

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

ENTREPRENEURSHIP AND
ECONOMIC DEVELOPMENT IN
NEW ZEALAND
1880-1910

A thesis presented in partial fulfilment of the requirements for the degree of Doctor of
Philosophy in History at Massey University

IAN HUNTER

2004

ACKNOWLEDGEMENTS

At the outset of this thesis, I did not know that this research would take so long, that it would draw on the resources of so many people, and that it would leave me owing such a debt to my friends and family—none moreso than my wife, Debra. She walked with me every tentative, sometimes backward, step of this road. And a few words do not do justice to the love, kindness, level-headedness, and sacrifice she offered that helped us all through this project. Thank you Debra. Likewise, our children, Sarah, Elise, Thomas, Benjamin, and Michael have put up with a preoccupied father, endlessly. Yet, despite this, in the good times and the difficult times, they were a constant encouragement and a source of much love—thanks gang.

I have benefitted in many ways from the assistance of my supervisors, Associate Professor Peter Lineham from Massey University, and Emeritus Professor Russell Stone of the University of Auckland. Professor Lineham's support made it possible to do a thesis on business history in New Zealand; he read draft after draft, always positive as he directed me to engage historical questions. Likewise, Professor Stone, who despite having a large number of calls on his time, embraced this project from the outset, expertly guiding me in the peculiarities of New Zealand economic development. Thank you both.

At the University of Auckland I was fortunate to have the companionship of many supportive colleagues including: Larry Murphy, Kevin Parnell, Felicity Lamm, Joe Beer, Erling Rasmussen, Suchi Mouly, Paul Gilberd, and Manuka Henare. In particular, I would like to acknowledge the assistance of Associate Professor Marie Wilson. Without her help fashioning arguments and getting rid of unnecessary passages, I would have rambled on continually.

Richard Higham activated my interest in entrepreneurship ten years ago; I am grateful for his continued interest in my research. Steve Jones, previously of the University of Auckland (now at the University of Dundee), came to my assistance on numerous occasions—well armed with liberal helpings of economic history and wit. At Auckland University of Technology, Chris Batstone, during a memorable year spent sharing an office built only for one, showed me how to construct a database of entrepreneurs. At the University of Auckland, Robert Soakai and I shared our common frustrations with PhD research, and celebrated, a few choice victories.

Librarians at Massey University, Auckland University of Technology, and the University of Auckland helped on many occasions to find articles and papers; I am grateful for their assistance.

At the end of it, however, this work is mine; I bear the responsibility for what is, what isn't, and what should have been presented here.

Ian Hunter, Auckland, 2004

CONTENTS

| | PAGE |
|---|------|
| ACKNOWLEDGEMENTS | 2 |
| LIST OF TABLES | 6 |
| LIST OF FIGURES | 7 |
| ABSTRACT | 8 |
| INTRODUCTION | 9 |
| PART I: THE IDEA OF ENTREPRENEURSHIP | |
| 1. FROM UNDERTAKER TO ENTREPRENEUR: A REVIEW OF THE LITERATURE | 17 |
| PART II: THE ENTREPRENEURIAL ECONOMY | |
| 2. THE NATURE OF THE DEVELOPING ECONOMY | 65 |
| 3. THE POLITICAL ECONOMY OF AN EVOLVING SETTLER COLONY | 89 |
| 4. THE INNOVATION DYNAMIC AT WORK IN ECONOMIC EXPANSION | 117 |

PART III: THE ENTREPRENEUR IN THE COLONIAL ECONOMY

| | | |
|----|--|-----|
| 5. | A CASE ANALYSIS APPROACH TO BUSINESS HISTORY | 161 |
| 6. | THE ENTREPRENEURIAL IMMIGRANT: MIGRATION AND ENTERPRISE IN A COLONIAL ECONOMY | 190 |
| 7. | CAPITAL AND THE COLONIAL ENTREPRENEUR: ENTERPRISE IN THE FACE OF SCARCITY | 219 |
| 8. | RISK, PERSISTENCE AND FOCUS: A LIFECYCLE OF THE COLONIAL ENTREPRENEUR | 255 |
| | CONCLUSION: ENTREPRENEURSHIP AND A NEW VIEW OF 'THE LONG DEPRESSION' | 290 |
| | APPENDICES | |
| A. | LIST OF ENTREPRENEURS | 308 |
| B. | CASE ANALYSIS INFORMATION COLLECTION SHEET | 311 |
| C. | INDUSTRIAL ACTIVITIES RANKED BY CAPITAL PER PLANT | 319 |
| D. | TWENTY LARGEST INDUSTRIAL ACTIVITIES BY CAPITAL INVESTMENT | 325 |
| E. | AVERAGE FACTORY SIZE | 330 |
| F. | AUCKLAND GOLD COMPANIES: 1890 | 332 |
| | BIBLIOGRAPHY | 333 |
| | INDEX | 354 |

LIST OF TABLES

| TABLE | PAGE |
|---|------|
| 1. Population of the North and South Islands: 1858-1911 | 80 |
| 2. New Zealand Trading Figures: 1853-1880 | 119 |
| 3. New Zealand Trading Figures: 1881-1910 | 121 |
| 4. Rank Order of Main Exports: 1880-1930 | 127 |
| 5. Gold Exports: 1857-1910 | 146 |
| 6. Entrepreneurial Activity | 167 |
| 7. Settlement Location of Case Analysis Entrepreneurs | 175 |
| 8. Occupation of Entrepreneurs' Fathers | 179 |
| 9. Age First Started Work | 180 |
| 10. Number of Different Occupations | 181 |
| 11. Number of Jobs Prior to First Venture | 182 |
| 12. Industry Activity of Entrepreneurs | 183 |
| 13. Lifetime Venture Activity | 186 |
| 14. Immigrant Entrepreneurs – Year Immigrated | 202 |
| 15. Immigrant Entrepreneurs – Age Immigrated | 203 |
| 16. NZ Foreign-born and Immigrant Entrepreneurs: 1881 | 204 |
| 17. Immigrant Entrepreneurs – Settlement Pattern | 205 |
| 18. Immigrant Entrepreneurs – Industry | 206 |
| 19. Comparison of Native and Immigrant Entrepreneurs | 209 |
| 20. Start-up Sources of Capital | 229 |
| 21. Reasons For First Venture | 233 |
| 22. Business Expansion: Sources of Capital | 235 |
| 23. Capital Investment by Industrial Class: 1881 | 237 |
| 24. Capital Investment in Plant and Machinery: 1881 | 240 |
| 25. Average Capital Entry Costs 10-Year Intervals | 242 |
| 26. Lifetime Venture Activity | 275 |

LIST OF FIGURES

| FIGURE | PAGE |
|--|------|
| 1. Wool Exports: 1853-1910 | 68 |
| 2. Miles of Track Open and Under Construction: 1873-1910 | 72 |
| 3. New Zealand Population: 1854-1910 | 77 |
| 4. Government Revenue and Expenditure: 1880-1900 | 106 |
| 5. Main Expenditure Items Public Works: 1880-1900 | 109 |
| 6. Primary and Private Schools in Operation: 1874-1910 | 111 |
| 7. New Zealand Balance of Trade: 1853-1930 | 120 |
| 8. Imports and Exports: 1853-1910 | 122 |
| 9. Per Capita Exports and Imports: 1880-1910 | 124 |
| 10. Wool Exports as a Percentage of Total Exports: 1870-1930 | 129 |
| 11. Wool Price per lb. :1853-1910 | 130 |
| 12. Emerging Exports: 1880-1890 | 131 |
| 13. Factory Size Frozen Meat Industry: 1881-1911 | 135 |
| 14. Capital Investment Frozen Meat Industry: 1881-1911 | 136 |
| 15. Movement of Major Export Classes at 10-year Intervals: 1880-1930 | 138 |
| 16. Shipping Tonnage and Outgoing Vessels: 1853-1890 | 140 |
| 17. Gold Price per Ounce: 1853-1910 | 144 |
| 18. Gold Exports in Ounces: 1857-1910 | 145 |
| 19. Butter Exports: 1853-1910 | 155 |
| 20. Settlement Locations of Case Analysis Entrepreneurs | 176 |
| 21. Sources of New Zealand Population Increase: 1853-1900 | 193 |
| 22. Emigration from the Colony of New Zealand: 1853-1910 | 194 |
| 23. Occupations of Adult Male Citizens Who Left United Kingdom for Australasia: 1876-1900 | 196 |
| 24. Number of Industrial Establishments: 1881-1911 | 226 |
| 25. Percentage of Establishments by Capital Investment: 1881-1911 | 238 |
| 26. New Zealand Boot and Shoe factories: 1881-1911 | 247 |
| 27. Saw Milling and Sash Door Factories: 1881-1911 | 251 |
| 28. Lifecycle of the Entrepreneur | 263 |
| 29. Annual Average Grain Prices: 1853-1910 | 271 |

ABSTRACT

This study investigates entrepreneurial activity in New Zealand between 1880 and 1910. Economic indicators, population, import and export patterns, provincial differences, and industrial development are examined to understand entrepreneurship and its relationship to economic growth. In addition, a case analysis of 133 entrepreneurs is presented, which analyses the backgrounds, education, reasons for venture start-up, venture types, methods of growth, incidence of failure, and sources of capital for nineteenth-century New Zealand entrepreneurs.

This study suggests that a range of structural characteristics present in the New Zealand economy at this time, such as rapid population growth, technological innovation, isolation of markets, business structures, public works investment, immigration, and fiscal policies, encouraged and fostered entrepreneurial activity. Common characteristics among those who undertook new ventures over this period are highlighted; these include skill, commercial experience, limited capital, partnership, networks and the propensity to undertake multiple business ventures. Overall, entrepreneurial activity by small and medium-sized enterprises emerged as an important mechanism by which the colonial economy expanded both in scale and scope.



INTRODUCTION

This thesis discusses how an economy, still in its infancy, struggles, adapts, copes with, and rises to the challenges of economic growth. What are the means such an economy uses to achieve this end? It is argued that, in the latter part of the nineteenth and early twentieth centuries, an important mechanism by which these aspirations were realised in the New Zealand economy was entrepreneurship. Structural changes in the economy, such as rapid population growth, technological innovation, the isolation of regional markets, infrastructure investment, business structures, immigration, and fiscal policy provided a fertile seedbed for the entrepreneur.

Similarly, entrepreneurs themselves displayed characteristics that pushed this economy forward; their willingness to bear risk, invest in new technologies, commence multiple business ventures, and a tendency towards business development, were the kinds of behaviours suited to a new economy searching for viability.

A few large-scale capitalists, operating monopolistic or oligopolistic enterprises, would have been an alternative pattern of development. A few large, capital-rich firms did emerge in the economy in industries, such as wool processing, gold-extraction, meat processing, shipping, and saw milling. But these firms were not the majority. The dominant organisational form in the colonial economy was the small or medium-sized enterprise—the family firm, partnership, or sole-proprietorship. This type of organisation, with its ability to undertake commercial activity on limited funds, its organic management structure, and its speedy decision-making capabilities was well suited to the colonial economy. Through the actions of large numbers of enterprising individuals the economy expanded.

While not uniform in character, the period 1880-1910 showed a number of common features and this made it a coherent subject for this research. In the period under review, there was generally a low level of government involvement in the functioning of the business environment, low rates of taxation, few barriers to overseas trade, and import duties were used primarily as a means to finance government expenditure rather than being used as an artificial mechanism to protect local industries. The country also experienced sizeable influxes of immigrants (something that remained a feature of the New Zealand economy until the mid-1920s) and a continually positive population growth.

This thesis draws on two main sources of material. Firstly, it makes use of economic data pertaining to the period as well as other primary sources; secondly, it uses a case analysis of 133 entrepreneurs who were active in business ventures during this period. Unless otherwise noted, statistical information presented in this thesis was derived from the *Census* or *Statistics of New Zealand*, and is not usually referenced. In addition, for the sake of style, where *he* appears in the text and does not refer to a particular entrepreneur it also encompasses the gender equivalent of *she*.

This thesis consists of nine chapters grouped as three parts. Part One consists of a single chapter, which deals generally with the idea of entrepreneurship. It examines the contributions of economic and sociological writers to this field of study. Part Two, entitled 'The Entrepreneurial Economy', consists of three chapters that investigate some of the structural characteristics of the colonial economy. Chapter 2 considers the general nature of the economy between 1880 and 1910. Chapter 3 develops this theme. It investigates government activity over the period in relation to entrepreneurship, discussing the influence of bonus schemes, fiscal policy, and public works spending on the development of new enterprises. Chapter 4 examines how innovation assisted the expansion of the economy, particularly in relation to the export trade.

Part Three of the thesis, 'The Entrepreneur in the Colonial Economy', consists of four chapters and moves from considering the economic context to the actors at work in that context. Chapter 5 offers a bridge between the macro-view of Part Two and the micro-view of Part Three. It introduces the use of case analysis in business history research examining the particular methodological issues that arise from this type of investigation. Chapters 6-8 are based on the findings of the case analysis. Chapter 6 examines immigration and its relationship to business development. Chapter 7 considers how entrepreneurial activity might develop in an economy with limited capital markets.

Chapter 8 presents the findings of the case analysis in relation to entrepreneurial business strategy, venture activity, and business failure suggesting a model for the lifecycle of the entrepreneur. A conclusion follows, which summarises the main findings of the thesis, limitations, and areas for further research.

NOTES ON SOURCES

Trade statistics, industrial data, banking statistics, shipping statistics and population statistics were collated for the period from *Census, Statistics of New Zealand*, and the *Factory and Industrial Statistics Yearbook*.¹ These provided a rich source of commercial information on changes to exports and imports, industrial capital, shipping, migration, public debt, territorial revenue, public works, customs revenue, banking liabilities and assets, postal and telegraph services. This information was entered into spreadsheets then analysed.

Other official sources used for this research included the *New Zealand Parliamentary Debates* and the *Appendices to the Journals of the House of Representatives*, which contained reports from government departments, select committees, and reports of royal commissions. Particularly helpful were the annual reports on immigration and public works, railways, and colonial industries. Also useful were sporadic reports on industries such as flax, fishing, and forestry.

Even over the relatively short time span of this study, drawing conclusions from official statistical publications was not straightforward. The *Statistics of New Zealand* were first published by the Government in 1858 (although they date back to 1854) and annually thereafter to 1920. After 1920, the *Statistics of New Zealand* was split into several volumes including the *Factory and Industrial Statistics Yearbook*. The main feature of the original *Statistics of New Zealand* was trade statistics; these included summaries by province, class of good, and destination. How government statisticians defined particular classes of goods, for example drapery, was subject to change—usually without explanation to the reader of what the new classes of goods might represent. In the 1870s, for example, drapery included fabric arranged in loose folds, ribbons, laces, cottons, threads, tailors trimmings, tablecloths, and haberdashery.

¹ The *New Zealand Official Year Book*, first published in 1892, presented much of this statistical information in a more aggregated form. However, it proved more relevant to this study to use the statistical sources mentioned.

By 1910, drapery also included woollens. Yet, it was difficult to work out what proportion of the 1910 figure related to the earlier category, and what amount related to woollens. Making comparisons between earlier data and goods imported after 1920 was almost impossible; *Statistics of New Zealand* ceased classifying goods by the principal articles in each class and adopted the British system of import and export classification.

The industrial and occupational sections of the *Census* were particularly useful for this research. These gave statistics on the number of industries, number of workers, wages, motive power, capital invested in fixed assets, yearly output, and value of production. Industries, such as brewing, flax mills, and grain mills were covered in detail by the *Census* from 1871; industries, such as printing, coach-building, boot and shoe manufacturing, aerated water manufacturing, saw-milling, etc., received detailed reporting from 1881 onwards.

Census statistics on industrial manufacturing were collected from 1867 onwards in conjunction with the population *Census* in 1867, 1871, 1874, 1878, and 1881; then every five years after this until 1918-1919. From 1919 onwards, the collection of industrial statistics was undertaken annually. Industrial statistics identified a factory as an establishment engaged in the manufacture, repair, or preparation of articles for wholesale or retail trade, or for export, which employed at least two hands or used motive power. While this included works like breweries, aerated water producers, sawmills, coach builders, flourmills and the like, it excluded bakeries, butcheries, laundries, smithies, waterworks, retail shops, wholesalers and indenters.

Large numbers of small establishments were also excluded from the census after 1920. Prior to this date, jewellers, watch-repair, boot, shoe and saddlery repair (and like trades), were included, even if they only had a proprietor. After 1920, these industries were not included in the census. Nor were establishments engaged in dressmaking and millinery (unless manufacturing wholesale), bespoke tailors, tea blending and packing, bottling liquor, stone quarrying and crushing, asphaltting and monumental masonry, or plumbers or joiners who made their own joinery for building contracts. This was done, as was claimed, to bring the statistics in line with those collected in other parts of the Empire.

The cumulative effect of these changes was to decrease the number of establishments submitting returns in the 1921-22 year by 624. Nevertheless, even the larger figure was still an approximation of factory and industrial activity, as firms that had branch establishments were only counted as one establishment for the purpose of *Census*

returns. For instance, Ross and Glendining, owners of the Roslyn Worsted and Woollen Mills and a clothing factory in Stafford Street, Dunedin, would be returned as having only one business premise instead of two. It is pure guesswork to ascertain the impact that this had on estimates of the size of New Zealand secondary industry. Such selective counting annoyed parts of the community. In 1880, the *New Zealand Herald* proudly listed some of the manufacturers and works of the colony as an example of progress; the paper made the comment that the list had been, 'compiled from official sources, but owing to whims of the statistic collectors, some returns have been entirely omitted.'²

There were no official statistics on the size of the retail industry in New Zealand prior to the twentieth century. J.A. Dowie lamented this in his studies on New Zealand investment between 1871 and 1900, and was forced to estimate the size of commercial capital on the basis of residential capital.³ Dowie's figures are useful but limited. They make no allowance for working capital, and likely underestimate the size of the commercial sector. Making further estimates as to the size of the commercial market (retail shops, offices, warehousing) might be possible from occupational statistics, although figures before 1886 do not allow a distinction between the employed and employers. Alternatively, it may be more accurate to estimate the size of the retail sector as a percentage of total commercial activity relative to the size of the industrial sector. Some figures could possibly be reconstructed from licensed establishments as in dentists, pharmacists, auctioneers, and taverns as a proportion of the total commercial community.⁴ Whatever the creative measure used, it would be a difficult task liable to errors.

Calculations of value also vary between government publications. The *Statistics of New Zealand* quoted the value of imports at their market value in the country of exportation plus 10 percent, and for exports, the value was given as the FOB cost to the port of departure.⁵ Conversely, when measuring the value of factory production, the

² *New Zealand Herald*, 8 January, 1880, p.6.

³ J.A. Dowie, 'Studies in New Zealand Investment 1871-1900', PhD thesis, Australian National University, Canberra, 1965, pp. 76-80.

⁴ It appears a business licence was required to trade in the 1870s, and paid to the provincial government. What is not clear is how widespread this was, nor if it was widely enforced. Business Licenses were discussed during the debate on the Hawkers and Pedlars Bill. Business Licenses were local revenue and it appeared that a trader who took out a license on the gold fields to trade, had to take out a license for every store he was operating, even though there might only be a gully between them. See *NZPD*, 42, July 13 (1882), pp.286-287.

⁵ It also appears that the exporter could arbitrarily set a value and this would be taken as the value of the exports.

census tended to give a wholesale value, not a market value. Goods that were exported or imported always appear to be higher in value as a result. Therefore, comparisons between the relative sizes of the different commercial sectors, for example, the value of timber or brick production versus the value of gold or agricultural exports, need to take this into account. In this thesis comparative figures have been adjusted to export prices, at times, to enable a more realistic comparison between industrial activities. When figures have been adjusted, this is indicated in the accompanying text.

The basis for the case analysis of entrepreneurs that forms Part III of this thesis is discussed fully in Chapter 5. In brief, a case group of 133 entrepreneurs was selected who were active in the period 1880-1910, which permitted an opportunity to venture generalisations about the nature of entrepreneurial behaviour during this period and ascribe characteristics to the colonial entrepreneur. The selection process for deciding who was, and who was not, an entrepreneur is also discussed in Chapter 5, however one item from this process warrants elaboration at the outset of this thesis: the problem of farmer. Is the farmer an entrepreneur, or is he not?

Farmers, in light of the peculiarities of the New Zealand pastoral economy, present something of a quandary. For one could easily venture an argument that farmers in New Zealand played more than just a producer role in the trade cycle—they accrued wealth from risk-taking activities and were vital in the current of colonial economic expansion. It is obvious, too, from the work of Jim McAloon, that there was not an easy divide between urban and rural wealth; farmers could, just as easily as city-dwellers involve themselves in entrepreneurial ventures and some did. Farming money moved between land and enterprise, between agriculture and commercial pursuits.⁶

These things said, however, as the reader will soon discover, traditional economic thinking quickly discredited the farmer as an entrepreneur. While Richard Cantillon explicitly included farmers as entrepreneurs on the basis that the farmer assumed risk not knowing the eventual price his goods would receive in the market, others moved away from this line of thinking. Turgot and Say, for example, did not include farmers as part of the entrepreneurial class, as they assigned entrepreneurs a function as the interface between producers (the farmers) and consumers. It was the buying and selling of commodities—the unique knowledge of trade and enterprise required at this point in the

⁶ See McAloon, Jim, *No Idle Rich: the Wealthy in Canterbury and Otago, 1840-1914*, Dunedin: University of Otago Press, 2002.

market system—that gave the entrepreneur his defining features. Other classical economists developed further characteristics of entrepreneurial behaviour and economic function, as are outlined presently.

Contemporary economists, also, have not included farmers in their discussion of entrepreneurship and economic process and the reason for this appears straightforward: the farmer is not a firm. A farmer is not a separate economic entity in the same way that a firm is, nor does a farmer enjoy the same capacity to expand his enterprise in the same way that a firm does. Economic thinking, and economic thinking on the entrepreneur, has therefore largely concerned itself with the economic entity that an entrepreneur creates: a firm.⁷ For these reasons and for reason of comparability with other large international studies of entrepreneurs using case analysis (who also did not include farmers as entrepreneurs), it was decided not to include farmers in the present study.⁸

The following chapter examines the idea of entrepreneurship and how this idea developed over time. It considers the work of classical and neo-classical economists, and concludes with a discussion about New Zealand research on entrepreneurship and business history.



⁷ See for example, Casson, Mark, *The Entrepreneur: An Economic Theory*, 2nd edn., Cheltenham: Edward Elgar Publishing, 2003.

⁸ See Sarachek, B., 'American Entrepreneurs and the Horatio Alger Myth', *Journal of Economic History*, 38 (1978), pp.439-56, for an example of such a study. Others are discussed in Chapter 5.

PART I

THE IDEA OF
ENTREPRENEURSHIP

1

FROM UNDERTAKER TO ENTREPRENEUR: A
REVIEW OF THE LITERATURE

The purpose of this chapter is to give a general summary of the idea of entrepreneurship as it relates to political economy.¹ In particular, this chapter will examine the attributes and functions that economic writers have ascribed to the entrepreneur. The early classical economists, including Adam Smith, developed an informed understanding of the attributes and behaviours of the entrepreneur that distinguished the entrepreneur from other economic actors. This distinction was perhaps best seen in the work of the English economist, Alfred Marshall.

In addition, this chapter will present a brief overview of some of the historical and sociological New Zealand literature as it refers to the entrepreneur. Finally, this chapter presents a preliminary definition of how we might conceive of the entrepreneur in the latter part of the nineteenth century and early part of the twentieth century.

¹ The phrase political economy in this thesis is used to describe the means, institutions and philosophy by which wealth is created in an economic system. I use the phrase in the same sense as it was used by J.S. Mill. In elaborating on political economy Mill noted: 'The conception, accordingly, of Political Economy as a branch of science, is extremely modern; but the subject with which its enquiries are conversant has in all ages necessarily constituted one of the chief practical interests of mankind, and, in some, a most unduly engrossing one. That subject is Wealth. Writers on Political Economy profess to teach or to investigate, the nature of Wealth, and the laws of its production and distribution; including, directly or remotely, the operation of all the courses by which the condition of mankind, or of any society of human beings, in respect to this universal object of human desire, is made prosperous or the reverse.' As such Mill's definition includes the themes of population, money, trade, philosophy and the operations of state, markets, firms and individuals and the institutions supporting them. See Mill, *Political Economy*, Preliminary Remarks, B.

L'ENTREPRENEUR

The idea of entrepreneurship is not new. The *Oxford English Dictionary* defines the entrepreneur as one who 'undertakes an enterprise; one who owns and manages a business; a person who takes the risk of profit or loss'.² This is the word's meaning in regards to political economy; its use in everyday language referring to commercial activity seems to date from around the 1950s.³ Of French origin, entrepreneur can be literally translated as 'to undertake', 'to launch upon' or 'to embark upon,' coming from the verb 'entreprendre.' In France, Savary's *Dictionnaire Universel de Commerce* (1723) defined an entrepreneur as one who undertook a project; a manufacturer; or a master builder. In contemporary French life the word has retained this meaning.⁴ An 'entrepreneur en ou de bâtiment', is a building contractor; an 'entrepreneur de travaux publics', is a civil engineering contractor; an 'entrepreneur de transports', is a haulage contractor. Of more sombre use is an 'entrepreneur de pompes funèbres', an undertaker or funeral director. The most common rendition in French life is in reference to a contractor—one who coordinates people and materials to construct a building. The word has assumed negative connotations when it is used in reference to a businessman. It describes an adventurous risk-taker, whose career climb through speculation and business dealing is often as meteoric as his eventual fall from grace. In French commercial life today it is more respectable to be called an industrialist than an entrepreneur.

HISTORICAL ROOTS

When it was first used in the Middle Ages, the entrepreneur referred to a person who 'assumed some task', who 'got things done.' It was the description used of a cleric who oversaw the construction of an abbey or cathedral. The cleric, whose role included procuring labour and materials, had to ensure that the project was completed, though he bore no financial risk. He assumed the functions of planner, negotiator, overseer, contractor, inspector, employer, and manager.⁵

² *Oxford English Dictionary* 2nd ed. Prepared by Simpson J.A. and E.S.C. Weiner, vol V, dvandva-follis, Oxford: Clarendon Press, 1989, p.307.

³ While the word entrepreneur was used in economic theory much earlier, as this chapter demonstrates, the *Oxford English Dictionary* (2nd ed.) contains references to its more popular use from the 1950s onwards.

⁴ See Hébert, Robert F., and Albert N., Link, *The Entrepreneur: Mainstream Views and Radical Critiques*, 2nd ed., New York: Praeger, 1988, p.17.

⁵ See Hoselitz, Bert F., 'The Early History of Entrepreneurial Theory', in *Essays in Economic Thought: Aristotle to Marshall*, Spengler, J.J. and W.R. Allen (eds.), Chicago: Rand McNally, 1960, pp.234-258; Hébert, and Link, *The Entrepreneur: Mainstream Views and Radical Critiques*, pp.17-18.

By the end of the 1500s, the term was associated with a group of men who bore the risk in large-scale undertakings, such as the building of castles, fortresses, churches, harbours, roads, drainage works, and the provision of army supplies. These men entered into a fixed price contract. The risk that they accepted was that the undertaking might cost more than the fixed price or that the construction might run into difficulties, causing the entrepreneur financial loss. The attraction to the entrepreneur was the profits that could be made by keeping costs below the agreed amount.

Typically, such contracts were made between an individual and the crown, though a wealthy patron might also engage an entrepreneur. For example, in 1599, when Henry IV appointed a Dutch engineer, Humphrey Bradley, to undertake drainage in southwest France, he referred to Bradley and associates as ‘iceux entrepreneurs.’ The word continued to be used in this sense in French government contracts between 1667 and 1706. In the English language synonymous terms were ‘undertaker’ or ‘adventurer.’ When new mines were opened in 1667, Stephen Primatt wrote: ‘There are divers other sorts of Collieries in Inland Counties in England, whose profit consists in an Inland Market; and they do produce in many places great profit to the Undertakers.’⁶

EARLIEST USE IN POLITICAL ECONOMY

Probably the first writer to use the word, ‘undertaker’ or ‘entrepreneur’ in an economic sense was the Irish-born banker and economist, Richard Cantillon, in his *Essai sur la Nature du Commerce en Général*. Cantillon wrote:

Il n’y a que le Prince and les Propriétaires des Terres, qui vivent dans l’indépendance; tous les autres Ordres and tous les Habitans sont à gages ou sont Entrepreneurs. (In translation: There are none but the Prince and the Proprietors of Land who live independent; all other Classes and Inhabitants are hired or are Undertakers.)⁷

In 1714, after working for the Paymaster General of the British Army, Cantillon established himself as a banker in France. He made a fortune under John Law’s Mississippi scheme, by sending an associate to Mississippi to investigate the claims that

⁶ From Primatt, Stephen, *The City and Country Purchaser and Builder*, 2nd ed., London: William Leybourne, 1680, p.30. For this and other examples see Bert F. Hoselitz’s article on the history of the word entrepreneur in ‘The Early History of Entrepreneurial Theory,’ *Explorations in Entrepreneurial History*, 3, 1951. pp. 193-220.

⁷ Cantillon, Richard, *Essai sur la Nature du Commerce en Général*, Henry Higgs (ed.), London: Macmillan, 1931, p.42-43.

Law was making about the new colony.⁸ Upon finding that the publicity regarding Law's scheme was untrue, Cantillon sold his shares before the share market bubble burst. Cantillon's *Essai* is the only remaining work of what was purported to be a large quantity of economic writing after a mysterious fire in 1734 destroyed his house and burnt his murdered corpse.⁹

Cantillon wrote *Essai* at some stage in the four years prior to 1734. The paper's central topics included a definition of the entrepreneur, the entrepreneur's role in the economic system, and risk. Cantillon saw that risk lay not in regard to the uncertainty of a speculative venture, but arose out of the unknown returns at the end of an activity. In other words, at the time of purchase the entrepreneur did not know the price that he would be able to sell goods for in the future. This differed from the undertakers of public works a century earlier; they knew the price in a contract, but took a risk as to the costs of fulfilling that contract.

Cantillon documented the different groups in society that bore this kind of risk and performed entrepreneurial work. He commenced with the farmer, whom he regarded as one type of entrepreneur. Cantillon observed that the farmer bore a risk in relation to the crops he chose, weather patterns, changes in population, customer preferences, and family income. Nor did the farmer know what price he would eventually get for his produce at the market. Here the farmer would deal with another entrepreneur—the one who provided the link between him and the consumer:

For this reason many people set up in a City as Merchants or entrepreneurs, to buy the country produce from those who bring it or to order it to be brought on their account. They pay a certain price following that of the place where they purchase it, to resell wholesale or retail at an uncertain price. Such entrepreneurs are the wholesalers in wool and corn, bakers, butchers, manufacturers and merchants of all kinds who buy country produce and materials to work them up and resell them gradually as the inhabitants require them. These entrepreneurs can never know how great will be the demand in the City, nor how long their customers will buy of them since their rivals will try all sorts of

⁸ For the life and economic contributions of Richard Cantillon, see for example Blaug, Mark, (ed.), *Richard Cantillon (1680-1734) and Jacques Turgot (1727-1781)*, Aldershot: Edward Elgar Publishing, 1991; Murphy, Antoin, E., *Richard Cantillon, Entrepreneur and Economist*, Oxford: Oxford University Press, 1986; and Brewer, Anthony, *Richard Cantillon: Pioneer of Economic Theory*, London: Routledge, 1992.

⁹ Cantillon's life has the hallmarks of a great murder mystery, as chests containing quantities of his papers and a will were retrieved from the jungles of Surinam six months later. However, the mysterious Frenchman who was transporting them eluded capture.

means to attract customers from them. All this causes so much uncertainty among these entrepreneurs that every day one sees some of them become bankrupt.¹⁰

Cantillon divided his entrepreneurs into two groups: those who set up with capital to conduct their activity, and those who sold their own labour. The first group included those in charge of mines, theatres, building projects, merchants by sea and land, cook-shop keepers, pastry cooks, and innkeepers. The second group, those that had no capital and sold their own labour, included journeymen, artisans, copper-smiths, needlewomen, chimney-sweeps, shoemakers, tailors, carpenters and wigmakers. Painters, physicians, and lawyers were also included in this group, since they sold their labour in art and science and were reliant on clients for patronage.

THE ENTREPRENEUR AS THE CIRCULATOR OF MONEY

A French government administrator and economic thinker, Jacques Turgot (1727-81), completed his *Reflections on the Formation and the Distribution of Wealth* in November 1766. In it, he extended Cantillon's ideas about the entrepreneur. Of particular interest were Turgot's views on the entrepreneur as a stimulant for the circulation of money and capital investment.

People borrow with every kind of purpose and with every sort of motive. This one borrows to undertake an enterprise which will make his fortune, this other to purchase an estate, another to pay a gambling debt, another to make up for the loss of his revenue of which some accident has deprived him, and another to keep himself alive until he can get something by his labour.¹¹

Turgot differed from Cantillon in regard to capital and the entrepreneur. He did not think that the farmer or those who sold their own labour could be classed as entrepreneurs. As Turgot saw it, the entrepreneur was someone who pursued advances through large-scale enterprises, similar to manufacturers and masters. To be effective, the entrepreneur required both investment capital and working capital.

Turgot had observed the delay that the entrepreneur incurred between receiving raw materials and selling finished goods. During this time the entrepreneur still had to finance their schemes, paying wages, providing for apprentices, completing work in

¹⁰ Richard Cantillon, *Essai sur la Nature du Commerce en Général*, pp.65-66. Note, Higgs translated entrepreneur as undertaker, but for sake of emphasis, I have retained Cantillon's, 'entrepreneur.'

¹¹ Jacques Turgot, *Reflections on the Formation and the Distribution of Wealth*, Meek, Ronald, (transl.), Cambridge: Cambridge University Press, 1973, p.160.

progress. Some had to construct new buildings, roads, even canals before seeing a return on their investment. To cover these expenses the entrepreneur borrowed working capital. Turgot claimed that lending an entrepreneur working capital was a good investment, regardless of whether the money was used in agriculture, manufacturing, or commercial enterprises. An entrepreneur returned interest on the capital that he borrowed, and drew a profit, compensating him for his trouble, labour, talent and risk. Because of his ability to produce supra-normal returns on any investment, Turgot saw the entrepreneur as an economic-dynamo in society. The entrepreneur created new enterprises, capital, and profits—reinvesting what he earned:

We see, from what had just been said, how the cultivation of the land, manufactures of all kinds, and all the branches of commerce depend upon a mass of capitals, or movable accumulated wealth, which, having been first advanced by the entrepreneurs in each of these different classes of work, must return to them each year with regular profit, that is, the capital to be reinvested and newly advanced in the continuation of the same enterprises, and the profit to provide for the more or less comfortable subsistence of the entrepreneurs. It is this continual advance and return of capitals which constitutes what ought to be called the circulation money; that useful and productive circulation which enlivens all the work of society, which maintains movement and life in the body politic, and which is with good reason compared to the circulation of blood in the animal body.¹²

ENTREPRENEURSHIP IN THE WEALTH OF NATIONS: NEWNESS AND RISK

Adam Smith's, *An Inquiry into the Nature and Causes of the Wealth of Nations*, appeared ten years after Turgot's work. While critics have identified its lack of originality, they have praised the style and scope of Smith's work, allocating it a place alongside other books that have captured the sentiments of a time, such as Machiavelli's *The Prince*, and *Das Kapital*, by Karl Marx.¹³

Some scholars have blamed Adam Smith for the disappearance of the entrepreneur from British economic writing. They claim that Smith gave only passing reference to undertakers and projectors, and he failed to separate the entrepreneur from

¹² *ibid.*, p.158.

¹³ See comments by Max Lerner in his introduction to the Modern Library Edition of *Wealth of Nations*. See Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, New York: Random House, 1937, p.v.

other forms of business activity, such as the capitalist.¹⁴ It has produced the assertion that profit taking is not a legitimate commercial activity. As Herbert and Link stated: “Through David Ricardo, this legacy was bequeathed to Karl Marx, who embellished and continued the idea of the capitalist bogey, that is, the parasitic “extortionist” who sucks profit from the “industrious” people of the economy.”¹⁵

It is understandable how this criticism arose. The important figure in Smith’s economy was the landowner or ‘proprietor’, as Smith was inclined to refer to him. Like other classical economists of his time, Smith regarded agriculture as the stimulus to society’s advancement; additional wealth was created as land was made more productive. Merchants and manufacturers merely converted the wealth that farmers produced in to different forms.

‘The cultivators get a better price for their surplus produce,’ said Smith when discussing the manufacturing establishments of Leeds, Halifax, and Birmingham, ‘and can purchase cheaper other conveniencies which they have occasion for. They are thus both encouraged and enabled to increase this surplus produce by a further improvement and better cultivation of the land; and as the fertility of the land had given birth to the manufacture, so the progress of the manufacture reacts upon the land, and increases still further its fertility ... Such manufactures are the offspring of agriculture.’¹⁶

The *Wealth of Nations* was a masterly attack on the mercantilist system, giving rise to the much-quoted phrase, ‘invisible hand.’¹⁷ Smith analysed the economic order by showing how the division of labour supported progress, how money enabled exchange, and how the natural price of a good was established.¹⁸ After setting out this ideal, Smith

¹⁴ For examples of this discussion see Rothbard, Murray N., *Man, Economy, and State: a Treatise on Economic Principles*, Princeton: Van Nostrand, 1962; Tuttle, Charles, A., ‘The Entrepreneur Function in Economic Literature’, *Journal of Political Economy*, 35, (1927), pp.501-521; Redlich, Fritz, ‘Toward the Understanding of an Unfortunate Legacy’, *Kyklos*, 19 (1966), pp.709-16.

¹⁵ See Hébert and Link, *The Entrepreneur*, p.48. Though they noted that Ricardo was more culpable than Smith for his neglect of the entrepreneur. See p.49.

¹⁶ Smith, *Wealth of Nations*, p.383.

¹⁷ *ibid.*, p.423. Smith’s notion of the invisible hand was based on the premise that self-interest led to societies greater good, as selflessly, each industry and individual would be both supporting domestic industry before foreign, and labouring each year to produce the greatest revenue he could. It is worth noting however, that Smith’s ‘free market’ doctrine did not accrue to all sectors of society. Smith regarded the duties of the sovereign (read government) to include defence of the realm, justice, and the delivery of public works and education. *ibid.*, pp.653-740.

