible for nearly all the oceanic plastic and more than half of all global atmospheric emissions, are excluded remains an anomaly and is expected to be short lived.

Trade and market access are still enabled and underpinned by FTAs. Mutually prosperous trade relationships and agreements are also being actively sought, either in addition to, or in the absence of, formal FTAs. Regardless, trade is becoming increasingly about strategic partnerships, which rules-based trading does not specifically target, but certainly does help facilitate. Despite this progressiveness, concerns around food security remain as leaders of nation states want to decrease their dependence on foreign food sources, especially when borders start to tighten (De Wei, 2022). Complete food security is difficult to achieve. As a country that exports most of what it produces (New Zealand Foreign Affairs and Trade, 2022d), on the one hand this is particularly concerning. On the other, it provides a catalyst for consumer-led exchange, for example, that between Atkins Ranch and Whole Foods Market (Atkins Ranch, 2022).

### Government action

Labour has held government since it was elected in 2017 and its social policies have seen significant increases to welfare payments and the minimum wage (as is typical of Labour). Unemployment has also remained reportedly low, even after COVID-19, though houses remain unaffordable for many and interest rates and inflation are both on the rise (Bell, 2021; StatsNZ, 2022). As well as dealing with the impacts of COVID-19, the government is continuing to regulate environmental issues in line and beyond international agreements. Despite this, New Zealand continues to be a relatively wealthy country. This is especially obvious in the housing market. New Zealand now has the fourth-largest median wealth per adult in the world, according to the Credit Suisse Global Wealth Report for 2021 with Australia, Belgium, and Hong Kong occupying the top three places. This report analyses the household wealth of 5.2 billion people and finds that New Zealand has 214,000 people in the top 1% of global wealth, and 1.97 million people in the top 10% (Edmunds, 2021). New Zealand's ultra-wealthy population is also expected to grow by over 50% during the next five years. This level of

wealth, combined with New Zealand's passport being regarded as one of the most powerful on Earth, makes New Zealand a highly desirable place for foreign investment. New Zealand also scores well on the Legatum Prosperity Index as the only country outside of Europe to feature in the top 10. This index uses metrics based on wealth and wellbeing. It covers 96% of the world's population and 99% of global GDP. At a granular level, New Zealand ranks in the top five for social capital and is relatively high in natural environment, investment environment, and governance indicator rankings (Legatum Institute, 2021), all positive signs for the Third Wave. At the same time, China is also experiencing rapid wealth growth as it recovers from the pandemic. As the Asia region is home to more billionaires than any other, it is critical to future growth and establishing the right relationships in the region is imperative (Williams, 2021). China is New Zealand's largest trading partner, with two-way trade between the two economies now surpassing NZ\$33 billion. As the world's second-largest economy with the largest population and a growing middle class, New Zealand exporters have seized the opportunity to trade with China. Major goods exports to China continue to be primary industries exports – dairy, meat, and wood (New Zealand Foreign Affairs and Trade, 2019).

At a government level, trade and market access have remained similar to what was observed in Wave Two, however, strategic partnerships are increasingly being sought for mutual benefits. Trade, instead of its traditional focus on the flow of goods and services, is now shifting to agreements of mutual prosperity and wellbeing, which is being increasingly demanded by citizens today. The New Zealand-United Kingdom Free Trade Agreement, signed in 2022, is an example of a newer FTA that “works harder for both [the New Zealand] economy and [New Zealand] society” and “includes commitments on SMEs [*sic*], trade and gender, trade and development, and consumer protection” (Beehive, 2021a). Strategic trade is leading to more ethical trade, with the home nation showing greater concern for the exporting nation and supply chain by wanting to create prosperity in the countries they produce in and export to (Zespri is an example of this). That said, shipping has become a lot more expensive since the COVID-19 pandemic, exposing New Zealand's heavy reliance on global shipping lines. This is forcing companies to think differently than before, as those firms who have staff and production in the countries that they also sell to have retained that advantage when shipping routes stopped, and borders were closed.



The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is a relatively new FTA that involves 11 countries in the Asia Pacific region, including New Zealand. Unlike other FTAs it aims to go beyond just reducing costs for businesses and includes commitments for high labour and environmental standards. Under the previous iteration of the Trans-Pacific Partnership Agreement (TPP), New Zealanders worried about a loss of autonomy, investment, health, and IP. These are no longer covered under the CPTPP so New Zealand's rights to uphold Te Tiriti o Waitangi (the Treaty of Waitangi) and make laws that protect New Zealanders and the natural environment will be preserved. The CPTPP was signed in 2018 in Chile (New Zealand Foreign Affairs and Trade, 2022a) and, as well as Chile, other countries involved in the CPTPP are Australia, Brunei Darussalam, Canada, Japan, Malaysia, Mexico, Peru, Singapore, and Vietnam. Partnering with these 10 countries in a multilateral agreement has increased market access with a combined population of over 480 million people who consume nearly one-third of New Zealand's total exports (NZ\$16.7 billion of goods exports and NZ\$7.3 billion of service exports in 2018) and presents another substantial opportunity for exporters. Australia, Japan, and Singapore are three of New Zealand's top 10 trading partners, while Japan, Mexico, Peru, and Canada are four countries with which New Zealand has never had an FTA. These 10 countries are also the source of 65% of FDI in New Zealand, making this agreement an extremely valuable one for exporters (New Zealand Foreign Affairs and Trade, 2022a). Three days after President Trump's inauguration, the United States of America withdrew from the TPP. This was not the only trade negotiation that the United States of America withdrew from, but it was hugely significant. Over the next two years tariffs on a wide range of goods were progressively raised between the United States of America and China (Coppel, 2021).

Increasing protectionism and loss of rules-based trading is challenging for countries like New Zealand. Due to its size and distance from markets, New Zealand relies heavily on free trade for its exports. As previously mentioned, New Zealand had extremely liberalised its economy by the time the WTO was established in 1995, so it cannot use reduced tariffs as a negotiation tactic in FTA negotiations. If New Zealand wishes to continue its successes as a competitive global trading nation amid growing food security concerns, it needs to appeal to global consumers. Businesses and governments are already highlighting the power of consumers

through changes to policies, and this trend shows no sign of slowing (McDermott & Scrimgeour, 2016).