¹⁸ Smith determined that the natural price of a good was its cost of production.

exposed how artificial interference in the workings of this system, by monopolist trading companies, had been detrimental to society through poor use of capital.¹⁹

While this remains the most well known of Smith's ideals, he did not overlook the entrepreneur or 'undertaker.'²⁰ On the contrary, Smith displayed an acute awareness of the entrepreneur's functions and behaviour. He first used the term undertaker to describe those who through their own initiative pursued economic advances. This might be through new products introduced into the market, land opened for development, new factories, mines, or trade. Smith, like Cantillon, associated risk with these kinds of activities, and he understood risk to mean the risk of the unknown result at the end of the venture. One example of this was Smith's use of the word undertaker in reference to mines. The undertaker was someone who leased a mine, and then tried to work this opportunity for commercial gain. How large (or small) that gain might be was the risk involved.

Neither are the profits of the undertakers of silver mines commonly very great in Peru. The same most respectable and well-informed authors acquaint us, that when any person undertakes to work a new mine in Peru, his is universally looked upon as a man destined to bankruptcy and ruin, and is upon that account shunned and avoided by every body. Mining, it seems, is considered there in the same light as here, as a lottery, in which the prizes do not compensate the blanks, though the greatness of some tempts many adventurers to throw away their fortunes in such unprosperous projects.²¹

Smith, who had read Cantillon,²² discussed the entrepreneur in regard to progress, money, capital, innovation, and exchange. Indeed, the term undertaker, and a similar cluster of words including projector, adventurer, dealer, and merchant speculator, made regular appearances throughout *Wealth of Nations*. All of these terms were still in use by the late nineteenth century to describe variations of entrepreneurial activity.

Smith acknowledged that entrepreneurship was different from managing or working in established lines of commerce. Established lines of commerce were less liable to change, because the wages paid to labour were more stable, as was the demand for

¹⁹ It disturbed what Smith referred to as the 'natural order of things.' See for example p.360.

²⁰ It should be noted that Smith used the work undertaker not the word entrepreneur.

²¹ *ibid.*, p.169-170.

²² Smith discussed the work of Cantillon in regard to labour. Smith divided workers into two classes; labourers and independent workman such as a weaver or a shoe-maker. Independent workmen Cantillon described as undertakers, Smith did not. See Smith, *Wealth of Nations*, p.68-69.

products. This was not characteristic, he observed, of those projectors who commenced entirely new industries.

Where all other circumstances are equal, wages are generally higher in new than in old trades. When a projector attempts to establish a new manufacture he must at first entice his workmen from other employments by higher wages than they can either earn from their own trades, or than the nature of this work would otherwise require, and a considerable time must pass away before he can venture to reduce them to the common level. Manufactures for which the demand arises altogether from fashion and fancy, are continually changing, and seldom last long enough to be considered as old established manufactures.... The establishment of any new manufacture, of any new branch of commerce, or any new practice in agriculture, is always a speculation, from which the projector promises himself extraordinary profits. These profits sometimes are very great, and sometimes, more frequently, perhaps, they are quite otherwise; but in general they bear no regular proportion to those of the old trades in the neighbourhood. If the project succeeds, they are commonly at first very high. When the trade or practice becomes thoroughly established and well known, the competition reduces them to the level of other trades.²³

Speculators were accorded an early entry in *Wealth of Nations*. Smith discussed them in reference to industrial improvements, asserting that the speculator reaped a benefit from the work or ingenuity of others.

Many improvements have been made by the ingenuity of the maker of the machines, when to make them became the business of a peculiar trade; and some by that of those who are called philosophers or men of speculation, whose trade it is not to do anything, but to observe everything; and who, upon that account, are often capable of combining the powers of the most distant and dissimilar objects. In the progress of society, philosophy or speculation becomes, like every other employment, the principal or sole trade and occupation of a particular class of citizens.²⁴

Adventurers were discussed in relation to commencing a new business activity. Smith's inference was that this new activity was outside their present competency, as was the case in his discussion of sovereigns and traders.²⁵ Similarly, Smith offered a lengthy account of what he saw as a distinction between merchants, undertakers, traders, and

²³ *ibid.*, pp.114-115.

²⁴ *ibid.*, p.10. Smith did not develop this theme further, and it appeared more related to scientific and technical discovery than commercial innovation.

²⁵ *ibid.*, pp.771.

projectors in a discussion on banking and credit.²⁶ Undertakers were associated with making improvements in land, erecting an iron forge, or setting up a mine; merchants and traders were always mentioned separately. Projectors, meanwhile, were associated with a scheme at its outset, or in relation to schemes of a finite length. This was supported in Smith's discussion of mercantile projects funded by borrowed capital.²⁷

When speaking of the undertaker, Smith accentuated the developmental aspect of their work: 'In the first way, are employed the capitals of all those who undertake the improvement or cultivation of lands, mines, or fisheries; in the second, those of all master manufacturers; in the third, those of all wholesale merchants; and in the fourth, those of all retailers. It is difficult to conceive that capital should be employed in any way which may not be classed under some one or other of those four.'²⁸ Dealers were another 'entrepreneurial category' that Smith discussed in reference to money circulation and he noted that they had both retail and wholesale activities.²⁹

Smith identified 'boldness in commercial enterprise' as the distinguishing characteristic between a merchant and a country gentleman. The merchant was familiar with investing money in profitable projects, whereas the country gentleman would chiefly employ it in expenditure. This had the result that one grew used to seeing money coming back with a profit—the other grew used to not seeing it return at all:

Those different habits naturally affect their temper and disposition in every sort of business. A merchant is commonly a bold; a country gentleman, a timid undertaker . . . The habits, besides, of order, economy and attention, to which mercantile business naturally forms a merchant, render him much fitter to execute, with profit and success, any project of improvement.³⁰

If there was a particular characteristic that Smith contributed to our understanding of the entrepreneur, it would be that the entrepreneur pursued new opportunity. This quality was a consistent feature in his portrayal of the entrepreneur. Furthermore, entrepreneur's pursued new opportunity with their own capital or the capital of others.³¹ One example of this was relation to the manufacture of clothing.

²⁶ *ibid.*, pp.288-292.

²⁷ *ibid.*, pp.294.

²⁸ *ibid.*, p.341.

²⁹ *ibid.*, pp.306.

³⁰ *ibid.*, pp.384-385.

³¹ *ibid.*, p.291. Here Smith says, 'Traders and other undertakers may, no doubt, with great propriety, carry on a very considerable part of their projects with borrowed money.'

Smith distinguished between two types of manufacturers. The first type operated established firms where their manufacture grew up 'naturally' in its original location. With these firms, Smith described the production of their goods as being a 'gradual refinement'. This was contrasted with manufacturers and undertakers who produced imitation goods outside their original seat of manufacture. This included the manufacturers of silks and velvets, who were banished from Lucca in the fourteenth century only to set up manufacture in Venice, and the fine cloth manufacturers from Flanders who re-established themselves in England. These producers were accorded the title *undertaker and manufacturer*, as they had established a new branch of industry in a new location.

Sometimes they have been introduced, in the manner above mentioned, by the violent operation, if one may say so, of the stocks of particular merchants and undertakers, who established them in imitation of some foreign manufactures of the same kind.... The seat of such manufactures, as they are generally introduced by the scheme and project of a few individuals, is sometimes established in a maritime city, and sometimes in an inland town, according as their interest, judgement or caprice happen to determine.³²

Smith did not suggest that all merchants and all manufacturers were undertakers. He added the word *undertaker* to his description when there was a progressive quality to their economic behaviour. The manufacturers he called, 'undertakers of great manufactories'; one example was the Dutch 'undertaker' of a woollen mill at Abbeville.³³ Likewise, with merchants, Smith termed them speculative merchants, when they constantly shifted capital between projects; trading in tea one year, in sugar another, and in wine another.³⁴

Entrepreneurs, observed Smith, displayed a high degree of optimism, if not reckless fancy. The opening up of new mining projects was one example: 'Such in reality is the absurd confidence which almost all men have in their own good fortune, that wherever there is the least probability of success, too great a share if it is apt to go to them of its own accord. But though the judgement of sober reason and experience concerning such projects has always been extremely unfavourable, that of human avidity has commonly been otherwise.'³⁵

³² *ibid.*, pp.381-382.

³³ *ibid.*, pp.428. Also see p.438 for another mention of undertakers of great manufacture.

³⁴ *ibid.*, p.114.

³⁵ *ibid.*, pp.529-530.

As to the wealth producing power of merchants and manufacturers, Smith had mixed views. On the positive side, Scottish banks had profited from underwriting new manufacturers that had returned extraordinary profits. In addition, merchants were able to turn their capital over several times a year; consequently, they had it in their power to lend money to others.³⁶ Despite these economic benefits, Smith referred to merchants as an unproductive class, asserting throughout *Wealth of Nations* that true wealth was generated from the land. One wonders whether if Smith had been writing fifty years later, in the middle of the industrial revolution, whether he might have reversed his position, and elevated merchants, manufacturers, and undertakers as wealth producers.³⁷

THE ENTREPRENEUR AS COORDINATOR OF RESOURCES

The French economist and spinning-factory owner, Jean-Baptiste Say, who witnessed the first advances in industrialisation and factory management in the early 1800s, attributed managerial functions to the entrepreneur. In *A Treatise on Political Economy* (1803), Say contrasted the farmer's basic entrepreneurial activity with that of the merchant involved in world trade.³⁸ For Say, the merchant required a rarer combination of qualities than the farmer, and because of this he deserved a greater reward. The merchant had to be informed of commodity prices in different parts of the world, currency prices, costs of transportation, qualities of merchandise, market fluctuations, as well as the customs and laws of the people he traded with:

In the second place, this kind of labour requires a combination of moral qualities, that are not often found together. Judgement, perseverance, and a knowledge of the world, as well as of business. He is called upon to estimate, with tolerable accuracy, the importance of the specific product, the probable amount of the demand, and the means of its production: at one time he must employ a great number of hands; at another, buy

³⁶ *ibid.*, p.862. For discussion on Scottish banks and their enterprise due to paper money and the innovation of cash accounts see pp.283-313.

³⁷ That the entrepreneur disappeared from the British school of economics after Smith was not entirely due to any oversight on his part of the entrepreneur. As Smith aptly demonstrated, he recognised the special functions of entrepreneurial activity being innovation, speculation, pursuing opportunity, capital creation, and unique skill. However, subsequent economic writers either focused on parts of political economy outside the entrepreneur (as did Ricardo), or subsumed the entrepreneur as equivalent to the capitalist, the manager or the proprietor (as did Mill).

³⁸ For a time Say was credited with being the first to define the term entrepreneur in economics until W.S. Jevons highlighted the significance of Cantillon's work in 1881. Jevons called Cantillon's *Essai* the 'first systematic Treatise on Economics.' See Jevons, W. Stanley, 'Richard Cantillon and the Nationality of Political Economy', *Principles of Economics*, London, 1905. First printed in *Contemporary Review*, Jan., 1881.

or order the raw material, collect labourers, find consumers, and give at all times a rigid attention to order and economy; in a word, he must possess the art of superintendence and administration . . . Thus the requisite capacity and talent limit the number of competitors for the business of adventurers. Nor is this all: there is always a degree of risk attending such undertakings; however well they may be conducted, there is a chance of failure; the adventurer may, without any fault of his own, sink his fortune, and in some measure his character; which is another check to the number of competitors, that also tends to make their agency so much dearer.³⁹

Say expanded the functions of the entrepreneur to include managerial characteristics. The entrepreneur directed the factors of production; he administered his business, supervised staff, ordered raw materials, and estimated demand. In addition, he served as a link in the market between producer and consumer. The entrepreneur was able to profit from his own knowledge, and the ignorance of others—a key figure in economic and technological progress.

He is the link between the various classes of producers, one with another as between the producer and consumer. He directs the business of production, and is the centre of many bearings and relations; he profits by the knowledge and by the ignorance of other people, and by every accidental advantage of production. Thus it is this class of producers, which accumulates the largest fortunes, whenever productive exertion is crowned by unusual success.⁴⁰

THE EMERGENCE OF THE CAPITALIST

David Ricardo's (1772-1823) economic writing focused primarily on the immediate problems of his time.⁴¹ In *On the Principles of Political Economy, and Taxation* (1817), he debated the ideas of Malthus, Say, and Smith, discussing at length the problems of natural price, trade, taxes, rents, capital, and foreign trade. Ricardo did not concern himself with the entrepreneur. His version of political economy consisted of merchants, labour, manufacturers, owners of mines, landlords, shoemakers, and the like. Entrepreneurs or undertakers did not receive a mention.

³⁹ Say, Jean-Baptiste, *A Treatise on Political Economy or The Production, Distribution and Consumption of Wealth*, Prinsep, C.R., (transl.), Philadelphia: Claxton, Remser and Haffelfinger, 1821, p.331.

⁴⁰ *ibid.*, p.332.

⁴¹ By the late nineteenth century, Alfred Marshall claimed that the form of Ricardo's ideas, while complete within the areas they covered, reflected England at the time and had little bearing on the present situation. See Marshall, Alfred, *Principles of Economics*, London: Macmillan, 1910, p.12.

If there was an entrepreneur in Ricardo's political economy, he was the capitalist: an owner demanding rents, or a manufacturer employing labour. Ricardo argued that capitalists were not motivated by the pursuit of progress.⁴² Instead, they moved their capital to new sources of production in response to external changes in the environment, such as trade opportunities, shifts in market demand, or the distress produced in an economy after protracted war.⁴³

The commencement of a long war after a long peace, or of peace after a long war, generally produces considerable distress in trade. It changes in a great degree the nature of the employments to which the respective capitals of countries were before devoted; and during the interval while they are settling in the situations which new circumstances have made the most beneficial, much fixed capital is unemployed, perhaps wholly lost, and labourers are without full employment. The duration of this distress will be longer or shorter according to the strength of that disinclination which most men feel to abandon that employment of their capital to which they have long been accustomed.⁴⁴

John Stuart Mill's (1806-1873) *Principles of Political Economy* appeared in 1848. As regards entrepreneurship, Mill echoed the work of David Ricardo and Adam Smith. Mill postulated an economic system that was a 'threefold system of labourers, capitalists, and landlords.'⁴⁵ Mill was even more forthright on the wealth-producing capabilities of land than Smith had been. Mill remarked: 'This limited quantity of land, and limited productiveness of it, are the real limits to the increase of production ... This general law of agricultural industry is the most important proposition in political economy. Were the law different, nearly all the phenomena of the production and distribution of wealth would be other than they are.'⁴⁶

Capital, in Mill's economy, could only be increased through saving: 'We may say, therefore, without material inaccuracy, that all capital, and especially all additions to capital, are the result of saving.'⁴⁷ Saving enriched a society, spending impoverished

⁴² Indeed Ricardo argued against improvements in machinery as he regarded these as disadvantaging labour. See Ricardo, David, *On the Principles of Political Economy, and Taxation*, Harmondsworth: Penguin Books, 1971, pp.378-381.

⁴³ *ibid.*, pp.112-114.

⁴⁴ *ibid.*, pp.270-271.

⁴⁵ Mill, John Stuart, *Principles of Political Economy with some of their Applications to Social Philosophy*, London: Longmans, Green and Co., 1900, p183.

⁴⁶ *ibid.*, p.109.

⁴⁷ *ibid.*, p.43.

one.⁴⁸ Smith claimed a similar dictum: ‘Capitals are increased by parsimony, and diminished by prodigality and misconduct.’

Mill claimed that capital determined the direction of labour. When capital was directed to particular enterprises, labour followed. Consumer demand, according to Mill, was not the primary force in deciding the allocation of productive resources. For Mill could foresee a situation where there was demand for a product and no capital directed to its production, with no consequence to labour. On what role undertakers, speculators, promoters, or adventurers might play in the economy Mill was conspicuously silent. Capital itself was attributed the power to act, seemingly without the presence of human initiative or enterprise.⁴⁹

The economic dynamic underneath the movement of capital, or the commencement of new industry or trade, or the pursuit of schemes were all points of economic life that Mill did not engage. On one occasion, he referred to the replacement of small establishments by larger ones, although he did not extend this line of inquiry. He attributed such behaviour to those who possessed large stores of capital.

In countries in which there are the largest markets, the widest diffusion of commercial confidence and enterprise, the greatest annual increase of capital, and the greatest number of large capitals owned by individuals, there is a tendency to substitute more and more, in one branch of industry after another, large establishments for small ones. In England, the chief type of all these characteristics, there is a perpetual growth not only of large manufacturing establishments, but also, wherever a sufficient number of purchasers are assembled, of shops and warehouses for conducting retail business on a large scale.⁵⁰

Indeed, it was not until halfway through *Principles* that Mill mentioned undertakers when referring to profit and risk.

The capital, or some part of it, may be borrowed: may belong to some one who does not undertake the risks or the trouble of the business. In that case, the lender, or owner, is the person who practises the abstinence; and is remunerated for it by the interest paid to

⁴⁸ *ibid.*, p.45. For Smith quote see, Smith, *Wealth of Nations*, p.321.

⁴⁹ *ibid.*, pp.59-61, for examples of this. Robert Coase would later engage this debate regarding the nature of the firm and its operation. His now famous rendition of D.H. Robertson’s quote, ‘We find islands of conscious power in this ocean of unconscious operation like lumps of butter coagulating in a pail of buttermilk’, served to illustrate that the price mechanism alone did not decide, or explain, the economic decisions of a firm. See Coase, R.H., ‘The Nature of the Firm’, *Economica*, IV, 13-16 (1937), pp.386-405.

⁵⁰ Mill, *Principles*, p.88.

him, while the difference between the interest and the gross profit remunerates the exertions and the risks of the undertaker.⁵¹

In a footnote, Mill added that it was unfortunate that the word undertaker was unfamiliar to the English ear. 'French political economists,' he said, 'enjoy a great advantage in being able to speak currently of *les profits de l'entrepreneur*.'⁵² Still, it would be incorrect to suggest, that in the absence of a suitable term, Mill either used something else, or described entrepreneurial activity in some other way. He did not.

The activity of the entrepreneur, even as Smith had conceived of it, was not part of Mill's view of economic progress. Mill's argument was that economic progress might be achieved through increase in capital, increase in population, or improvements in production.⁵³ All of which, he believed, involved the capitalist.⁵⁴ He did account for speculators, though these too he believed would have a large store of capital to draw on so they might purchase goods when they were at a low price in the market, reselling them when the price was higher. Mill argued that such actions had a moderating effect on value and smoothed the market against variations in price and supply.⁵⁵

The safety and cheapness of communications, which enable a deficiency in one place to be supplied from the surplus of another, at a moderate or ever a small advance on the ordinary price, render the fluctuations of prices much less extreme than formerly. This effect is much promoted by the existence of large capitals, belonging to what are called speculative merchants, whose business it is to buy goods in order to resell them at a profit.⁵⁶

Mill saw that innovation, or 'improvements in the arts of production,' such as the spinning-jenny and the steam engine, had lowered the cost of some necessities. He accounted for these improvements in what he termed new branches of trade. However, in existing branches of trade, such as agriculture, Mill observed that improvements were never sudden and had, in practice, stopped prices from rising rather than acting to lower costs.⁵⁷ It was easy to see how some might have reacted to Mill's doctrine. In advancing

⁵¹ *ibid.*, p.246.

⁵² *ibid.*, p.246.

⁵³ *ibid.*, p.430.

⁵⁴ Other terms Mill used were producer and dealer. Of the two, dealer might more closely accrue to the notion of an undertaker, or entrepreneur, though it was not an area of investigation Mill pursued. He was content to apply a more generic term, capitalist.

⁵⁵ For example see his discussion on corn-dealers. *ibid.*, p.428-429.

⁵⁶ *ibid.*, p.427.

⁵⁷ *ibid.*, pp.719-732..

the benefits of competition, Mill emphasised the connection between lower wages and greater profitability. It was an encouragement for the landowner to decrease farm wages and extract higher rents.

Given Mill's focus on agriculture, capital, and population as the drivers for economic advancement, it was not surprising that he was an advocate for the colonisation ideals of Edward Gibbon Wakefield.⁵⁸ In Wakefield's scheme (which is referred to in more detail later) were the elements of wealth creation. In the colonies ample fertile land waited to be exploited for gain. All that was needed was a movement of labour and capital from the home country to the colonies. As Mill noted, it would be an, 'agent of great efficacy in extending the field of employment for that which remains: and it may be said truly that, up to a certain point, the more capital we send away, the more we shall possess and be able to retain at home.'⁵⁹ Mill was also clear on the principle of determining who might be sent to the colonies to affect this plan. His contempt was obvious at agricultural labourers who married young and had large families. Mill saw their inability to practise 'any prudential restraint whatever'⁶⁰ as evidence of their reckless character. They were expendable in the home economy.

THE ENTREPRENEUR AS AN ECONOMIC CLASS

Carl Menger (1840-1921) is identified as the founder of the Austrian school of economics. Menger's *Grundsätze Volkswirtschaftslehre* or in translation, *Principles of Economics*, was first published in 1871, though it was not translated into English for more than 80 years.⁶¹ In *Principles of Economics*, Menger took an original line of inquiry with his notion of value and his concept of goods. Menger argued for, what he termed, lower order and higher order goods, both economic and non-economic. Lower order goods (or goods of the first order), had a direct causal relation with the satisfaction of human need. For example, bread was a good of the first order as it satisfied hunger. Goods of the second order had an indirect causal relationship with the satisfaction of human need. For example, flour could be made into bread, but, of itself, it did not directly satisfy

⁵⁸ Mill has numerous references to Wakefield in *Principles*. See for example pp.73, 231, and 441. He calls him on one occasion an: 'able writer', see p.89.

⁵⁹ *ibid.*, p.448.

⁶⁰ *ibid.*, p.213.

⁶¹ Menger, Carl, *Principles of Economics*, Dingwall, James, and Bert F. Hoselitz (transl.), New York: New York University Press, 1981.

human need. In this respect flour could be considered a complementary good to the production of a lower order good.⁶²

Menger isolated the entrepreneur as an economic good in his own right, a particular class of labour. He did not regard the entrepreneur as being synonymous with the capitalist. Menger could see that, on occasion, entrepreneurs would require access to capital, but capital was not the distinguishing characteristic of their class; nor was their willingness to bear risk a distinguishing characteristic. Instead, Menger pointed to the entrepreneur's decision-making ability as the distinguishing characteristic.

The entrepreneur, claimed Menger, had four identifiable functions: entrepreneurs obtained information about economic situations, made economic calculations on the productive process, acted by will to assign goods to a productive process, and supervised the productive process.⁶³ Menger claimed that however large an organisation might develop, these four functions were always observable in the actions of entrepreneurs, and that the total value of a product could only be determined if entrepreneurial activity was included in its calculation.

In the early stage of civilization and even later in the case of small manufactures entrepreneurial activity is usually performed by the same economizing individual whose technical labour services also constitute one of the factors in the production process. With progressive division of labor and an increase in the size of enterprises, entrepreneurial activity often occupies his full time. For this reason, entrepreneurial activity is just as necessary a factor in the production of goods as technical labor services. It therefore has the character of a good of higher order, and value too, since like other goods of higher order it is also generally an economic good.⁶⁴

ALFRED MARSHALL AND THE NINETEENTH CENTURY ENTREPRENEUR

The first edition of Marshall's *Principles of Economics* appeared in 1890. Marshall, while regarded as a neoclassical economist, was in some respects a bridge between classical and neoclassical economics. Although he used hypothetical mathematical models, Marshall remained firm on the need to interpret and account for observed human behaviour. Classical economics had grappled with macroeconomic issues: trade, population, economic growth, the supply of capital, the movement of exchange. Its

⁶² *ibid.*, pp.51-71.

⁶³ *ibid.*, p.160.

⁶⁴ *ibid.*, p.161.

protagonists searched for universal economic principles using philosophical arguments and case analysis. Neoclassical economics, with its more mathematical basis, turned its attention to the laws of price formation, or natural value as Smith termed it. It looked for the forces that would return the market value of a good or service towards its natural price.⁶⁵ How to allocate scarce means, each with its own opportunity cost, toward a given end, became the dominant line of inquiry.⁶⁶

While Marshall did construct more abstract theoretical models of demand, supply, and price, which aligned him with the neoclassical school of thought, he did so in the pattern of a classical economist. Marshall showed a keen regard for human nature, claiming that economics was as much a study of wealth as it was of man and man's character.⁶⁷ As a result, he produced a study of the economic system that combined theoretical modelling with a detailed concern for the psychological and social state of the worker.⁶⁸

Marshall's survey of late nineteenth-century economic life contained some important observations. As Marshall described the emerging industrial order, his writing took on an imprecise quality. Organisational forms and industry appeared to be changing so dramatically that Marshall struggled to find the words to accurately represent what he observed. A new combination of rationalism and personal initiative was emerging in industrial life:

We may conclude that the term competition is not well suited to describe the special characteristics of industrial life in the modern age. We need a term that does not imply any moral qualities, whether good or evil, but indicates the undisputed fact that modern business and industry are characterized by more self-reliant habits, more forethought, more deliberate and free choice. There is not any one term adequate for his purpose: but *Freedom of Industry and Enterprise*, or more shortly, *Economic Freedom*, points in the right direction; and it may be used in the absence of a better. Of course this deliberate and free choice may lead to a certain departure from individual freedom when co-operation

⁶⁵ Mill, *Principles of Political Economy*, pp. 472-3.

⁶⁶ Humberto Baretto's work, *The Entrepreneur in Microeconomic Theory: Disappearance and Explanation*, London: Routledge, 1989, reviews the roles played by the entrepreneur from Richard Cantillon onwards, using a selected group of economists. He charts the disappearance of the entrepreneur from mainstream economic theory from the 1930s onwards. In explaining why, Baretto claims that the entrepreneur disappeared in neoclassical economics, with the rise in importance of the theory of the firm. Rather than occupy a unique place with distinct qualities, the entrepreneur was considered another element in a line of productive inputs, and as such, was paid a wage according to the laws of supply and demand (see pp.47-100). In addition, entrepreneurial activity did not accord with the assumptions behind the theory of the firm (see pp.101-117).

⁶⁷ Marshall, Alfred, *Principles of Economics*, London: Macmillan, 1910, p.1.

or combination seems to offer the best route to the desired end. The questions how far these deliberate forms of association are likely to destroy the freedom in which they had their origin and how far they are likely to be conducive to the public weal, will occupy a large share of our attention towards the end of this treatise.⁶⁹

Describing the new economic order, Marshall fastened on the entrepreneur. When Marshall considered the organisation and division of labour, he observed established firms as well as workingmen rising through the ranks to head their own enterprises. He observed large capital-rich firms with advantages over small firms, and conversely, small firms able to exploit advantages over larger concerns.⁷⁰ Grappling with these new realities, Marshall used a number of terms to describe the person in charge of a business: manufacturer, producer, employer, the head of a business, management, adventurer, and undertaker. Up to Book IV he used these words synonymously,⁷¹ as if struggling to find the correct label.

Later in his discussion, the undertaker emerged as a unique economic class. Marshall saw some undertakers as highly speculative, for example, those who dealt on the stock exchange, while others were involved in lines of business that had a higher administrative component, demanding less speculative activity. The latter included property developers, the woollen trade, the furniture industry and the textile trade, who made use of outworkers instead of investing in factories. Marshall saw risk as a common element to all their endeavours.⁷²

But in the greater part of the business or the modern world the task of so directing production that a given effort may be most effective in supplying human wants has to be broken up and given into the hands of a specialized body of employers, or to use a more general term, of business men. They 'adventure' or 'undertake' its risks; they bring together the capital and the labour required for the work; they arrange or 'engineer' its general plan, and superintend its minor details. Looking at business men from one point of view we may regard them as a highly skilled industrial grade, from another as middlemen intervening between the manual worker and the consumer.

There are some kinds of businessmen that undertake great risks, and exercise a large influence over the welfare both of the producers and of the consumers of the wares in which they deal, but who are not to any considerable extent direct employers of labour.

⁶⁸ See for example, *ibid.*, p.251.

⁶⁹ *ibid.*, pp.9-10.

⁷⁰ *ibid.*, p.284-290.

⁷¹ *ibid.*, p.620 as an example of using management, undertaker and employer interchangeably

⁷² *ibid.*, pp.294-5.

The extreme type of these is the dealer on the stock exchange or the produce markets, whose daily purchases and sales are of vast dimensions, and who yet has neither factory nor warehouse, but at most an office with a few clerks in it. The good and the evil effects of the action of speculators such as these are however very complex; and we may give our attention at present to those forms of business in which administration counts for most and the subtler forms of speculation for least. Let us then take some illustrations of the more common types of business, and watch the relations in which the undertaking of risks stands to the rest of the work of the business man.⁷³

Marshall's unique contribution to economic thought regarding the entrepreneur was his descriptions of the routes various undertakers took to rise above their social or economic class.⁷⁴ He had observed men rise without possessing capital. Some had accomplished this through using their skills, talents, or networks; alternatively, some had combined their talents entering into partnerships.⁷⁵ Such success did not necessarily come quickly. Sometimes, claimed Marshall, it could take two generations. Indeed, he was relieved to see less of the meteoric rises that had occurred at the start of the nineteenth century, of which he claimed, 'The workmen who at the beginning of the last century rose in such large numbers to become employers were seldom fit for posts of command: they were too often harsh and tyrannical, they lost their self-control, and were neither truly noble nor truly happy ...'⁷⁶ The following excerpt described the ability of the working classes to become undertakers.⁷⁷

About three-fourths of the whole population of England belong to the wage-earning classes; and at all events when they are well fed, properly housed and educated, they have their fair share of that nervous strength which is the raw material of business ability. Without going out of their way they are all consciously or unconsciously competitors for posts of business command. The ordinary workman if he shows ability generally becomes a foreman, from that he may rise to be a manager, and to be taken into partnership with his employer. Or having saved a little of his own he may start one of those small shops which still can hold their own in a working man's quarter, stock it chiefly on credit, and let his wife attend to it by day, while he gives his evenings to it. In

⁷³ *ibid.*, p.293.

⁷⁴ The above quote showed the influence of Carl Menger's writings in Marshall's work. The first part of this quote is similar to the functions of the entrepreneur Menger described, in addition, Marshall also described goods of the first order and used Menger's framework for value. For goods of the first and second order see, Marshall, *Principles*, p.64. For the functions of the entrepreneur see p. 284, where he discusses the activities of the heads of large and small firms. Also see p.292.

⁷⁵ *ibid.*, p.306. See also p.285 for another example of a new man working his way up against larger competition.

⁷⁶ *ibid.*, p.310.

these or in other ways he may increase his capital till he can start a small workshop or factory. Once having made a good beginning he will find the banks eager to give him generous credit. He must have time; and since he is not likely to set in business till after middle age he must have a long as well as a strong life; but if he has this and has also 'patience, genius and good fortune' he is pretty sure to command a goodly capital before he dies.⁷⁸

Marshall used the metaphor of a wheel to describe the modern industrial world. It was a world with private employers and managers of joint stock companies in the hub, many of whom had only small capital, and towards them radiated the interests of labour and the owners of capital. The interests of the two parties were intertwined. The companies required capital and labour, the owners of capital required outlets for investment; labour required places to sell its services. The reciprocal interests of each party held the economic world together. But that was not a complete picture and in his side notes to the text Marshall added: 'though the role of the undertaker is of growing importance.'⁷⁹

In the modern economy, Marshall observed a natural attraction of capital towards the man who proved he could usefully command it. Accompanying this trend was an increase in financial providers: banks, cooperative societies, supplier credit, etc.⁸⁰ He saw some firms rising quickly to prominence only to be outdone by younger firms with even newer methods, a phenomenon that Schumpeter would later refer to as creative destruction.⁸¹ Marshall expanded this theme later in regard to the economic law of substitution, which he also ascribed to the entrepreneur.

'It is through their conscious agency,' he stated, 'that the principle of substitution chiefly works in balancing one factor of production against another; with regard to them it has no other agency than the indirect influence of their own competition.'⁸² Marshall saw that this had several effects. Firstly, it led some to succumb who may have done excellent work, while others rose to almost monopoly status. He also argued that it ensured that there was a constant increase in the forces that broke up monopolies, thereby causing an opening for men of small capital to start new businesses.

⁷⁷ Also interesting is his description of the gradual rise of a working carpenter, *ibid.*, pp.600-603.

⁷⁸ *ibid.*, p.309.

⁷⁹ *ibid.*, p.534.

⁸⁰ *ibid.*, p.308-312.

⁸¹ *ibid.*, p.287.

⁸² *ibid.*, p.663.

Overall, Marshall provided an extensive treatment of the entrepreneur. He concluded that the undertaker, like the skilled artisan, provided an indispensable service to society. Moreover, if society were to engineer this service itself, it would come at a higher cost.⁸³ Even though he used a variety of terms to describe those at the head of a business, in the end, Marshall resolved that the undertaker was in a class of his own.

There is no breach of continuity as we ascend from the unskilled labourer to the skilled, thence to the foreman, to the head of a department, to the general manager of a large business paid partly by a share of the profits, to the junior partner, and lastly to the head partner of a large private business: and in a joint-stock company there is even some what of an anti-climax when we pass from the directors to the ordinary shareholders, who undertake the chief ultimate risks of the business. Nevertheless business undertakers are to a certain extent a class apart.⁸⁴

PURE PROFIT FROM ENTREPRENEURIAL JUDGEMENT

The American, Frank Knight, submitted his doctoral thesis in 1916; it was subsequently rewritten and published in 1921 as the book, *Risk, Uncertainty and Profit*.⁸⁵ Knight's main contribution was towards a theory of profit. His work, as he stated, was 'pure theory,' though he hoped it would make a special contribution towards the fuller understanding of the role of the entrepreneur as the 'central figure' of the economic system. At length, Knight described the assumptions behind the conditions of supply and demand and the principles of exchange. He constructed an 'imaginary society' that was rational, where labour was perfectly mobile, where there was perfect competition, perfect knowledge, no prejudice, fraud, or deceit, and no irregular fluctuations or progressive change.⁸⁶

In doing this Knight was not indifferent to economic realities. He stated: 'Historically, of course, the other things have been so far from equal—especially the demand for capital has increased so rapidly through the increase of population and opening-up of new natural resources—that the interest rate shows an astonishing

⁸³ *ibid.*, p.664.

⁸⁴ *ibid.*, p.663.

⁸⁵ Knight, Frank, H., *Risk, Uncertainty and Profit*, Boston: Houghton Mifflin Company, 1921. Knight was the first of the economists surveyed here to use the term entrepreneur exclusively, in preference to undertaker. Very seldom, he uses the term enterpriser, though mostly in deference to Hawley; on one occasion he uses the word adventurer, though with evidently no particular inference.

⁸⁶ *ibid.*, pp.78-80.

constancy.⁸⁷ Rather, Knight's purpose was to deepen a theoretical understanding of profit, and with it, the entrepreneur.

In defining the entrepreneur, Knight was influenced by the earlier work of economist Frederick B. Hawley. Hawley had published several papers dealing with profit, risk, and entrepreneurship between 1892 and 1902; he was vehement in his defence that the entrepreneur was unique economic class different in function from the manager or capitalist.⁸⁸ As Hawley saw it, the entrepreneur must by definition bear proprietorship in an enterprise otherwise the residual profits, which were his reward for assuming risk, would not accrue to him. As Hawley stated:

Now why is it that this fact of the ownership of the entrepreneur is so significant? If both selling price and cost, inclusive of his own wages of management, were absolutely predetermined and certainly known to every body else as well as to himself, would there be any such things at all as profit? Manifestly not, for then the cost and selling price would always equal each other, unless the producer enjoyed some personal or monopolistic advantage that kept others from competing with him . . . The element of "profit," however; or of its complement, "loss," is attendant upon coordination when coordination happens to be an incident of ownership; and it is attendant upon ownership only so long as either cost or selling price is undetermined, so long as ownership involves risk. . . . It is, therefore only the "enterpriser *per se*" who is entitled to the undetermined residue or profit of the transaction.⁸⁹

Knight affirmed Hawley's emphasis in *Risk, Uncertainty and Profit*. He claimed that Hawley came close to the essence of entrepreneurship 'in his insistence on the responsibility and risk of proprietorship as the essential attributes of entrepreneurship. The entrepreneur is the owner of all real wealth, and ownership involves risk; the coordinator "makes decisions", but it is the entrepreneur that accepts the consequences of decisions.'⁹⁰ Later Knight described this as the defining quality of the entrepreneur, ' . . . a true entrepreneur, making responsible decisions, in the business in question.'⁹¹ The possession of capital was not mandatory for Knight's entrepreneur,⁹² for as he saw it,

⁸⁷ *ibid.*, p.169.

⁸⁸ Hawley liked to use the term enterpriser to describe the entrepreneur.

⁸⁹ See Hawley, Frederick B., 'Enterprise and Profit', *Quarterly Journal of Economics*, 15, (1900), pp.87-88; see also Hawley, Frederick B., 'A Positive Theory of Economics', *Quarterly Journal of Economics*, 16:2 (1902), pp.240-254.

⁹⁰ Knight, *Risk, Uncertainty and Profit*, p.45.

⁹¹ *ibid.*, p.300.

⁹² Alliterating an earlier theme of Hawley's. Hawley too had developed the theme of insuring against risk. See 'Enterprise and Profit'.

entrepreneurs could make use of the capital supplied by others in their activities, although Knight suggested that entrepreneurs would have some of their own wealth or productive means at work in a business.⁹³

The responsibility of the entrepreneur to take decisions and to receive the consequences of those decisions permeated Knight's work. Indeed, it was one of the factors underpinning his theory of price. As Knight saw it, entrepreneurs made decisions or judgements in the face of uncertainty, and it was this true uncertainty, which could not be insured against or reduced to routine, that distinguished them as a class of their own and as the receivers of 'pure profit.'

The only 'risk' which leads to a profit is a unique uncertainty resulting from an exercise of ultimate responsibility which in its very nature cannot be insured nor capitalized nor salaried. Profit arises out of the inherent, absolute unpredictability of things, out of the sheer brute fact that the results of human activity cannot be anticipated and then only in so far as even a probability calculation in regard to them is impossible and meaningless. The receipt of profit in a particular case may be argued to be the result of superior judgement. But it is judgement of judgement, especially one's own judgement, and in an individual case there is no way of telling good judgement from good luck, and a succession of cases sufficient to evaluate the judgement or determine its probable value transforms the profit into a wage.

The fundamental fact of organized activity is the tendency to transform the uncertainties of human opinion and action into measurable probabilities by forming an approximate evaluation of the judgement and capacity of the man. The ability to judge men in relation to the problems they are to deal with, and the power to 'inspire' them to efficiency in judging other men and things, are the essential characteristics of the executive. If these capacities are known, the compensation for exercising them can be competitively imputed and is a wage; only, in so far as they are unknown or known only to the possessor himself, do they give rise to a profit.⁹⁴

INNOVATION AND ENTREPRENEURSHIP

Joseph Schumpeter's significant contribution to the understanding of entrepreneurship was the impact of innovation on an economic system. Schumpeter examined the process of change in an economic system, and, in a challenge to the classical doctrine that had assumed change to be slow, he constructed another set of assumptions. Schumpeter claimed that economic progress was the result of

⁹³ *ibid.*, pp.299-300.

discontinuous and explosive change. These changes were not external or exogenous shocks to an economic order; they were the internal characteristics of the capitalist economy:

On the contrary, we must recognise that evolution is lopsided, discontinuous, disharmonious by nature—that the disharmony is inherent in the very *modus operandi* of the factors of progress. Surely, this is not out of keeping with observation: the history of capitalism is studded with violent bursts and catastrophes which do not accord well with the alternative hypothesis we herewith discard, and the reader may well find that we have taken unnecessary trouble to come to the conclusion that evolution is a disturbance of existing structures and more like a series of explosions than a gentle, though incessant, transformation.⁹⁵

Schumpeter described innovation as doing things differently in the realm of economic life. In this respect, he distinguished it from invention. An invention was not an innovation as the invented product might not be adopted by society, thus produce no economic effect. Conversely, an innovation did not need to comprise an invention of any sort. It could be, for example, a ‘new combination’ of existing things. For instance, the existing factors of production in an industry could be managed in a different way so as to produce a different economic outcome. Such ‘creative destruction,’ as he termed it, was the essential characteristic of capitalism and the principal domain of the entrepreneur.

... the function of entrepreneurs is to reform or revolutionise the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganising an industry and so on. Railroad construction in its earlier stages, electrical power production before the First World War, steam and steel, the motor car, colonial ventures afford spectacular instances of a large genus which comprises innumerable humbler ones -- down to such things as making a success of a particular kind of sausage or toothbrush. This kind of activity is primarily responsible for the recurrent prosperities that revolutionise the economic organisation and the recurrent recession that are due to the disequilibrating impact of new methods or products.⁹⁶

⁹⁴ *ibid.*, pp.310-311.

⁹⁵ Schumpeter, Joseph, *Business Cycles: A Theoretical, Historical and Statistical Analysis of the Capitalist Process*, London: McGraw-Hill, 1964, pp.76-77.

⁹⁶ Schumpeter, Joseph A., *Capitalism, Socialism and Democracy*, London: George Allen Unwin, 1976, p.132.

Schumpeter laid out a range of effects that he described as innovation. These included the opening up of new markets, new sources of supply, technological change in production, new business forms, changes in work methods, scientific management, new production functions including new commodities, and new combinations of firms, such as those that might be produced by merger or acquisition. Innovation, argued Schumpeter, was an internal factor of change in a capitalist society and was a matter of general business behaviour.⁹⁷ Schumpeter claimed that firms entering a market with innovative products or processes did not do so on the same existing marginal cost curve or productivity curve. They displaced it, interrupting the status quo by producing a new production or cost curve.⁹⁸

Whenever a given quantity of output costs less to produce than the same of a smaller quantity did cost or would have cost before, we may be sure, if prices of factors have not fallen, that there has been an innovation somewhere. It would be incorrect to say that in this case innovation produces falling long-run marginal cost curves or makes, in certain intervals, marginal cost negative. What should be said is that the old total or marginal cost curve is destroyed and a new one put in its place each time there is an innovation.⁹⁹

Schumpeter believed that small firms were more likely to be the ones that exhibited innovation. Firstly, new firms founded with a specific purpose were new productive units; secondly, older firms tended towards conservatism and were less prone to modification. Not all new firms would be successful, but Schumpeter did not regard the rise and decay of firms as abnormal market activity, rather, as a central fact of capitalism.¹⁰⁰

As regards the entrepreneur, Schumpeter was precise. The entrepreneur was the figure who acted innovatively (in an economic sense). Furthermore, to behave thus was the defining function of the entrepreneur, distinguishing him from the manager, farmer, or landowner. Schumpeter dismissed risk, claiming that risk was not borne by the entrepreneur but by the capitalist. The capitalist and the entrepreneur may at times be one and the same person, but capital was not a prerequisite to entrepreneurial activity in

⁹⁷ See for instance, Schumpeter, *Business Cycles*, pp.60-63.

⁹⁸ Schumpeter was not alone in citing the disequilibrating effect of entrepreneurial activity. Alfred Marshall also spoke of firms rising quickly to prominence, only to be outdone by younger firms with even newer methods, though he mentioned it only briefly. See Marshall, *Principles*, p.287.

⁹⁹ Schumpeter, *Business Cycles*, pp.63-64.

¹⁰⁰ *ibid.*, pp.69-70.

Schumpeter's view. Echoing the thoughts of Marshall, Schumpeter claimed entrepreneurs were a class unto themselves, and their activity was not class-based in the social sense.¹⁰¹ Emphasising Marx's oversight, Schumpeter depicted the classlessness of entrepreneurial activity, as it permitted the working class man to rise.

Second, entrepreneurs as such do not form a social class. Although, in case of success, they or their descendants rise into the capitalist class, they do not from the outset belong to it or to any other definite class. As a matter of historical fact, entrepreneurs come from all classes which at the time of their emergence happen to exist. Their genealogies display most varied origins -- the working class, aristocracy, the professional groups, peasants and farmers, and the artisan class, all have contributed to what is sociologically not a uniform type.¹⁰²

MODERN APPROACHES TO ENTREPRENEURSHIP

Under the leadership of historian Arthur H. Cole, (and with the support of Joseph Schumpeter for the last two years of his life), a Research Center in Entrepreneurial History was established at Harvard University in 1948. For a decade it encouraged research and writing on entrepreneurship and published the journal, *Explorations in Entrepreneurial History*.¹⁰³ Since then, interest in entrepreneurship as an area for academic research as well as a topic for popular debate has multiplied.

One of the leading writers has been the Austrian-born economist Peter Drucker. Drucker has reinforced Schumpeter's view of the entrepreneur as the innovator and the exploiter of change in society. Drucker defined the entrepreneur as someone who: '... see(s) change as the norm and as healthy. Usually they do not bring about the change themselves. But—and this defines entrepreneur and entrepreneurship—the entrepreneur always searches for change, responds to it, and exploits it as an activity.'¹⁰⁴

Karl Vesper, best known for his book *New Venture Strategies*, acknowledged that while generalising from studies of groups of entrepreneurs could be useful (as it could show how successful, or not, particular courses of action were), the experiences of every

¹⁰¹ Interestingly, Schumpeter regarded someone as being entrepreneurial at the start of their economic activity; as the firm developed, the entrepreneur turned to more managerial functions. He did not conceive that people might be entrepreneurial multiple times over their life span.

¹⁰² *ibid.*, p.79.

¹⁰³ In 1969 the journal's title was changed to *Explorations in Economic History*. An evaluation of the Research Center for Entrepreneurial History is given by Supple, B.E., 'American Business History - A Survey', *Business History*, 1 (1959), pp.63-76.

¹⁰⁴ Drucker, Peter, *Innovation and Entrepreneurship*, London: William Heinemann Ltd, 1985, p.42.

entrepreneur were unique and could be different from all such findings. 'Entrepreneurs,' said Vesper, 'almost by definition are people who win by finding new breaks in patterns.'¹⁰⁵

Other writers have accentuated different aspects of entrepreneurial behaviour. Economist Israel Kirzner, highlighted the ability of the entrepreneur to perceive opportunities for profit and to pursue them.¹⁰⁶ Albert Shapero emphasised traditional themes claiming: 'In entrepreneurship, there is agreement that we are talking about a kind of behaviour that includes: (1) initiative taking (2) the organising or reorganising of social economic mechanisms to turn resources and situations to practical account, and (3) the acceptance of risk of failure.'¹⁰⁷

Robert C. Ronstadt discussed the wealth creation aspect of entrepreneurial, and similar to Schumpeter, emphasised that it was through innovation that wealth was created: 'Entrepreneurship is the dynamic process of creating incremental wealth. The wealth is created by individuals who assume the major risks in terms of equity, time, and/or career commitment to provide value for some product or service. The product or service may or may not be new or unique but value must somehow be infused by the entrepreneur by receiving and locating the necessary skills and resources.'¹⁰⁸

Innovation was a recurring theme in other definitions too. Mary Coulter wrote of entrepreneurship as: '...the process whereby an individual or a group of individuals use organised efforts and means to pursue opportunities to create value and grow by fulfilling wants and needs through innovation and uniqueness, no matter what resources are currently controlled.'¹⁰⁹ Australian authors, John Legge and Kevin Hindle, pointed to the business development aspect in entrepreneurial activity stating: 'In the simplest terms, entrepreneurs create enterprises and managers run them.'¹¹⁰

A number of studies have attempted to either confirm or deny the presence of various personality traits as precursors to entrepreneurial success. Douglas W. Naffziger, Jeffrey Hornsby, and Donald Kuratko undertook a review of this research and identified such traits as risk-taking propensity, locus of control, need for

¹⁰⁵ Vesper, Karl, *New Venture Strategies*, Englewood Cliffs, NJ: Prentice Hall, 1980, p.29.

¹⁰⁶ See for example, Kirzner, Israel, *Competition and Entrepreneurship*, Chicago: University of Chicago, 1973.

¹⁰⁷ Shapero, Albert, *Entrepreneurship and Economic Development*, Project ISEED, Ltd. Milwaukee, WI, Center for Venture Management, 1975, p.187.

¹⁰⁸ Ronstadt, Robert C., *Entrepreneurship*, Dover, MA: Lord Publishing Co., 1984, p.28.

¹⁰⁹ Coulter, Mary, *Entrepreneurship in Action*, New Jersey, Prentice Hall, 2001, p.6.

achievement, vision, energy level, need for autonomy, conformity, persistence, dominance, desire to build something for yourself, and self-attitude.¹¹¹ William Gartner was critical of this type of approach to researching entrepreneurship and claimed that entrepreneurs were more usefully defined by their behaviour, rather than their personality traits.¹¹² Gartner asserted that the answer to the question: 'What do entrepreneurs do?' was a better place to begin the investigation of what is an entrepreneur. Gartner's response to his own question was that entrepreneurs created new businesses.¹¹³ Paul Reynolds, who has also investigated the business creation aspect of entrepreneurship among practising and latent entrepreneurs, has also pointed out that personality-based research is only one aspect of a person's decision to start a firm; the other two reasons were characteristics of the economic environment and characteristics of the individual's life or career.¹¹⁴

Economist Mark Casson has made some important theoretical contributions to the notion of the entrepreneur. [Casson defined the entrepreneur as someone who specialised in taking 'judgemental decisions' (Casson's terminology) about the coordination of scarce resources, and placed the entrepreneur in the wider context of an economic system.]

Although in the short-run the reward of the entrepreneur is a monopoly reward to information, in the long-run it is simply compensation for time and effort: namely, for the time and effort spent in identifying and making judgmental decisions. The equilibrium reward is greater, the greater is the demand for entrepreneurs and the smaller is their supply. The demand for entrepreneurs depends upon the pace of change in the economy. The faster change occurs, the greater will be the demand and the higher the reward to the entrepreneur ...In summary, therefore, the reward to entrepreneurship

¹¹⁰ Legge, John and Kevin Hindle, *Entrepreneurship: How Innovators Create the Future*, Melbourne: Macmillan, 1997, p.xi.

¹¹¹ An excellent review of the studies on entrepreneurial personality is by Naffziger, Douglas W., Jeffrey Hornsby and Donald Kuratko 'A Proposed Research Model of Entrepreneurial Motivation', *Entrepreneurship Theory and Practice*, Waco, 18 (1994), pp.29-42. See also Brockhaus, R. H., 'The Psychology of the Entrepreneur,' in Kent, C., D. Sexton and K. Vesper (eds.) *Encyclopedia of Entrepreneurship*, Englewood Cliffs, NJ: Prentice Hall, 1982, pp.39-57.

¹¹² See Gartner, William, 'Who is the Entrepreneur? Is the Wrong Question,' *American Journal of Small Business*, 12 (1988), pp.11-32.

¹¹³ John Coase and John Miner, have both identified multiple typologies of the entrepreneur. See Miner, John, *4 Routes to Entrepreneurial Success*, San Francisco: Berrett-Koehler Publishers, 1996.

¹¹⁴ Reynolds, Paul, 'Predicting New Firm Births: Interactions of Organizational and Human Populations,' in Sexton, D.L., and J.D. Kasarda (eds.) *The State of the Art of Entrepreneurship*, Boston: PWS-Kent Publishing, 1992, pp.268-297.

depends upon the pace of economic change, the distribution of personal wealth, and the social and institutional framework of the economic system as a whole.¹¹⁵

This concept of 'judgemental decision-taking' was crucial to Casson's work. To be able to take such decisions an entrepreneur needed to cultivate a series of qualities and skill, such as self-knowledge, imagination, practical knowledge, analytical ability, search skills, foresight, computational skill, communication skills, delegation skills, and organisational ability.¹¹⁶ Each entrepreneur, in any economy, has access to different kinds of information. As a result, the judgemental decisions that entrepreneurs make are not substitutable. Different entrepreneurs with the same information may make different assessments and respond accordingly; the judgemental decision of one entrepreneur does not preclude another's judgemental decision.

The number of judgemental decisions in a market is related to the number of entrepreneurs in a market and the rate of change. In a stable economy, which experiences a low rate of change and where there are established barriers to competition; there may be limited scope for judgemental decision taking. However, as Casson stated: 'If large unforeseen changes are continually occurring, and information about each of these changes is initially localized, then the scope for judgemental decision-taking is very great. There is ample opportunity for the entrepreneur to take a dissenting view of some situation, based upon privileged access to information.'¹¹⁷

Biographical studies of entrepreneurs, tycoons, and business elites have been popular since the nineteenth century, whether as discrete accounts or compilations of well-known entrepreneurs. These include works, such as those by Samuel Smiles or Elbert Hubbard's *Little Journeys to the Homes of the Great*.¹¹⁸ Some historians have used biographical accounts as a source for further analysis; a number of these are discussed in the chapter on survey methodology later in this thesis. These include studies by Bernard Sarachek, Berghoff and Möller, C. Wright Mills, and William Miller.¹¹⁹ A more recent book with an Australian focus, *Champions of Enterprise*, was a biographical compilation of 500 Australian entrepreneurs between 1788 and 1900. It included entrepreneurs, such as

¹¹⁵ Casson, Mark, *The Entrepreneur: An Economic Theory*, Oxford: Martin Robertson and Co., pp.337-338.

¹¹⁶ *ibid.*, p.334. For definition of an entrepreneur see p.23.

¹¹⁷ *ibid.*, p.334.

¹¹⁸ Hubbard, Elbert, *Little Journeys to the Homes of the Great*, 13 vols., Cleveland: World Publishing Co., 1928.

¹¹⁹ Mills, C. Wright, 'The American Business Elite: A Collective Portrait', *The Tasks of Economic History* (Supplemental Issue of *The Journal of Economic History*), V 1945, pp.20-44.

Leslie Hooker, Sir Frank Beaufort, Sidney Myer, Bob Ansett, and James Hardie. Drawing heavily on the *Australian Dictionary of Biography* it is interesting reading, but makes only a partial effort to analyse patterns or similarities amongst the entrepreneurs.¹²⁰

Investigating the motives behind entrepreneurial activity has also been an area of interest for researchers. A landmark study in this area was that of David McClelland, *The Achieving Society*. Using controversial methodology, McClelland attempted to show how ideological values and family socialisation produced a drive for achievement (something McClelland called *n*Achievement) that in turn promoted entrepreneurial behaviour leading to economic growth. Stated McClelland: ‘a society with a generally high level of *n*Achievement will produce more energetic entrepreneurs who, in turn, produce more rapid economic development.’¹²¹ Outwardly, McClelland’s arguments were appealing and seemingly logical; not dissimilar to the thesis argued by Max Weber.¹²² Yet, methodological difficulties have clouded McClelland’s study. In constructing the measures to prove or disprove his hypothesis he used, among other things, children’s stories, electric power generation, folk tales, and Greek urns. John Deeks pointed to this in a critique of McClelland’s study:

In spite of the fact that cultures such as the Winnebago, Koryak, and Tenetehara did not keep occupationally classified manpower records, in spite of the fact that there is no guarantee that the folk tales analysed for need achievement imagery belonged to the same period in a culture’s history as the ratings of entrepreneurial activity, despite all the admittedly obvious flaws in the data, the admittedly crude methodology, the admitted probability of errors in measurement, the admitted difficulties of cross-cultural comparisons, McClelland concludes that his data ‘confirm the hypothesis that the *n*Achievement level of a society is a variable significantly related to entrepreneurial activity in a culture.’¹²³

Despite this, McClelland’s study remains an influential work in the psychological, management, and entrepreneurship literature. For American economists and management writers interested in entrepreneurship, another key reference point was the 1960 publication by Collins and Moore. Collins and Moore investigated 110 Michigan

¹²⁰ Hartwell, Max, and Jaqui Lane, *Champions of Enterprise: Australian Entrepreneurship 1788-1990*, Double Bay, N.S.W.: Focus Books, 1991.

¹²¹ McClelland, David, *The Achieving Society*, New Jersey: D. Van Nostrand Company, 1961, p.205.

¹²² Weber, Max, *The Protestant Ethic and the Spirit of Capitalism*, Parsons, Talcott (transl.), London: Unwin University Books, 1930, pp.67-73.

¹²³ Deeks, J., *The Small Firm Owner-Manager: Entrepreneurial Behaviour and Management Practice*, New York: Praeger, 1976, p.21.

entrepreneurs between 1945 and 1958 using interviews and thematic apperception tests. From their research, the entrepreneur emerged as a person on the margin of society, who carried a basic distrust of authority. The entrepreneur was someone who did not fit in the prevailing education system, who after decades of job and occupational changes, chose to start their own business. The entrepreneur that Collins and Moore wrote about was without capital resources, without social skills, and without the support of the established business networks. It is doubtful that the Collins and Moore 'entrepreneur' was representative of the wider genus. For apart from the cultural and contextual limitations of the sample, which only included businesses active between 1945 and 1958, all the entrepreneurs were Michigan manufacturers; the sample did not include any entrepreneurs from retail, services, agriculture, publishing or professional undertakings. As to the behaviour, orientation, and background of these people, the research was silent.

Overall, Collins and Moore's research suggested that the entrepreneur was least likely to come from a professional family (10%) and most likely to come from a family where the father in some capacity had his own small business or family business (25%). Over half were either immigrants or the sons of immigrants (54%), and it was more likely their early family life would be poor or financially strained. It was unlikely that they went to university (61%). Interestingly, other studies suggest that many of these indicators are reversed if we consider those who achieve top executive positions; a research finding that seems to hold true across cultures.¹²⁴

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

Economists are divided on the importance of entrepreneurship in economic development. Turgot, Say, Cantillon, Marshall, Schumpeter, A.H. Cole, William Baumol, and T.C. Cochran all regarded the entrepreneur as an active figure in economic progress. Meanwhile, H.J. Habakkuk, Douglas North, and Phyllis Deane have argued that the entrepreneur was essentially a passive figure, with economic development caused by

¹²⁴ Similar results are in Cooper, A.C., and W.C. Dunkelberg 'Entrepreneurial Research: Old questions, New Answers, and Methodological Issues,' *American Journal of Small Business*, 11:3 (1987), pp.11-23. Their survey of 890 entrepreneurs found 50% had at least one parent or guardian who was self-employed. 65% had no college education and only 15% had a degree. In a study of successful Chinese entrepreneurs in Hong Kong, 60% of their fathers were self-employed. Amongst managerial high-flyers 53% had a bachelor degree or better. See Lam, Syrine Kit Sum, *Portraits of Successful Entrepreneurs and High-Flyers: A Psychological perspective*, Aldershot: Ashgate, 1999.

forces beyond the entrepreneurs' control.¹²⁵ For example, when contrasting the USA and Great Britain, Habakkuk argued that what produced a slow down in British entrepreneurship and a burst in American entrepreneurship in the late nineteenth century was the rate of economic growth. According to Habakkuk, there was no difference in the basic stock of ideas, inventiveness of the people, or scientific skill of the two societies. This well-known quotation epitomised his argument:¹²⁶

The slow rate of expansion of British industry affected the performance of business men. Great generals are not made in time of peace; great entrepreneurs are not made in non-expanding industries. Because the market was growing slowly, the risks of adventure were much greater than in Germany and America . . . the abundance of entrepreneurial talent in the USA was the consequence rather than the cause of a high rate of growth; and it was the slow expansion of English industry which accounted for the performance of English entrepreneurs in the later nineteenth century not vice versa.¹²⁷

Bert Hoselitz has researched the marginalisation of immigrant groups as a precursor to entrepreneurial behaviour using the examples of Jews and Greeks in medieval Europe, Lebanese in West Africa, Chinese in Southeast Asia, and Indians in East Africa. Hoselitz proposed that all these groups were free from society's preconditions to respond in a situation, allowing them to pursue creative solutions and 'genuine innovations in social behaviour.'¹²⁸ Another examination of the benefits accruing from immigration can be found in Julian Simon's *The Economic Consequences of Immigration*¹²⁹. Using examples and studies from North America, Australia, New Zealand, Canada, and Israel, Simon argued that immigrants had a number of positive effects on an economy. They displayed a higher propensity to start new businesses than natives, immigration narrowed disparities in income, immigrants created new jobs with their

¹²⁵ See for example Mathias, Peter, 'Entrepreneurs, Managers and Business Men in Eighteenth-century Britain', *Nature of Industrialisation*, 3 (1996), pp.12-32. Also Magee, Gary B., 'Competence or Omniscience? Assessing Entrepreneurship in the Victorian and Edwardian British Paper Industry', *Business History Review*, 71 (1997), pp.230-259.

¹²⁶ Alfred Chandler in his work *Scale and Scope* argues that it was the prolonged use of the family firm and personal capitalism in the British economy that hindered the economy's progress. This he compared to the American adoption of the M-form of multidivisional management that gave American managers and entrepreneurs technological and organisational advantages.

¹²⁷ Habakkuk, H.J., *American and British Technology in the Nineteenth Century: The Search for Labour Saving Inventions*, Cambridge: Cambridge University Press, 1962, pp.212-3.

¹²⁸ Hoselitz, B.F., 'A Sociological Approach to Economic Development,' *Development and Society*, Novack, D., and R. Lekachman (eds.), New York: St. Martins Press, 1964, p.157.

¹²⁹ Simon, Julian, *The Economic Consequences of Immigration*, Oxford: Basil Blackwell, 1989.

spending, they decreased native unemployment, they had a higher rate of participation in the labour force and saved more than natives. Others, such as Andrew Godley, have examined immigrant entrepreneurs among distinct cultural groups.¹³⁰ The next section of this review discusses further research on entrepreneurship, and in particular, looks at the contributions of New Zealand writers, historians, and economic historians.

ENTREPRENEURSHIP AND NEW ZEALAND ECONOMIC HISTORY

For many years, the New Zealand literature on entrepreneurship and economic development, as well as business and economic history generally has suffered from two omissions: firstly, a lack of able scholars, and more typically, a general lack of attention by the practising historical community. Fortunately, this pattern is changing; there appears a gathering force for action among local historians, scholars, and the business community to capture and understand New Zealand's commercial past.¹³¹

Pressed to categorise the existing historiography as it relates to economic and business history in New Zealand, four categories are observable: company and industrial histories, regional histories, biographies, and general economic history. In each of the four categories, while there are some stand-out pieces and authors, scholarly works, which endeavour to offer critical analysis or a broader historical context, are noticeably lacking. Company histories, for example, tend to be commissioned as projects to mark some milestone or centenary, often given to a past member of the company or practising journalist to write. At their worst, such works run out a laudatory, and quickly tiring, list of past chairman and leaders, missing both the undercurrent of change in the firm and the general economic context. Many are just too brief. The result is that the opportunity for incisive analysis or learning is lost.

Pleasantly, there are a collection of New Zealand company histories which are not only well written, but exhaustively researched: banking, insurance, and legal history fare well in this respect.¹³² Likewise, Donald Gordon's work on James Speight & Co., is

¹³⁰ Godley, Andrew, *Jewish Immigrant Entrepreneurship in New York and London, 1880-1914: Enterprise and Culture*, New York: Palgrave, 2001.

¹³¹ The University of Auckland Business History Project, commissioned by the The University of Auckland Business School in 2003, is one example of this.

¹³² Examples of this include: Stone, R.C.J., *The Making of Russell McVeagh: The First 125 years of the Practice of Russell McVeagh McKenzie Bartleet and Co., 1863-1988*, Auckland: Auckland University Press, 1991; Chappell, Norman, *New Zealand Banker's Hundred: a History of the Bank of New Zealand, 1861-1961*, Wellington: Bank of New Zealand, 1961; Parry, Gordon, *Underwriting Adventure: a Centennial History of the National Insurance Company of New Zealand Limited*, Dunedin: National Insurance Co. of New Zealand, 1973.

sharp, giving a detailed profile of the founders as well as the peculiarities of doing business in the late nineteenth and early twentieth centuries. For example, Gordon demonstrates conclusively the importance of international exhibitions in aiding the expansion of the firm.¹³³ Healy's book on New Zealand Forrest Products is both a useful narrative of the entrepreneurs behind this ambitious enterprise, as well as firm development.¹³⁴ Len Anderson's work on Wilson and Kettle, similarly, J.C. Irving's book on Wright Stevenson, are useful to understand the importance of branch expansion in the development of local firms as they strove to serve isolated communities.¹³⁵ Gordon Parry's work on the National Mortgage and Agency Company and the National Insurance Company rank among the best produced, as do John Angus's work on H.E. Shacklock and New Zealand Paper Mills.¹³⁶ Both Parry and Angus admirably demonstrate the skill of sound business history: a grasp of subject *and* context.

Comparative company history or industry history in New Zealand is almost non-existent. Notable exceptions include Simon Ville's on stock and station agent industry (discussed shortly); Kathryn Lucas's work on Donaghy's Industries which places the development of the firm within wider events such as the development of farm equipment and the binder twine market;¹³⁷ and Julia Millen's work on Joseph Nathan and Glaxo, which due to its subject matter, had to grapple with presenting and contrasting business development in the United Kingdom and New Zealand as the Nathan business expanded in different points on the globe.¹³⁸ There are other works of a business history nature that merely achieve a basic historical of the facts and personalities, and desperately warrant further and more extensive treatment. Brasch's work on Hallenstein is one such

¹³³ Gordon, Donald, *Speight's: the Story of Dunedin's Historic Brewery*, Dunedin: Avon Publishers, 1993.

¹³⁴ See Healy, Brian, *A Hundred Million Trees: the Story of New Zealand Forest Products Ltd.*, Auckland: Hodder and Stoughton, 1982.

¹³⁵ Anderson, Len, *Throughout the East Coast: the Story of Williams and Kettle Ltd.*, Hastings: New Zealand Pictorial Publications, 1974; Irving, J.C., *A Century's Challenge*, Wellington: Wright Stephenson and Co., Ltd., 1961.

¹³⁶ Parry, Gordon, *Underwriting Adventure: a Centennial History of the National Insurance Company of New Zealand Limited*, Dunedin: National Insurance Co. of New Zealand, 1973; *N.M.A.: the Story of the First 100 years: the National Mortgage and Agency Company of New Zealand Ltd., 1864-1964*, Dunedin: National Mortgage and Agency Co., 1964; *Engineering Hundred*, Christchurch: Montgomery Watson New Zealand, 1998; Angus, John H., *The Ironmasters: the First One Hundred Years of H.E. Shacklock Limited*, Dunedin: H.E. Shacklock, 1973. *Papermaking Pioneers: a History of New Zealand Paper Mills Limited and its Predecessors*, Matakura: New Zealand Paper Mills, 1976.

¹³⁷ Lucas, Kathryn, *A New Twist: a Centennial history of Donaghy's Industries Limited*, Dunedin: Donaghy's Industries, 1979.

¹³⁸ Millen, Julia, *Glaxo: from Joseph Nathan to Glaxo Wellcome: the History of Glaxo in New Zealand*, 2nd ed., Auckland: Glaxo Wellcome New Zealand, 1997.

example, as is Simpson's work on Winstones.¹³⁹ Both seek to record a brief company history, and rush lightly over some of the more poignant and significant aspects of firm development. Winstone for example, is a vital account of family business moving into vertical expansion on personal capital waiting to be told more forcefully. Likewise, Bendix Hallenstein is perhaps New Zealand's greatest entrepreneur, yet his biographical profile has yet to be given the stage his enterprise and foresight demands.

Industry histories tend to be better served. Guy Scholefield's study of the newspaper industry as well as Simpson's on the New Zealand timber industry is strong examples in their class, showing careful and diligent research.¹⁴⁰ Shipping is perhaps the most amply covered industry by New Zealand historians with notable works by both Gordon McLauchlan and Gavin McLean.¹⁴¹ The largest gap, both from a company and industry perspective is retail. It is not the case that retail has been done poorly by New Zealand historians, it is just not done. There is not yet a work that isolates any identifiable trends in New Zealand retail development, or any in-depth study of a major New Zealand retail chain.¹⁴² Overseas initiatives, such as the recently commenced, Centre for the History of Retailing and Distribution (CHORD) by Laura Ugolini at the University of Wolverhampton suggest that this area is receiving increased interest by business historians. One hopes that this might be heeded by New Zealand historians.

For categorisation purposes, one might also include association histories in company history, such as the manufacturers associations and the chambers of commerce. Though these studies tend to focus on higher profile members in the respective associations, they can also provide beneficial information about the pace and style of economic development in a region, and among particular strains of commercial activity. Chambers of Commerce, for example, tended to attract merchants, traders, shippers, and

¹³⁹ Brasch, Charles, *Hallensteins: the First Century, 1873-1973*, Dunedin: Hallenstein Bros., 1973; Simpson, Frank, *The First Century: A Centenary Review of Winstone Ltd.*, Auckland: Winstone Ltd., 1965.

¹⁴⁰ Scholefield, Guy, *Newspapers in New Zealand*, Wellington: Reed, 1958; Roche, M.M., *A History of New Zealand Forestry*, Wellington: NZFC, 1990; Simpson, Thomas, *Kauri to Radiata: Origin and Expansion of the Timber Industry in New Zealand*, Auckland: Hodder and Stoughton, 1973.

¹⁴¹ See for example, McLauchlan, Gordon, *The Line that Dared: A History of the Union Steam Ship Company, 1875-1975*, Mission Bay: Four Star Books, 1987; McLean, Gavin, *The Southern Octopus: the Rise of a Shipping Empire*, Wellington, New Zealand Ship and Marine Society and the Wellington Harbour Board, 1990; McLean, Gavin, *Richardsons of Napier*, Wellington, New Zealand Ship and Marine Society, 1989; Kirk, Allan, *Anchor Ships and Anchor Men: the History of the Anchor Shipping and Foundry Company Ltd.*, Wellington: Reed, 1967.

¹⁴² Julia Millen's work on Kirkcaldie and Stains may be the exception to this. See Millen, Julia, *Kirkcaldie and Stains: a Wellington Story*, Wellington: Bridget Williams Books, 2000. Malcolm Kay's book on the Farmers Trading Company, unfortunately, is not.

warehousemen; journals and reports were given to reporting insurance rates, mail rates, and economic fluctuations in different points on the globe. Millar's book, *The Merchants Paved the Way*, is one of the best examples of this style of history; the Auckland volume is less helpful.¹⁴³ Yet to be covered is the role of other associations closely linked to business. The history of the associations formed under the protectionist era post Second World War waits to be unearthed; the role of lodges, rotary, and religious associations with a business focus also wait to be explored. Ancillary institutions, such as Mechanics Institutes, the New Zealand Institute of Management, and the various legal and accounting associations warrant further investigation. Diana Beaglehole's recent work on the New Zealand College of Management is a welcome and well-written addition to this particular sector of business history.¹⁴⁴

Regional history, too, can offer useful information and insight as it relates to business and economic history. For example, the works of Stevan Eldred-Grigg on Canterbury, or Jim McAloon on Nelson, offer helpful comment on the particular economic characteristics of the province, underscoring the stark regional differences that existed in resources, trade, and economic development in the nineteenth century.¹⁴⁵ McAloon, for example, suggests that Nelson was largely insulated from many of the suggested effects of the long depression and supported a buoyant trade from gold, mercantile, and light industry in the nineteenth century.¹⁴⁶

Biography is more a mixed bag. While there are a goodly list of suitable business figures that warrant biography in New Zealand, biography as a literary form, suffers from much the same malaise as many company histories. Often written by journalists, themes which would be of interest to the wider discipline, such as personal capitalism, social mobility, business strategy, technology transfer, managerial practice, and decision-making tend to be overlooked. As a result, details which would help the business or economic historian to wring value from biography are absent, and other sources have to be relied on to flesh out the significance of a subject as a business actor or as an entrepreneur. Important biographical studies include those on Sir John Logan Campbell, Sir James

¹⁴³ Millar, J. Halket, *The Merchants Paved the Way: The First Hundred Years of the Wellington Chamber of Commerce*, Wellington: A.H. & A.W. Reed, 1956. For the Auckland work see, Franklin, E.C., *A Century of Auckland Commerce, 1856-1956*. Auckland: Chamber of Commerce, 1956.

¹⁴⁴ Beaglehole, Diana, *Learning to Lead – 50 Years on: A History of the New Zealand College of Management, 1952-2002*, Wellington: New Zealand College of Management Inc., 2004.

¹⁴⁵ See Eldred-Grigg, Stevan, *A New History of Canterbury*, Dunedin: John McIndoe Ltd., 1982; McAloon, Jim, *Nelson: A Regional History*, Nelson: Cape Catley Limited in association with Nelson City Council, 1997.

Fletcher, and J.C. Firth, although there remain a large number of other business figures from New Zealand's past who are yet to be the subject of biographical works, such as Thomas Morrin and George Whitcombe. Others, such as Sir William Goodfellow, William Winstone, Robert Kerridge, John McKenzie, Robert Hannah, Rodolph Wigley, Henry Wise, and Thomas Warnock would benefit from more detailed study. New Zealand business historiography is as yet unable to ascertain the due import of these figures until more incisive and comprehensive work is done.

On the subject of historical entrepreneurship in New Zealand, while a number of writers have tackled the topic implicitly as part of a company history, regional history, or biography there is only one New Zealand work to date that carries the word in its title: *The Rural Entrepreneurs: A History of the Stock and Station Agent Industry in Australia and New Zealand*, by Simon Ville. Profiling the stock and station agent industry, Ville demonstrates the interface agents performed in the market as a source for finance, farm supplies, business advice, insurance, stock, auctioneering, land sales—in short, Ville suggests that the export-led economic development arising from the farming industry in Australia and New Zealand in the late nineteenth and well into the twentieth century depended on the stock and station agent who performed as an entrepreneur. Throughout this, and other work, Ville has sought to integrate historical explanations of entrepreneurial activity with management and economic theory.¹⁴⁷

Fortunately, Ville is not alone in this level of scholarship. There have been a small number of business and economic historians who have been researching and writing, over the past thirty-years, on various aspects of the country's economic development. Russell Stone remains the pre-eminent figure in the group, largely pioneering the field of business history in New Zealand. His work, *Makers of Fortune*, remains the most detailed and insightful study of the New Zealand commercial environment and entrepreneurs in the nineteenth century.¹⁴⁸ A later work, *The Making of Russell McVeagh: the First 125 years of the Practice of Russell McVeagh McKenzie Bartleet and Co.*,

¹⁴⁶ McAloon, *Nelson*, pp.98-118.

¹⁴⁷ Ville, Simon, *The Rural Entrepreneurs: a History of the Stock and Station Agent Industry in Australia and New Zealand*, Cambridge: Cambridge University Press, 2000; Boyce, Gordon, and Simon Ville, *The Development of Modern Business*, New York: Palgrave, 2002; *The European Economy, 1750-1914: a Thematic Approach*, Aldcroft, Derek H., and Simon P. Ville (eds.), Manchester: Manchester University Press, 1994; Ville, Simon, and D. Merrett, 'The Development of Large Scale Enterprise in Australia, 1910-64' in Merrett, D., (ed.), *Business Institutions and Business Behaviour in Australia*, London: Frank Cass, 2000.

¹⁴⁸ Stone, R.C.J., *Makers of Fortune: a Colonial Business Community and its Fall*, Auckland: Auckland University Press, 1973.

1863-1988, offers a perceptive view on the New Zealand commercial environment in the twentieth century through the workings of a large law firm.¹⁴⁹

The themes that Steve Jones has advanced, for example, on the nature of industrial development and the relationship between the state and economic enterprise are well-constructed and have been presented in a number of general and scholarly texts. Jones is best known for his contribution to New Zealand business history research regarding the brewing industry, merger waves in the twentieth century, and economic policy.¹⁵⁰ A forthcoming work on what was New Zealand's largest manufacturing firm, Ross and Glendining, will be a vital addition to this cluster. Similarly, Ken Jackson has produced studies on gold mining, the timber industry, and electrification.¹⁵¹ Demographic historian Ian Pool has written extensively on New Zealand population and his work often has economic links.¹⁵²

Among other scholars, the entrepreneur has emerged in alternative guises. Perhaps the best known of these is the "town-booster." Hamer's work, for example, as well as that of McAloon, discusses the role of the booster in the nineteenth-century town. Boosters—influential town patriarchs, usually with extensive business connections—were able to direct and influence the development of a town. Some might suggest, in the fragile framework of colonial life, the booster might dictate whether or not the town succeeded at all.¹⁵³

McAloon's study of the rich in Canterbury and Otago is one of the few works undertaken on New Zealand commercial activity using a broad sample, rather than one-shot cases. Studying the probate records of slightly over 1000 Canterbury and Otago

¹⁴⁹ See Stone, R.C.J., *The Making of Russell McVeagh: the First 125 years of the Practice of Russell McVeagh McKenzie Bartleet and Co., 1863-1988*, Auckland: Auckland University Press, 1991. Also Stone, R.C.J., *An Anatomy of the Practice of Law in Nineteenth Century Auckland*, Auckland: University of Auckland, 1988.