### Industry response

Many businesses across the primary industries are adapting to Wave Three and a few, arguably, began adapting several years ago. Firms are scaling to what the market and consumers want, along with putting IP protection around it to ensure maximum consistency, safety, and value gained. Having IP protection also means companies can build demand ahead of supply, though must take care to ensure the gap does not widen too far that consumers then become frustrated and disengaged. Striking a balance between surplus demand and constrained supply keeps the price at an extremely profitable level of return, and Zespri is an example of this. Not all industries and businesses have adapted to Wave Three, however, and it is incredibly difficult to move large, fragmented institutions and industries. Generally, those considered to be operating under the Wave Three dominant logic are those with a well-established in-market presence, as fostering intimate connections with consumers is critical to ensuring products are produced with them in mind. Oftentimes, the demand from sophisticated consumers goes above and beyond the attributes of the product itself. These Wave Three businesses and industries also have a strong value proposition and, in many cases, have already been through the necessary change process to adapt to different ways of working. This shows a shift in the relationship nexus, and the strengthening business-to-consumer relationship. While there are fewer New Zealand offshore staff than in Wave One, some industries and corporates are choosing to recruit locally which still adds immense value to understanding consumers in those countries (if the challenge of deciding how much New Zealand culture is reflected in organisational culture can be overcome).

Successful Wave Three organisations are also innovative in their supply chains and how they work with supply chain partners; have greater control over supply and IP; and, build business models with consumer-responsive supply chains – an example of direction coming from the ‘bottom up’ in defining, influencing, and shaping the commons. The question that remains is whether it is the responsibility of government, organisations, individuals, or all of the above.

The integrity system is now driven by the consumer, who wants assurance at a much more granular level than has ever been witnessed before – right back to the individual farmer or grower. This has resulted in the creation of consumer-responsive private standards, such as, those used by McDonald's (McDonald's, 2012).

Data is the most accessible it has ever been and is designed to serve the network good (J. C. Lockhart & H. R. Gow, personal communication, September 23, 2021). Communication is now done through social media and video calling, meaning it is constant and instant. However, the fact that the data is as accessible to consumers as being in their hand or pocket – through their cell phone – means it is difficult to communicate this effectively back to farmers with the speed at which it is coming, let alone, to create shared value from the insights (McDermott & Scrimgeour, 2016). Data is increasingly difficult to control, and misinformation is becoming more widespread (Auxier & Arbanas, 2021). Even capital structures are becoming values-based as funds are more democratised and accessible. The shares platform Sharesies is an example of this trend. Consumers are also increasingly concerned with corporate and pension funds, which companies they are investing in, and if they are socially and environmentally conscious (Blume, 2021). While COVID-19 has temporarily derailed international travel, before the pandemic air travel had become extremely affordable, and it is expected to recover in this way when air traffic and demand for flights increases (IATA, 2022). Despite this expectation, the strong case for in-market staff remains, and was proven in Wave One. Wealth is created through strategic product leadership and consumer intimacy (Howard, 2021). This is difficult to achieve without constant, on-the-ground, presence.

Wave Three is increasingly about being the best producers for the world, and New Zealand's food and fibre sectors are having to adapt to this ethos (Bank of New Zealand, 2021). As a small agricultural nation, New Zealand is heavily reliant on biological exports to pay for the goods it imports where there is no advantage to producing them domestically (Lambie, 2005). Many primary products are already plant and values-based, sustainable, and regenerative, with a focus on vitality and health (viewing food as medicine) which is exactly what modern consumers are demanding (McDermott & Scrimgeour, 2016). What hamstrings the

businesses and industries that are not as successful in Wave Three, or are still in Wave Two, is a lack of awareness. This lack of awareness then contributes to friction, and opportunities to collaborate are lost. When productivity gains stalled, industries were forced to flip and focus instead on the opportunities, as evidenced by New Zealand's dairy industry (New Zealand Productivity Commission, 2020). The problems to solve are significant and Wave Three requires more collaboration to successfully implement different ways of working. The science and innovation system is becoming more collaborative and now combines modern science with mātauranga Māori and shared IP knowledge, through partnerships with government, iwi and private firms. This is underpinned by the mutual understanding that better solutions will be found if a partnership approach is taken (Beehive, 2022).

Kiwifruit has continued to grow rapidly, aided by the fact that it accelerated through Wave Two after the emergence of Psa. Zespri has recognised that the modern consumer is one that takes a global guardianship view on society. The product, business, and associated value chain must align with those of the discerning consumer (Thompson, 2019). This is challenging for any global business to achieve while also making a profit and is especially difficult for exporters. Nevertheless, the consumer plays a key role in defining the shared values and it is up to government and organisations to respond to these signals. Zespri's SPE means it must work extra hard to retain its credibility internationally and domestically. Every now and then, this structure comes under threat from other nation states or internal industry frictions, so mutual prosperity is critical to its continued operations and success (Greer & Saunders, 2012). An example of mutually prosperous trade occurs with Zespri between New Zealand and South Korea.

South Korea imported 38,664 tonnes of Zespri's New Zealand grown SunGold and Green kiwifruit in 2020, and as such, is one of Zespri's top 10 markets (New Zealand Horticulture Export Authority, 2022). South Korean consumers love Zespri kiwifruit because of the health and gifting attributes it provides. Geographically, South Korea is situated in the northern hemisphere and has good growing conditions for kiwifruit. Zespri has recognised this and grows kiwifruit there as part of its 12-month supply strategy (Zespri Global Supply). This

partnership creates jobs and wealth in South Korea and provides access to technical expertise and SunGold IP. This grower loyalty then feeds back into better quality kiwifruit – a win-win for both New Zealand and South Korea (Asia Media Centre, 2017). There will be even more opportunities for mutual prosperity in the future, and it is up to Zespri (or any other organisation) to explore these opportunities. Zespri's innovation system is also world class and key to its success. From partnering with New Zealand's Plant and Food Research (NZPFR) on the world's largest kiwifruit breeding programme at one end, to insights gathered from its global marketing and market research team at the other, the connection between consumer demand and grower supply has never been stronger in New Zealand's primary industries. SunGold – Zespri's propriety gold kiwifruit – is one variety to have come out of the breeding programme and demonstrates there is substantial value to be gained in IP (Plant and Food Research, 2021). The challenge Zespri and other horticultural IP protected organisations face is the sheer cost of protecting that IP. This is another example of how mutually prosperous trade could be beneficial. If countries see value in the relationship as being more than transactional, exploitation may be less likely.

The dairy industry has undergone a series of changes in the last four years alone. Milk supply has remained largely static or shrunk and, due to the introduction of new globally driven environmental and land use policies (such as the National Policy Statement on Freshwater) and increasing cost of inputs, is predicted to decline as some farms on better land switch to horticulture. Despite static and slowly declining production, demand is trending the other way, keeping farmgate milk prices and the dairy payout forecast high. While it is (hopefully) unlikely that prices will crash again as they did in 2014/2015, as price takers with zero ability to pass higher costs onto consumers, dairy farmers should remain vigilant amid the things they can somewhat control – farm working expenses and interest repayments. New Zealand's key competitive advantage over intensive overseas producers is in its efficient and pasture-based systems. This relentless pursuit of efficiency has kept dairy farmers viable in low payout years, but controlling debt and expenses is critical this time around, as is maintaining production levels within environmental boundaries (Hickman, 2021).

## Farmer result

It is difficult for farmers and growers to access the advice and market signals they need if the organisations that are there to support them are not geared towards the Third Wave. This ranges from accessing technical advice to changes in institutions' fundamental values and purposes. It is vital that all supply chain partners are involved in this shift, which will inevitably take time, and that farmers and growers in particular are engaged in the shift (McDermott & Scrimgeour, 2016). Due to infrastructural issues, such as, lack of broadband coverage in some rural areas in New Zealand, the way industry organisations and institutions communicate with farmers and growers may be vastly different (i.e., more traditional) to the ways they communicate with the end consumer (Edmeades, 2021). Over the past 80 years, farmers and growers have continued to change and diversify in response to market and consumer signals. In most industries, there is also a very competitive domestic market for supply, demand, and labour, as well as the international competition that exists as soon as a firm begins to export. Looking forward, New Zealand's success as a whole remains dependent on a food and fibre sector that is resilient to impacts from climate change, global prices, and the exchange rate. Accepting risks and uncertainty makes for better decisions and happier consumers (Lambie, 2005).

Wave Three is especially unique in that its end date remains unknown until the next key sequence of institutional changes or events, and predictably, the emergence of a Fourth Wave. What is known, however, is that growing protectionism and geopolitical tensions have large and lasting impacts on New Zealand (New Zealand Institute of Economic Research, 2017). New Zealand's relative size, in some respects, is a definite advantage. It means it can afford to be more experimental. But producers and processors must remain relentlessly focused on the consumer, and it is obvious when organisations are not (McDermott & Scrimgeour, 2016). Trade liberalisation enables conversations with those consumers, critical to being able to deliver what they want and are willing to pay for, but it is up to businesses and industries to take advantage of improved market access opportunities (Lambie, 2005). Country of origin rules, product labelling, and geographic indicators present some risks for New Zealand exporters. However, if managed well, these same issues may present opportunities (Australian Bureau of Agricultural and Resource Economics & Ministry of

Agriculture and Fisheries, 2006). A summary of Wave Three can be observed in Table 6.1 below.

Table 6.1. Dominant Logic Matrix: Three waves.

<b>Attributes</b>	<b>Wave 1</b>	<b>Wave 2</b>	<b>Wave 3</b>
<i>The world view</i>	Centralised social ethos	Laissez-faire	Unity
<b>Institutional market structure</b>			
<i>The lens</i>	Imperial development	Productivity and efficiency	Global guardianship
<i>International environment</i>	Sovereign-based trade	International rules-based trade, FTAs and MNCs	Collective civil society
<i>Relationship nexus</i>	Government to government	Business to business	Business to consumer
<i>Values of civil society</i>	Socialism and egalitarian	Capitalism	Growing division between socialism and capitalism
<b>How governments operated</b>			
<i>Market access</i>	Government to government	Bilateral FTAs and business-owned relationships	Multilateral FTAs embellished by mutual prosperity
<i>Trade</i>	Quotas and subsidies	Open, rules-based trade	Mutual prosperity and wellbeing
<i>Market structure</i>	Institutionally constrained markets	Open, unconstrained markets	Socially constrained markets
<i>Protectionism</i>	Protectionist	Tariffication	Semi-protectionist
<i>Control</i>	Government control	Corporate control	Consumer control
<i>Integrity system</i>	Government public standards	Industry private standards	Consumer responsive private standards
<b>How agri-businesses responded</b>			
<i>Business model</i>	Single trading entities legislated by government	Deregulated hyper-competitive corporates	Consumer responsive value chains
<i>Source of capital</i>	Debt and equity – imperial and government-supported	Debt and FDI – free market	Values-based – consumer, corporate and pension funds
<i>Source of scale</i>	Volume-based scale	Efficiency-based scale	Market and consumer-based scale
<i>Wealth creation</i>	Arbitrage of subsidies and market protections	Operational excellence	Strategic product leadership and customer intimacy
<b>The resulting domestic environment</b>			
<i>Knowledge</i>	Public knowledge	Industry knowledge	Modern science, Mātauranga Māori, and shared IP knowledge
<i>Innovation</i>	Centralised for public benefit	Privatisation of public knowledge	Collaborative value chain model
<i>Data ownership</i>	Public good	Private good	Network good
<i>Communications</i>	Snail mail	Electronic mail	Social mail

Chapter Five identified the prevailing (or overwhelming) dominant institutions apparent in Waves One and Two as that of government and business control respectively, and the way society behaved – including in the food and fibre sector – was largely because of the logics created. While Reay and Hinings (2005) identified that two competing dominant logics can co-exist at the same time, the historical review provides enough confidence that most people did organise under these logics.

Wave Three has its own unique dominant logic. Market sovereignty is changing the way businesses and governments operate and design policies, products, and supply chains (Sassatelli, 2015). In Chapter Five, the institutional logics were mapped over Sharpe's Three Horizons Framework. Wave One was identified as H1 and, therefore, one might reasonably expect that Wave Two would identify as H2. However, it is obvious now that Wave Two was more than just a period of disruptive innovation, as several years later it eventually became the new BAU because of *other* disruptive factors. Following this argument, Wave Two might be better mapped to the original H3, leaving open the question of what becomes of H2. If it is true that H2 was intended to be only a *period* of disruptive innovation, and not a complete horizon in itself, then H2 is better described as a transition period hitherto undisclosed. To explain the concept of a transition in greater depth, the period of adaptation between Waves One and Two (or H1 and H3 in the first cycle of the way) is now explained.