¹⁵⁰ See for example: Jones, S.R.H., 'Brand Building and Structural Change in the Scotch Whisky Industry since 1975', *Business History*, 45:3 (2003), pp.72-89; Jones, S.R.H., 'The New Zealand Brewing Industry, 1840-1995' in R. G. Wilson and T. Gourvish (eds.), *The Dynamics of the International Brewing Industry since 1800*, Routledge, 1998; Jones, S.R.H., 'Government Policy and Industry Structure in New Zealand, 1900-1970' *Australian Economic History Review*, 39:3, (1999), pp.191-212.

¹⁵¹ See for example: Jackson, Kenneth E., *Electricity Provision and the Concept of Service in New Zealand: an Historical Example of Pricing Policies*, Auckland: Dept. of Economics, University of Auckland, 1990; *Natural Resource Markets and Population Growth: the Case of Forest Usage, Markets and Technological Change*, Auckland: Dept. of Economics, University of Auckland, 1995.

¹⁵² See for example Pool, Ian, 'New Zealanders: a nation of 'boat people' Hamilton: Population Studies Centre, University of Waikato, 1996; Pool, Ian, *The Maori Population of New Zealand 1769-1971*, Oxford University Press, 1977; Pool, Ian and Richard Bedford, *Macro Social Change in New Zealand: Historical and International Contexts*, Hamilton: University of Waikato, Population Studies Centre, 1996.

¹⁵³ See, for example, Hamer, D.A., 'Towns in Nineteenth-Century New Zealand', *New Zealand Journal of History*, 13:1 (1979), pp.15-18.

rich, McAloon found that, in stark contrast to Eldred-Grigg's assertions about a Canterbury gentry,¹⁵⁴ the concept of a 'gentrified' lifestyle was misleading, instead, humble origins, and continued industry characterised the Otago and Canterbury rich. McAloon concluded that landed wealth in Canterbury dominated; whereas in Otago, urban wealth predominated and more fortunes were made in trade and manufacturing rather than in farming. Though McAloon's sample includes many early colonists, and is regionally specific, his findings hold a resonance with the propositions advanced in this thesis. In particular, there was a predominance of family firm structures among colonial enterprise,¹⁵⁵ networks and interlocking directorships figured highly,¹⁵⁶ strong Calvinist values appeared to support an enterprise culture, and personal capital rather than managerial capital was the dominant form of business financing. What emerges from McAloon's work is a picture of an economy, not run in carefully-planned fashion from a small boardroom in Britain as Cain and Hopkins allude to in their work on British imperialism,¹⁵⁷ but rather, a dynamic mix of opportunities seized by people of lower middle class origins who were able to extract a degree of economic and social agency they had not previously enjoyed.¹⁵⁸

The final grouping of business history work undertaken in New Zealand falls under the banner of broad economic history, social history, and general history. Unfortunately, many authors, especially those writing social and general history, have not undertaken sufficient primary research to support their assertions about economic life, or equally unfortunate, they have neglected economic history altogether concentrating instead on political history, Maori history, social history, class history, and the history of identity. Even a recent collection of New Zealand histories illustrates this point well.

Michael King's popular; *The Penguin History of New Zealand* has only nine pages in the first 300 which discuss New Zealand's economic development.¹⁵⁹ Respectfully, what emerges is not a history of New Zealand; it is more aptly, a history of the Maori and

¹⁵⁴ See Eldred-Grigg, Stevan, *A Southern Gentry, New Zealanders who inherited the Earth*, Auckland: Heinemann Reed, 1980.

¹⁵⁵ *ibid*, p.56.

¹⁵⁶ *ibid*, p.64-65.

¹⁵⁷ See Cain, P.J., and Hopkins, A.G., *British Imperialism: Innovation and Expansion, 1688-1914*, London: Longman, 1993, pp.44, 233.

¹⁵⁸ McAloon's research negates Cain and Hopkins claims that collaborative groups exerted sufficient leverage over the colonies to keep them within the imperial system. Politically, such a claim may bear out, economically, the empirical evidence does not support it. See for example, *No Idle Rich*, pp.31, 66, 172.

¹⁵⁹ King, Michael, *The Penguin History of New Zealand*, Auckland: Penguin Books, 2003, pp.209-10, 228-232, 237-239.

politics. James Belich, in the first half of *Paradise Reforged*, devotes 23 pages to the development of the frozen meat industry, what Belich terms the ‘protein trade’; other industries and business events are largely absent.¹⁶⁰ While meat exports were important, and the capital and enthusiasm directed toward the protein trade significant, it was only one of several sizeable industries on the colonial landscape. Despite the fact that fixed capital in meat processing increased seven fold between 1881 and 1901 from £96,845 to £893,720, it was still surpassed by capital invested in gas works, and was less than half the £1.8m industrial capital that had been applied to fixed assets in hydraulic gold mining, dredging, and crushing in the same period. If one asserts that the “protein trade” defined New Zealand’s industrial development, one can also not leave off “the golden nugget”, the “big kauri”, the “printing press”, the “flour mill”, the “brewer”, the “coal miner” and the “happy merchant”. It was not a big “one” in the colonial rush for enterprise; it was more accurately a big dozen.

Equally, there has been a tendency among social and general historians to repeat economic generalisations without further investigation. Basset, for example, in his work on the state in New Zealand, devotes one paragraph to economic development in the 1880s. He repeats a list, often churned, suggesting that the depression deepened, high government debt caused retrenchment, there was a collapse of meat prices, and unemployment steadily increased.¹⁶¹ Unfortunately, even a little analysis erupts with inaccuracies. As Chapter 3 will demonstrate, government continued to direct millions of pounds to infrastructure projects in the 1880s, meanwhile negative migration had no negative impact on overall population as natural increase was the dominant source of population growth by the 1880s. On the growing unemployment we might be convinced. Basset cites a total spend of £22,246 paid out in government grants to unemployment schemes between 1884 and 1887 as evidence for the steady increase in unemployment.¹⁶² The amount sounds large; it does not when we consider that during this same period government issued private contracts for the construction of public buildings in excess of £605,000.

¹⁶⁰ Further discussion on economics and business is generally framed in notions of class and politics. For example, see Belich, James, *Paradise Reforged, A History of the New Zealanders from the 1880s to the Year 2000*, Auckland: Penguin, 2001, pp.126-156.

¹⁶¹ Bassett, Michael, *The State in New Zealand, 1840-1984: Socialism without Doctrines?*, Auckland: Auckland University Press, 1998, p.77.

¹⁶² Basset, *State in New Zealand*, p.77.

What is more alarming is that the amount paid out in government grants to unemployment schemes, as Basset cites, was enough to support 44 households per year in an economy of 600,000 people.¹⁶³ The assertion that this piece of empirical evidence supports deepening unemployment is, however well meaning, incorrect.

Among the general economic histories, Hawke's *Making of New Zealand*, is widely referred to, however, it relies heavily on trade and monetary factors for its analysis, and omits many industries, such as mercantile, warehousing, printing, and other service industries. What is left is an important account of trade and prices, but an appreciation for the texture of the colonial economy—what it was like on the ground—is absent.¹⁶⁴ More detailed from an industrial perspective is Muriel Lloyd Prichard's, *An Economic History of New Zealand to 1939*.¹⁶⁵ This is the most comprehensive study to date using factory and industrial statistics, though Prichard does not venture much in the way of analytical comment on industrial relativities. On the period before 1930, J.B. Condliffe's *New Zealand in the Making: A Survey of Economic and Social Development*, provides an insightful economic commentary.¹⁶⁶ Simkin's, *The Instability of a Dependent Economy*, investigates economic cycles in New Zealand prior to the First World War and provides a useful overview of broad economic patterns however, there are inaccuracies in Simkin's analysis, which are dealt with later in this thesis.¹⁶⁷

The controversial economist, W.B. Sutch, produced a number of works covering New Zealand's economic progress, such as *Industrial Development in New Zealand*, *Poverty and Progress in New Zealand*, and *Poverty and Progress In New Zealand: A Re-assessment*.¹⁶⁸ While Sutch's work is useful, one needs to read carefully as his history tends to blend rather too quickly with an overt socialist agenda. More balanced and better researched is

¹⁶³ This is calculated thus: £22,246 over four years equals £4449 per year. At an average wage of approximately £100 per year, this would be enough to support 44 households. Average wages were given in *Statistics of New Zealand*, and are discussed at later points in this thesis, and by other historians. See for example, Donald Gordon in *Speights*, p.55.

¹⁶⁴ Hawke, G.R., *The Making of New Zealand: An Economic History*, Cambridge: Cambridge University Press, 1985.

¹⁶⁵ Loyd Prichard, M., *An Economic History of New Zealand to 1939*, Auckland: Collins, 1970.

¹⁶⁶ Condliffe, J.B., *New Zealand in the Making: A Survey of Economic and Social Development*, London: G. Allen and Unwin, 1930.

¹⁶⁷ See a discussion of this in Chapter 7. Simkin, C.G.F., *The Instability of a Dependent Economy: Economic Fluctuations in New Zealand 1840-1914*, Oxford: Oxford University Press, 1951.

¹⁶⁸ Sutch's socialist bias comes strongly through his work. He was a great campaigner for industrial development in New Zealand and supporter of protectionism. See for example Sutch, W.B. *Poverty and Progress in New Zealand: A Re-assessment*, Wellington: Reed, 1969; Sutch, W.B., *Industrial Development in New Zealand*, Wellington: Dept. of Industries and Commerce, 1964; Sutch, W.B., *Poverty and Progress in New Zealand*, Wellington: Modern Books, 1941.

A History of New Zealand by Keith Sinclair, and *The Oxford History of New Zealand*,¹⁶⁹ although in both, economic development is relegated to the occasional chapter; wars, class, and politics, tend to dominate the historical landscape. Good commentaries on the changes in New Zealand economic affairs and business environment can be found in Deeks and Enderwick, *Business and Society*. An attempt to consider the development of entrepreneurship in New Zealand's history has recently been addressed by Graeme Hunt with the publication of *The Rich List: Wealth and Enterprise in New Zealand*.¹⁷⁰ Destined to become a useful companion to the student of business history in New Zealand, Hunt has done an extensive job of citing many of the figures who shaped New Zealand's commercial environment to the present day.

However, there still exist considerable gaps in our knowledge of the development of the New Zealand business enterprise and how this compares to international literature. Alfred Chandler's seminal themes of strategy and structure have yet to be explored from a New Zealand perspective. Likewise, the development of management practice, Taylorism, Scientific Management, the rise of co-partnership movement at the turn of the twentieth century—all await examination. Equally fertile ground would be further investigation into the family firm, or the impact of technology on colonial enterprise, as well as the retail industry. In short, while business history and the study of the entrepreneur are both well-established academic fields, there is much scope for New Zealand historians to make additional contributions.

CONCLUSION

This chapter has briefly traced the development of the idea of entrepreneurship. It has shown how the word took on an early association with one who assumed risk, who provided for their own income, and who acted as a coordinator or undertaker of projects. Political economists, such as Turgot, Say, and Smith, then added a number of important distinctions to our understanding. We saw how the entrepreneur had a propensity to reinvest their profits rather than turn to consumption.

¹⁶⁹ Sinclair, K., *A History of New Zealand*, London: Oxford University Press, 1961; Oliver, W.H. (ed.), *The Oxford History of New Zealand*, Wellington: Oxford University Press, 1981.

¹⁷⁰ Hunt, Graeme, *The Rich List: Wealth and Enterprise in New Zealand 1820-2000*, Auckland: Reed, 2000; see also Hunt, Graeme, *Hustlers, Rogues and Bubble Boys: White-Collar Mischief in New Zealand*, Auckland: Reed, 2001.

In addition, the role of the entrepreneur as a circulator of exchange in the economy was pointed out. Both of these aspects highlighted the ability of the entrepreneur to stimulate an economic system. Adam Smith made numerous references to the entrepreneur, or undertaker as it was known in English, and identified a 'newness' characteristic in reference to the entrepreneur's economic behaviour.

Austrian economist Carl Menger emphasised the decision making ability of the entrepreneur, claiming that entrepreneurs were distinct from capitalists or other economic actors. This was also emphasised in the work of English economist Alfred Marshall. Marshall's description of the entrepreneur, which has particular relevance to this study as he wrote during the time period of this investigation, identified the career mobility of the entrepreneurial class.

Over the past eighty years, neoclassical economists have largely ignored the role of the entrepreneur in economic affairs, choosing instead to focus on the theory of the firm and its role in the market. There were exceptions to this; however, interest in entrepreneurship has mostly been the result of a more recent revival. Economists, such as Kirzner, Baumol, Drucker, and Casson, have again emphasised the role of the entrepreneur to create wealth, pursue innovation, and make decisions in an uncertain economic environment. In New Zealand, a few economic historians and business historians have considered entrepreneurial behaviour; other historians and management writers have written more generally about economic development and business behaviour. Largely, however, the historical community has neglected this area of research in favour of other themes, such as class, politics, gender, war, and race. Commerce—a vital strand in national development and identity—begs to be tackled more vigorously.

What is the definition of the entrepreneur that is used in this research? Using the characteristics identified by Cantillon, Turgot, Smith, Marshall, Schumpeter, and Knight the entrepreneur can be defined as a person who creates and owns a new economic enterprise; or someone who transforms an existing enterprise into a new economic entity.¹⁷¹ In doing so the entrepreneur assumes risk for providing their own livelihood and accepts the economic consequences of the decisions that they make. The entrepreneur generates wealth and reinvests profits thereby stimulating exchange in the

¹⁷¹ The theme of transformation is discussed in the research of Bernard Sarachek. See Sarachek, 'Horatio Alger Myth', p.440.

economy. Entrepreneurs constitute a particular class of economic actors in society—distinct in behaviour and orientation from the capitalist, worker or manager. The entrepreneur is essentially an innovator, breaking past moulds of production and marketing, with an essential ingredient if he is to be successful—a gift for timing. Perceiving an opportunity where others don't, he has the tenacity to pursue it.

Entrepreneurs are both born and made. History testifies that some have displayed such an orientation from a very young age; likewise, others have acted this way later in life. Entrepreneurship, as Alfred Marshall demonstrated, has been a vehicle for class mobility. Those who have been successful in pursuing new ventures, generating wealth and reinvesting their capital, have attained greater economic agency.

We might say two further things from this definition of the entrepreneur. Firstly, we could construe from this definition that any economy with a concentration of people acting in this way would be advantaged—the economic base of society would expand as new businesses and organisations were added, new wealth generated. Secondly, we might construe that an economy, at a particular time, might be more or less conducive to the entrepreneurial class. Particular social, economic, or political conditions might allow the entrepreneur greater freedom to act, or create more opportunities.

The argument of this thesis is that the entrepreneur was an important figure in New Zealand's economic progress in the late nineteenth and early twentieth century, and that the economy in which this undertaker worked was particularly conducive to entrepreneurial activity. Important factors in this dynamic were immigration, technological innovation, isolation, low barriers to market entry, government support for development, a nationalistic zeal for progress, and few class or social barriers inhibiting entrepreneurial activity. This is not a definitive list. Rather, these factors form the nucleus of the argument proposed here, that the New Zealand economy between 1880 and 1910 fostered entrepreneurial activity, and was advanced by it.

This study is necessarily limited to New Zealand, though it is entirely possible that examinations of other economies at this time, for example Victoria or New South Wales in Australia, or parts of North America or Canada, for example, would very probably reveal a similar dynamic.

This concludes Part One of the thesis. Part Two, entitled 'The Entrepreneurial Economy', investigates the economic context within which entrepreneurship operated during the period of this thesis. It considers government actions to encourage enterprise over the period as well as structural changes that took place in trade and enterprise as a

result of innovation. The first chapter in Part Two comments on the broad economic trends in the period before discussing specific structural changes in the economy, such as population, trade, investment, and settlement.



PART II

THE ENTREPRENEURIAL
ECONOMY

2

THE NATURE OF THE DEVELOPING COLONIAL ECONOMY

When the scientist unearths nature's secrets and when men of action go forth to subdue new territories or discover new riches, endless opportunities are brought within the reach of millions who would otherwise be content to continue a dull and uneventful existence. Pioneers are always very few in number, but the range of their influence is incalculable.¹

This chapter examines the nature of the economy in which entrepreneurship operated during the period of this thesis, 1880-1910. Change produced opportunity in the colonial economy. Structural shifts such as new trade opportunities, technological change, population growth, and market innovation offered the possibility for profit—drawing people and enterprise together. In the developing economy such shifts came in rapid fashion by virtue of the nature of colonisation. The economy could not remain static: infrastructure had to be built, new migrants attracted, land developed, housing constructed, trade given confidence and capital applied. All these activities were the result of human endeavour. The entrepreneur by his various titles, be it undertaker, adventurer, speculator, projector, or promoter, was one actor on this economic stage. How he played his part and why he was such a vital character is a central point of this thesis.

This chapter is divided into two parts. Part One considers the economic nature of the New Zealand society during this period, and highlights some of the main changes. It commences with an investigation of international trade, followed by a discussion of the

broad patterns evident in investment, economic cycles, and population. Part Two discusses the different levels of economic activity in the colonial economy, examining how entrepreneurship was understood in New Zealand in the late nineteenth century.

THE NATURE OF THE ECONOMY

... [it is concerned with] those decades straddling the turn of the century when technological change and political and economic consolidation produced what Oliver has described as the 'nationalisation of regional life'. A period of transformation that encompassed those years when transport improvements and refrigeration refined and reinforced New Zealand's dependence on European markets; when provincial politics gave way to national government; and when immigration and urbanization reinforced those other forces leading to a greater degree of centralisation and homogeneity of New Zealand living experiences.²

The broad strands of the New Zealand economy between 1880 and 1910 included: the continued importance of pastoralism and agricultural production, the depression of the 1880s and export-led economic recovery after 1896, the influx of foreign capital and increasing government indebtedness from overseas borrowing, and the development of infrastructure and expansion in residential construction and utilities. There was a steady decline in export prices, especially grain and wool prices, a population drift from the South Island to North Island, an exodus of population to Australia in the late 1880s, and a rural/urban drift, that was noticeable by the turn of the century. Added to these trends was the changing nature of import and export staples, the isolation of towns and markets cementing the importance of regional economies, the expansion of local industry, both in scale and scope, and the rise of consumerism. These changes provided the context within which entrepreneurship occurred in the colonial economy. At times, the entrepreneur was the instigator of change, for example, in the export of refrigerated produce. On other occasions, the entrepreneur was able to seize opportunities that arose as a result of the unique context in period of transformation.

The outstanding feature of New Zealand's economic development is the dominating importance of the pastoral industries, an importance which strengthens as these industries become more diversified and work out characteristic methods suitable to their

¹ Thomas, Brinley, *Migration and Economic Growth*, 2nd ed., Cambridge: Cambridge University Press, 1973, p.26.

² Pearson, D.G., 'Small Town Capitalism and Stratification', *New Zealand Journal of History*, 14:2 (1980), pp.107-108.

new habitat. These are the 'natural industries' of the Dominion, and in their organisation the practical empirical genius of the colonists is seen at its best. The ability of these antipodean farmers to compete successfully in world markets is reflected not only in good wages and a comparatively high standard of comfort, but also in land values, which seem preposterously high to many visitors from older and more densely populated lands.³

Pastoralism was central to the development of the colonial economy. New settlers lived off the land and used it as a means to extract wealth. In 1861, 226,621 acres of land were under cultivation for cropping, grasses, and livestock farming. By 1880, this had changed dramatically. An increasing population and greater demand for agricultural land saw land under cultivation increase to 4,506,889 acres. Pastoral activity intensified at a rate faster than the population growth rate. By 1910, land under cultivation had increased fourfold to over 16 million acres, spread between 73,000 holdings over one acre in size. During this same period, the population of New Zealand doubled from 484,864 to 1,002,679 persons.

Agricultural sectors advanced in varying proportions. Between 1880 and 1910, sheep population in the colony doubled from 12 million to 24 million; wool output increased as new cross breeds were introduced, such as the Corriedale.⁴ Fifty-three percent of total sheep flocks were in the North Island, 47 percent in the South Island. As a total economic unit, pastoralism in New Zealand was comparable to the Australian States of Victoria or Queensland.⁵ But the most striking change in colonial agriculture over the period was in beef and dairy farming. The 1881 census returned 698,637 cattle, a figure that had increased threefold by 1910 to 2,020,171 (including dairy cows), 79 percent of which were in the North Island, 21 percent in the South Island.⁶ The colony consumed a third of its butter and meat production, ten percent of its cheese production.⁷ Agricultural production provided a way for the colony to enter international trading markets. When exports were first officially measured in 1853, the

³ Condliffe, *New Zealand in the Making*, p.113.

⁴ The *New Zealand Yearbook (1911)* reported that by 1911 crossbreds and other longwools comprised over 90 percent of New Zealand flocks. The merino was less suited for freezing.

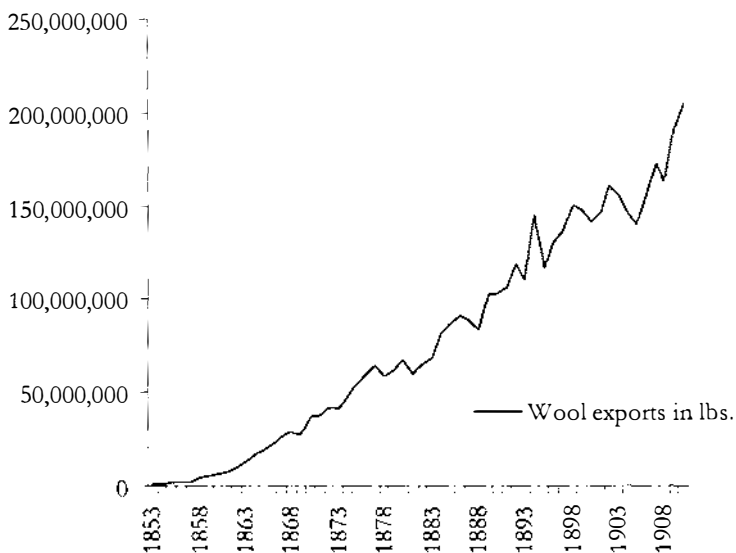
⁵ By 1910, for instance, New Zealand sheep numbered 24 million compared to 12 million in Victoria and 20 million in Queensland. New South Wales had 45 million sheep.

⁶ The industry was given encouragement under the Dairy Industry Act, 1908, which provided for the appointment of inspectors, formation of cooperatives and licensing of producers and for government investment in the industry.

⁷ By contrast, the colony exported 95 percent of its wool production.

main classes of goods (with the exception of kauri gum) were agricultural in nature: wool, flax, butter, and grains. Of the commodities the colony traded in, the most important was wool. It was readily exported, and the colony's natural resources and climate suited sheep farming on a large scale, especially in the open grasslands of the South Island. By 1878, wool exports had developed to a thriving £3 million trade, leading the colony's trading account. It did not remain in this state. From 1880 to 1910, the colony's export trade, and its basic industrial structure, swung in favour of more capital intensive activities; technological advances in primary processing and transportation, particularly of frozen foods, enabled new products to be brought to international markets. The production of frozen meat, cheese, and butter was taken up enthusiastically by investors, farmers, industrialists, and merchants. These new emerging markets benefited from greater price stability than was to be found in wool or grain markets.

FIGURE 1
WOOL EXPORTS: 1853-1910



Source: *Statistics of New Zealand - 1853-1910*

The New Zealand economy between 1880 and 1910 should not be considered a national economy. While observations can be drawn on aggregate figures, and these are useful to some extent, the economy remained an intensely provincial affair. Until 1876, New Zealand had been governed under nine provincial governments (for a short period 10 with Southland). These were not merely artificial political barriers; they also had some geographic merit. Provincial capitals were separated by unsympathetic geographic terrain that made transport and communication difficult. Climate varied too, and while the extensive plains around Canterbury, Hawkes Bay, and Wairarapa suited cropping, this

was not the situation further north in the densely forested and bush-locked Auckland province. Freight cargoes in and out of each of the main ports emphasised the distinct provincial variations.

By 1880, the most important of the four major ports was Dunedin, exporting £1,644,951 worth of goods. Two-thirds of all the produce carried from the port was wool (£928,915), followed by gold exports (£452,391), and other agricultural products, such as seeds and grasses (£127,057).⁸ Further north, Christchurch was the major exporter of grains; two-thirds of the colony's grain export departed from the port of Lyttelton (£656,615). In the North Island, Wellington was the colony's third largest port and a substantial exporter of wool (£748,931). It also exported by-products of meat-processing; almost half the colony's tallow production left the port of Wellington. The province of Auckland was again different in economic character. Without a substantial agricultural hinterland, the region looked to take advantage of its thickly-forested surroundings and timber, gold (from Coromandel), and all of the colony's exports of kauri gum were the dominant export products.

But as much as exports tell a story of an advancing trading economy, the colony's advance was not export driven. For the first 40 years of its life under colonial rule, New Zealand's trade account was dominated by what it imported, not by what it exported. An emerging settler society demanded the kinds of products that its settlers had enjoyed at home, consumer goods figured highly in the import account. By 1880, the largest imported class of goods was drapery (£805,665), such as haberdashery, linens, and other textiles. This was predominantly cloth by the yard, distributed via dozens of retailers throughout the colony. Given the freedoms in international trade, customers found that it was not necessary to travel to Oxford Street to sample the latest European fashions.

In Dunedin, for example, Princes Street was home to the mercantile trade. Customers had a wide choice: Brown Ewing and Co., marketed the latest all-wool flannel produced locally by the Kaikorai Woollen Factory, Herbert Haynes and Co., retailed specialty products like Canadian tweeds, Japanese silks, Grecian cords, and French merinos. Other retailers, such as Kirkpatrick, Glendining and Co., Thomson Strang and Co., and Mollison, Duthie and Co., sold a wide range of imported cloth, hats, jackets, and shirts. The English firm, Arthur Briscoe and Co., stocked a wide range of goods: stoves,

⁸ These, and other trading figures, were sourced from respective years in *Statistics of the Colony of New Zealand*.

fencing wire, table lamps, baths, flower vases, cricket bats, and ice pitchers. Their wholesale premises in Princes Street contained 2000 manufacturers catalogues. With branches in Britain, Australia, and New Zealand, Briscoe and Co., (like some shipping, banking, and insurance firms) was a nineteenth century version of the multinational firm.⁹

Such was the dominance of the textile trade in the colony, that other main centres also had clusters of large drapery firms. In Wellington, for example, Kirkcaldie and Stains sold a complete range of imported drapery, jackets, silks, millinery, underclothing, curtains, sheets, quilts, shirts, and lace. So too did S.W. Alcorn, T.J. Steele, Wilson and Richardson (all on Lambton Quay), McDowell Brothers opposite the Bank of New Zealand, and James Smith in Cuba Street. Imported cloth also went to the eight clothing factories in the colony, including Hallenstein's clothing factory in Dunedin, as well as the over 4000 self-employed tailors and seamstresses, who because of their self-employed status were not accounted for in factory and industry statistics.

In short, the colony almost spent as much on drapery and apparel in 1880 as it exported in gold.¹⁰ Dunedin was the primary port, and it exported more than Auckland and Wellington combined; Dunedin's imports almost equalled the total exports from the whole of the North Island. Wool was the staple export of the South Island and also Wellington. Wheat showed a clear regional strength in Canterbury; timber, gold, and gum were dominant export products in Auckland. Just over half of New Zealand's total imports came from the United Kingdom (£3,479,217), out of a total of £6,162,011. Almost £2 million in exports came from Australia (£1,930,408), and £238,011 from the United States. This pattern would continue for some time to come. Habitually, New Zealand kept a positive trade balance with the United Kingdom; it was trade with Australia where the imbalance occurred. Little developed as an export market, Australia continued to be better at selling to New Zealand, than New Zealand was to Australia.

By the end of the period in 1910, the colony's trading figures had changed dramatically. Rather than being a net importer, the colony had become a net exporter across a diversified range of goods, such as butter, wool, gold, sheepskins, meat, and cheese. Similarly, the import account changed as the products and technology of the

⁹ Briscoe and Company was established in Wolverhampton in 1768. By 1881, the firm had branches in London, Melbourne(1852), Dunedin(1862), Sydney(1878) and Invercargill (1881).

¹⁰ The Colony's spending was of course not a national effort but the cumulative result of individual purchasing decisions by individual firms operating as distinct units in the provinces.

second industrial revolution found their way to colonial markets. Capital goods, such as machinery, iron, and steel products, increased in importance in the import account over consumer goods. In addition, goods, such as the telephone, automobile, telegraph, phonograph, radio, and electric engine changed both the methods of business and the nature of the consumer market.

INVESTMENT

Overseas borrowing financed colonial development. By 1870, British investments overseas were worth in the region of £700 million, and this figure doubled to over £2,000 million by 1900, providing one tenth of Britain's national income.¹¹ The United States, Canada, Argentina, South Africa, Chile, and the colonies of Australia and New Zealand were all significant destinations for investment. In New Zealand, this capital was largely distributed through the banking system. New Zealand and foreign banks, supported by Scottish and English investors, channelled funds into agriculture and infrastructure projects, such as harbour construction, port facilities, water races, schools, hospitals, water supply, drainage, roads, telegraph, and railways.

Such investment was most noticeable during the Premiership of Sir Julius Vogel in the 1870s. Funded by British capital, Vogel embarked on an extensive programme of public works development and state-assisted immigration. The economic theory behind such an initiative was straightforward. The investment in infrastructure aided New Zealand's ability take part in the world exchange economy, on which, in the last resort, New Zealand's rising standard of living depended.

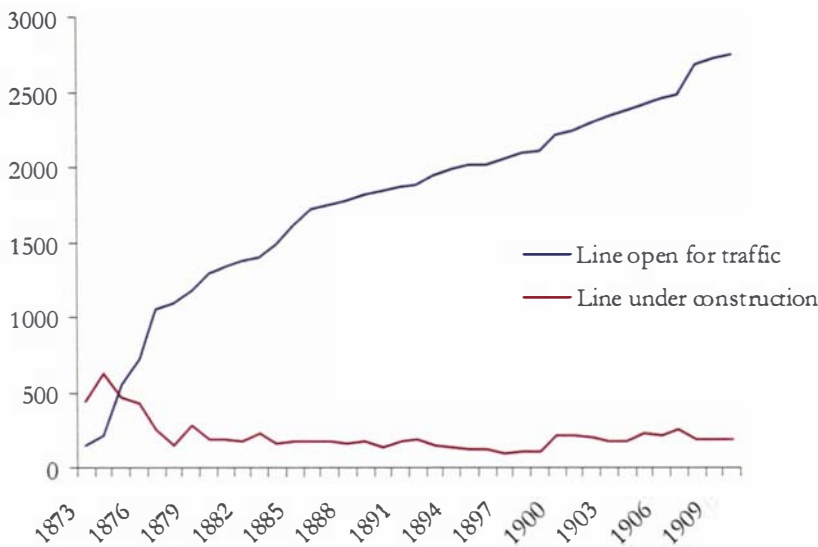
Outwardly, this programme of investment achieved its aims. Between 1870 and 1880, eighteen hundred miles of telegraph line were constructed. The postal service expanded rapidly, letters received and despatched in the colony increased from 5 million annually in 1870 to over 22 million by 1880, creating a threefold increase in Government postal revenue. Over the same period, land under cultivation increased from just over 1 million acres to 4.7 million acres, and registered vessels belonging to the colony increased 46% from 384 to 559.¹² Railway building was central to the State's investment strategy.

¹¹ Between 1870 and 1914, Britain provided two-fifths of the world's exported capital. For a discussion of the rise of the United Kingdom capital market and overseas investment, see Cain, P.J. and A.G. Hopkins, *British Imperialism: Innovation and Expansion 1688-1914*, London, Longman, 1993, pp.173-201.

¹² *Statistics of New Zealand*. A list like this is often described by historians when describing the progress of the Vogel era. See for example: Sinclair, K., *A History of New Zealand*, 4th edn., Auckland: Penguin Books, 1991, p.155.

By 1880, over £8 million had been spent on construction. The most concentrated period was between 1873 and 1876, when over 400 miles of track per year was under construction; on average, 167 miles per year were opened for traffic as vital hinterland was put within reach of the ports.¹³ Overall, track miles increased from less than 50 miles in 1870 to 1288 miles by the end of the decade, returning over £800,000 in receipts.¹⁴

FIGURE 2
MILES OF TRACK OPEN AND UNDER CONSTRUCTION: 1873-1910



Source: *Statistics of New Zealand – 1873-1910*

Such an intense investment in rail had visible results. By the 1880s, New Zealand had more track miles in proportion to its population than England, France, the United States, Canada, or any of the Australian colonies. Great Britain had one mile of track for every 2000 people; New Zealand had one track mile for every 406 people.¹⁵ However, these figures were disproportionate to the kinds of returns being generated. England averaged £3,485 of income per track mile, New Zealand averaged £648. Rail

¹³ Throughout the 1880s, there was still over 150 miles a year under construction, but the completed miles each year dropped to slightly over 60. Quinquennially, between 1880-84, 62 miles per year were opened for traffic, 1885-89, 66 miles, 1890-94, 37 miles and 1895-1899, 22 miles per year. By 1896, over 2000 track miles were in operation, and the rail network was growing at a rate of 2 percent per year. There were still some outbursts of intense effort. In 1880, 117 miles were completed for operation, and in 1885/86 periods, an additional 242 miles were added.

¹⁴ Generally, railway receipts, remained buoyant in the late nineteenth century. There was a falling off in per track mile receipts in 1884, when they fell to £560 per track mile, though they averaged £604 throughout the period.

¹⁵ In the South Island alone, this was 330 people per track mile. Yet the South Island had overall higher railroad miles than the North Island. Calculated from *Statistics of New Zealand*.

transportation suffered in the face of lower cost alternatives in the colonial market. For instance, north of Auckland, it was cheaper to establish an export market for farm produce with Sydney, than it was to send goods eighty miles by rail from Kaipara to the Auckland market.

For many years, the New Zealand rail network remained a welter of mainline extravagance, branch lines to unprofitable destinations, lines through areas to augment land values, branch lines to hoped for rather than actual population centres, and sorely felt provincial disparities. A lingering example of one such fiasco was the Midland rail link between Christchurch and Hokitika, promised to the projectors of the Brunner mine as early as 1871.¹⁶ There were also difficulties with engines and rolling stock. New rolling stock from England deteriorated in sidings as it waited to be commissioned, in addition, the large variety of engines in use in the colony necessitated an equally large stock of spare parts. Nineteen different classes of steam engine were in use, six or seven would have sufficed. The *English Mechanic* called the large number of varieties 'an amateurish experiment.'¹⁷ Despite grand comparisons to the Australian state of Victoria, New Zealand's rail network in the nineteenth century did not have the population, or the integrated planning necessary, to make it a profitable activity.

DEPRESSION AND RECOVERY

There were two economic periods during the period of this thesis. Between 1878 and 1896, the colony experienced what some historians have termed the 'long depression.' This was followed by a buoyant, export-led economic recovery that continued until the sharp recession in 1920-1922, following the First World War.

A traditional view of the long depression, aspects of which this thesis will question, states that falling export prices, decreasing land values, and the collapse of the City of Glasgow bank in 1878, triggered an economic slump that lasted from 1878 to 1895. The cumulative effect of these forces, coupled with an increase in government debt to over £20 million under Vogel's public works and immigration scheme, greatly

¹⁶ Phrase used by the committee was in regard to establishing a rail link with the Brunner mine, 'the construction of railways, South Island, should be carried out with the least possible delay, and that these works should be undertaken at the cost of the colony.' See Report of the Joint Committee on Colonial Industries, *AJHR*, 1871, H.7, p.3. For a history of the broken promises, protests, deputations to Wellington and London and provincial machinations over the Midland rail project see Canterbury Progress League, *The Story of the Midland Railway*, Christchurch: Lyttleton Times Co. Ltd., 1923.

¹⁷ *New Zealand Herald*, Wednesday January 7, 1880, p.5.

affected the infant colonial economy. Landholders and farmers, who had used mortgage security as a way of raising loans, saw the value of their land drop as farming revenue decreased. Between 1886 and 1888, two local banks, the Colonial Bank, (with 20 branches) and the Bank of New Zealand (with over 100 branches), found themselves overstretched—the Bank of New Zealand on the verge of collapse. Local and overseas investors, who had invested in these banks by way of share capital, debentures, or deposits, were faced with falling returns and the security of their funds in question.

It was not until 1895, following an upward movement in wool prices and international prices generally (with the discovery of gold in Transvaal), that the resultant prosperity lifted the depression. With increasing exports in dairying and meat following the introduction of refrigeration in 1882, New Zealand enjoyed a period of prosperity that lasted into the next century.

Historical interpretations of the 'long depression' years are not uniform. Economist J.B. Condliffe identified the depletion of the Otago gold fields as the trigger for the long depression, suggesting that it lasted from 1865 to 1895.¹⁸ Gary Hawke took a more cautious view. He acknowledged that between 1879 and 1896 international prices fell, but was more reserved in his judgement as to whether or not real incomes fell, asserting that there were regional variations in the economy.¹⁹ Keith Sinclair placed the depression years from 1879 until 1896, linking his argument to the banking crisis precipitated by the failure of the City of Glasgow Bank. Sinclair argued that the reduction of bank credit facilities in the colony by £1.5 million in 1879 caused the ruin of many traders and shop keepers and the collapse of the land boom.²⁰

W.B. Sutch painted a gloomy picture of New Zealand's economic fortunes during this period. He concurred with the dates Condliffe gave for the long depression, highlighting unemployment and a migratory exodus of population in the late 1860s.²¹ Sutch emphasised social difficulties in the colony: the increasing desertion rate of husbands, the use of sweated labour in factories, falling prices, soup kitchens, and a separatist movement seeking separation of the two islands that one might not be blighted with the economic difficulties of the other.