## 6.2 Transition One: A period of market liberalisation

The change from Wave One to Wave Two did not occur instantly, and it was not until New Zealand was already into Wave Two that the fundamental differences between the two appeared. It was gradual, yet deliberate, and to a large extent predictable as it was primarily invoked by policy changes. With the benefit of hindsight, a period of transition can be observed between approximately 1984 to 1999 when markets began to liberalise. The fall of the Berlin Wall – a last attempt to stave off radical change through liberalisation of business and economic policies – in 1989 marked the beginning of rapid change across Eastern Europe (and beyond) and the end of the Cold War gave rise to globalisation (Konrad Adenauer



Stiftung, 2009). Beginning in the 1980s and continuing through the 1990s, this period of market liberalisation started in Eastern Europe before it spread to Latin America (International Monetary Fund, 2001). Entrepreneurial growth followed, accelerated by the Chicago School of Economics, and global leaders, particularly Ronald Reagan, relied heavily on economists', such as Michael Porter's, advice (Williams & Schrage, 1983). Porter claimed that introducing competition would stimulate growth, innovation, and productivity (his Five Forces framework intended to cope with competition). By the early 2000s, this policy preference had moved to Africa and Southern Asia, which kicked off the economic boom in this part of the world. By then, nearly all countries in the world had liberalised (with China, Africa, and South-East Asia last to do so) as it became increasingly clear that those countries who liberalised did better – domestically and globally (World Trade Organisation, 2015).

To cope with the explosion in global trade, international standards were established under the WTO such as the Codex Alimentarius Commission (Codex) and the World Organisation of Animal Health (OIE), and the Food and Agriculture Organization (FAO) which is part of the UN. Integration of the global economy has increased living standards across the world, and not just in developed countries. Many developing countries have shared in this prosperity too, and in some cases, incomes have risen substantially. Collectively, developing nations have risen in importance to global trade; in the early 1970s, they accounted for 25% of trade, and in 2001, 33%. Trade between developing countries also increased rapidly during this period, with 40% of exports going to other developing countries (International Monetary Fund, 2001).

The liberal trading environment enabled by the rules-based trading order not only inspired investment, but also allowed countries to produce and trade goods to their comparative advantage leading to more efficient use of resources, wealth, and job creation (Lambie, 2005). While some economies liberalised as early as the middle of the century, many took much longer and did so during this transition period. But the advancement of liberalisation has been uneven in recent decades. The results have been impressive for several developing countries in Asia, and to a lesser extent in Latin America. These countries became successful as they chose to actively participate in international trade which attracted the majority of FDI

available to developing economies at the time. This is true in the case of India and China because they too embraced liberalisation to some extent, and for higher-income countries, such as, Singapore and South Korea (who were much less wealthy in the 1970s). However, for many other economies, particularly in the Middle East and Africa, this progress was far less rapid. In stark contrast, the world's poorest countries saw their share of global trade decline drastically and if they chose not to lower their trade barriers, they risked even greater marginalisation than they were already facing due to systemic structural problems; weak policy institutions and frameworks; onshore and domestic and market protection; and, invariably despotic governance. Compared to those who embraced trade liberalisation, these countries depended disproportionately on producing and exporting traditional commodities (International Monetary Fund, 2001).

Policies that encourage openness towards trade and investment are needed to sustain economic growth. This is particularly necessary for developing countries, such as, in East Asia where lowering tariffs and opening up to the global economy has enabled competitive advantage in some products, leading to the number of people in absolute poverty declining by over 14 per cent in the 1990s alone (International Monetary Fund, 2001; Bartley Johns et al., 2015).

New Zealand was among the countries to liberalise earlier and had all but removed most of its tariffs, subsidies, and quotas since the major reforms of the 1980s. Although New Zealand was ultimately forced to liberalise to avoid even greater economic blows, it meant the country was well poised to take advantage of the impending economic boom. As an added benefit, New Zealand's regulatory system also facilitated this change. However, large agricultural institutions struggled to keep pace with the speed at which the markets were opening up (due to a wide range of factors including land ownership) and at the time, agriculture was seen as a sunset industry (Lees, 2014). It has already been identified that trade liberalisation leads to job creation, and this was observed in both developed and developing nations throughout the transition period. While there are benefits from improved access to other markets, economies get the most benefit from liberalising their own market (particularly agricultural

markets for developed countries). For developing economies, equal benefits could be gained in manufacturing and agriculture (International Monetary Fund, 2001).

Transition One would not traditionally appear on the Three Horizons Framework, as it is not permanent enough to warrant its own horizon. However, the impacts of this relatively short period propelled international trade into its next phase of growth, and set the institutions up for the next horizon, or Wave Two and it, therefore, should be acknowledged and included for its importance. The positioning of Transition One on the dominant logic matrix, which bridges Wave One and Wave Two, can be observed in Table 6.2 below.

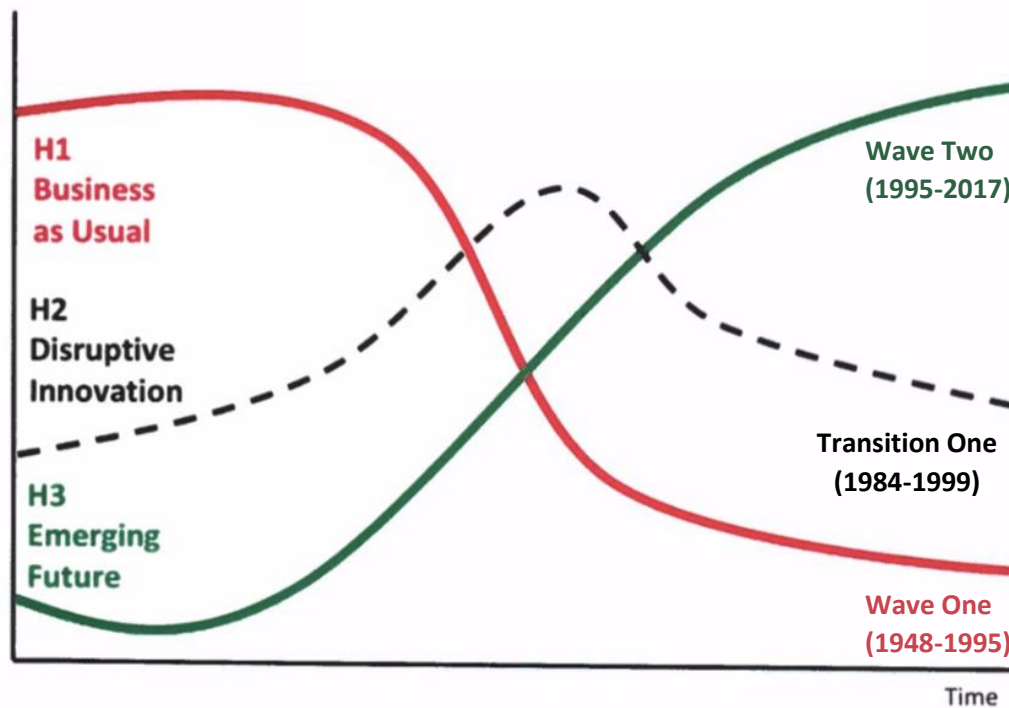
Table 6.2. Dominant Logic Matrix: Three waves and a transition period.