¹⁸ See Condliffe, *New Zealand in the Making*, London, 1930.

¹⁹ See Hawke, *Making of New Zealand*, Cambridge, 1985, p.5-6.

²⁰ See Sinclair, *A History of New Zealand*, Auckland, 1991.

²¹ See Sutch, *Poverty and Progress*, Auckland, 1969.

Two economic historians, Russell Stone and Muriel Prichard, while agreeing with many of the main elements of these views, have noted anomalies which do not equate with a country in the middle of economic difficulties.²² These include the flow-on effect of Vogel's scheme; the successful introduction of refrigeration and resulting development of the frozen meat, butter and cheese industries; the development of secondary industry servicing the local market; the increase in residential housing and city building; the importance of industries such as timber and gold; and that the country was more an economy of separate provinces rather than a unified state.

But a balanced account of economic and social change between 1870 and 1890 must tell a story of success far more than one of failure. There were two decades of solid economic growth in spite of the long depression. The population expanded and a unified transport system was helping to change a colony into a nation. Valuable assets were built up: transport facilities, more farms with better homesteads, fences and pastures, and new processing industries.²³

This thesis is aligned with the latter of these two views. It argues that there is a range of economic, social, and political evidence to suggest that the dominant characteristic of the colonial economy was expansion in scale and scope, rather than contraction. Expansion in secondary industry provides one example of this. For instance, between 1877 and 1895, the number of new manufacturing industries grew by 260%, from 945 to 2459, and the capital invested in these businesses doubled from £2,447,907 to £5,096,930. In sum, these additional 1500 new firms created approximately 14,200 new jobs. This was aside from developments in shipping, retail services, warehousing, financial services, or building trades, such as carpentry, glazing, painting, and plastering—none of which are accounted for in *Census* records.²⁴

²² See Prichard, *Economic History of New Zealand*, Auckland, 1970; and, Stone, *Economic Development 1870-1890*, Auckland, 1967; also, Stone, *Makers of Fortune*, Auckland, 1973. Simkin in his analysis of economic cycles prior to The First World War placed the depression between 1884 and 1895. See Simkin, C.G.F., *The Instability of a Dependent Economy: Economic Fluctuations in New Zealand 1840-1914*, Oxford: Oxford University Press, 1951, p.190.

²³ Stone, R.C.J., *Economic Development, 1870-1890 and the Social Consequences*, Heinemann Educational Books, Auckland, 1967.

²⁴ All these activities were not collated in census records of the time, nor in *Statistics of the Colony of New Zealand*. To some extent a rough estimate can be arrived at from occupational classes—though this is problematic.

POPULATION

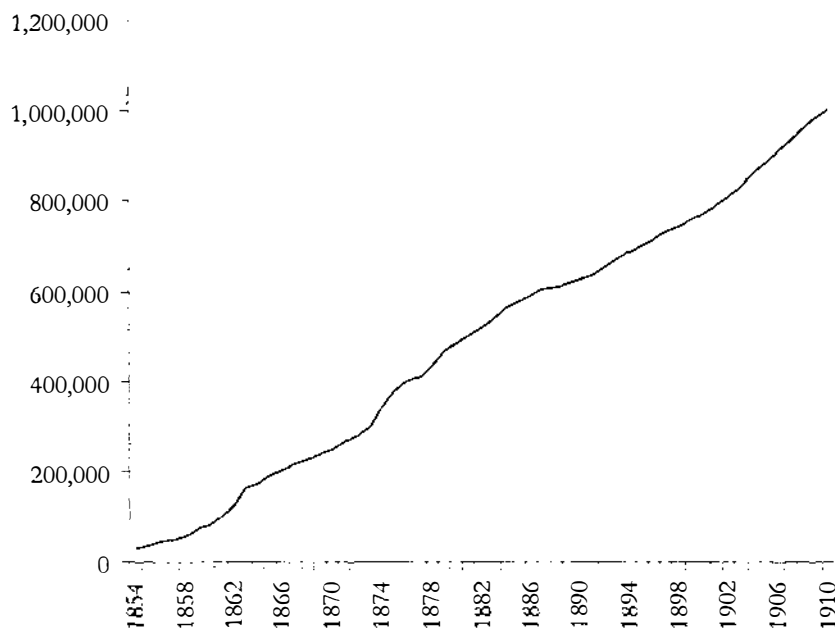
New Zealand's population grew rapidly following colonisation. Between 1853 and 1892, approximately 326,000 people immigrated to New Zealand, increasing the total population from approximately 30,000 in 1853, to approximately 800,000 by the turn of the century.²⁵ By 1910, the population had reached one million. For the colony of New Zealand, what was significant was the rapidity of this population explosion. Population inflows stimulated local business. In the early years of settlement, such as 1862 and 1863, the population increased by 27 and 30 percent respectively; in 1874, it increased by 16 percent. Such population surges placed enormous pressure on infrastructure and enterprise to keep pace. Up until 1878, immigration had been the dominant source of population increase in the colony. Thereafter, natural increase took over as the dominant source of population increase.

The late 1880s were characterised by a migratory exodus due to the depressed trading conditions in New Zealand. At its height in 1888, departures exceeded arrivals by 9175 people, many of whom left for better possibilities in Australia. Ironically, the Australian economy then suffered from a financial depression in the early 1890s. Despite the exodus of people from New Zealand, the combined impact of immigration and natural increase produced a steady upward movement in total population. At no point in any of the years between 1853 and 1910, did the colony experience a decrease in overall population numbers. In the 1860s, the average rate of total population increase in New Zealand was 13 percent per annum. In the 1870s, it was seven percent, and in the 1880s and 1890s, it was three percent and two percent respectively.²⁶

²⁵ Note these figures refer to the European population only. An accurate census of Maori was not conducted until 1926.

²⁶ The average annual population growth rate from 1853 to 1900 was 7 percent. Calculated from *Statistics of New Zealand: 1854-1900*.

FIGURE 3
NEW ZEALAND POPULATION: 1854-1910



Source: *Statistics of New Zealand 1854-1910*

The change from immigration to natural increase as the dominant source of population growth in the colony changed the underlying make-up of the population. In 1880, the colony of New Zealand was predominately populated by people who were born somewhere else, rather than those who could call their birthplace New Zealand. Of the 489,933 persons returned in the 1881 census, 54.4 percent were born outside New Zealand.²⁷ The largest group of these were from England (24.33), followed by Scotland (10.77), and Ireland (10.08). Three and a half percent of the population were born in Australia, 3.3 percent were born in Europe (including France, Germany, and other European states) with almost two percent born in China. Yet, colonial citizens who did not know Great Britain as their home were increasing in numbers. In the period 1878-1881, 49,000 fresh New Zealanders were born who reversed the population figures of the country from a place of predominately foreign-born persons, to one of New Zealand-born citizens. By 1886, foreign-born New Zealanders were 47 percent of the population (276,263), by 1896, this figure had dropped to 37 percent (261,095); by 1916, it was 27 percent (303,702), out of a total population of 1,097,841.

²⁷ A census of the Maori population taken at the same time, although admitting errors, returned a population of 44,097. Unfortunately, these figures were not incorporated into the census analysis as a whole.

New Zealand in 1880 was a youthful place. One in every two people was no older than 21 (52 percent of the population), and 42 percent of the population were aged 15 and under.²⁸ Twenty-five percent of the population were concentrated in only four cities, Wellington, Auckland, Christchurch, and Dunedin, producing four distinct economic units.²⁹ Dunedin (already discussed as the dominant exporting port by value), was also the colony's largest city. The population, including boroughs such as Maori Hill, Roslyn, and St Kilda, was 42,794. It had more brick and stone buildings than any other city in the country, and it was the most concentrated industrial area. The second largest city was Auckland and suburbs, which contained a population of 30,952. Christchurch had a population of 30,715, and Wellington, 20,563.

Yet, the reverse of these population statistics was also worth consideration as seventy-five percent of the population did not live in the four main cities. They lived in hundreds of smaller towns dotted throughout the country. Their size varied from a dozen or so settlers, to a thousand or more. North of Auckland there was only small settlements. Whangarei was the largest of these with 495 people. Other than Auckland and Wellington, North Island population centres with over 3000 people were Napier (5756), Thames (4,863), New Plymouth (3310), and the rapidly growing resort town of Wanganui (4646). In the South Island, outside Dunedin and Christchurch, the four largest population areas were Invercargill (6976), Nelson (6764), Oamaru (5791), and Timaru (3917).³⁰

Such towns were situated in diverse locations. Some were surrounded by dense native bush; others were in isolated coastal locations, pockets of pastureland, or in remote wetland or alpine areas. Life outside a city did not make settlers agricultural workers by default. On the contrary, any town was a cross section of farmers, labourers,

²⁸ By the end of the period in this study these percentages had decreased. The Annual Statistical Report on Population and Buildings 1928-29, Census and Statistics Office, while it changed the classification system and gave minors as those under 21, (not 21 and under), reported 39 percent (558,802) of the total population (excluding Maori) were aged under 21. Maori under the age of 21 were 36,674. Those 15 and under comprised 30 percent (428,344) of the population. By way of comparison, as of June 2002, Statistics New Zealand estimated New Zealand's total population at 3,939,100; 32 percent were aged 21 and under, 23 percent aged 15 and under.

Figures were also published in the 1926 Census showing a comparison between New Zealand rates of foreign-born citizens and those of other countries. In 1926, 24 percent of the New Zealand population was foreign born which was the highest rate of the other list countries; as compared to 15 percent of the Australian population, 22 percent of the Canadian, 15 percent of the South African and 14 percent of the American population. These figures came from the respective country's latest census.

²⁹ By the 1926 census these four urban areas contained 38.71 percent of the population. The total urban population was 57.99 percent; rural, 42.01 percent.

³⁰ Both Greymouth and Hokitika had populations less than 3000.

printers, bakers, coach-builders, stock and station agents, retailers, grocers, insurance agents, gold-miners, carters, photographers, hardware merchants, hoteliers, doctors, teachers, and bankers—all involved in the motions of everyday life. Geographic barriers, limited transport, and rudimentary communication networks provided local firms a measure of protection from competitors outside their region. Consequently, many could trade their way up as the population in their respective centres expanded.³¹

By 1910, the chief cities were still Auckland, Wellington, Christchurch, and Dunedin, though their rank order in terms of population had changed. Auckland's population was 102,676 (including suburbs). It had 22,000 more people than the second largest city, Christchurch (80,193). Third-ranked in terms of population was Wellington and suburbs (70,729), followed by Dunedin (64,237).³² Between them, these four cities comprised one third of the colony's population.

In 1881, approximately 40 percent of the population lived in 'urban areas', by 1910, this had increased to 50 percent of the population. However, these figures underestimated the scale of the move. Reporting on the size of urban areas varied between statistical reports and some were prone to use stricter measures of town or city boundaries, underrating the extent of the urban population. Yet, the scale of what had occurred could not be ignored; even using more conservative estimates the population of the colony's 12 largest urban areas increased by 39 percent between 1901 and 1911. In numerical terms, this was an increase of 107,861 people, from 169,696 to 277,557 persons.³³ Ten years later, the registrar-general of the 1921 census called the trend disturbing:

The continuance of a somewhat disturbing feature is revealed by the census returns in the presence of further evidence of 'urban drift.' The term 'urban drift' is used to indicate the gradual abandonment of rural life for that of the city and the growth of cities at the expense of their rural hinterland. It is a condition not peculiar to the Dominion, but experienced in practically every country in the world. In a manufacturing country the tendency is perhaps more natural, but for New Zealand, which is for the greater part

³¹ See *NZPD*, 41 (1882), p.86 (M.W. Green), for comments on the increase in merchant wealth and land prices resulting from increasing population. For links between expanding population and the development of industry see *NZPD*, 38 (1881), p.2 (Governor's Speech).

³² Statistical records enumerated a town as 500 or less presided over by a Board and run by a chairman. Once a town reached a population of 1000 it might have full municipal powers and have a council presided over by a mayor. Once the population exceeded 20,000 it would be classified as a city.

³³ The 12 principal cities and boroughs were Auckland, Wellington, Christchurch, Dunedin, Gisborne, Napier, New Plymouth, Wanganui, Palmerston North, Nelson, Timaru and Invercargill. Two more were added to the list after 1921, Hastings and Hamilton.

a primary producing country, the indications of strong urban drift are viewed by many with alarm.³⁴

Population within the colony was characterised by one further change during the period of this thesis; a movement of people from the South Island to the North Island. However, this is not an entirely accurate description. While the percentage of the population increased in the North Island in favour of the South Island, this did not coincide with a population exodus from the South Island. In total numbers, the South Island increased in population at each successive census period between 1858 and 1911. However, proportionately, the North Island population increased at a faster rate from the 1880s onwards. The following table gives the numbers resident in each island as well as the proportions in each island. At the start of the period of this thesis in 1881, the South Island accounted for 60.55 percent of the population (296,644 persons). By 1911, as a percentage of the total population, this had fallen to 44.07 percent, despite the population in the South Island increasing to 444,477 persons.

TABLE 1
POPULATION OF THE NORTH AND SOUTH ISLANDS: 1858-1911

| Census Year | Population(excluding Maori) | | | Percentages | |
|-------------|----------------------------------|---------------------------|---------|----------------------------------|---------------------------|
| | North Island and Chatham Islands | South and Stewart Islands | Total | North Island and Chatham Islands | South and Stewart Islands |
| 1858 | 34179 | 25234 | 59413 | 57.53 | 42.47 |
| 1861 | 41691 | 57330 | 99021 | 42.10 | 57.90 |
| 1864 | 65349 | 106809 | 172158 | 37.96 | 62.04 |
| 1867 | 80097 | 138571 | 218668 | 36.63 | 63.37 |
| 1871 | 97008 | 159385 | 256393 | 37.84 | 62.16 |
| 1874 | 112063 | 187451 | 299514 | 37.41 | 62.59 |
| 1878 | 158404 | 256008 | 414412 | 38.22 | 61.78 |
| 1881 | 193289 | 296644 | 489933 | 39.45 | 60.55 |
| 1886 | 250681 | 327801 | 578482 | 43.33 | 56.67 |
| 1891 | 281745 | 344913 | 626658 | 44.96 | 55.04 |
| 1896 | 340872 | 362488 | 703360 | 48.46 | 51.54 |
| 1901 | 390786 | 381933 | 772719 | 50.57 | 49.43 |
| 1906 | 476934 | 411645 | 888579 | 53.67 | 46.33 |
| 1911 | 563991 | 444477 | 1008468 | 55.93 | 44.07 |

Source: *New Zealand Yearbook*, 1911, p.575

³⁴ Census, April 1921, population, p.7.

THE ENTREPRENEUR IN THE COLONIAL ECONOMY

To understand how enterprise worked in the colonial economy we must peel back the various layers of economic activity. Much like French historian Fernand Braudel's layers of commercial life, there were layers of activity in the colonial economic system. Balance of payments, imports and exports, population growth, capital expenditures—these were all nation-wide measures of economic well being (or the lack of it); beneath these aggregate figures were diverse regional economies. Auckland and Dunedin were cities in the same country, tied by a single government, though economically and socially diverse in nature. That trade was buoyant, or alternatively, that the country was in recession, did not mean that each centre was experiencing such phenomena in equal measure, or at the same time. The colonial economy consisted of distinct regional economies, with different character and strengths, sometimes separated by significant geographical barriers. It can be inaccurate to make blanket statements about the New Zealand economy in the late nineteenth century. A downturn in wool prices, for instance, might have significant effect on communities in Otago or Canterbury, yet have little impact on the Auckland province where timber, kauri gum, and gold were staples.

Industry was the third layer of enterprise beneath the national and regional economies. The joinery industry, the brewing industry, flour-milling, coach works and printing to name a few—spread throughout the colony, expanding as a result of technological advance, rising populations, enterprise, and consumer demand. At times, an industry could behave counter to the prevailing economic climate, increasing in capital, output, and staff during times of national recession. The boot and shoe industry was one example. In the 1886 to 1896 period, while brickworks and sawmills suffered a decline in numbers and output, the boot and shoe industry expanded rapidly. In 1885, there were 42 factories employing 1654 people with a total output of 670,000 pairs of boots and shoes. In the five years to 1890, an additional five factories opened, total employment in the industry increased 17 percent, and output rose by 24 percent to 832,554 pairs. By 1895, the number of works had increased to 65, and output increased still further to over one million pairs per annum. Conversely, in times of plenty, some industries like the flax industry or rabbit skin industry in the 1920s, dissolved to almost nothing.

Below the industry level was the organisation: public and private limited liability companies, informal companies, partnerships, municipal authorities, and cooperatives.

Subject to economic forces, technological limitations, and imperfect information, the organisation directed limited capital to productive use. It was in the direction of capital (the management of the firm), that the human side of enterprise was revealed. Actions taken by the firm were not always rational, not always based on sound economic sense, nor made with perfect information. Management and decision-making could be subject to factors outside industry, regional, or national influence, such as personal preference, pride, optimism, talent (or the lack of it), the hostility of competitors, and the limitations of suppliers. Collectively, these factors meant that at any time, the organisation was in its own dynamic environment, juggling its abilities, limitations, and aspirations.

Removing the final layer of commercial life revealed one last figure, the entrepreneur, which introduced the human element. It was an obvious but important distinction. He was not an organisation, though he might develop one; not a company, though he may own one; not an industry, though he may have interests across several and run businesses in several provinces, even countries. He was not a government policy, and his response to changes in policy was his to make. He could decide to exploit an opportunity or not. If a market changed for the worse, he might decide to close down his enterprise and pursue a more attractive venture; alternatively, he might decide to try and out-do his competition. The decisions he made were on the basis of imperfect information, but to him this was an advantage, not a disadvantage. His competitors might not see the opportunity in the way that he did.

He was limited by his own capital; although, this did not always deter him. He drew on networks of supporters who would contribute financially to his initiatives solely because they respected his talent. He was not immune from failure, though failure appeared to be a stimulus to further enterprise, not a hindrance. He was someone who had decided, for whatever reason (and they could have been many), to accept the risk for earning his own income. This choice was a unifying factor in his economic class. He, and those like him, assumed control over their own economic destiny rather than risk it in the hands of another. Organisations, regions, industries, and governments take initiatives and are successful—so are individuals. To get a balanced view of economic progress in a period it is necessary to account for all five layers, as they all contribute to the eventual reality.

THE IDEA OF THE ENTREPRENEUR IN THE COLONIAL ECONOMY

The nineteenth-century entrepreneur in New Zealand was clearly an entrepreneur in orientation and behaviour, though he probably did not use that word to describe himself. Other words were used instead: trader, merchant, proprietor, speculator, adventurer, projector, and promoter. At times, the words more or less referred to someone we would recognise today as an entrepreneur, however, there were subtle differences. One document that was particularly useful in this respect was the report of the 1880 Colonial Industries Commission. The commissioners interviewed and wrote about a wide variety of industries and different types of organisations at different stages of development. Some were clearly self-employed persons; others were owners of large and expanding firms. At no time did the Committee use the word 'entrepreneur' to describe those active in New Zealand industry, instead, it made use of other phrases as Adam Smith had done a century earlier to describe entrepreneurial activity. The commission used the words promoter, adventurer, capitalist, and projector, each with a particular connotation.

A 'promoter' of local industry, in the sense that the commission used it, was one who either wished to establish an industry or was working in the early stage of establishing an industry. To be a promoter was an admirable quality; embodied in the term was recognition of the credibility of the industry or business activity proposed and the promoter's suitability to undertake it.

This was in contrast to those who were less than reputable, or completely uninformed about the activity they sought to pursue. For this speculative class, the commission reserved the term, 'adventurer'. It used the term when discussing how the government might be protected from such individuals gaining funds under the bonus scheme. Commented the commission: '... the conditions which they propose are at the same time of a character to protect the Government against imposition and to deter adventurers from plunging into wild schemes at the public expense.'³⁵

That reputable people of large capital might invest in 'ventures' was understood, and the term 'ventures' was used by the commission with regard to a new enterprise in much the same sense as it is in the present day: 'Many persons, who, from the confidence with which they have invested large capital in their ventures ...'³⁶

³⁵ Report of the Colonial Industries Commission, *AJHR*, 1880, H-22, p13.

³⁶ *ibid.*, p.4.

The word capitalist was used by the commission in the sense of an investor. A capitalist might share in the profits of an undertaking, though they might not be the entrepreneur or 'promoter' driving the scheme forward. In the colony, following the introduction of the Partnerships Amendment Act, 1866 and the Joint Stock-Companies Act, 1860, capitalists could share in the profits of an investment under the protection of limited liability.³⁷

The final term, 'projector,' was used to refer to one who required the capital of others in an enterprise, though clearly without the stigma of the 'adventurer' as evident in the sentence: '. . . as to admit of capital being invested in an enterprise, with a view to assisting projectors, without subjecting the capitalist to unnecessary risk.'³⁸ Projector also seems to have had a plural sense. That is we might talk of an individual promoter and a group of projectors.

It is a complex task describing social identity in late nineteenth-century New Zealand, especially in relation to business enterprise. Questions of religion and creed invariably drew out strong associations to one's religious homeland; Scots, in particular, seemed to regard themselves as a particularly enterprising culture. For the business community as a whole, identifying as a 'New Zealander' with a sense of 'our country' was evident when making comparisons between the rest of the world, especially Australia or England, and the phrases were proudly used in conjunction with the 1890 New Zealand and South Seas Exhibition. Local 'New Zealand' manufacturers and exhibits were put on show as the country and its people seized recognition in their own right. Local colonial industry and ingenuity came from many quarters of the country. Albert Sanford from Auckland exhibited his jellied smoked schnapper; H. Dobbie from Whangarei exhibited the first orange marmalade grown from local oranges; J.J. Craig displayed his Mahurangi lime and unburnt hydraulic limestone. Likewise, John Bycroft showed his 80 varieties of Bycroft biscuits, and Sargood Son and Ewen displayed their standard brand boots and shoes.³⁹

Class in the developing economy of New Zealand was not as dominant a concept as progress. As might be expected, a group of far flung migrants, in an inhospitable environment were more inclined towards inclusiveness rather than separatism. In

³⁷ *ibid.*, p.14.

³⁸ *ibid.*, p.14.

³⁹ See *Otago Daily Times*, New Zealand and South Seas Supplement, 1 January, 1890, pp.1-4.

parliament the class-based language of England and the continent surfaced in relation to questions of labour, though not much else. Debate on the Eight Hour Bill, for example, produced phrases like 'working man' or 'working class,' whereas on other topics, expressions of labour would be devoid of class and just referred to as 'workers.' Notions of what it meant to be 'Anglo-Saxon' or 'European,' were raised when considering the native issue or questions of land. It was regarded as a basic 'Anglo-Saxon' right to own land on which to raise a family,⁴⁰ and it was evident early on that the New Zealander considered himself a better class of 'British.'⁴¹

Undoubtedly, the most powerful identifier in some locations was province. Provincial allegiance ran deep and with it incumbent jealousies over wealth, industry education, governance, and administration. The 1877 Education Act and the move to centralised government, for example, brought many of these to the fore. Yet, it was not clear-cut. One could imagine, for instance, an immigrant Dunedin businessman swaying between allegiances depending on the circumstances; on Sunday, a staunch Scottish Presbyterian; on Monday, a trans-national merchant; on Tuesday in the House of Representatives, a fierce Otago provincialist; in financial sub-committee on Wednesday, a loyal colonial.

In New Zealand's past, there has not been a strong celebration of the individual. Certainly, it was not as evident as a celebration of progress, especially industrial progress, which added momentum to the hope that the colony had established its viability and had become the 'Britain of the South.'⁴² For the most part, colonial progress appeared to remain conveniently faceless. Newspaper reports of new industries described at length the size of the building, what it was made of, the machinery, its origins, and its productive capacity. The entrepreneur, his background, and what obstacles he may have overcome—personal, financial, social, and technological—were almost absent. For example, when the *New Zealand Herald* described the opening of Brown, Campbell, and Co.'s new brewery in Newmarket, it did so in fine detail:

⁴⁰ NZPD, 41 (1882), p.91 (Thomas Fergus).

⁴¹ See for example Sinclair's chapter on New Zealanders and Britons in *History of New Zealand*, pp.213-233. His quote from Trollope is particularly poignant in this respect.

⁴² See remarks made in NZPD, 35 (1880), p.541, (Sir W. Fox)

This room, at an elevation of from 70 to 80 feet from the ground, contains a large rectangular cast-iron tank or cistern, capable of containing 200 gallons of water, the latter being raised to it by means of a force-pump worked by the engine, and raised from wells sunk in the immediate vicinity, where there is a never failing supply . . . Immediately beneath the room just described in another of the same dimensions, 30 feet by 27 feet, which is chiefly occupied by the liquor-vat, of a capacity to contain 50 hogsheads.⁴³

On this occasion, as on others, the entrepreneurs were named in passing, but only to ascribe ownership, not personal accomplishment. So, while we might say we have a rich entrepreneurial history, it is not one that has celebrated entrepreneurship. Indeed, one of the aims of this history is to write some of the people back into the story. For as much as national, regional, industrial, and organisational economies were all vitally important, progress in many instances in the colonial economy had a single face, that of an entrepreneur. This is not a heroic picture, though some of their deeds sometimes may appear so in hindsight; nor is it meant to create a mythology; rather, it aims at a more realistic assessment of our country's economic life.

CONCLUSION

This chapter has examined the broad strands of economic development between 1880 and 1910. The colonial entrepreneur found himself in an environment that was, at times, receptive to enterprise, and at times hostile. Predictability, which gives some in business the confidence to make long term plans, was not readily found in the colony. Discontinuous change prevailed. The physical landscape of the country altered as land under cultivation increased 400 percent between 1880 and 1910 to over 16 million acres. Farming, which had been the obvious occupation of early settlers, became more widespread and diverse and shifted in both products and location. Wool production, that had been the back-bone of early run holders, was soon complemented by beef then dairy farming. And these emerging industries located primarily in the North Island, in the Wellington province and in the Taranaki. The cropping of grains also provided an important source of export income for many.

A survey of export and import classes revealed an economy that was changing both in structure and capability. By the mid-1880s, the import-intense spectre that had

⁴³ 'Brown, Campbell, and Co.'s New Brewery', *New Zealand Herald*, Thursday, January 8, 1880, p.5. See also the account of John Bycroft's new flourmill and biscuit factory, *New Zealand Herald*, Saturday, January 10, 1880, p.5.

characterised the early period of New Zealand settlement was being left behind in favour of an export-led economic advance. The frozen-meat, gold, butter, and cheese industries were not simple additions to an already pastoral economy. Rather, they were bold innovations by entrepreneurially-minded colonists, combining the latest in mechanical engineering with ambitious capitalism. Nor were such adventures the result of central government initiatives. Immigration and public works were coordinated by central government and provided distinct economic benefits. But much of the commercial activity of the colony was not undertaken on a grand scale. It was brought about by entrepreneurs using small amounts of capital to develop a business enterprise.

The New Zealand entrepreneur did not often emerge as a member of an elite or landed capitalist, like his British counterpart whose family wealth might date back several generations. Neither did the New Zealand entrepreneur emerge as the captain of industry as his American counterpart. The physical isolation and characteristics of colonial advance did not permit it. Large-scale borrowings were ploughed into public assets, not industrial activity. The newness and isolation of the colony meant that technology was imported rather than exported. However, isolation also encouraged resourcefulness and in the engineering industry this was seen in the endeavours of entrepreneurs such as Kincaid and McQueen in Dunedin, the Price Brothers in Thames, and Henry Shacklock in Dunedin. In each instance, these entrepreneurs manufactured goods that competed technologically, and on cost, with imported articles from nations that boasted much larger economies of scale.⁴⁴

Moreover, any entrepreneurial activity in the latter part of the nineteenth century was aided by two particularly favourable phenomena. Firstly, there was a rapid and constant increase in population that expanded markets and broadened consumer demand. In the thirty-year period of this thesis the New Zealand population more than doubled; this increase in population drifting to urban areas more than rural. Opportunities arose for firms in construction, retail, and wholesale activities to provide goods and services to growing markets. However, such was the rate of change that first mover firms, operating on personal capital, could not fully satisfy the expanding market demand. As a result, additional manufacturers, contractors, engineers, merchants, and industrialists entered the colonial economy and found opportunities to participate in this changing marketplace.

Secondly, New Zealand was not a national market for goods and services. Geographical barriers and limited transport and communication meant that towns were isolated, even from cities of close proximity, and had to produce a degree of self-sufficiency in the provision of commodities that by the twentieth century would be provided nationally. This isolation meant that for a prolonged window of time, the colony was not one economy, but a collection of economies, with strong provincial centres. Economic downturn or buoyancy in one provincial area could not be interpreted as affecting the entire colony. Neither could changes in the export trade be interpreted as affecting the entire colony as staple exports also had strong provincial centres.

In sum, the relative isolation of many population groups encouraged a replication of industrial and commercial activity that permitted a greater degree of enterprise than was arguably possible by the mid-twentieth century. This occurred, for example, in industries such as brewing, aerated water production, publishing, and dairy processing, where multiple small firms operating in distinct local areas were the distinctive feature of the colonial market. National distribution chains and chain stores, although there were some, were largely a feature of the twentieth century and not the nineteenth century.

The following chapter looks in more detail at government actions to encourage and stimulate enterprise during the period. In particular, it considers bonus schemes, investment in public works, and fiscal policy, along with their respective impact on entrepreneurial activity.



⁴⁴ These themes will be developed in later chapters.

3

THE POLITICAL ECONOMY OF AN
EVOLVING SETTLER COLONY

This chapter examines the extent to which the state's role in the development of the colonial economy in the latter part of the nineteenth century, provided opportunities for entrepreneurship. This chapter argues that the state acted as a facilitator of economic endeavour, doing so through three main mechanisms: fiscal policy, encouragement to industry, and investment in public works. The most important of these was the continued and extensive investment in public works.

The fundamental issue motivating the state's involvement in the economy was a search for economic viability. How would the state provide a society that was attractive to new immigrants and satisfactory to those already here? The eventual solution was, in part, a planned response, and in part good fortune. A general economic recovery relieved some of the earlier pressures felt by government and more buoyant economic conditions assisted the economic advance.

This chapter is constructed in four parts. Part One briefly considers the tensions facing the government at the outset of the period. A growing public debt and looming financial depression pushed the state to consider a range of options to continue its programme of development that had begun in the 1870s. Part Two examines the encouragement government gave to industry in the form of bonus schemes. Part Three examines the government fiscal policy and discusses how this impacted upon commercial activity. Finally, Part Four looks in detail at the continued investment in public goods and argues that a sustained programme of government investment in infrastructure kept the economy buoyant, stimulating entrepreneurial activity.

BACKGROUND

Every one has a notion, sufficiently correct for common purposes, of what is meant by wealth. The enquiries which relate to it are in no danger of being confounded with those relating to any other of the great human interests. All know that it is one thing to be rich, another thing to be enlightened, brave, or humane; that the questions of how a nation is made wealthy, and how it is made free, or virtuous, or eminent in literature, in the fine arts, in arms, or in polity, are totally distinct enquiries. Those things, indeed, are all indirectly connected, and react upon one another. A people has sometimes become free because it had first grown wealthy; or wealthy, because it had first become free.¹

How the colony of New Zealand was to attain economic viability and generate wealth was a pressing problem by 1879. A growing national debt, coupled with a looming financial depression and falling international commodity prices, was putting pressure on the New Zealand government to solve problems of a scale it had not known previously. An ageing Premier, Sir George Grey, was becoming increasingly erratic and withdrawn. The situation had boiled over with the quarrelsome and public removal of Greys' own Treasurer, John Ballance. Grey himself stepped in to assume control of the Treasury, but he showed poor judgement. Even his most sympathetic biographer admitted that Grey had 'no notion of figures' nor, 'grasp of details,'² and only a few men in the House still considered him fit to be a minister.³

Grey's response to the imminent financial crisis was to look to raise more money. It was not a particularly unique suggestion. Grey was proposing nothing different than his predecessor, or those Australian colonies that were still raising considerable sums to facilitate infrastructure development. However, when Grey floated the need for a £5 million loan at the outset of parliamentary session of July 1879 he was met with immediate scorn. In part, it was a result of his lack of due process; he had taken the unprecedented step of asking for an alteration of Parliamentary standing orders to debate the loan.

His actions were also symptomatic of his increasingly divisive and reclusive behaviour. He had not submitted a required statement of the government's finances,

¹ Mill, John Stuart, *Principles of Political Economy*, London: Longmans, Green, and Co., 1900, Preliminary Remarks, B.

² See Collier, *Life of Sir George Grey*, p.189.

³ Grey's biographer Rutherford cites a comment by Atkinson that there were not more than eight men in the House who thought Grey still fit to be a minister. See pp.620-625.

only a select few knew the exact state of the colony's financial situation.⁴ The wider issue that Greys' loan bill raised was the style of political economy practised in the colony. Vogel's scheme of expansion through borrowing had become increasingly unpopular. Not at first, while the money and immigrants flowed, but as the interest payments mounted on the capital expenditure it became a matter of debate in the House as to whether or not this had been the best path of economic development to take. On some indicators, Vogel's scheme was undeniably successful. Population had increased through immigration; the colony now had a rail network whereas nine years earlier nothing existed. The same progress was evident with roads, tunnels, harbours, water supply, and public buildings including courthouses and hospitals. But by 1879, the interest payments on this grandiose investment were rising. How the colony was going to meet its commitments to its London backers was a very real and pressing problem.

The urgency of the situation had been compounded by the collapse of The City of Glasgow Bank the previous year. With 133 branches, the failure of the bank was the worst financial collapse in the Scottish banking community for 20 years. Initially, news of the crash had been slow to filter through to the colony. The *Otago Daily Times* reported a cable from London on October 11 that merely stated: 'The City of Glasgow Bank has failed.'⁵ Ten days later, it reported a longer examination that downplayed the event and accorded much of the failure to the Bank's investments in India.

But the truth was closer to home. As the tangle of financial disaster was unravelled, what was revealed was reckless lending, falsification of accounts, and exposure to investments in India, American railroads, and in particular New Zealand land. Bank directors had used New Zealand land as security on share purchases, principally through investments in the New Zealand and Australian Land Company. While the shareholders in some Scottish banks had limited liability, the City of Glasgow shareholders did not. They were ultimately responsible for all losses that the bank incurred.

Scottish and English investors who tried to recoup capital by selling estates in New Zealand found a depressed and unforgiving land market. It hung like an albatross

⁴ Sir William Fox responded calling Grey's actions unconstitutional; and refused to debate something he had insufficient information on. 'Will the honourable member at the head of the Government state to this House exactly what it is he wants the money for?' demanded Fox. 'Does he want it for the ordinary services of the Government? Does he want it for public works? Does he want it to pay interest?' In the ensuing debate Grey lost his motion and the Loan Bill lapsed See *NZPD*, 28 (1879), p.19.

⁵ *Otago Daily Times*, 11 October 1878, p.2.

round the necks of wealthy Scottish families. The bank's creditors eventually made calls totalling £2750 per £100 share; something Scottish and English investors did not forget when contemplating future investment in the colony.⁶

EARLY DEVELOPMENT

Initially, both Australia and New Zealand had financed their development through overseas borrowing on the London market. Any new colony could not continue with a rudimentary infrastructure and hope to participate in international markets. If colonies were to become effective in any economic sense, they had to invest in large-scale public works to stimulate colonisation, enable enterprise, and provide efficient access to world trade routes. In the New Zealand and Australian colonies it seemed that large-scale borrowing had been the right course of action to take. Economic expansion occurred at such a rate that it seemingly flouted the traditional tenets of economic wisdom. Economist J.S. Mill observed that the economic expansion in the colonies occurred at such a pace that it appeared more fable than reality.⁷

But the year 1879 was no fairytale for New Zealand's colonial government. Short on cash and denied loan finance, Grey acted expediently in an effort to keep the colonial economy moving. A 10 percent value added tax on imports was increased to 15 percent in almost every class of item, such as apparel, ready made clothing, bags, coffee, ironmongery, musical instruments, paints, tobacco, umbrellas, tin-ware, soaps, and stationery.⁸ If those in power had been expecting a lift in revenue as a result, they were bitterly disappointed. Customs revenue fell £333,919 (27 percent) over the next 12 months. Grey's government was defeated in October that year and a new ministry formed under John Hall.

As the Governor, Sir Hercules George Robert Robinson, called the seventh parliament together in May 1880, he spoke of a partial relief from the depression as a result of an abundant harvest and an increase in the value of the country's staples. However, Robinson was firm on the need for action to address the underlying monetary problems, and he advocated a call to more conservative financial management:

⁶ For example see: Lenman, Bruce, *An Economic History of Modern Scotland 1660-1976*, London: B.T. Batsford, 1977, pp.190-191.

⁷ See Mill, *Principles*, p.966.

⁸ See List of Customs Duties Leviable, *Statistics of New Zealand*, 1878, 1879.

With the lessening of the abnormal influx of foreign capital, the colony must look for a diminution in the rate of progress it has recently been accustomed to, both in respect to its ordinary and territorial revenue. In these circumstances, my Advisers entertain no doubt as to the course to be pursued. Expenditure must be decreased; luxuries must be curtailed; the public works which have been already been constructed must be made more productive. It is to industry and economy that the colony has to look for a development of its resources, and the maintenance of a healthy progress.⁹

Following through on such rhetoric, the new administration explored a number of possibilities to either curtail expenditure or increase revenue including implementing a beer tax, cuts to the civil service, property tax, additional *ad valorem* tax on imports, even income tax. They decided on two immediate actions. The railway timetable was reduced along with staff numbers and the £5 million loan that had caused Grey such difficulty in the house, was drawn down. By the winter of 1881, the Premier was lauding the apparent recovery, even though it was more good fortune than sound management that had eased the pressure. The government had raised additional funds selling off waste lands; business and public confidence was on the rise as good prices were being achieved in international export markets. More importantly, coal had been discovered in large deposits on the west coast of the South Island, and had excited the hope that the colony was indeed a place of vast, untapped mineral wealth. Such hope was premature. Extracting minerals from the isolated and rugged terrain of the West Coast would involve new rail services and further extensions to West Coast harbours, the cost of which was estimated around £400,000, far beyond the reach of the government.