<b>Attributes</b>	<b>Wave 1</b>	<b>T1</b>	<b>Wave 2</b>	<b>Wave 3</b>
<i>The world view</i>	Centralised social ethos		Laissez-faire	Unity
<b>Institutional market structure</b>				
<i>The lens</i>	Imperial development		Productivity and efficiency	Global guardianship
<i>International environment</i>	Sovereign-based trade		International rules-based trade, FTAs and MNCs	Collective civil society
<i>Relationship nexus</i>	Government to government		Business to business	Business to consumer
<i>Values of civil society</i>	Socialism and egalitarian		Capitalism	Growing division between socialism and capitalism
<b>How governments operated</b>				
<i>Market access</i>	Government to government		Bilateral FTAs and business-owned relationships	Multilateral FTAs embellished by mutual prosperity
<i>Trade</i>	Quotas and subsidies		Open, rules-based trade	Mutual prosperity and wellbeing
<i>Market structure</i>	Institutionally constrained markets		Open, unconstrained markets	Socially constrained markets
<i>Protectionism</i>	Protectionist		Tariffication	Semi-protectionist
<i>Control</i>	Government control		Corporate control	Consumer control
<i>Integrity system</i>	Government public standards		Industry private standards	Consumer responsive private standards
<b>How agri-businesses responded</b>				
<i>Business model</i>	Single trading entities legislated by government		Deregulated hyper-competitive corporates	Consumer responsive value chains
<i>Source of capital</i>	Debt and equity – imperial and		Debt and FDI – free market	Values-based – consumer, corporate and pension funds

	government-supported			
<i>Source of scale</i>	Volume-based scale		Efficiency-based scale	Market and consumer-based scale
<i>Wealth creation</i>	Arbitrage of subsidies and market protections		Operational excellence	Strategic product leadership and customer intimacy
<b>The resulting domestic environment</b>				
<i>Knowledge</i>	Public knowledge		Industry knowledge	Modern science, Mātauranga Māori, and shared IP knowledge
<i>Innovation</i>	Centralised for public benefit		Privatisation of public knowledge	Collaborative value chain model
<i>Data ownership</i>	Public good		Private good	Network good
<i>Communications</i>	Snail mail		Electronic mail	Social mail

The identification of this transition period, and the notion that it could in fact be better reflected as H2 on the original Three Horizons Framework (as illustrated in Figure 6.1 below), proposes that New Zealand had completed one full cycle of the framework between approximately 1948 and 2017 – Wave One, Transition One, and Wave Two. Long before 2017, however, Wave Two became the new BAU, or H1. This realisation, therefore, along with the emergence of Wave Three, then indicates the existence of a second transition period.

Figure 6.1. Adapted Three Horizons Framework including a transition period.



Source: Adapted from Sharpe's Three Horizons Thinking.

### 6.3 Transition Two: Information liberalisation

By nature, Transition Two is inherently more complex than Transition One but indicates that the change from Wave Two to Wave Three is not occurring instantaneously (as observed between Wave One and Wave Two). In contrast to the first transition, Transition Two was also arguably predictable, though to a lesser extent. It is not based on the same drivers of Transition One (policy). This is not to diminish these drivers, however, the fundamental transitory drivers of Transition Two are more centred around access to and control of information and growing expectations of consumers, particularly the younger generation. These trends emerged more fully in Wave Three, but signals of change began to appear in the second transition period. With the knowledge that three waves and at least one transition period exist, another period of change can be observed from the early 2000s when the information liberalisation boom took off, and likely, continues today.

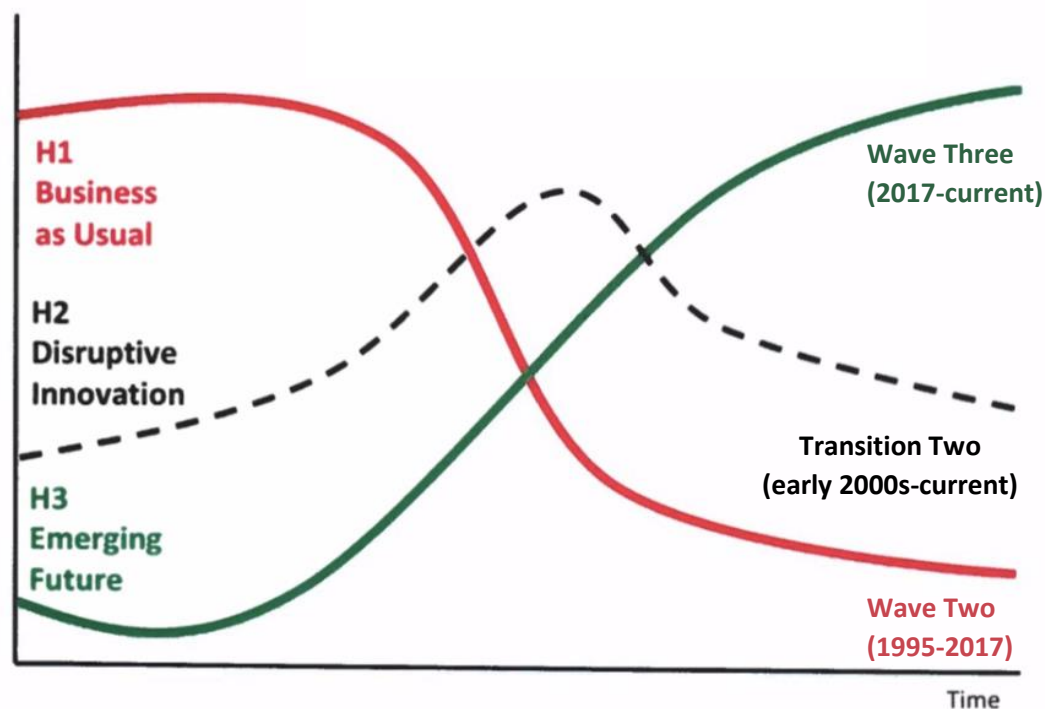
The period of information liberalisation moved faster than regulatory systems could keep up with and it remained largely unregulated. As a result, stopping the spread of misinformation became increasingly difficult and this is a challenge many governments and businesses continue to grapple with today. They face stiff competition against the social media giants on the one hand, and free speech activists on the other (HEC Paris, 2021). The key question for the government is what facilitates the adoption of the commons model without the need for heavy-handed legislation? In the era of information liberalisation, and the context of New Zealand's primary industries, the ease with which information is accessed means it is beholden on the producer or marketer to ensure it is accurate (despite having very little control over the dissemination of the information). Many consumers are motivated by the cost of food. However, there is an equally large (and growing) group who are motivated by a range of other product attributes, such as, quality, safety, source, and nutrition, with price of lesser importance to them. It is more important than ever to recognise these nuances and produce what is desired by modern consumers in a way that is transparent and individualistic (Slavica & Mirjana, 2017). This appetite for seeking opportunities was maximised as individuals but now requires greater collaboration, as was seen at an industry level in Wave One.

The identification of the second transition period, and the previous notion that Transition One could in fact be better reflected as H2 on the Three Horizons Framework, reasons that Transition Two is also a version of H2. With this statement, the argument would also hold that New Zealand is currently in the process of completing another cycle of the Three Horizons Framework, beginning in 2017 and with an unknown end date. This argument is presented in Figure 6.2 below. As previously outlined, Wave Two likely became the new BAU, or H1, well before 2017. However, for completeness, this statement is grounded in the beginning of the Second Wave being 2017.

The Three Horizon's Framework is a useful tool to explain changes over time and monitor where New Zealand, and particular industries, are sitting on the three horizons at any given time. This framework has its limitations though, as was identified in previous chapters. This

framework also lacks granular detail of what occurred under each of these horizons, so a matrix may be a more appropriate way of analysing and displaying the institutional, governmental, agribusiness, and resulting domestic environment for farmers and growers to relate to.

Figure 6.2. Adapted Three Horizons Framework: Wave Two and Wave Three.



Source: Adapted from Sharpe's Three Horizons Framework.

#### 6.4 The Dominant Logic Matrix

Throughout this research, the identification and analysis of the three waves and two temporary transition periods led to the development of a dominant logic matrix. These three dominant logics are best observed with the benefit of hindsight, meaning, the identification of Wave One and Wave Two's attributes are more robust than those of Wave Three. However, the signals of change today provide an accurate enough picture of what the future dominant logic is shaping up to be, and this gives enough confidence to present Wave Three in the matrix. The dominant logic matrix, in full, is presented in Table 6.3.

Table 6.3. The New Zealand Food and Fibre Sector's Dominant Logic Matrix.

<b>Attributes</b>	<b>Wave 1</b>	<b>T1</b>	<b>Wave 2</b>	<b>T2</b>	<b>Wave 3</b>
<i>The world view</i>	Centralised social ethos		Laissez-faire		Unity
<b>Institutional market structure</b>					
<i>The lens</i>	Imperial development		Productivity and efficiency		Global guardianship
<i>International environment</i>	Sovereign-based trade		International rules-based trade, FTAs and MNCs		Collective civil society
<i>Relationship nexus</i>	Government to government		Business to business		Business to consumer
<i>Values of civil society</i>	Socialism and egalitarian		Capitalism		Growing division between socialism and capitalism
<b>How governments operated</b>					
<i>Market access</i>	Government to government		Bilateral FTAs and business-owned relationships		Multilateral FTAs embellished by mutual prosperity
<i>Trade</i>	Quotas and subsidies		Open, rules-based trade		Mutual prosperity and wellbeing
<i>Market structure</i>	Institutionally constrained markets		Open, unconstrained markets		Socially constrained markets
<i>Protectionism</i>	Protectionist		Tariffication		Semi-protectionist
<i>Control</i>	Government control		Corporate control		Consumer control
<i>Integrity system</i>	Government public standards		Industry private standards		Consumer responsive private standards
<b>How agri-businesses responded</b>					
<i>Business model</i>	Single trading entities legislated by government		Deregulated hyper-competitive corporates		Consumer responsive value chains
<i>Source of capital</i>	Debt and equity – imperial and government-supported		Debt and FDI – free market		Values-based – consumer, corporate and pension funds
<i>Source of scale</i>	Volume-based scale		Efficiency-based/ profitability scale		Market and consumer-based scale
<i>Wealth creation</i>	Arbitrage of subsidies and market protections		Operational excellence		Strategic product leadership and customer intimacy
<b>The resulting domestic environment</b>					
<i>Knowledge</i>	Public knowledge		Industry knowledge		Modern science, Mātauranga Māori, and shared IP knowledge
<i>Innovation</i>	Centralised for public benefit		Privatisation of public knowledge		Collaborative value chain model
<i>Data ownership</i>	Public good		Private good		Network good
<i>Communications</i>	Snail mail		Electronic mail		Social mail