The means to exploit such mineral wealth and expand the economic and industrial base of the colony would have to come from private enterprise. As the government faced these realities, its new style of political economy was perhaps self-evident. With only limited means it had to explore a role as facilitator of enterprise in order to bring about economic viability. How it achieved this end is the subject of this chapter, which considers the government's encouragement of industry, its fiscal policy, and investment in public works.¹⁰

⁹ NZPD, 35, (1880), p.2.

¹⁰ Immigration could equally be considered an important Government initiative in respect of political economy however I have chosen to examine this separately in Chapter 8.

COLONIAL INDUSTRIES COMMISSION AND BONUS SCHEMES

Government actions to encourage enterprise had been taken as early as 1871 with the first commission on local industries. Then, a joint committee on colonial industries had been charged with investigating, 'what steps, if any, should be taken to ascertain and develop the producing and manufacturing resources of the colony'¹¹ It was both an information-gathering exercise and a way of examining what actions might be taken with such limited funds as were available to assist industrial development.

The committee heard evidence regarding the production of paper, fish curing, coal mining at the Brunner mine, converting iron-sand into steel, sericulture, trademarks, and sugar beet. The committee's minutes reveal a discussion that centred on whether or not to put in place a customs duty on a particular good, hence offer a modicum of protection to a new industry, or perhaps a bonus to assist manufacture, or to offer assisted immigration to gain the necessary workers who might commence a particular industry.¹²

Sugar beet was one example of government action to assist industry. Following the committee's examination of the possibilities for refining sugar in the colony, the German Consul in Wellington was asked to contact an immigration agent in Germany who might secure 200 German migrants skilled in the production of sugar beet. Three thousand acres of land was set aside for its production, first-class beetroot seed was sourced from Germany, and for four years any production would be exempt from excise duty. As an added incentive, a bonus of £2500 was offered for the production of the first 250 tons of sugar produced from sugar beet.¹³

Bonus schemes had previously been in use by provincial councils and were an accepted method of enticing a local promoter to establish a new industry. In some instances the bonus method was successful in stimulating enterprise; 1880 commission member A.J. Burns, the entrepreneur behind the Mosgiel Woollen Mills, had himself been assisted by a bonus offered by the Otago Provincial Council in 1868 for the first 5000 yards of woollen cloth produced in the Province. Likewise, the following year, the

¹¹ Report of the Joint Committee upon Colonial Industries, *AJHR*, 1871, H.7, p.3.

¹² *ibid.*, pp.1-27.

¹³ Memorandum of Action taken in accordance with resolutions of the Joint committee on colonial industries, *AJHR*, 1872, G.16, pp.1-10. This particular initiative would come to nothing and the colony would never get its sugar-beet plantation, but the bonus scheme would prove more effective in stimulating other industries such as paper production and woollen mills.

Canterbury Provincial Council had offered a £1000 bonus for the production of woollen cloth, sugar, beet, or preserved meat for export.

On other occasions the scheme was clearly not so useful, nor could it guarantee commercial success. The New Zealand Titanic Steel and Iron Company optimistically expended £18,000 on a furnace and buildings to produce iron from iron-sand in Taranaki. Though they succeeded, the costs escalated out of control. After a full blast in September 1876, the projectors managed to produce two tons of iron at a cost of £154 a ton. The ruling price on the English market was £6 a ton. Despite the evidence of hopefuls, all with extensive experience in the English steel industry, the experiment was discontinued, its projectors exhausted in both capital and spirits.

Likewise, attaining a bonus might still not protect projectors from the significant capital outlays involved in establishing new industries in sometimes-difficult conditions. The Woodhaugh mill of Edward McGlashan won the government bonus of £1500 as the first company to produce 50 tons of paper in the colony in 1876. Equally eager was the Maitava Paper Mill Company of James Walker Bain and his co-supporters. Both companies were forced to apply thousands of pounds in capital on machinery and experimental production to establish their fledgling industry. McGlashan, heavily mortgaged, sold his Woodhaugh mill to the Otago Paper Mills Company in 1878. Bain held on at Maitava, though the company's debts escalated as additions were made to the factory. Eventually in 1884, having expended nearly £25,000 in establishing Maitava, the mill was sold to Dunedin printing and stationery firm, Coulls, Culling and Co. The price was £5,000. Neither Bain's nor McGlashan's chief difficulty had been in their machinery or quality of output, both were satisfactory. The projectors were unable to generate a return relative to the amount of sunk capital. New owners of the Maitava mill, the Coulls brothers, would face no such difficulty. It was easier to show a return on a £5,000 investment than it was on £25,000.¹⁴

The 1880 commission was a more hurried affair than the 1871 investigation, and the commissioners reluctantly admitted as much when they presented their final report in Parliament four months later.¹⁵ Convened in March that year, the commission's objective was to consider the state of local industries in the colony and whether existing, or new industries should be aided or promoted, and how this might be achieved. The

¹⁴ See Angus, John, *Papermaking Pioneers*, Maitava: New Zealand Paper Mills Ltd., 1976, pp.39-47.

¹⁵ Report of the Colonial Industries Commission, *AJHR*, 1880, H.22, pp.3-4, 14.

six-member commission consisted of Edward Wakefield, woollen entrepreneur Arthur Burns, William Murray, Theodore Tinne, papermaker James Bain, and Edward Stevens.

Commissioners sent out a circular to mayors, county chairmen, chambers of commerce, and agricultural and pastoral associations inviting submissions. The commission visited the main population centres in person but were unable to see the West Coast of the South Island. Most submissions came by mail and covered a range of industries as diverse as cardboard box manufacture, jewellery, woollens, sulphuric acid manufacture, cement, carriage construction, and coal.

The most common submission asked for the lifting of a particular government duty on a good used in their manufacturing process so they might make an article cheaper, or alternatively, the increasing of a duty to enable a new industry to compete with imported products. For example, William Leys of Auckland requested that a duty of 35 percent be added to all ruled books and papers to enable the manufacture of such books in the local economy.¹⁶

Building was also at the forefront of submissions as both local bodies and private enterprise were anxious to have locally produced cement. Gisborne County Council sought a government grant of £7000 to assist someone in the Gisborne region to undertake the manufacture of cement, as did the Selwyn County Council in Christchurch. Greymouth County Council had reason to believe that it was worth experimenting of the manufacture of hydraulic lime and cement from Greymouth Limestone and sought assistance to do so. A Dunedin promoter, W.A. Ewing, stated that he would manufacture cement if the government gave him an order for 100 tons.¹⁷ Likewise, earthenware pipe manufacturers asked for between a 10 and 15 percent duty on drain-pipes to assist local manufacturers to compete in the market, citing a recent contract to supply the Christchurch drainage board that was lost to imported pipe.¹⁸

Various trades, asked for consideration in the lucrative railway contracts that were at present going outside the colony. In 1871, when Vogel negotiated the contract for the development of a rail network in the colony with John Brogden and Sons in England, he had done so in his capacity as Premier, by-passing the need to gain the wider support of government. If he had asked the government to endorse this sole-supplier

¹⁶ *ibid.*, p.46.

¹⁷ *ibid.*, pp.57-67.

¹⁸ *ibid.*, pp.81-91.

contract he would likely have received little support. Provincial engineering and contracting firms soon complained bitterly that they had not been given the opportunity to bid for some of this work.

Some contractors, such as Thomas Connor, James McKay and David Proudfoot, offered to construct railways for 10 percent less than the engineers' estimated scheduled cost per mile that had been set by the government. Forrest and Co., of Dunedin were equally eager.¹⁹ At first, the government did not give in to these firms, nor did they allow them the opportunity to provide rolling stock for the country's lines, a legacy that was still sorely felt ten years later. At the 1880 hearings, the Dunedin firm, Sinclair and Morton, petitioned the Commission for tenders to be offered for the supply of railway carriages, trucks and wagons, as did Kincaid McQueen and Co., and the Auckland firm of A. and G. Price. Other engineering firms had different concerns. Charles Hawkeswood's Staffordshire Iron works in Auckland petitioned for a protective duty and a bonus for the production of pig iron and steel, while Dunedin stove and range maker, G. Thornicroft, wanted neither free trade nor protection but a piece of land by the side of the railway at a nominal rent for 10 years.²⁰ Ross and Glendining, owners of the Roslyn Woollen Mills in Dunedin asked that all yarns for weaving purposes be admitted free of duty. The Mosgiel Woollen Factory in Dunedin and the Kaiapoi Woollen Factory both opposed such a move.²¹

The conflicting requests were not lost on the commissioners. Indeed, they had opened a simmering conflict that would go on for decades between manufacturers who wanted protection, and importers, merchants and traders, who did not. It was a difficult situation. Removing a duty on one article that might be used in the production of goods would injure another promoter who might seek to make that particular article himself. Wakefield took the middle line in his report and advocated caution in regard to any proposed changes to the customs structure:²²

¹⁹ See for example AJHR, 1872, Engineers Estimates and Contracts Entered into for the Construction of Lines from Invercargill to Maitai, and Dunedin to Balclutha, D-22, pp.8-9.

²⁰ Report of the Colonial Industries Commission, AJHR, 1880, H.22. See pp. 127-135.

²¹ *ibid.*, pp.144, 146-147.

²² It appears that even despite extensive customs duties the government did not consider themselves to be operating a 'protectionist' regime. To all intents and purposes, they likely viewed their activities as more akin to free trade, and the customs duties merely the mechanism by which they earned income.

Many persons, who, from the confidence with which they have invested large capital in their ventures, and from the wide experience which they claim to possess of the operation of commercial laws, might be assumed to be authorities on the subject, urge the desirability of imposing protective or even prohibitive duties upon manufactured articles, or upon articles which they allege can be produced in the colony. Others again, engaged in precisely the same trades, and appearing to be equally capable of arriving at a sound judgement, advocate exactly the opposite course. The promoters of some local industries ask for protective duties on the particular articles which they produce, whilst other promoters of local industries show the protective duties on those very articles would inevitably crush their hopes of success.²³

Overall, the commission were positive about the state of enterprise in the colony and singled out a number of industries for comment. Colonial wine production made an early impression and the commission pressed for changes to the present licensing laws to remove some of the restrictions inhibiting the sale of local wine that retarded the growth of the industry. The timber industry came in for lengthy comment, as did railways. The country's natural forestry resource was being exploited without any regard for management or replanting to ensure a long-term future for the industry; the commission sought further action from Parliament to right this situation. Railways received a more scathing comment. Current railways charges were cited as impeding the progress of the coal industry, the earthenware industry, and the fisheries industry where the high rail charges for freight were making the cost of bringing these goods to market prohibitive.

More daring were the commission's recommendations regarding the establishment of new industries through bonus schemes including tobacco, sugar, linseed, starch, sulphuric acid, sugar refining, silk, and cement. Yet 'bonus' was probably the wrong title. Any amount paid to a promoter to set up a factory or manufacturing plant was not a bonus for doing so, but a means of recouping part of their establishment costs.

The 1880 commission refined the scheme and in doing so proposed an interesting innovation. It proposed that the method for working out the amount of bonus was to estimate the capital outlay required to set up a particular industry, then, depending on the amount of the investment, calculate the interest expense on that capital at five percent for the first four, five, or six years of the undertaking. The total of this interest cost was then offered as the bonus amount. In effect, the government was

²³ Report of the Colonial Industries Commission, *AJHR*, 1880, H-22, p.4.

offering to cover the interest payments on start-up capital in a new industry for the first five years or so until the industry had produced sufficient cash flow, or reached a point of efficiency where it was viable.²⁴ It was a useful mechanism, allowing the colonial government, at limited expense and risk, a means of facilitating industrial development.

FISCAL POLICY: CUSTOMS AND INCOME TAX

Government action as regards fiscal policy might also have an impact on enterprise. The starting point for this discussion is a brief examination of the free trade versus protectionism debate that highlighted the government position on the function of customs revenue. This is followed by a broader discussion on income tax. What is suggested through this discussion is the important role that indirect methods of taxation played in the nineteenth century economy and how these might have aided economic development.

FREE TRADE AND PROTECTIONISM

In the 1880s, talk of depression, over-spending on imports, and low-priced foreign goods displacing local manufacturers, roused sentiments on the merits of free trade versus protectionism. The debate was instigated in Christchurch after the formation of the Colonial Industrial Association, which at times displayed division in the ranks, but was generally vocal in its opposition to free trade and supportive of a measure of protective duties to encourage industry.²⁵ Its opponent, the Christchurch Chamber of Commerce, took the opposite view and seemed to enjoy the opportunity to debunk the claims of the Association whatever they be, even at times claiming there was no depression. In 1886, the debate was continuing, only this time it had moved to Auckland and was being waged through the *New Zealand Herald*.

A range of tactics were employed; visiting experts were asked for their opinion which was resoundingly delivered as the decisive point on the subject. The industrialist, J.C. Firth, waded into the debate quoting statistics from America and abroad on the benefits of protection and free enterprise, confusing his opponents along the way as to

²⁴ As an interesting aside, while the commissioners wish to establish a tobacco industry in the colony looked feasible in regards both to production and manufacture of tobacco, they were discouraged to do so by customs revenue officers who claimed that if, 'the tobacco industry were to be allowed to flourish, one of the most important sources of revenue (the only source which can be absolutely depended on) would be dried up.' p.8.

exactly what his conclusions were. Comparisons were made with England, America and Europe as to who had prospered and how; even Adam Smith was quoted in a bid to deliver the final blow.²⁶ The outcome in terms of government action could probably have been predicted and would have little to do with any philosophical position on free trade or protectionism. The government quite simply needed to raise more revenue and it was expedient to use its largest income-generating source, customs duties. In 1888, a new schedule of duties was passed with the budget that year.

The colonial government trod a fine line between protectionism and free trade, and comprehending the difference is the starting point for this examination of government revenue and expenditure. It is commonplace today to associate import duties with protectionism. Yet, in the world of colonial politics, the two were not regarded as synonymous. This was perhaps never better stated than by Vogel while delivering his 1885 Financial Statement. In it, he eloquently conveyed the government's position regarding free trade versus protection. Customs duties, as far as Vogel and the government were concerned, were not a form of protection, or should ever be considered as such by manufacturers rather they were a form of revenue generation.²⁷

We cannot have this colony as wealthy and prosperous as it should be if manufactures do not hold an important position amongst its industries. With a good climate, abundant water and coal, an immense range of natural productions, and separated by a wide belt of ocean from other countries, it possess the natural conditions which should make manufacturing a success. But the earlier stages of all industries are behest with more or less difficulty, and there is no proof whatever that any particular manufacture may be suited to the colony because in its initial stages it cannot compete with goods of the same kind imported. Thus, we are brought face to face with the theories which are ranges under the two heads of free-trade and protection.

²⁵ See for example: the *Press*, 26 April 1884, p.1; the *Press*, 4 September 1884, p.3; the *Press*, 11 September 1884, p.3

²⁶ See for example: *New Zealand Herald*, 7 January 1886, p.6; *New Zealand Herald*, 13 January 1886, p.6; *New Zealand Herald*, 11 February 1886, p.6

²⁷ Vogel's biographer, Raewyn Dalziel, in *Julius Vogel: Business Politician*, describes this period of Vogel's return to New Zealand politics well. Vogel was obviously optimistic about the colony's economy, and with Stout, continued to direct increased borrowings towards railway expansion and public works. Dalziel held that Vogel's will to triumph over economic adversity was not fully shared by his other ministers, or other politicians who were committed to schemes of regional development rather than national projects. However, it might also be argued that the net result was still a will towards advancement, and Dalziel makes room for alternative views of the Long Depression while discussing Vogel's actions toward economic development. See Dalziel, Raewyn, *Julius Vogel: Business Politician*, Auckland: Auckland University Press, 1986, pp.260-267.

Although, as I have previously said, the old-world doctrines which are comprised under these banners are quite different in their nature to those which we have to consider, it seems impossible to prevent people dealing with the question as if we really had to fight out the question on the ancient field of battle.

In any case you have the right to ask the government to frankly disclose their views. We are, then, neither Freetraders nor Protectionists in the sense which those terms are commonly used. We do not believe the circumstances of the colony are such as to make it politic to adopt simple free-trade principles, which resolve themselves into giving no advantage whatever to local producers, and to applying excise, to countervail import, duties. On the contrary, we think it is so important that all sections of the population should be profitably employed, that it is impossible to apply any theory that depends for its basis on the supposition that the population, if it cannot find one occupation, must look to another, and be content to contend with the populations of other countries on equal terms, no matter what the condition of labour in those countries.

On the other hand we distinctly abjure a policy of protection, which would give to the followers of protected pursuits a State-aided guarantee of success, no matter how unsuitable those pursuits might be. Any policy of the kind which would carry with it a guarantee of the State, direct or implied, though the thousand ramifications of manufacturing operations, would be a system of unhealthy forcing, fraught with possible ultimate disaster. We are far from saying there are not some industries which the State should foster, but these should be commanding, conspicuous industries like that of the fisheries, and the fostering should be direct in character by bonus. But, with regard to industries generally, the question with those who pursue them should be, are they calculated, when the initial difficulties are overcome, to stand on their own merits, and defy competition? As I have said, we hold that, in the natural and logical course of things, every import should be subject to a reasonable duty to represent a contribution to the expense of the Government, of the machinery of which the importers take advantage.²⁸

For this government, it was not a philosophical contradiction to believe in free trade and raise customs duties. And this was done on numerous occasions; The Customs Tariff Act, 1866; The Customs Tariff Amendment Act, 1867; The Customs Tariff Act, 1871; The Customs Tariff Act, 1873; The Customs Tariff Act, 1878; The Customs Tariff Act, 1879; The Customs and Excise Duties Act, 1888.²⁹ Overall, the government recognised that in the nascent stages of industrial development a firm might be assisted

²⁸ Financial Statement, *AJHR*, 1885, B-1, pp.viii-ix.

²⁹ Only the 1888 revisions were regarded as a protectionist measure.

by a small duty being levied on a good. But this was a secondary consideration to the primary intention of revenue generation. It was the government's desire to see an internally competitive economy flourish that would produce firms competitive in local and overseas markets. Vogel made such a goal explicit:

But I distinctly state that the primary object of the Customs is revenue; that the tariff should be entirely within the control of Parliament; and that Parliament, in dealing with the tariff from time to time, should not be fettered with implied engagements of an indirect character. I say to the manufacturers throughout the country that they will be unwise if they invest large sums in industries under the idea that these will be continually bolstered up by tariff arrangement. They may reasonably exercise their judgement as to the probable duration of the duties which at the outset will assist them. But their calculations should be made on the presumption that their industries, within a reasonable period, can defy competition elsewhere, and, even beyond this, that there is fairly a prospect of their being able to supply outside markets.³⁰

Customs revenue was the single largest revenue earner for the colonial government. On average, between 1880 and 1900, 37 percent of revenue in any one year came from customs duties. While the amounts each year varied, the percentages were surprisingly consistent. Customs revenue went as high as 43 percent of total government revenue in 1883. The lowest point, over the 20 years between 1880 and 1900, was 1886 and 1887 when it was still 35 percent of government revenue. The other main sources of funds were from railway receipts (earnings on freight charges mainly), which constituted, on average, 26 percent of revenue between 1880 and 1900, and revenue from postal and telegraph charges and stamp duty (14 percent).³¹

The balance of revenue came from an assortment of property tax, marine charges, rents, land sales, and beer duty (23 percent); these were always secondary to the main income generating activities of customs, rail, and post. For example, in 1888 the government's total revenue was £3,521,490. This consisted of £1,251,651 from customs duties on articles, such as drapery, tobacco, spirits, silks, and ironware; £981,826 from railways receipts; £587,318 from stamp duty, postal revenue, and telegraph revenue; £376,576 from property taxes; £52,000 from beer duty; and the balance of £272,119 from rents, marine charges, and miscellaneous items.

³⁰ Financial Statement, *AJHR*, 1885, B-1, pp. ix.

³¹ Figures calculated from Financial Statements, *AJHR*, 1880-1900.

Together, the combination of customs duties and rail income proved a potent revenue collection machine. The colony was reliant on imported goods from the United Kingdom which provided the customs department a stable revenue source, in addition, local industries were reliant on railways for the movement of bulk goods, such as timber, earthenware, coal, livestock, and grain. These two revenue sources were also cost-effective. The customs department cost the same as gaols or lunatic asylums to administer, but produced a significantly greater return.³²

It was also important which classes of goods carried no duty. While an Auckland or Dunedin importer would have to pay 15 per cent added value tax on landed clothing, shoes, or millinery from England, any promoter who wished to import their own sewing machines, spinning and weaving machines, gas engines, steam boilers, flour mills, saw mills or quarts-crushing plant could do so without impediment and exempt from government duty. Therein lay the inducement for local promoters to start new industrial concerns. Capital invested in imported plant and machinery was kept free from government taxation. But what other encouragement might there be for the projector or promoter? What might be the reward for enterprise?

As we have seen, indirect taxation was the mainstay of nineteenth-century colonial fiscal policy. There was no corporate tax, or tax of any sort on profits until 1891 following the passing of the Land and Income Assessment Act, 1891. It should be noted that the word 'income' was used in the broadest sense by the government. There was no distinction between private individuals and companies; both earned income that was then potentially liable to tax. In this sense, income tax was the first form of direct company tax, described as a tax on incomes derived from trade and commerce.

The tax was first imposed on companies at a rate of one shilling in the pound (5 percent) and included all joint stock companies, banks, shipping, fire and marine insurance firms, and gold-mining companies. An exemption of £150 applied to all company incomes and a further £150 abatement if the company's income did not exceed £600.

³² For example in 1883, the customs department cost £39,839; whereas gaols cost £36,829 and lunatic asylums £38,000. A similar expenditure was incurred to administer marine services including harbours and lights (£38,461).

For those who earned professional incomes and salaries, the first £300 of income was exempt from taxation, (thereby disqualifying the majority of the population from paying the tax). For those incomes above £300, this same amount was deducted from their gross income to give a taxable figure. Someone earning £1000 would pay income tax on £700. The rate of tax for individuals was lower than that for companies; being 3d. in the pound on the first £200 above the exemption, and 6d. in the pound over this amount.³³

The abstract fairness of an income-tax on profits derived from trade and commerce has never been questioned. Our change in the respect gets rid of a number of exceptional taxes which rest on no principle, substituting a simple tax on profits realised. The comparatively light income-tax under the head of salaries and professional incomes will fall only upon those whose positions enable them to contribute it without inconvenience, the exemption of £300 affording ample protection to all who come within the limits of the schedule.³⁴

The stimulus to business through having no tax on the outcomes of commercial activity can only be supposed. There was certainly no disincentive for willing speculators to engage in commercial pursuits and generate a profit. Even after income tax was assessed in for the first time in 1892, given the exemptions, the effective rate for most firms was between two and a half and five percent. This remained so until the 1930s, with the result that the profits from commercial enterprise accrued more to the individual than to the government. If, as the eighteenth century economist Jacques Turgot asserted, the entrepreneur displayed a propensity toward reinvestment rather than consumption, leaving profits in the hands of entrepreneurs was a stimulus to further enterprise.

PUBLIC WORKS AND INFRASTRUCTURE

The most important role government played in regards the encouragement of entrepreneurship and enterprise in the late nineteenth century was through public works. In this section it is argued that it was not just public works spending itself that encouraged enterprise, but also the mechanism the government used to do so.

³³ See, Financial Statement, *AJHR*, 1892, B.6, p.13.

³⁴ Financial Statement, *AJHR*, 1892, B.6, p.14.

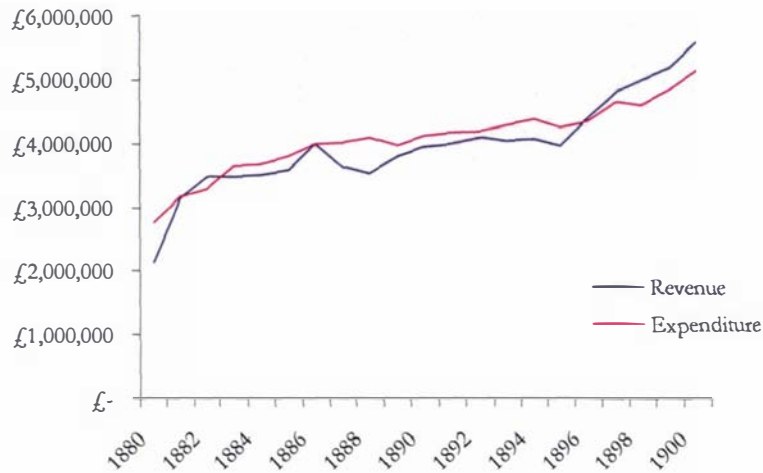
Using a tender system among private contractors enabled firms in the private sector to expand in scale and scope. This section begins with a brief examination of the government revenue and expenditure accounts, before analysing the expenditure of public works in particular.³⁵

By 1880, annual government revenue from its various sources was £2,133,759. By 1900, this had increased to £5,580,385. The average annual revenue over the period was £3,963,474. However, regardless of the increase in funding, the proportions of revenue and expenditure between 1880 and 1900 directed to the various activities of the government were surprisingly consistent. On average, 47 percent went towards paying the civil service. So, for example, in the 1888 year, and this is only given by way of example, expenditure on the civil service (including the postal service, army, education, railways, courts, trade and customs) was £2,026,741. Interest on the colony's loans, which in 1888 stood at around £30 million, was £1,765,667. Other expenditures that year included £15,597 on immigration, £198,347 on road construction, £22,984 on extending telegraph lines, £76,825 on lighthouses, harbour works, and defences, and £90,328 on additional public buildings. There were also smaller amounts spent on water races, rates on native lands, thermal springs, and defence.³⁶

³⁵ For a discussion of Australian investment in public utilities and infrastructure during the 1880s see: Davidson, Graeme, 'Public Utilities and the Expansion of Melbourne in the 1880s', *Australian Economic History Review*, 10:1 (1970), pp.169-189.

³⁶ The choices for either raising income or decreasing expenditure for the government were limited. Increasing railway charges was not possible as the government was consistently barraged about the limiting effect that high freight charges had on industry. This was the case as wool, and especially grain were transported via rail, as was timber, earthenware products and most other goods. Other revenue, as mentioned, came chiefly from stamps and postal revenue, and then a variety of smaller charges, the marine, beer duty, etc. Expenditure could viably have been decreased on public works, but wasn't. One reducible item was civil service expenditure. As a result, officers were redeployed, vacancies were not filled, and those who retired not replaced in an effort to reduce expenditure. It had the desired impact; from 1889 to 1893, expenditure on the civil service as a percentage of total government expenditure dropped from around 56 percent in 1885 to between 47 and 48 percent. By value this was a drop from £2,121,529 in 1885 to £1,891,921 in 1888.

FIGURE 4
GOVERNMENT REVENUE AND EXPENDITURE: 1880-1900



Source: Compiled from Government Financial Statements 1880-1900

The most sizeable expense between 1880 and 1900 was that directed towards interest and sinking funds. It reached a high in 1888, when 50 percent of the government revenue was spent on interest payments (£1,765,667), and a low in 1900, when 31 percent (£1,749,393) of government revenue was spent on interest payments. The average over this period was 39 percent.³⁷ It might be fair to assume that such financial pressure to meet interest payments arose from the over-zealous loan-spending during the Vogel years. Numerous accounts of the colony's depression seem to support the claim that the intensive spending on public works in the 1870s had more than doubled the colony's debt, resulting in a legacy of crippling interest payments. W.J. Gardner in the *Oxford History of New Zealand*, was abrupt on this point:

The aftermath of the crisis of 1878-79 was a severe downsizing which went on into 1880 without any sign of recovery. A long period of stagnation or near-stagnation followed in many parts of the economy, lasting until 1895. These years, known in the past as 'the Long Depression', were characterized by: low wages, unemployment, and poverty; low prices for primary exports which inhibited the progress and diversification of farming; the failure of secondary industries to keep pace with urban population growth; the heavy

³⁷ Calculated from financial statements, *AJHR*, 1880-1900.

and unrelieved burden of debt-repayment which clogged both public and private development . . .³⁸

But there is little in these statements that can be sustained. It is true that politically the rhetoric changed, and in the 1880s it became almost fashionable for politicians to deride Vogel's unbridled spending in the 1870s. Yet, their talk bore no resemblance whatsoever to government expenditure occurring during their own administrations. Claims that the public works spending of the Vogel years stopped in 1880, or even slowed down to a marked degree, are a total historical inaccuracy. And the facts, presented in the following section, offers an explanation for the apparent dichotomy in the 1880s, during which depression was interrupted with economic advancement.

The logic that propelled Vogel's immigration and public works programme has already been touched on in this chapter. The construction of roads, railways and telegraph lines both enabled and encouraged settlement. It provided jobs and stimulated secondary industry as public work activities relied on timber, bricks, stone, earthenware even engineering services – all from the local economy. The supposed financial outcome of this initiative has been much quoted by historians; the colony's indebtedness rose from £7 million in 1870 to £22 million by 1879. In 1880 the whole scheme was dropped in favour of less audacious approach. It was not.

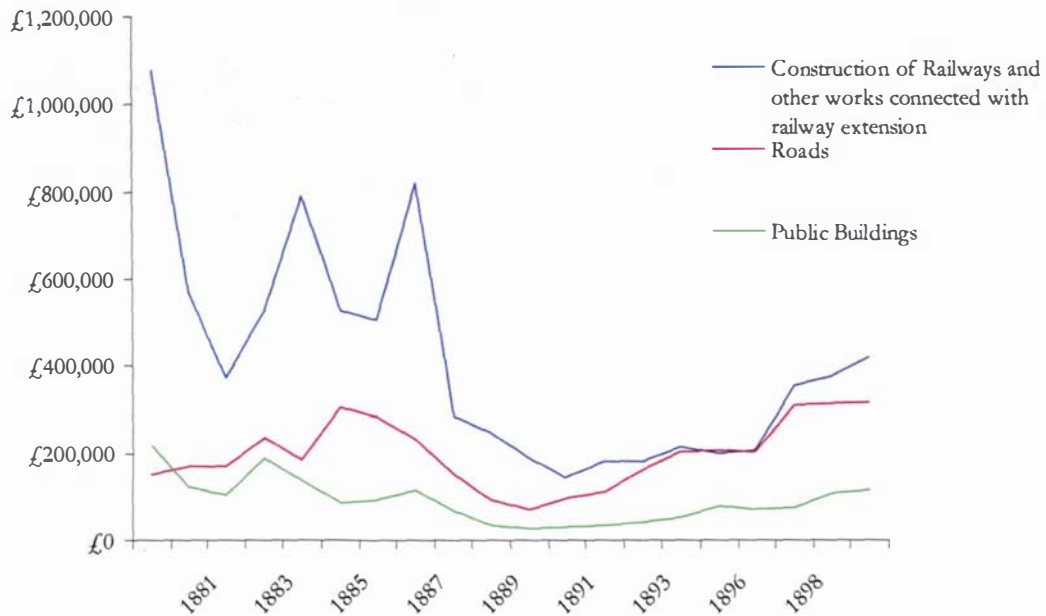
The political rhetoric was just that. Grey was successful in his bid to secure a £5 million loan in 1879 and this money was applied to roads, railways, harbours, lighthouses, public buildings, jails, custom houses, school buildings, hospitals, domains, drainage, gold field water races, and dams as it had been done in the 1870s. The enthusiasm with which loans were raised for public works during the 1880s made the Vogel years read like a preamble.

³⁸ Gardner, W.J., 'A Colonial Economy', in *The Oxford History of New Zealand*, 2nd ed., Geoffrey W. Rice (ed.), Auckland: Oxford University Press, 1992, pp.75. See too an earlier comment in the same chapter: 'In the late 1870s government borrowing was used to stimulate the sagging economy, which could not support the load of debt unaided, especially in view of falling export prices. In attempting to get itself out of debt, the colony got further into debt.' p.71. Gardner is not alone in this kind of statement, Borrie made a similar abrupt claim in *Immigration to New Zealand*.

The New Zealand Loan Act, 1879 brought in £5 million. The New Zealand Loan Act, 1882, brought in another £3 million. That same year, the New Zealand Colonial-inscribed Stock Loan Act, 1882 and the North Island Main Trunk Railway Loan Act, 1882 between them raised another £1.25 million. This was followed two years later by another New Zealand Loan Act, 1884 for £1.5 million and the District Railways Purchasing Acts, 1885-86 raising £479,487. In 1886, another New Zealand Loan Act was passed for £1,325,000 and another in 1888 for £1,000,000. By 1899, £29 million had been raised from loans for public works, and an additional £2.7 million diverted from the consolidated accounts and other funds. In total, some £32,056,606 was raised. This money was not spent as the loans were raised. Or more precisely, once the loans were raised, the monies were fed into the economy at a reasonably constant rate. It is not far short to state that in each decade approximately £10 million was diverted into public works.

Ascertaining an exact amount that the government spent on public works—the construction of roads, bridges, public buildings, hospitals, gaols, custom houses, dams, telegraphs, water races, school buildings, harbours, light houses—is not an easy task. It was not a discrete column in government revenue or expenditures. Much of the public works spending was assigned out of the public works loan account, and this was presented each year with the Financial Statement. However, monies directed to public works also came out of the consolidated funds under headings such as public buildings, domains, and in some years, the category public works. Monies were also paid to local bodies and road boards, who in turn directed these funds towards projects. In addition, it is clear from the 1881 Financial Statement and subsequent breakdowns of departmental expenses that school buildings, railway buildings, and hospitals were constructed out of the annual appropriations for those departments.

FIGURE 5
MAIN EXPENDITURE ITEMS PUBLIC WORKS: 1880-1900



Source: Compiled from Government Financial Statements 1880-1900

An initial analysis of these figures (without analysing individual department returns) showed that the combined spending on public works out of consolidated funds and loan finance in 1880 was £1.5 million. In 1881, it was £1.2 million and reduced to £909,853 in 1882. Then until 1887, there was a sustained burst: £1.2 million in 1883, £1.5 million in 1884, £1.2 million in 1885, £1.5 million in 1886, and £1.6 million in 1887. In 1888, public works spending dipped below one million pounds per year, reaching a low of £555,536 in 1890, then it increased steadily again towards the million pound mark by the end of the century. It is worth remembering that at the same time developmental funds were being diverted into immigration. So for instance, while the funds directed towards public works in the 1890s were under a million pounds per year, spending on immigration and land purchases increased dramatically from 1893 onwards. In short, there was a large and sustained expenditure by government on infrastructure and construction projects from 1870 to the end of the nineteenth century, with monies diverted towards this from multiple sources.

The public debt of the colony increased as these loan monies were spent. The net public debt of the colony in 1870 was £7,384,547 (approximately £29 per head of

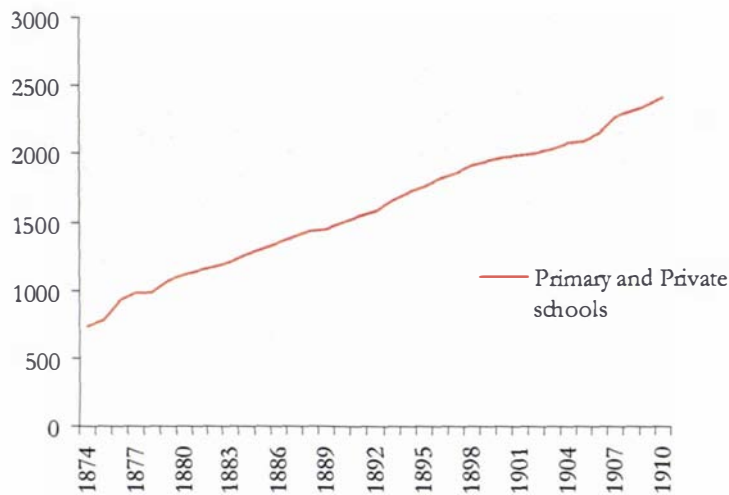
population).³⁹ Over the term of the Vogel programme to 1879, this trebled to £22,153,079. In the 1880s, the debt increased even more than in the Vogel years. By 1889, the net public debt of the colony stood at £37,162,891, an increase of £15 million. It rose another £9 million by 1899 to £46,080,727; £61 per head of population. These figures do not include the nearly £7 million debt of local bodies.

Had such amounts of money been raised with the intention of paying for services to keep basic mechanisms of the colony's government in progress, one might say that this had been wanton expenditure by a country struggling to keep itself financially buoyant. But this was not the case. The primary target of this indebtedness was public works. Even a conservative estimate⁴⁰ shows that by 1899, £16 million had been spent on railways, £2.1 million on immigration, £2.3 million on public buildings, £5 million on roads, nearly £2 million on land purchases and lesser amounts on coal mines, thermal springs, lighthouses, harbour works and defences, telegraphic extensions, native land rates and other expenses. The point of this argument is, that if the Vogel era with its £14 million injection into the economy stimulated economic activity, then the same argument holds true for the two decades that followed. The government continued its public works spending programme, regardless of which Premier was in power.

³⁹ *Statistics of New Zealand*, 1890, p.253.

⁴⁰ I term such estimates conservative, as these expenditures all relate to government expenditure from loan monies on public works. They do not include the amounts spent on buildings and construction from the consolidated fund. School buildings were built from the annual allocation to the Education Department as were hospitals from the Hospitals and Charitable Institutions budget; other public buildings and domains were also constructed from funds diverted from the consolidated account.

FIGURE 6
PRIMARY AND PRIVATE SCHOOLS IN OPERATION: 1874-1910



Source: *Statistics of New Zealand – 1874-1910*

While there were clear social benefits, as the number of schools and hospitals and other community services increased (Fig. 6), the marked spending on public works had two further economic effects. Firstly, the increased harbour facilities, roads, railways, and bridges facilitated commercial activity, enabling economic expansion; secondly, the mechanism for enacting the public works programme was to use a tendering process with private firms.⁴¹

Had the public works programme been carried out by a large public works department, with its own bureaucracy, staff, and equipment to undertake the works, then the primary economic benefit for the colony would have been job creation. In addition, a follow-on demand would have been generated in secondary industries for construction materials.