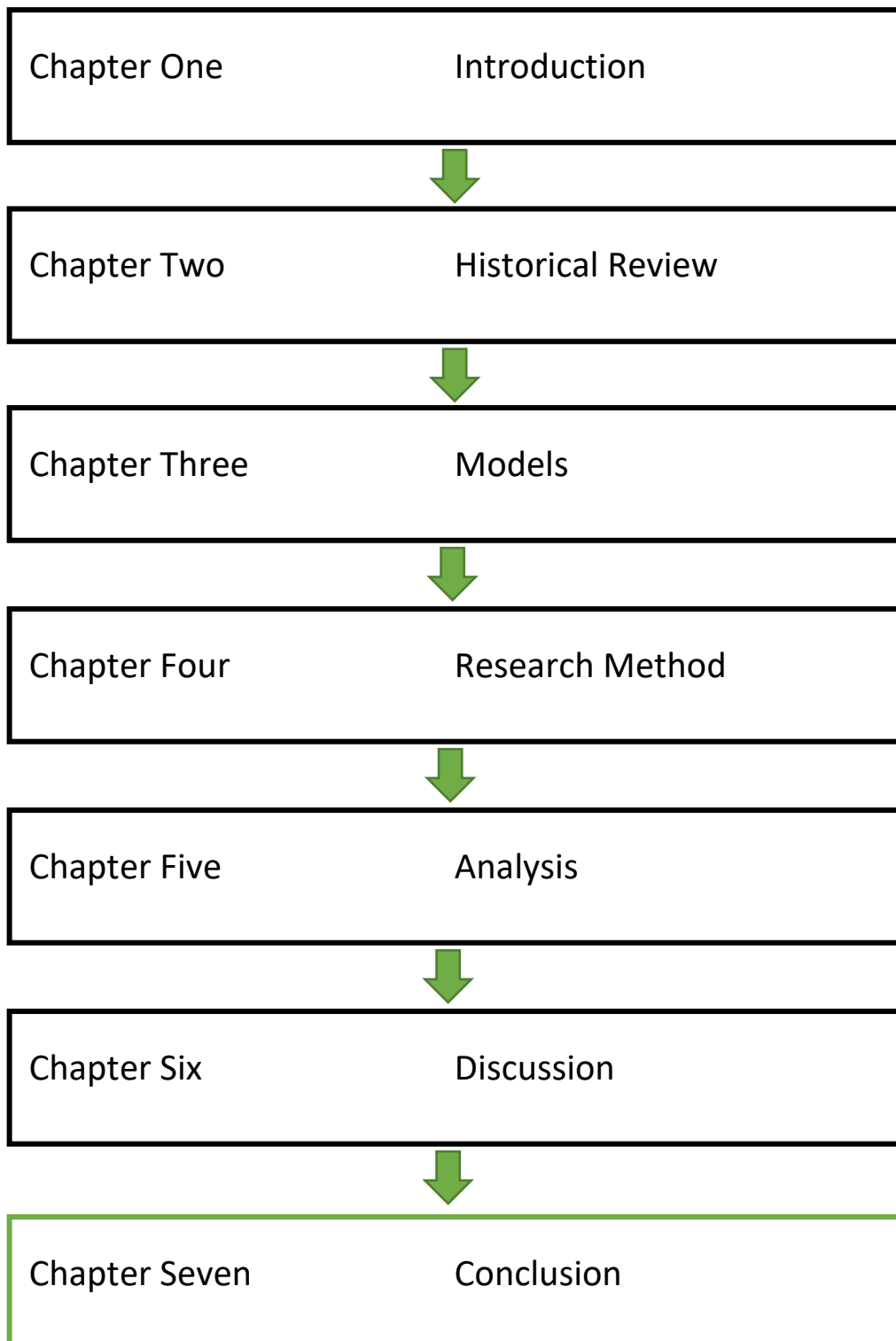
## 6.5 Summary

This chapter identified the emergence of Wave Three and the retrospective finding of two transition periods that bridge the three waves. It also suggested an alternative way of viewing the Three Horizons Framework – as two horizons (H1 and H3) and a transition period (H2) between each. It is likely that most of New Zealand’s primary industries and firms are currently sitting in Transition Two or Wave Three, at various stages, after seeing the market signals and adapting their business model to suit. This has been particularly prevalent in small organisations where the founder/s can set the vision and ensure constant direction towards this vision (e.g., Progressive Meats, Atkins Ranch and First Light Foods). Size is another factor, and though it can sometimes prove to be restrictive, in this case it means it has not been restricted by the rules and logics of a large institution, which is always slower to move<sup>5</sup> (McKinsey & Company, 2012). Consumers are becoming increasingly discerning and hold greater expectations on the product itself, and the way it was produced, demanding more ethical and sustainably sourced products (McDermott & Scrimgeour, 2016). This is more commonly becoming a market access requirement, so it makes sense that New Zealand’s policies would align with domestic and global consumer expectations, which is keeping policymakers around the globe busy. Initially, this is one way for producers to achieve a competitive advantage (‘right to win’), though as it becomes the observed norm, it will become the new BAU and an expectation of a ‘right to play’. To succeed, New Zealand’s food and fibre sector will need to acknowledge and capitalise on the signals of change and the lessons learned from Waves One and Two to best adapt to the Third Wave. The next chapter concludes the thesis by revisiting the research objective, outlining the implications of the research, acknowledging the limitations, and providing potential areas for future research.

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<sup>5</sup> Somewhat ironically, it is often the institutional norms that act as a catalyst to do business differently.

## Chapter Seven: Conclusion



## 7.0 Introduction: The Research Objective Revisited

The sustained, global success of New Zealand's food and fibre sector suggests traditional trade theory models may not be applicable in all countries and production systems, and that other factors might be occurring to achieve sustained high performance. The purpose of this research was to determine how New Zealand has remained successful despite trade theory suggesting otherwise and coupled with its size, reliance on resource-based industries, and distance from market, whether the behaviours leading to this success could have been predicted. If so, can this retrospective observation be used to predict the future success (or otherwise) of the food and fibre sector? This empirical and conceptual study attempted to expand on a substantial body of literature with respect to New Zealand's primary industries and exports and collate this into a single document. Once collated, this information could then be used to determine specific reasons New Zealand's food and fibre sector has remained globally competitive, despite significant global changes occurring over time. The research hypothesis was:

*"That the identification of historical institutional logics will conform to dominant change models through which the future may be understood."*

To test this hypothesis a comparative institutional analysis of New Zealand's food and fibre sector over the past eight decades was undertaken. Chapter Two presented a historical review of the literature that explored several key international events affecting farmers and growers since the signing of the GATT in 1948, until the initial beginnings of the rules-based trading system's breakdown in 2017. It outlined the resulting responses of governments, industries, and individual farmers and growers. In Chapter Three the limitations of trade theory, of which New Zealand is a prime example, were offered, and new ways of looking at country and firm-level analysis were proposed in the form of comparative institutional analysis and Sharpe's Three Horizon's Framework. The primarily inductive, grounded theory research method used for this thesis was discussed in Chapter Four, and the concept of institutional logics, first observed by Reay's multiple works on institutional logics, was introduced. The results of the research findings were then presented in Chapter Five and the identification of two waves were offered in the form of Wave One and Wave Two, along with the integration of these waves in the Three Horizons Framework. The findings of Chapter

Five, as discussed in Chapter Six, identified a Third Wave and the two wave-bridging transition periods. These were then presented as a new way of understanding the three time horizons through the creation of a dominant logic matrix. One in which the two transition phases, Transition One and Transition Two, are mapped, repeatedly, onto Sharpe's Three Horizons Framework.

This Chapter delivers a summary of the research. First, the contribution to knowledge is summarised. Secondly, the implications for industry members are presented before the implications for farmers and growers. Next, the limitations of the research and application of this study are discussed. Finally, areas of future research are proposed.

## 7.1 Contribution to Knowledge

The aim of this research was to determine and explain the specific reasons for New Zealand's sustained success and international competitiveness in food and fibre exports. This aim was further explored by retrospectively examining key trade events and domestic policy. The knowledge gained from the research led to the unearthing of three waves, connected by way of two transition periods. The key research finding and contribution to knowledge, which emerges in full in Chapter Six, is the dominant logic matrix. It is well-known that New Zealand's size gives it minimal ability to influence global trends, events, and implications. Throughout the research it became evident that several key global events had vast and lasting impacts on New Zealand and each time, exporters had to adapt to what they viewed as unpredictable, changing demand and supply scenarios. Several attributes were consistent throughout the three waves that fell into four cascading clusters: institutional market structure; how governments operated; how agribusinesses responded; and, the resulting domestic environment. Their attributes, such as, the values of civil society, control, wealth creation, and knowledge, evolved with each subsequent wave. The evolution of each attribute reflected the institutional, or dominant, logic of the respective time and defined the environment and behaviours inherent in each wave. The creation of the dominant logic matrix was not a linear process, but through many iterations a substantial amount of historical

literature was crafted into a succinct illustration. Not only did the matrix confirm historical behaviours, but its emergence details what could predictably be expected in Wave Three for food and fibre exporters. As well as the creation of the dominant logic matrix the research also suggested an alternative way of viewing Sharpe's Three Horizons Framework – as two horizons (H1 and H3) and a temporary transition period (H2) between them. What emerges from the research is that New Zealand's food and fibre sector has 'been through' Sharpe's model not once but twice during the period of this analysis.

## 7.2 Implications

The dominant logic across New Zealand's food and fibre sector differs between industries. For those with a Wave Two worldview, this logic is understandably strong. Wave Two is a defence of the status quo. This is often seen in the more traditional legacy industries, though not exclusively. But for New Zealand producers to become the best producers *for* the world, it will need to accelerate all its industries to move through Transition Two to Wave Three, which may require assistance from Wave Three industries. This accelerated transition will likely not be enough to meet the demands of all the discerning consumers and markets around the world on its own, but that, coupled with increased collaboration at an industry level, could well do so. Those industries that are already embracing a Wave Three worldview have a deep understanding of how value is created, and the importance (and rise) of consumer sovereignty. For example, these businesses know that they should not simply label consumers as either 'vegans' or 'meat-eaters'. They are acutely aware of the fact that their consumers are unique, and that their purchasing power and influence is stronger than it has been in the past. This is evident in their success and this point ultimately reinforces the importance of having intimate consumer knowledge and insight, and the communication role that industry and businesses must play. If farmers and growers can produce the right products with the right attributes the market is demanding, and industries can incentivise this producer behaviour, New Zealand as a whole can only be better off.

Operating a land-based business in the Third Wave is set to be the hardest yet. Some farmers and growers are responding well to the challenges and opportunities. But others are struggling, creating further division to what is ideally a cohesive sector. This division is even more stark between farmers and growers, and global consumers. The social, cultural, and environmental disconnect between these two fundamentally important ends of the value chain is a huge risk to New Zealand's food and fibre sector. Those producers who do not create sustainable value propositions for Wave Three consumers risk being forced to change, through regulation or otherwise. It is much more cost effective to adapt proactively to market signals, than be forced to react immediately to market expectations. In previous waves, New Zealand's approach to attracting people into agriculture was designed to get people back onto the land, whether formally qualified or not. Which could explain why New Zealand has some of the lowest rates of formally educated farmers around the world<sup>6</sup>. By contrast, Ireland, for example, requires The Green Cert qualification to qualify as a young, trained farmer (Gibbons, 2019). Many New Zealanders grew up under this system which occurred with few negative externalities and increasing wealth, leading to particular learned behaviours. These learned behaviours are predictably difficult to change but are key to moving the whole sector to Wave Three. As such, some existing business models may no longer be fit-for-purpose, for example, those relentlessly pursuing efficiency. While this has been a reliable, cash generating model to date, with increasing consumer expectations the ability to 'win' in this way becomes limited. Those that pivot towards finding new business opportunities are expected to be better off. It is entirely possible there will still be room for operational excellence businesses in Wave Three, but it will have to be done within consumer determined environmental limits which is inherently more difficult than it has been in the past.

Short-term demand and supply spikes, such as, those generated by COVID-19, cause a new equilibrium to appear. Although short-term spikes are presumed to be temporary, they can have significant impacts on businesses and industries less resilient to changes. Wave Three embraces these changes and it is more resilient than any individual short-term spike. There

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<sup>6</sup> Formally educated means holding a New Zealand Qualifications Authority (NZQA) or equivalent qualification. This is despite the fact that agriculture is highly technical in nature, yet New Zealand's pastoral farmers are some of the best in the world.

is nothing to suggest that Wave Three has been abbreviated as a result of these spikes and that the world is already heading towards the next transition period, but the spikes will ideally move industries out of Wave Two, advancing through Transition Two even faster. This is not to say a whole of system reset is easy at any level. But small, incremental changes may not be enough.

## 7.2 Limitations

There are several limitations surrounding the research. Firstly, the lack of primary data. The aim of this research was to use historical data to create a predictive tool. There is a substantial amount of literature on international trade and New Zealand's primary industries (which meant only including what was deemed to be the most relevant literature). While this was achieved by using only historical literature, the ability to access primary data through extensive farmer and grower surveys would have embellished the research findings and analysis, as would having tested the dominant logic matrix with industry members. However, to do so would have required a considerably different resource bundle. The second is that it is specific to New Zealand. While the global trends and forces are not New Zealand-centric the specific government policy directions, trade history, and unique sector composition are. This New Zealand centricity gives it limited international applicability in its entirety, though some sections may be adapted to other economies where there is enough similarity between them and New Zealand.

## 7.3 Areas of Future Research

This thesis has provided the opportunity to deepen my knowledge of New Zealand's food and fibre sector over the last 80 years and use this to create a predictive output for the future. However, its ability to be specific was limited and, as such, it is largely generalist in nature. Industries and firms would greatly benefit from a deeper level of specially tailored analysis, along with what the dominant logic matrix means for them, and clear ways to accelerate their transition to Wave Three (if they identify as being in Wave Two or Transition Two). The dominant logic in New Zealand's food and fibre sector has already evolved three times in the

last eight decades, which could only be observed with the benefit of hindsight. It is plausible, therefore, that a Fourth Wave is likely to appear in coming decades. To better prepare for the next 80 years, the sector should operate under this assumption, and ensure it is ready to catch the wave when it does.



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