However, as private firms working in a competitive environment undertook the government contracts, it might be argued that the primary economic outcome was not job creation, but enterprise. As firms undertook these projects, wealth, skill, management, organisational expertise, capacity and innovation were all added to the

⁴¹ Lionel Frost suggests a similar symbiotic relationship between the private and public sector in Australian colonial economic development. He stresses that the private and public sector were not separate entities, but that public investment in infrastructure aided private capital formation. In particular, suburban property developers were advantaged by urban infrastructure and farm development increased rail receipts and tax revenue. See Frost, Lionel, 'Government and the Colonial Economies: An Alternative View', *Australian Economic History Review*, 40:1 (2000), pp.71-85.

private sector. New firms came into existence that had no previous form, and existing firms increased in capability and capacity.

Given a tender process for work, firms could increase in scale without the necessity of large amounts of capital. Increased equipment needs and additional labour could be written into the tender document regardless of whether the firm had these kinds of resources to begin with. In some cases, winning government tenders might enable a small firm to expand quickly, such was the case with the Auckland firm of Winstones who won contracts for the reclamation of the Auckland waterfront.⁴² It also encouraged an industry of contractors. For example, in Dunedin in 1887 there were 51 building contractors and 38 firms listed as general, roading, and bridge building contractors.⁴³

A brief survey of the railway contracts let by the Public Works Department in 1885 revealed the depth of this kind of industry. The following examples are only part of the total list of contracts awarded that year, and are only for railway work, not any of the other classes of public works. The list is revealing in the variety of projects that were being undertaken as well as the kinds of firms undertaking this work. The construction work was not dominated by a few large concerns. Although some were well known, there were a large number of firms that we have no record of today. Yet, at the time, they were undertaking significant projects that would have required the organisation and direction of large amounts of men and equipment.

Contractor John O'Brien won the contract to construct the Cambridge station building at a cost of £5455 while contractors, Philip Cooper and D. Henderson, supplied the Hamilton and Cambridge line with water. Bridge works costing £4924 around Hamilton were undertaken by Hector Reid; H. McKenzie and Co., won half the contract to construct the Awapurua Bridge on the Wellington-Woodville line at a cost of £7412. The contract to construct the Johnston Street Wharf in Greymouth was let to J. Goodfellow at a cost of £5,234. An extension of the line at Lake Forsyth was undertaken by Stocks and Wallace for £6,440, as well as bridge work at Hurunui for another £9,190. Dunedin engineers, Kincaid, McQueen and Co., won a tender for supplying air locks and pneumatic apparatus, as well as the contract to supply iron piers and a station overbridge to the Dunedin railway station at a cost of £13,826. Ormand brothers won a tender for bush felling in Tahoraite, while Alexander and McFarlane

⁴² See: Winstone Ltd., *The Winstone Group of Companies*, Auckland: Winstone Group, 1974; Simpson, Frank, *The First Century: A Centenary Review of Winstone Limited*, Auckland: Winstone Limited, 1965.

constructed station buildings on the Napier Woodville line. Alexander O'Donnell busied himself with a contract to cart 13,000 sleepers for the Foxton-New Plymouth line. R.S. Sparrow and Co., constructed the Wingatui Viaduct at a cost of £13,922.⁴⁴ Miller and Smillie won a contract for £18,958 for formation of the line at Hurunui. D. McKenzie had one for £48,839 for formation of the Otago central line around Wingatui and R. Meikle and Co., had a contract of similar amount for line formation around Nenthorn. Meanwhile, in Auckland, the contract to build Auckland Passenger station was let in 1885 to William Ahern for £12,168.⁴⁵

Economic benefits of spending like this on public works reached wider than the firms and contractors involved and their immediate labour. Public works construction triggered a secondary demand for locally produced building materials. Quarrying, brickworks, saw-mills, joinery manufacturers, coppersmiths, earthenware pipe manufacturers, tile manufacturers, cartage firms—all experienced a follow-on demand. This is discussed in more detail in a subsequent chapter. But, for instance, sawn timber production that had been at 143 million feet in 1881, by 1886 was 206 million feet; similarly, brick production, that had been 28 million per year in 1881, had increased to 34 million by the time of the 1886 census.⁴⁶

CONCLUSION

This chapter has examined how the State sought to achieve the longer-term aims of economic viability and wealth creation in the colonial economy. With limited capacity for industrial development, the State assumed a role as facilitator of economic expansion rather than instigator. It undertook this role in the areas of bonus schemes, government fiscal policy, and public works, the most important of which was public works.

Initially, such a move was bound up in the difficult economic conditions at the start of the 1880s that necessitated establishing a more diverse economic base in the economy. By the end of the nineteenth century, however, in part as a result of government encouragement of enterprise and in part through personal initiative and changes in the general international economic environment, this question had resolved.

⁴³ From an examination of *Stones Postal Directory*, 1887.

⁴⁴ Many of these were significant contracts, bearing in mind that a years wage for a tradesperson/labourer would be in the region of £50 to £100 per annum.

⁴⁵ Schedule of Railway Contracts, *AJHR*, 1885, Appendix –C, D-1, pp.22-24.

⁴⁶ There were no figures available for quarrying at this time.

Trading conditions in the colony had improved considerably, new export markets had opened up as a result of technological innovation in refrigeration and dairy production, and the industrial base of the economy had broadened in scale and scope.

Spurred on by investigations by colonial industry commissions, bonus schemes were developed as a direct method of encouraging investment in new industries. These resulted in the establishment of a number of industries, such as paper production and woollen milling. In each of these industries, following the establishment of the initial firms, other firms came into being without any form of government assistance.

Industries also petitioned the government for protection in the form of customs duties. Some of these were successful, others like the Auckland umbrella manufacturers who sought the duty removed on silks, and the distillery industry that sought to have protection to manufacture purer spirits manufactured from wheat, were not. The government was clearly informed that to reduce the duty on some goods, while it might cause advantage for the immediate manufacture, would cause harm to other sectors of the economy.⁴⁷ The government took direct action in respect of the dairy and cheese industry. Sensing a new industry after the successful shipment of frozen meat and dairy products to the United Kingdom, the government appointed an advisor late in 1882. The advisor's role was to assist those who wanted to establish cheese and dairy factories. How successful the advisor was is unclear, though he toured various districts giving lectures on setting up a butter and cheese factory. He was paid the substantial salary of £200, permissible as this was regarded as an important industry and the Government were justified in offering it every possible encouragement and facility.⁴⁸

⁴⁷ The fostering of local industries was also reinforced as a useful instrument to assist the credit rating of the country. When giving his Financial Statement in 1883, Major Atkinson spoke with some pleasure at the terms that had been recently been agreed over a new loan for £100,000 on the English market. He regarded this as the best afforded yet, giving as some indication that the stock that had gone out through the Bank of England was quickly trading above par. Atkinson's surmised that as long as the country's affairs were prudently managed to promote the settlement of land *and* the development of local industries, then the government would be able to raise as much as it needed on reasonable terms to undertake public works. Atkinson was also aware of the import substitution effect, and he made it clear that the encouragement of local industries reduced the need for imported goods, thereby releasing funds that were previous spent on imports for other activities. *NZPD*, 44 (1883), p.216.

⁴⁸ *NZPD*, 45 (1883), p.4 (Thomas Dick). See also *NZPD*, 45 (1883) p.35 (William Watt) for comments on lectures on West Coast of North Island.

Government revenue came primarily from two sources, customs revenue and railway receipts, with customs revenue providing the majority of revenue. The government did not view customs duties as part of a protectionist policy and were concerned that local industry and promoters develop competitive industries even in their early stages. In addition, an inducement to commence new ventures was evident in the customs structure whereby machinery and plant for industry were exempt from duties. A direct tax on incomes and profits from trade and commerce was not used until 1891, with the effect that the profits from enterprise remained in the hands of promoters.

Public works spending by the government had a number of trickle-down effects in the colony's economic system. Public works spending was important as it injected funds into the economy creating jobs. There were other positive benefits to be had from public works spending but these depended on what monies were spent on, how much was spent, how constant any spending was, and what the mechanism was for spending such money.

Government building contracts offered considerable work for the building industry as courthouses, jails, customhouses, asylums, schools, hospitals, police buildings, and harbour facilities were constructed throughout the colony. At any time in the 1870s and 1880s, despite a recession, this programme of construction continued. Not only did these contracts offer scope for local contractors and firms who tendered for the work, but they also stimulated the market for locally made building supplies. Brick works, earthen pipe companies, saw-mills and joinery firms continued to expand in number and output.

While each of the three types of government involvement in the economy surveyed in this chapter (bonus schemes, fiscal policy, public works), had specific outcomes, they had one economic benefit in common—enterprise. In differing measure each type of involvement encouraged either the expansion of existing firms, or the creation of entirely new firms. Bonus schemes, immigration, increasing population, low corporate tax, customs exemptions for industrial plant and machinery, public works spending, and a tendering process for winning government contracts, built up the basic infrastructure. These actions made trade and interchange easier, sustained the development of firms, and created opportunity for new entrepreneurs to enter the market.

In the chapter that follows, the role of innovation in economic development is considered in more detail. The frozen meat industry, hydraulic gold mining industry and

dairy industry are examined to investigate the ways in which innovation occurred as a process (through the actions of entrepreneurs), as well as its effect on the structure of the colonial economy.



4

THE INNOVATION DYNAMIC AT WORK IN
ECONOMIC EXPANSION

Once innovation takes off, including in this not only the inventions themselves but also their successful marketing and profitable utilization, this facilitates and stimulates further innovative effort. The obvious connection is that the demonstrated profit opportunity is sure to attract other inventors, other investors, and other entrepreneurs whose task it is to ensure that invention is put to effective and remunerative use ... In sum, innovative activity can be considered a cumulative process, in which there is feedback from one innovation to the next; once the free market has launched its innovation machine, the inherent structure of the mechanism leads the machine to grow more powerful and productive with the passage of time.¹

This chapter discusses the role of innovation in economic development. In particular it examines the way in which innovation assisted the colony's search for economic viability between 1880 and 1910. This was especially manifest in the export trade, where entrepreneurially-minded individuals pursued both product and process innovations that opened new markets and strengthened the colony's economic base.

This discussion lends support to the claims of economist William Baumol who has argued that innovation (and not price) in the competitive market economy was the driving force behind economic expansion. We see evidence of this in the New Zealand economy during this period. However, this chapter will also demonstrate that it was not just the profit opportunity which attracted other inventions as Baumol asserted, but Carl Menger's notion of complementary goods was also a powerful mechanism for growing the 'innovation machine.'

This chapter is divided into two parts. Part One gives a brief summary of the trading environment over the period of the thesis, discussing how the basic structure of

¹ Baumol, *Free-Market Innovation Machine*, pp.11-12.

the economy changed as the colony moved from a continued negative trade balance to an export-led economic recovery. Part Two considers the effect of product and process innovation on export markets. Groups of entrepreneurs succeeded in creating new markets by exploiting technological advances in gold extraction, frozen-meat production, and dairy processing. As innovation expanded the industrial base of the economy, the provision of complementary goods and services was also stimulated in areas, such as engineering and shipping. This chapter argues that the movement behind such innovation was primarily the entrepreneur, rather than large-scale, established firms or government.

INTRODUCTION: THE TRADING ECONOMY

It was with good reason that historians Gary Hawke, J.B. Condliffe, Keith Sinclair and W.B. Sutch centred their discussions of the New Zealand economy on trade.² Trade was vital to any colonial economy if it was to import the materials it needed to pursue progress and export what resources or products it might have to ensure its economic survival. New Zealand had acted this way from its earliest beginnings as a colony.

Since total trade (imports plus exports) was first measured in 1853 it had grown steadily.³ In 1853, total trade had been £901,109 and by 1859 had reached £2 million. Total trade swelled five-fold over the next four years to £10 million as the population doubled due to gold discoveries in Otago.⁴ However, the large increases in New Zealand's total trade were not the result of a vibrant export economy. Although wool, timber, and gold were all being exploited as export goods at this time, the rapid rise in the colony's total trade was being fuelled by an aggressive importing economy.⁵

² See for example Hawke, G.R. *The Making of New Zealand: An Economic History*, Cambridge: Cambridge University Press, 1985, pp.22-65.

³ Between 1853 and 1861 total trade increased on average 23 percent per annum.

⁴ The population rose from 71,000 in 1859 to 164,000 by 1863.

⁵ Condliffe provides a useful account of the alluvial gold rushes and its economic impact. See Condliffe pp.29-31.

INNOVATION DYNAMIC

TABLE 2

NEW ZEALAND TRADING FIGURES: 1853-1880

| Year | Total Trade | % change | Imports | % change | Exports | % change | Positive Imports | Positive Exports |
|------|-------------|-------------|------------|-------------|------------|-------------|---------------------|---------------------|
| 1853 | £901,109 | | £597,827 | | £303,282 | | £294,545 | |
| 1854 | £1,212,092 | 0.35 | £891,201 | 0.49 | £320,891 | 0.06 | £570,310 | |
| 1855 | £1,179,328 | -0.03 | £813,460 | -0.09 | £365,868 | 0.14 | £447,592 | |
| 1856 | £1,029,301 | -0.13 | £710,868 | -0.13 | £318,433 | -0.13 | £392,435 | |
| 1857 | £1,362,388 | 0.32 | £992,994 | 0.40 | £369,394 | 0.16 | £623,600 | |
| 1858 | £1,599,296 | 0.17 | £1,141,273 | 0.15 | £458,023 | 0.24 | £683,250 | |
| 1859 | £2,102,514 | 0.31 | £1,551,030 | 0.36 | £551,484 | 0.20 | £999,546 | |
| 1860 | £2,137,286 | 0.02 | £1,548,333 | 0.00 | £588,953 | 0.07 | £959,380 | |
| 1861 | £3,864,058 | 0.81 | £2,493,811 | 0.61 | £1,370,247 | 1.33 | £1,123,564 | |
| 1862 | £7,048,816 | 0.82 | £4,626,082 | 0.86 | £2,422,734 | 0.77 | £2,203,348 | |
| 1863 | £10,510,079 | 0.49 | £7,024,674 | 0.52 | £3,485,405 | 0.44 | £3,539,269 | |
| 1864 | £10,402,322 | -0.01 | £7,000,655 | 0.00 | £3,401,667 | -0.02 | £3,598,988 | |
| 1865 | £9,308,195 | -0.11 | £5,594,977 | -0.20 | £3,713,218 | 0.09 | £1,881,759 | |
| 1866 | £10,414,937 | 0.12 | £5,894,863 | 0.05 | £4,520,074 | 0.22 | £1,374,789 | |
| 1867 | £9,989,285 | -0.04 | £5,344,607 | -0.09 | £4,644,678 | 0.03 | £699,929 | |
| 1868 | £9,414,946 | -0.06 | £4,985,748 | -0.07 | £4,429,198 | -0.05 | £556,550 | |
| 1869 | £9,200,986 | -0.02 | £4,976,126 | 0.00 | £4,224,860 | -0.05 | £751,266 | |
| 1870 | £9,461,771 | 0.03 | £4,639,015 | -0.07 | £4,822,756 | 0.14 | | £183,741 |
| 1871 | £9,360,277 | -0.01 | £4,078,193 | -0.12 | £5,282,084 | 0.10 | | £1,203,891 |
| 1872 | £10,333,616 | 0.10 | £5,142,951 | 0.26 | £5,190,665 | -0.02 | | £47,714 |
| 1873 | £12,075,058 | 0.17 | £6,464,687 | 0.26 | £5,610,371 | 0.08 | £854,316 | |
| 1874 | £13,373,081 | 0.11 | £8,121,812 | 0.26 | £5,251,269 | -0.06 | £2,870,543 | |
| 1875 | £13,857,799 | 0.04 | £8,029,172 | -0.01 | £5,828,627 | 0.11 | £2,200,545 | |
| 1876 | £12,578,636 | -0.09 | £6,905,171 | -0.14 | £5,673,465 | -0.03 | £1,231,706 | |
| 1877 | £13,300,890 | 0.06 | £6,973,418 | 0.01 | £6,327,472 | 0.12 | £654,946 | |
| 1878 | £14,771,363 | 0.11 | £8,755,663 | 0.26 | £6,015,700 | -0.05 | £2,739,963 | |
| 1879 | £14,117,711 | -0.04 | £8,374,585 | -0.04 | £5,743,126 | -0.05 | £2,631,459 | |
| 1880 | £12,514,703 | -0.11 | £6,162,011 | -0.26 | £6,352,692 | 0.11 | | £190,681 |

Source: Statistics of New Zealand 1853-1880

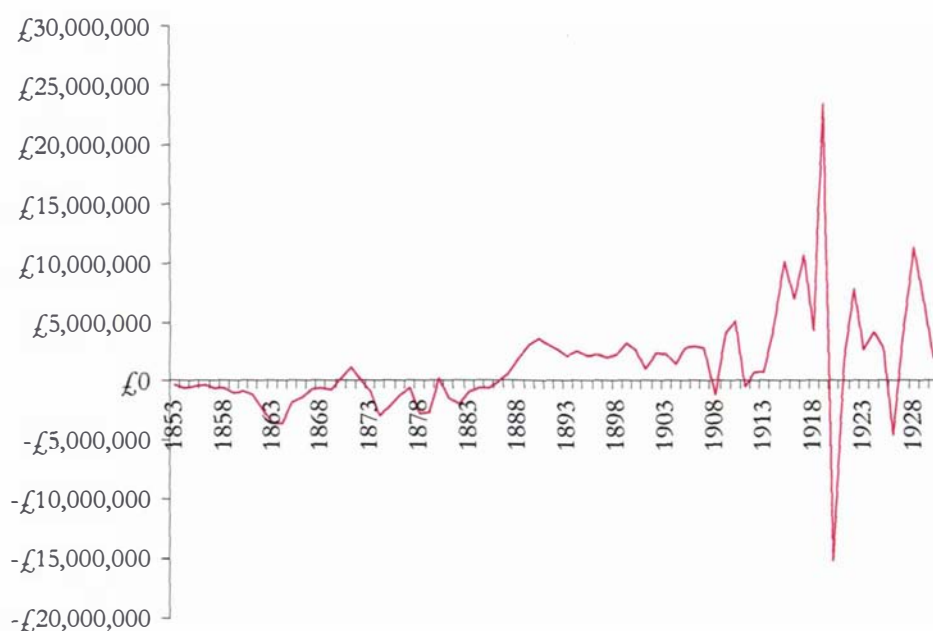
For seventeen years between 1853 and 1869, the colony imported more than it exported. The trade deficit was most noticeable between 1854 and 1864. During these eleven years imports each year were, on average, 130 percent greater than exports. An expanding population demanded a range of products that the infant economy was not yet equipped to produce.

For the first time in 1870, New Zealand achieved a positive balance of payments. This occurred again in the following two years, but it was a short-lived change in fortunes. From 1873 to 1886, the balance of payments repeated the same ingrained import-intense pattern that had characterised its early settlement years, as Vogel's immigration and public works machine surged forwards. The total amount expended during this short time gave some indication of an increasingly precarious financial

situation. Total imports for the years 1871 to 1879 amounted to £62.8 million, whereas total exports were only £50.9 million.

A structural change in New Zealand's trading pattern emerged in 1880. Then, for the first time in seven years, exports were of greater value than imports; caused more by the 26 percent fall in imports that year rather than the 11 percent increase in exports. The trade figures the following year resorted to the normal pattern of imports greater than exports, but in percentage terms the difference between the two indices was falling and continued to do so.

FIGURE 7
NEW ZEALAND BALANCE OF TRADE: 1853-1930



Source: Compiled from *Statistics of New Zealand: 1853-1930*

Imports as a percentage of exports in 1881 were 23 percent greater than the previous year; and in 1882, they were 29 percent greater. But this percentage did not increase the following year, nor did the trend have the volatility of previous decades. By now the trend was one way and heading towards a positive exporting economy. In 1883, imports were only 12 percent higher than exports, eight percent the following year and by 1886, one percent. In 1887, the colony was a net exporter of goods to the value of £620,654, and imports were 91 percent of exports. This trend continued for the next forty years. Proportionately, imports reached their lowest point in 1890, when by value they were just 64 percent of exports, although typically they remained between 75 and 85 percent of exports until 1930. The mean between 1887 and 1930 was 84 percent. There

were individual years, when imports again were larger than exports, such as 1908, 1911, 1920, and 1926, but these were only single years and not sustained bursts.⁶

TABLE 3
NEW ZEALAND TRADING FIGURES: 1881-1910

| Year | Total Trade | % change | Imports | % change | Exports | % change | Positive Imports | Positive Exports |
|------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------|---------------------|
| 1881 | £13,517,911 | 0.08 | £7,457,045 | 0.21 | £6,060,866 | -0.05 | £1,396,179 | |
| 1882 | £15,267,278 | 0.13 | £8,609,270 | 0.15 | £6,658,008 | 0.10 | £1,951,262 | |
| 1883 | £15,070,037 | -0.01 | £7,974,038 | -0.07 | £7,095,999 | 0.07 | £878,039 | |
| 1884 | £14,755,555 | -0.02 | £7,663,888 | -0.04 | £7,091,667 | 0.00 | £572,221 | |
| 1885 | £14,299,860 | -0.03 | £7,479,921 | -0.02 | £6,819,939 | -0.04 | £659,982 | |
| 1886 | £13,431,804 | -0.06 | £6,759,013 | -0.10 | £6,672,791 | -0.02 | £86,222 | |
| 1887 | £13,111,684 | -0.02 | £6,245,515 | -0.08 | £6,866,169 | 0.03 | | £620,654 |
| 1888 | £13,709,225 | 0.05 | £5,941,900 | -0.05 | £7,767,325 | 0.13 | | £1,825,425 |
| 1889 | £15,650,727 | 0.14 | £6,308,863 | 0.06 | £9,341,864 | 0.20 | | £3,033,001 |
| 1890 | £16,072,245 | 0.03 | £6,260,525 | -0.01 | £9,811,720 | 0.05 | | £3,551,195 |
| 1891 | £16,070,246 | 0.00 | £6,503,849 | 0.04 | £9,566,397 | -0.03 | | £3,062,548 |
| 1892 | £16,477,907 | 0.03 | £6,943,056 | 0.07 | £9,534,851 | 0.00 | | £2,591,795 |
| 1893 | £15,896,879 | -0.04 | £6,911,515 | 0.00 | £8,985,364 | -0.06 | | £2,073,849 |
| 1894 | £16,019,067 | 0.01 | £6,788,020 | -0.02 | £9,231,047 | 0.03 | | £2,443,027 |
| 1895 | £14,950,353 | -0.07 | £6,400,129 | -0.06 | £8,550,224 | -0.07 | | £2,150,095 |
| 1896 | £16,458,425 | 0.10 | £7,137,320 | 0.12 | £9,321,105 | 0.09 | | £2,183,785 |
| 1897 | £18,072,216 | 0.10 | £8,055,223 | 0.13 | £10,016,993 | 0.07 | | £1,961,770 |
| 1898 | £18,748,555 | 0.04 | £8,230,600 | 0.02 | £10,517,955 | 0.05 | | £2,287,355 |
| 1899 | £20,677,968 | 0.10 | £8,739,633 | 0.06 | £11,938,335 | 0.14 | | £3,198,702 |
| 1900 | £23,892,257 | 0.16 | £10,646,096 | 0.22 | £13,246,161 | 0.11 | | £2,600,065 |
| 1901 | £24,699,339 | 0.03 | £11,817,915 | 0.11 | £12,881,424 | -0.03 | | £1,063,509 |
| 1902 | £24,971,700 | 0.01 | £11,326,723 | -0.04 | £13,644,977 | 0.06 | | £2,318,254 |
| 1903 | £27,799,053 | 0.11 | £12,788,675 | 0.13 | £15,010,378 | 0.10 | | £2,221,703 |
| 1904 | £28,040,042 | 0.01 | £13,291,694 | 0.04 | £14,748,348 | -0.02 | | £1,456,654 |
| 1905 | £28,484,804 | 0.02 | £12,828,857 | -0.03 | £15,655,947 | 0.06 | | £2,827,090 |
| 1906 | £33,306,540 | 0.17 | £15,211,403 | 0.19 | £18,095,137 | 0.16 | | £2,883,734 |
| 1907 | £37,371,818 | 0.12 | £17,302,861 | 0.14 | £20,068,957 | 0.11 | | £2,766,096 |
| 1908 | £33,788,778 | -0.10 | £17,471,284 | 0.01 | £16,317,494 | -0.19 | £1,153,790 | |
| 1909 | £35,336,715 | 0.05 | £15,674,719 | -0.10 | £19,661,996 | 0.20 | | £3,987,277 |
| 1910 | £39,231,792 | 0.11 | £17,051,583 | 0.09 | £22,180,209 | 0.13 | | £5,128,626 |

Source: Statistics of New Zealand 1880-1910

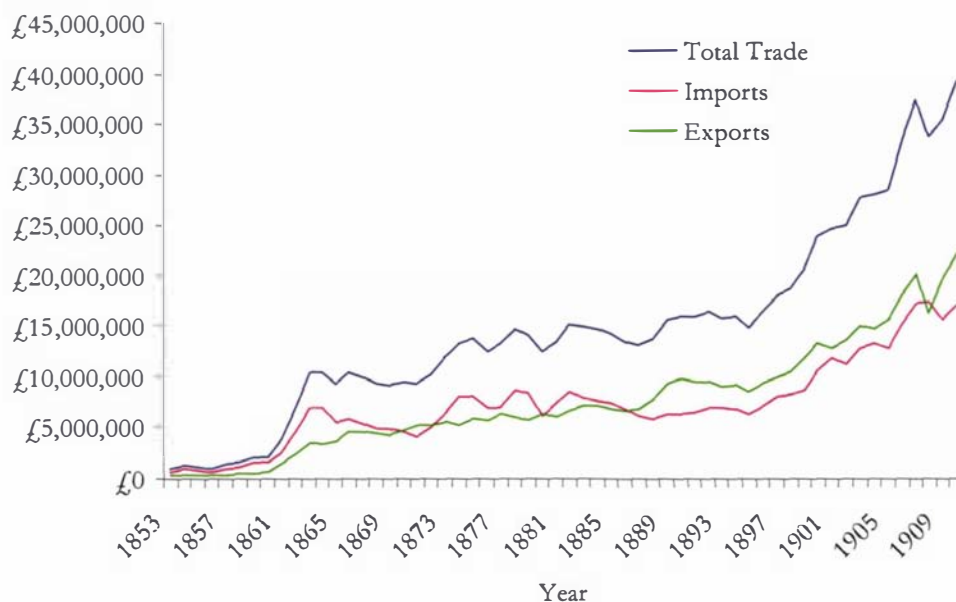
What these aggregate trading figures suggested was that something had happened in the economy to cause exports to grow faster than imports in overall terms. By 1887, the country had reached the point where the terms of trade were no longer dominated by sellers to internal markets, but sellers to external markets. The argument of this chapter is, that innovation, brought about by the initiative of colonial entrepreneurs in the areas

⁶ *Statistics of New Zealand*

of technology and distribution, was the dominant cause of this reversal in economic fortunes.

Imports and exports were to a degree independent; changes in one did not necessarily come at the expense of the other. While large grain companies and mercantile companies handled significant quantities of imports and exports, extensive trade also occurred amongst smaller firms.⁷ Individual farmers sold direct into English markets, meat producers like James Gear travelled to the United Kingdom to organise contracts, and an array of small-time drapers and merchants, such as Thomas Warnock or Thomas and Samuel Morrin, imported goods on their own account, indifferent to what movements might be occurring in the broader balance of payments.

FIGURE 8
IMPORTS AND EXPORTS 1853-1910



Source: Generated from *Statistics of New Zealand 1853-1910*

The agents of change in the export and import markets were not the same. In the export markets the agents of change were primarily product innovation, price, and the infrastructure of trade—meaning the limitations and development of marketing and

⁷ When George Gray Russell and John Macfarlane Ritchie reorganised their fledgling mercantile company in 1873, they were already investing in land and trading in New Zealand wool, wheat, sugar from Mauritius, Chilean flour, and Indian tea. Profits were substantial in the buoyant colonial market. On the first year's trading of £28,000 profit was £8000. See Parry, Gordon, *N.M.A.: the Story of the First 100 years: the National Mortgage and Agency Company of New Zealand Ltd., 1864-1964*, Dunedin: National Mortgage and Agency Co., 1964, p.24.

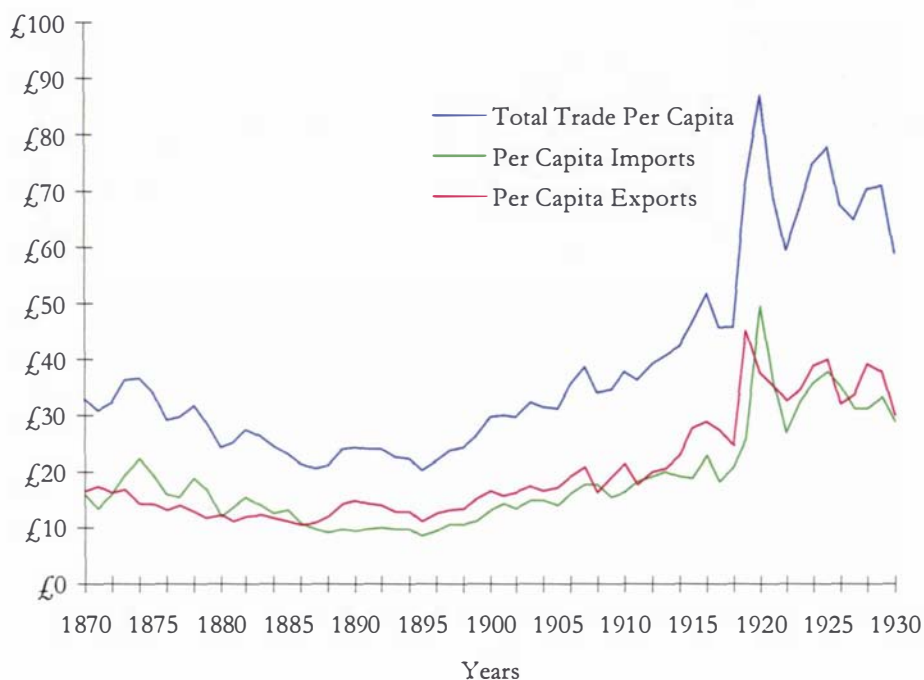
distribution networks in the home country and in the intended market. The frozen-meat industry, to be discussed shortly, provided a useful example of this as its expansion was contingent on both technological innovation and the development of distribution networks. Likewise, the expansion in the gold industry in the Auckland region in the 1890s was triggered by technological innovation; in this case by the adaptation of the cyanide process for gold extraction.

By contrast, the important explanatory factors for the growth in the importing trade (including local wholesale and retail markets), had to do with population growth, product innovation in the second industrial revolution creating new markets, and isolation. Isolation refers to the regional transport and geographic barriers that enabled the rise of localised monopolies and replication of industries. This is discussed in a later chapter, but in brief, these market characteristics permitted merchants and local industries such as coachbuilders, printers, and brick makers to expand, aided by significant barriers to competition.⁸

In this respect, it is of very little value to use broad-based economic indicators, such as import and export statistics, as the sole measure to interpret what was occurring in the colonial economy. For example, given the extraordinary levels of population growth occurring in the colony, indicators such as per capita import and per capita export figures need to be treated with caution. If there had been a relatively static population in the colony, a downward movement in per capita imports might have indicated a drop in consumer demand, if a local manufacturing industry was not providing substitute products. However, New Zealand's colonial economy was not that static. Consequently, interpreting New Zealand's per capita trading figures prior to 1900 is complicated by rapid population growth and mushrooming mercantile and industrial markets.

⁸ See Chapter 7.

FIGURE 9
PER CAPITA EXPORTS AND IMPORTS: 1880-1930



Source: *Generated from* Statistics of New Zealand 1870-1930

The above graph gives one example of the limitations of broad economic analysis. The substantial enterprise and economic recovery, that most economic historians acknowledge had occurred by 1896, is not visible in terms of per capita trading figures. For instance, per capita export figures did not surpass the figures achieved in 1870 until 33 years later in 1903. The reason for this had little to do with the strength or make-up of the economy, but rather the diluting power of population in per-capita analysis.⁹ In the eleven years between 1860 and 1870, the New Zealand population tripled from 79,711 to 248,400; in the decade following that it almost doubled again to 484,864; between 1880 and 1890 it increased another 30 percent. In the final decade to 1900 New Zealand's population rose by another quarter. In summary terms, between 1860 and 1910 the population increased 1157 percent.

The effect of such a population increase on an economy can be surmised from comparable economic analysis of Australia at this time. In his landmark work on the

⁹ For example, had the export trade kept pace with such an expansion in people and demand the 1860 export trading statistics would have reached £5,671,617. They did not. Exports that year were in fact £13,246,161, exceeding by 133 percent what they would have been if they had only kept pace with population growth.

Australian economy in the late nineteenth century, economist Noel Butlin argued that urbanisation rather than trade opportunities drove the continent's rapid economic expansion. Butlin based his claim, in part, on an average compound population growth rate of three percent per annum between 1861 and 1901, when the Australian population increased in size 219 percent from 1,156,000 to 3,690,000:

A population increase until 1891 at 3½ percent p.a. was very fast indeed, considerably above all other countries of the western world. Even though the workforce grew more slowly, the over-all rate of growth was still very fast by world standards. These were basic influences along with the growth of capital stock, the increase in land area used and changes in technology, behind the very high rate of growth in Australian gross domestic product.¹⁰

Ironically, New Zealand's average compound population growth rate during this same period at six percent was double that of Australia. It is not suggested that the New Zealand economy was of the same scale or concentration as the Australian economy, especially centres such as Melbourne or Sydney. However, it is undeniable that some of the central claims of the Butlin thesis on population-driven demand, urbanisation, changes in technology, increasing land use, infrastructure development, and expansion of local manufacturing hold true for New Zealand as well.

Indeed, on the basis of urbanisation alone, one might venture an argument that New Zealand's long depression was not such at all. Rather, it was an economy struggling to keep pace with possibly the fastest rate of population increase in the western world. In short, supernormal rates of population growth, coupled with their associated economic demand, produced an inevitable turbulence as capital markets, infrastructure, labour markets, and enterprise strove to keep pace. To call such tensions depression is to misstate the obvious. The dominant characteristic of the colonial economy between 1880 and 1910 (even between the so-called long depression years of 1878-1896) was expansion not retrenchment. And such an expansion, as we are about to examine, figured in the trading sector as much as in manufacture, or domestic mercantile activities.

¹⁰ Noel Butlin, *Investment in Australian Economic Development 1861-1900*, Australian National University: Canberra, 1972, p.13. Ville also echoes the opportunities that were open for entrepreneurs during this period of intense urbanization, especially in brewing, saw milling, retailing and shipping, see Ville, Simon, 'Business Development in Colonial Australia', *Australian Economic History Review*, 38:1 (1998), pp.30-32.

PRODUCT AND PROCESS INNOVATION IN EXPORT MARKETS

The following section considers the developments in the colony's export markets between 1880 and 1910. To begin, the main classes of export goods at the start and end of the period are summarised isolating some of the significant changes. It is argued that rather than a pastoral economy developing based on low-technology wool production, what emerged was a multi-product export economy based on primary processing and technological innovation. Technological innovation and changes in demand of export markets provided an opportunity for entrepreneurs to exploit, particularly if they timed their entry into the market shrewdly. And their advantage was greater if they were in a first mover position.

Developments in meat processing, gold extraction and the dairy industry are considered as examples of this innovation-led economic expansion. Paralleling this discussion is an investigation of what economist Carl Menger termed 'complementary goods.' In the exploration of gold one immediate 'complementary good' was the development of a domestic engineering industry. In the primary processing of refrigerated meat and dairy products, shipping was an obvious 'complementary good.'

EXPORT CLASSES

By 1865, imports made up 60 percent of total trade, yet by 1891, this figure had reversed and exports made up 60 percent of total trade; a basic structural change occurred in the economy over these 25 years. Yet, as much as the proportions of goods exported and imported changed, so did the actual classes of goods themselves.

In 1880, the chief exports of the colony were wool (£3,169,300), gold (£1,220,263), grains (£908,810), kauri gum (£242,817), and tallow (£146,535) shipped out in bulk and in near as raw form as possible. For instance, sixty-seven percent of the wool export went out packed as greasy, unwashed wool with the colony spending more on packaging for its wool clip than it earned on its entire tallow export.¹¹

¹¹ In total, £158,200 was spent on bags and sacks including corn sacks, flour bags and wool packs.

TABLE 4
RANK ORDER OF MAIN EXPORTS: 1880-1930

| | 1880 | | 1890 | | 1900 | | 1910 | | 1920 | | 1930 |
|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|-------------|-------------|-------------|
| Wool | £3,169,300 | Wool | £4,150,599 | Wool | £4,749,196 | Wool | £8,308,410 | Meats | £12,212,267 | Butter | £11,854,056 |
| Gold | £1,220,263 | Meats | £1,087,617 | Meats | £2,218,405 | Meats | £3,997,306 | Wool | £11,863,827 | Meats | £11,087,196 |
| Grains | £908,810 | Grains | £1,009,111 | Gold | £1,439,602 | Gold | £1,896,318 | Cheese | £6,160,840 | Wool | £7,664,362 |
| Gum | £242,817 | Gold | £751,360 | Grains | £1,032,355 | Butter | £1,811,975 | Sheep Skins | £3,060,212 | Cheese | £6,438,438 |
| Tallow | £146,535 | Flax | £381,789 | Butter | £740,620 | Cheese | £1,195,373 | Butter | £3,022,355 | Sheep Skins | £1,516,738 |
| Rabbit | £66,976 | Gum | £378,563 | Gum | £622,293 | Tallow | £756,841 | Tallow | £1,748,773 | Tallow | £683,571 |
| Timber | £51,957 | Timber | £190,641 | Tallow | £368,473 | Sheep Skins | £741,259 | Gold | £883,748 | Fruits | £669,397 |
| Meats | £38,591 | Tallow | £162,471 | Flax | £332,182 | Gum | £465,044 | Rabbit | £830,024 | Gold | £550,678 |
| Sheep Skins | £32,598 | Sheep Skins | £122,790 | Sheep Skins | £279,391 | Flax | £448,414 | Timber | £697,608 | Timber | £300,582 |
| Leather | £26,509 | Butter | £122,701 | Timber | £233,659 | Timber | £408,112 | Flax | £688,972 | Flax | £221,923 |
| Potatoes | £23,194 | Rabbit | £111,880 | Cheese | £229,111 | Grains | £318,340 | Gum | £556,756 | Gum | £189,635 |
| Flax | £15,617 | Flour | £87,368 | Leather | £112,867 | Coal | £259,562 | Grains | £210,812 | Coal | £186,210 |
| Butter | £8,373 | Cheese | £84,986 | Coal | £98,136 | Seeds | £113,568 | Seeds | £147,369 | Seeds | £166,221 |
| Seeds | £6,742 | Potatoes | £80,794 | Seeds | £93,006 | Rabbit | £32,773 | Coal | £128,509 | Rabbit | £142,249 |
| Fungus | £6,627 | Leather | £67,966 | Rabbit | £41,689 | Leather | £23,721 | Leather | £51,940 | Grains | £88,191 |
| Flour | £6,076 | Coal | £67,003 | Potatoes | £25,134 | Fungus | £16,447 | Fruits | £14,685 | Fungus | £11,446 |
| Coal | £5,979 | Seeds | £24,605 | Flour | £17,044 | Potatoes | £3,509 | Potatoes | £12,806 | Potatoes | £8,451 |
| Cheese | £1,984 | Fungus | £12,823 | Fungus | £7,192 | Fruits | £1,935 | Fungus | £8,413 | Leather | £5,332 |
| Fruits | £1,591 | Fruits | £778 | Fruits | £692 | Flour | £1,419 | Flour | | Flour | £57 |

Source: Statistics of New Zealand: 1880-1930

The above chart shows the major classes of exports in rank order at ten-year intervals between 1880 and 1930. What is evident is the diversification of export products and markets during this time. Only two export staples in 1880 were above one million pounds in value—wool and gold. By 1930, this had increased to five export classes over the million pound mark. And of the top five export classes in 1880, only one good (wool), remained in the top five export classes 30-years later. This too, was no longer in the top position but had been surpassed by exports of butter and frozen meats.

But one does not need to look fifty-years ahead to see the evidence of diversification. Even as early as 1910, there had been significant changes in the classes of exports. By 1910, only wool and gold remained in the top five export classes that had been present thirty years earlier. Meat exports (£3,997,306), butter (£1,811,975) and cheese (£1,195,373) had risen substantially as new industries in their own right, each of them largely the result of innovation.

Other significant export classes by 1910 were coal (£259,562), kauri gum (£465,044), flax (£448,414), and rabbit skins (£132,773).¹² By-products of pastoralism also rose in importance as energetic traders found markets for sheepskins and pelt

¹² Export of rabbit skins rose dramatically over the next ten-years and by 1920 totalled £830,024 in export receipts.

exports.¹³ While grain had dropped in value as an export over the period, the export of seeds was proving a lucrative market and had risen from £6742 in 1880, to £113,568 by 1910. Indeed the economy had changed from being a net importer of seeds to a net exporter.

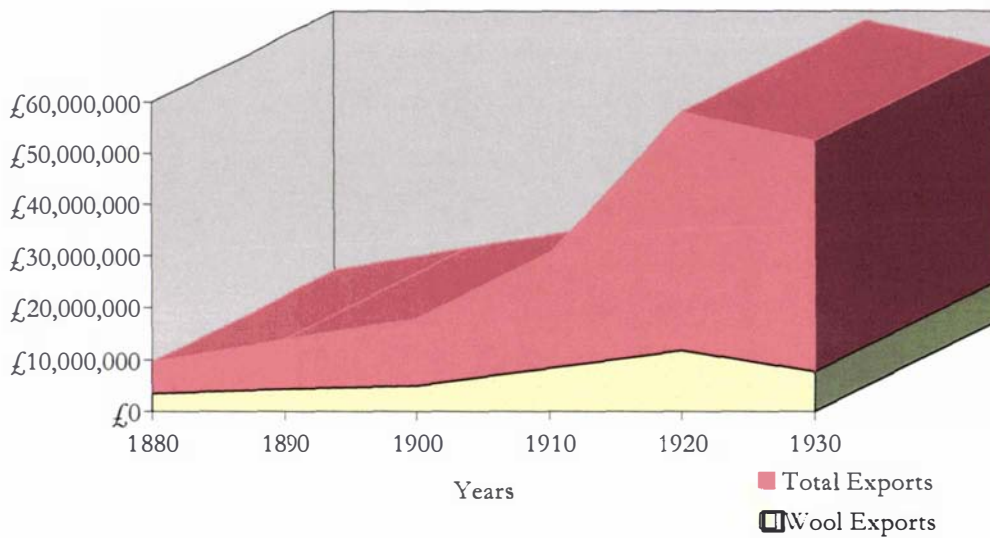
Also interesting to note were the products that remained *un-exported* to any significant degree. These included flour, potatoes, fruit, and most noticeably, timber. Though produced in large numbers, these items were consumed in the local economy due to demand from the resident population. For instance, timber exports in 1910 were £408,112 being a total of 81,988,227 super feet. Yet this was barely a quarter of the timber production in the economy, which was approximately 363,699,688 super feet at a wholesale value of £2,699,888.

THE EMERGING DIVERSIFICATION OF THE EXPORT TRADE

Wool was the top export earner in 1880 and still so by 1910. Yet the structural changes that occurred in the economy were not shown so much by absolute values but by considering the percentage movements in the total export account. For though wool as an export in absolute terms had doubled in value between 1900 and 1910, it had decreased in relative importance to other classes of exports.

¹³ In 1910, exports of skins totalled £741,259 and by 1920 it was as large as the butter export that year at £3,060,212.

FIGURE 10
 WOOL EXPORTS AS A PERCENTAGE OF TOTAL EXPORTS: 1870-1930

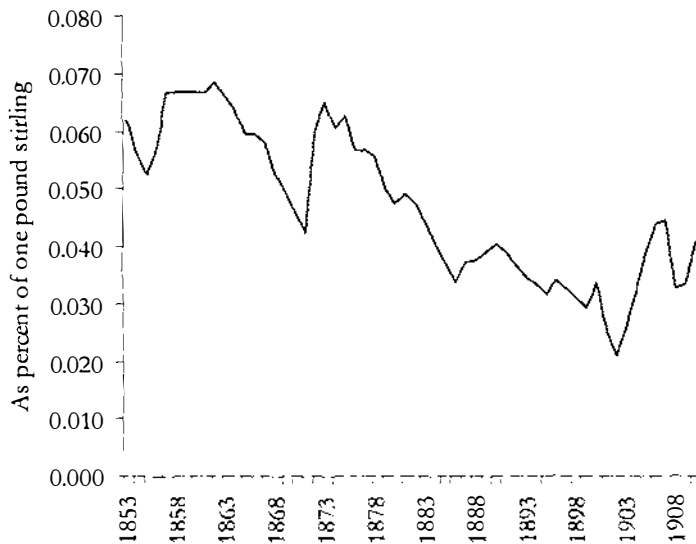


Source: Graph generated from figures in *Statistics of New Zealand 1880-1930*.

Wool exports emerged as a significant force in 1872 when for the first time they surpassed gold in exported value. By 1874, wool accounted for 54 percent of New Zealand's total export, and by 1876 it was 60 percent of the total value of exports (this particular year was the high point of wool's dominance of New Zealand's export mix). After 1876, wool began a steady decline in percentage share of New Zealand's total export earnings although the amounts of wool exported by value and volume were still large. By 1880, wool accounted for 50 percent of export earnings.¹⁴ By 1890, wool exports made up 42 percent of total export earnings and by 1910, this had fallen to 37 percent. Other goods such as frozen meat, cheese, sheep skins, and butter were growing at a faster rate, contributing an increasing proportion to the total export earnings and total trade. Indeed among the top eight exports, wool was the most volatile in terms of price, which could have a marked effect of the fortunes of the agricultural community.

¹⁴ The most important port of departure for wool exports was Dunedin. In total, Dunedin exported £1,644,951 worth of goods, amounting to 25 percent of the country's total exporting effort with two-thirds of this total being wool, (£928,915). In addition, significant amounts of gold (£452,391) went through the port, as did agricultural products like seeds and grasses (£127,057).

FIGURE 11
WOOL PRICE PER LB. 1853-1910



Source: Graph generated from figures in *Statistics of New Zealand 1853-1910*.

The most acute example of this occurred in 1895, when 116 million pounds of wool were exported from the colony at a value of £3.6 million. For the wool industry, this represented a 50% fall in value compared the returns generated 18 years earlier in 1877. Then, an export of only 64 million pounds of wool had earned £3.6 million. In cash generated and return on investment, 1895 was a pitiful result for the wool industry, revealing just how susceptible the industry was to large swings in overseas price. The only upside of such an effect was that when prices did strengthen (and if demand held), the industry would be well-placed to earn a significant return given the large volume of wool being produced.

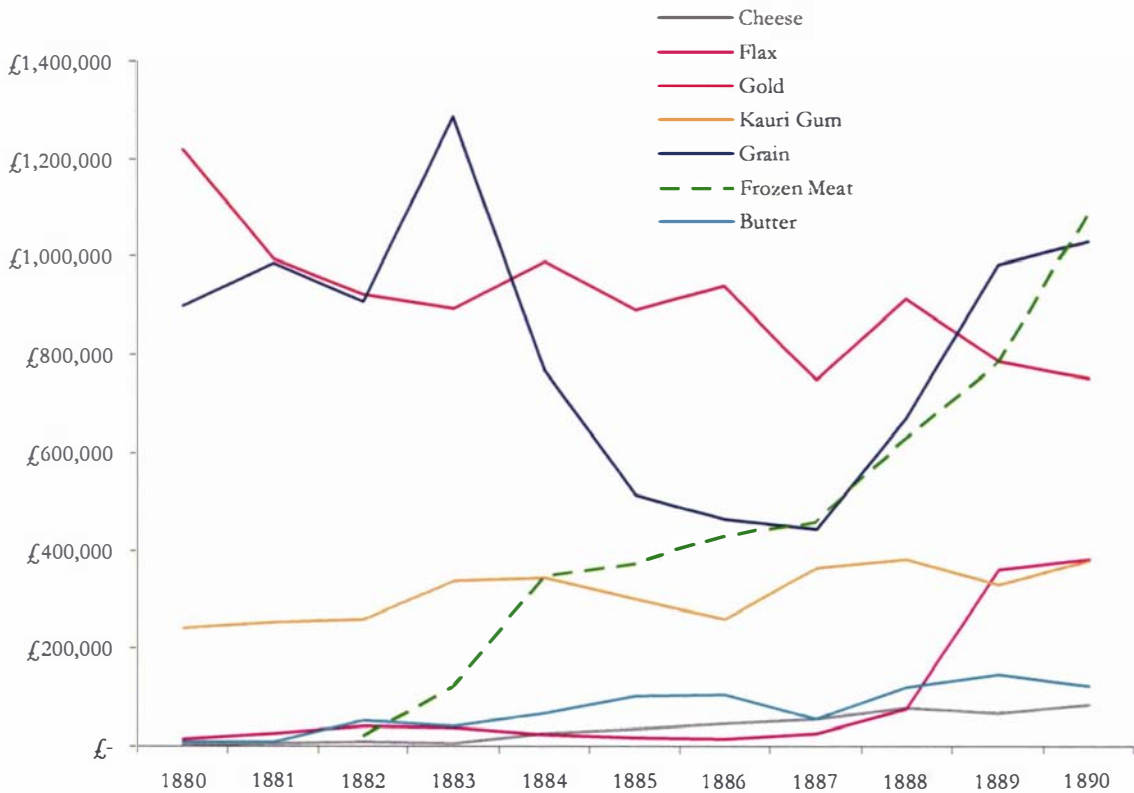
INNOVATION AND THE FROZEN MEAT INDUSTRY

Meat was the first of the export staples to benefit from the application of technological innovation. Historian James Belich pointed to the export of refrigerated meat in 1882 as a stimulus to what he had called the recolonisation period and his emphasis seemed justified. There was no other economic event in the 1880s that had such a profound effect on the basic structure of the economy and its orientation towards foreign markets.

Yet, in terms of enterprise and entrepreneurship, what stood out in the frozen-meat industry was not just the size of the innovation but the dramatic rate at which the

industry expanded and encouraged new enterprise. In 1880, £38,591 of potted and preserved meats was exported. Ten years later in 1890, £1,223,799 of preserved and frozen meats was exported—a 3000 percent increase in the value of trade in what had become the colony’s second largest export industry. The following graph shows this pictorially. The wool export has been removed from the graph so as to make the scale more uniform amongst other export classes.

FIGURE 12
EMERGING EXPORTS: 1880-1890



Source: Graph generated from figures in *Statistics of New Zealand 1880-1890*.

The main trends from the above graph are easily recognisable. The export of gold and grain stand out as the two dominant staples at the start of the period. Exports of kauri gum were also of some importance while at the bottom of the graph are a cluster of insignificant performers; meat, butter, flax and cheese.

As the decade progresses the various export industries enjoyed different fortunes. The export of gold declines throughout the 10-year period, while grain exports show a

sharp fall coupled with an upswing at the end of the decade.¹⁵ Exports of kauri gum showed a steady demand and slow upward momentum. The most striking advance was that of frozen meat exports, which rose from nothing in 1882, to over a million pounds in export earnings eight years later. By way of comparison, flax, butter, and cheese that were all at similar positions on the graph to frozen-meat exports in 1882, were at vastly different points eight years later.

The development of the frozen meat trade in New Zealand was instigated by two ambitious entrepreneurs, William Davidson and Thomas Brydone. They were not the first to experiment with the export of frozen meat on the world market. The Australians, Americans, and Argentineans had already beaten them by two years or more. But the process was not perfected. In bringing the necessary technology together at Port Chalmers in Dunedin, the pair were taking a very real risk in what looked to be an exciting but uncertain market.

Preparations for the first export took place over a two-year period. In 1880, Davidson, the general manager since 1879 of the New Zealand and Australian Land Company, negotiated with Scottish engineering company, Bell, Coleman and Co., in Glasgow for suitable refrigeration equipment. He also convinced the Albion Shipping Company to outfit out one of their fastest ships, *Dunedin*, with this innovative equipment. Simultaneously in New Zealand, Thomas Brydone, a manager with the New Zealand and Australian Land Company, began to construct the infrastructure needed to effect the scheme. He planned and built a specially-constructed slaughter house at Totara, North Otago, from which meat would be despatched in insulated rail wagons to Dunedin and the port.¹⁶

The first setback came quickly. While the first shipment was being loaded, a component in the freezing machine broke down and the first 641 carcasses of frozen mutton had to be sold locally. The *Dunedin* was dutifully repacked and despatched for London on February 15 1882. Ninety-eight days later, Davidson, who had sailed independently, was waiting on the London Docks for his new venture to berth and inspect the hold. He was not disappointed, and after dispensing the cargo of over 4500 carcasses for a sound profit, twice what he would have netted on the home market, he

¹⁵ By 1887, the grain industry had suffered a 60 percent drop in value. The reasons for this are discussed in a later chapter.

¹⁶ For an in-depth description of the developments behind the first shipment see: Cuff, Martine E., *Totara Estate: Centenary of the Frozen Meat Industry*, Wellington: New Zealand Historic Places Trust, 1982, pp.31-54.

must have wished he had a dozen such ships on the seas heading towards the London docks. Assembling such an armada would take time, but events probably happened faster and on a greater scale than Davidson or Brydone could have anticipated. Even while the *Dunedin* was plying her way towards Britain, another gathering of eager investors, farmers and projectors met in Invercargill to enter the industry, forming the Southland Frozen Meat and Produce Export Co. Ltd. In Auckland, a specially built freezing unit was constructed at the Auckland docks by the Auckland Harbour Board; within nine months a cargo of 9000 carcasses was despatched by eager promoters.¹⁷

After hasty meetings in the provinces, a group of frozen meat companies were formed around the country. For some the frozen meat trade offered the possibility of vertical integration, allowing them to capitalise on existing plant and machinery in the supply chain. In Auckland, the brothers, William and Richard Hellaby, turned their interests towards the frozen meat trade and their firm expanded considerably as a result. Their first shop opened in 1873, but by 1900 they were arguably the largest butchery firm in the colony. Two hundred staff worked in their retail premises, slaughterhouse, boiling down works, bone mills, fellmongery, and freezing and tinning works.

Wellington butcher, James Gear, provided a similar example to the Hellaby brothers. He too was well placed to enter the new market. Gear, the son of an English butcher, had been apprenticed into the trade, immigrating to New Zealand by 1861.¹⁸ He opened his first butcher's shop in Wellington four years later. Gear expanded his trade by acquiring other Wellington butcher's shops, and by 1873 he began what would be an increasing move into vertical integration. He constructed a preserving plant to enable the distribution of meat into outlying districts, and a year later in 1874 opened slaughterhouses and boiling down works at Petone.

In November 1882, six months after the *Dunedin* landed at the London docks, Gear forming the Gear Meat Preserving and Freezing Company, bringing in the capital and talent of other Wellington businessmen, P.A. Buckley, W.H. Levin, John Duthie, and Nicholas Reid. Of this group, Levin and Reid were strategic choices by Gear. While Gear had substantial experience in meat processing he had no knowledge of international

¹⁷ Lind recounts some of the enthusiasm among other projectors. See Lind, Clive A., *The Keys to Prosperity: Centennial History of Southland Frozen Meat Ltd.*, Invercargill: Southland Frozen Meat Ltd, 1981, pp.47-63.

¹⁸ *Cyclopedia of New Zealand*, vol.1, Wellington, pp.704, 826-827.

trading practices. This was something that merchants Levin and Reid had in abundance.¹⁹

The venture was a success. By the late 1890s, Gear Meat Preserving and Freezing Company employed 250 staff over five departments: the engineering and freezing department, the boiling down works, the fellmongery department, the stock and slaughtering department, and the meat preserving and canning department. In addition, Gear had a manure plant employing another 20 staff. Gear's works were capable of freezing 16,000 sheep per day and storing up to 3000 carcasses.²⁰

Gear and the Hellaby brothers were quickly joined by others also keen to enter this new market. Shares placed through joint stock company floats were eagerly subscribed by merchants, farmers, promoters, financiers, industrialists, and merchants. Over the next two years a cluster of local initiatives emerged. This included firms, such as the New Zealand Refrigerating Company (1881), the Wellington Meat Export Company (1881), the Southland Frozen Meat and Produce Export Company (1882), the Canterbury Frozen Meat and Dairy Produce Export Company (1882), the Hawke's Bay Meat Export Company (1882), New Zealand Frozen Meat and Storage Company (1883), the Otago Meat-Freezing and Produce Company (1883), the Christchurch Meat and Produce Freezing Company (1883), the Marlborough Freezing Company (1883), the South Canterbury Refrigerating Company (1883), the West Coast Meat and Produce Export Company (1883) and the Wellington Meat-preserving and Refrigerating Company (1883).²¹ Within three years, the frozen meat trade attracted significant capital investment, directed into the building of processing and storage facilities. Put together, combined share capital of the firms listed above was £535,000, £188,883 greater than the

¹⁹ Levin in particular. William Hort Levin started in his father's mercantile business in 1864. By then, Levin and Co., had been established in Wellington for over 20-years. Started in 1841, by Nathaniel Levin, himself the son of a Jewish merchant, the firm had begun importing soft goods and by 1843 started exporting. By the 1860s, when Levin's son William entered the firm it had expanded to include a large wine and spirit business, wool exports, insurance agencies, estate management, loan company investments through New Zealand Trust and Loan Company (from 1866), and shipping agent for Shaw Savill and Co., since 1862. It was in this regard that the connection with the Gear meat company was favourable. Levins and Co., had extensive knowledge of agency arrangements, London markets and the cost and supply of shipping routes. The *Dunedin* was the first refrigerated vessel of the Shaw Savill and Albion Company (Shaw Savill and Co., and the Albion Company amalgamated at the end of 1882). See Gore, Ross, *Levins 1841-1941: The History of the First Hundred Years of Levin and Company Limited*, Wellington: Levin and Company, 1956 for a list of agencies handled in the firm by 1883, pp.64-65.

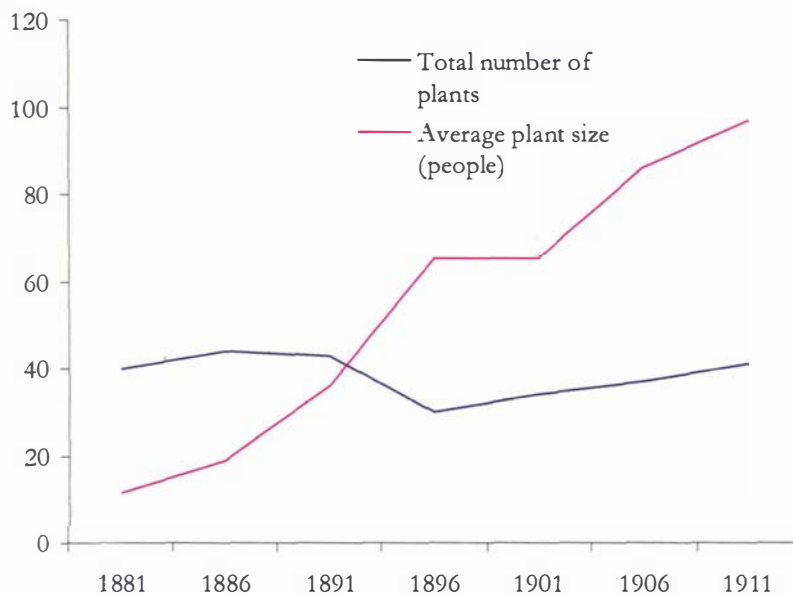
²⁰ *Cyclopedia of New Zealand*, vol. 1, Wellington, pp. 826-827.

²¹ *Statistics of New Zealand*.

increase shown for the frozen meat industry in the industrial statistics during the same period.²²

In 1881 there had been 40 meat works in the colony. These works employed 465 people with a total capital investment of £96,845. Five years later, there were only 44 works, but numbers employed in the industry had nearly doubled and capital invested in plant machinery and buildings had risen fourfold to £442,962.²³ The frozen meat trade was capital intensive, with the trend over the period toward larger plants employing larger staff.

FIGURE 13
FACTORY SIZE FROZEN MEAT INDUSTRY: 1881-1911



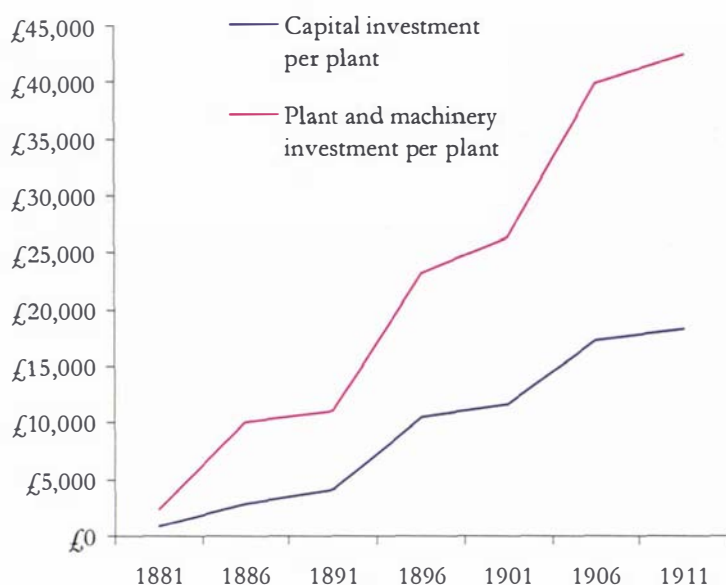
Source: Generated from *Statistics of New Zealand: 1881-1911*

The industry developed so rapidly that the problem for the meat freezing companies was not securing enough stock to send to England, but finding available space on the existing ships. In 1885, for example, the Southland Frozen Meat Company was unable to lure a vessel to Bluff and had to send carcasses by rail to Christchurch.

²² The value reported in the census statistics was for fixed capital in land and buildings, plant and machinery. It did not show other capital, which would always be needed in commercial activity including working capital to finance day-to-day operations, capital held in stock, raw materials and work in progress.

²³ It sparked a provincial if not national cooperative effort. The first national conference of meat companies was held in Christchurch on 8 August 1884. Aside from setting quality standards for the preparation and transportation of frozen meat, they also secured reduced shipping rates.

FIGURE 14
CAPITAL INVESTMENT FROZEN MEAT INDUSTRY: 1881-1911



Source: Generated from *Statistics of New Zealand: 1881-1911*

EARLY DIFFICULTIES

There was more to gaining a foothold in a new market than just forming a company, and the export of frozen meat did not go ahead without some early difficulties. ‘There is a general all round objection in England,’ wrote one correspondent, ‘to the introduction of any New Zealand produce. Buyers do not like going outside of their ordinary groove.’²⁴ Meat was of varied quality upon delivery, and the first shipment from Southland was derided at home and abroad for sending old ewes in a deplorable state. High returns were not guaranteed with meat prices on the London market favouring the fresh article, rather than frozen stock. Any aversion, however, was not lost on some English butchers, who purchased cheaper frozen New Zealand meat and sold it at premium prices disguised as English mutton.

New Zealanders in London who visited Smithfield market, or agents of New Zealand firms, were quick to communicate their impressions to newspapers back home. In early 1884, the *Doric* berthed in London and discharged cargoes of frozen meat, butter, and cheese. Charles Pharazyn, who was in London at the time, wrote that the condition of the meat was equal to English meats and addressed the question as to why

there would be a price difference of up to 3d per pound in the English markets for frozen New Zealand meat. Two reasons occurred to Pharazyn; firstly, that it was difficult for a new innovation in such great supply to find new channels of consumption; secondly, that the meat was being bred too fat for the English palate compared to English mutton.²⁵

Detractors were also found in the home markets. In Auckland, one writer to the *Herald* was clearly incensed about the idea of despatching frozen meat from the port of Auckland. He reprimanded the promoters, pointing to the difficulties being experienced by the Australian Frozen Meat Company: 'Now, this company has the cream of squatting influence at its back, having on its share list the most prominent runholders. Everything is in its favour—wealth, supply unlimited, perfect means of transit. In writing this I desire those about me to consider whether we are not doing a very foolish thing to try to struggle into the trade ...'²⁶

Persist they did, and it was evident from the sheer quantities of frozen meat being shipped that significant capital and enterprise was being directed towards this new industry. In 1882, 762 tons of frozen meat was exported from New Zealand. In 1883, it was over five times this amount at 4300 tons. One correspondent wrote from London in December 1883 applauding the launch of the steamers, *Ionic*, *Doric*, and *Tongariro* into the meat trade. They were needed; in 1884 the frozen meat trade tripled to over 12,000 tons per year.

As to the condition of the cargoes and the market in general the correspondent remarked, '...it is quite clear that the New Zealanders have secured by their enterprise a position of superiority in regard to the frozen meat trade which cannot easily be challenged. Not only are their cargoes of meat, as a rule, superior in condition to those arriving from the Australian colonies, but New Zealand sends four or five sheep for every one sent from all the other colonies put together.'²⁷ As the correspondent looked to the next year, he expressed some anxiety that the distribution channels in England might not be able to cope with the expected numbers of New Zealand mutton, which

²⁴ Christchurch *Press*, Thursday January 17 1884, p.3.

²⁵ *ibid.*, Friday, January 25, 1884, p.3. Pharazyn also stressed the need for the shipping companies and freezing companies to reduce their charges to make the trade more profitable for the farmers.

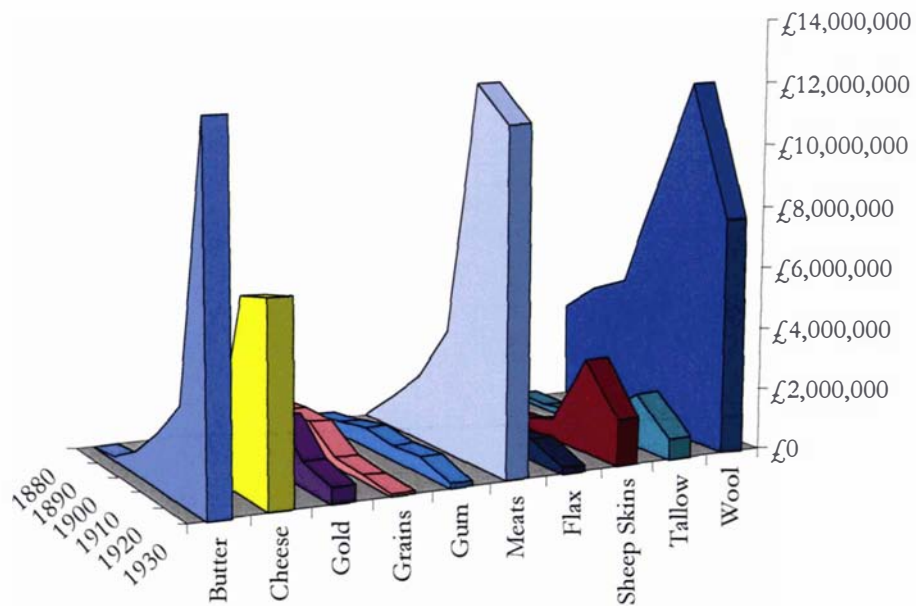
²⁶ *New Zealand Herald*, Friday June 1 1883, p.3. By June 1883 Auckland had shipped its first frozen meat cargo of 8000 carcasses, the Harbour Board having made provision at the Auckland docks of the necessary facilities.

²⁷ Christchurch *Press*, Wednesday February 6, 1884, p.3.

looked to double on the previous year's tally of 250,000 carcasses. To dispose of this amount of stock, provincial centres in Britain would also have to be supplied as well as metropolitan areas. Even as early as 1889, New Zealand promoters had assumed the prime mover position in the world market for frozen meat. Figures provided by Clive Lind, suggest that by 1889, New Zealand had sent over three million carcasses to London, compared with two million from the River Plate and 600,000 from Australia.²⁸

Predictably, frozen meat continued its climb in importance as an export staple through out the 1890s. In 1890, almost 50,000 tons of frozen meat was shipped to Britain, and ten years later it was almost 100,000 tons. By value, the industry also doubled. It exported just over £1 million of frozen meat in 1890 and over £2 million by 1899—meaning that that price had remained stable in the face of rapidly increasing supply. By then, the trade had reached such proportions that government were anxious to involve themselves in the industry.

FIGURE 15
MOVEMENT OF MAJOR EXPORT CLASSES AT 10-YEAR INTERVALS: 1880-1930



Source: Generated from *Statistics of New Zealand: 1880-1930*

²⁸ See Lind, Clive A., *The Keys to Prosperity: Centennial History of Southland Frozen Meat Ltd.*, 1981, Southland Frozen Meat Ltd.

The Premier while on a state visit to England in 1897 to participate in the celebrations surrounding Queen Victoria's sixtieth year on the throne, visited the English shipping companies. Directly, he informed them that unless a reduction in charges was forthcoming the government would intervene. Exactly what he had in mind is not known, but nor did the shipping companies linger to find out, and a drop in freight rates was soon advised. By 1900, the export of meat had increased another million pounds in value to £2,218,405 (See Table 4). It rose by almost two million pounds over the subsequent ten years to 1910 (£3,997,306). By 1920, this figure had tripled and meat exports that year valued at £12,212,267, eclipsed wool as the dominant export staple. The biggest structural change in the New Zealand export economy was now complete. Innovation driven export growth, in what Belich termed the 'protein trade', had usurped wool's leading position.

EXPLANATIONS FOR GROWTH

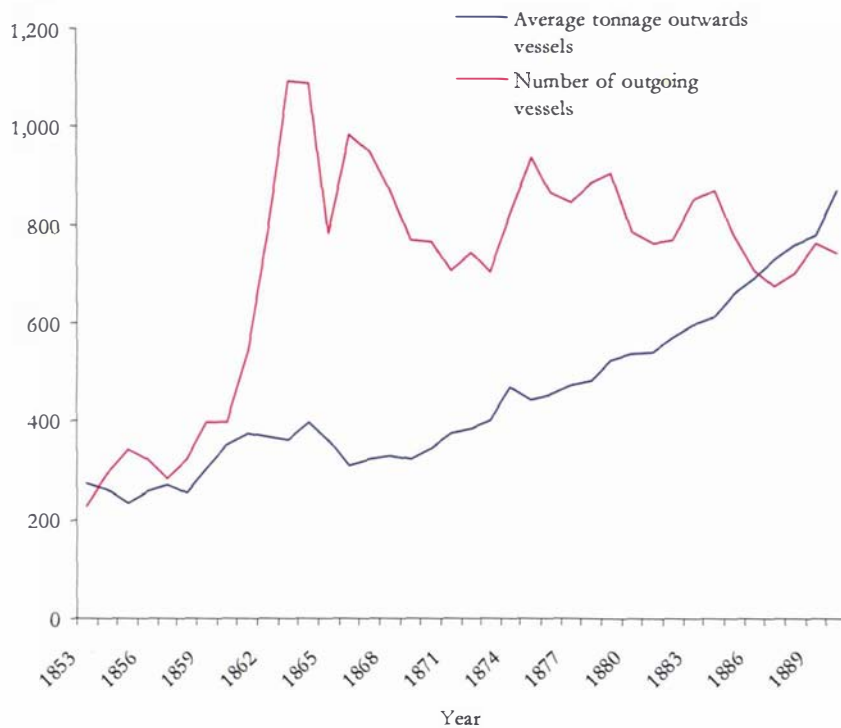
One of the questions that might be asked of the frozen meat industry is: How did it manage to expand with such speed? Certainly farmers saw it as a boost to both productivity and prices as they could export all year round, generally achieving superior prices on the English market to those achieved at home. In addition, the frozen meat trade benefited from an existing distribution network. Firms, such as the New Zealand Loan and Mercantile Agency Company Ltd., National Mortgage and Agency Company of New Zealand, and Miles and Company already had established agents and branches in New Zealand, with willing buyers of colonial produce in the United Kingdom. These firms merely added another class of goods to their established list as the frozen meat trade grew. New Zealand promoters of frozen meat did not have to develop entirely new channels of distribution; rather, they could concentrate their efforts on refining the product and processing. The British consumer played a significant part in accepting this innovative new product, sustaining demand for colonial suppliers. Visionary support for the expansion of the frozen meat trade was also found among shipping companies.

SHIPPING AND THE DEVELOPMENT OF INFRASTRUCTURE

As economist Carl Menger asserted, the launch of an innovation in the market would spur innovation in what he termed 'complementary goods.' For the frozen meat trade, the beneficial economic effects were not just the development of processing plants and profitable returns to company projectors and farmers, but also in the other activities that were spin-off activities from the initial innovation. Some were goods related to the

production of the initial innovation, such as the production of wraps for meat carcasses. It was an industrial activity that was not large, but nevertheless one that was not needed prior to the initial innovation. Other complementary goods could emerge in the provision or delivery of the new innovation to market.

FIGURE 16
SHIPPING TONNAGE AND OUTGOING VESSELS: 1853-1890



Source: Generated from *Statistics of New Zealand: 1853-1890*

The infrastructure of the frozen meat trade—shipping companies, agency firms, warehousemen, insurance firms, retail and commercial outlets, all increased in scale and scope as import and export trade in the colony intensified.²⁹

Shipping companies, in particular, embraced the innovation in frozen meat. Speed was essential for transporting frozen items long distances, and although the iron clipper *Dunedin* was fast, she was not as fast as the new steamers being launched on

²⁹ The number of insurers and their international connections give some indication of the sophistication in this area and among the 38 insurance companies trading in Dunedin in the 1880s were the National Insurance Company, South British Insurance Company, Magdeburg Fire Insurance Company of Hamburg, New Zealand Insurance Company, Victoria Insurance Company, Transatlantic Fire Insurance Company, and the Australian Alliance Assurance Company.

international routes. In this respect the New Zealand Shipping Company was well placed to get some of this new business. Founded in Christchurch in 1877, the line was initially under contract to the New Zealand government to bring out immigrants from the United Kingdom. Following the success of frozen meat exports, the company took a significant risk. While refrigeration was in its infancy, it ordered five steamers from a Glasgow shipbuilding firm capable of transporting between 12,000 and 15,000 carcasses. The gamble paid off. Given that steamers could make the trip between England and New Zealand in almost half the time that the iron clippers could, it was inevitable that the New Zealand Shipping Company would soon dominate the trade. The Company commenced its direct monthly steamers to the United Kingdom in 1883, and by 1902, it had 16 ships working the route. For other firms to have a share of this new market, they would have to upgrade their fleets at substantial cost. They did. Shaw Savill merged with the Albion line in 1883, just as the New Zealand Shipping Company began to work the frozen meat trade. Quick to respond to a colonial competitor in a market they had previously monopolized, the English firm commissioned seven large cargo steamers for the New Zealand trade, and these were then followed by a raft of other ships, the *Ionic*, the *Doric*, *Tainui*, *Arawa*, and *Victory*.

The English firm of Turnbull Martin and Co., who ran the Shire line of steamers, launched the specially built *Elderslie*, just two years after the Dunedin's voyage. At 300ft long, *Elderslie* could carry in excess of 8000 carcasses. She was one of six steamers the company ran. They called at Townsville and Brisbane, before taking on wool and dairy produce from New Zealand ports bound for Rockhampton. In London, storage facilities for frozen meat were increased and further ships were fitted with freezing plants, such the *Arawa*, *Kaikoura*, and *Mataura*—with a capacity of 7000 carcasses each.

The Tyser Line, an English company with the New Zealand head office in Napier, started working the New Zealand route later than any of the other major shipping firms though showed no hesitation in committing sizeable resources to the frozen meat trade. By 1887, its ships, such as the *Balmoral Castle*, were carrying cargoes of 22,000 carcasses; only one of the 13 steamers the company had working the New Zealand route.³⁰

³⁰ Lind records that in Liverpool and London by 1889 storage facilities for frozen meat had a capacity of 400,000 carcasses, smaller facilities in Glasgow, Birmingham and Manchester added another 300,000 to that total. 10 Sailing ships and 16 steamers were servicing the frozen meat trade between New Zealand and Britain with an overall capacity of 1.2 million carcasses. See p.85.

In sum, the process of capital attraction that was evident among producers of frozen meat products repeated itself in the shipping industry; evidence of the flow on effect of innovation-led economic development. This movement of resources was aided by the technological improvements in steam shipping which assisted the movement of frozen produce.

The technological improvements wrought in steam transportation changed the nature of coastal shipping around the colony, prompting new entrants to this market too. Merchants Levin and Company ran small river steamers out of Foxton, while the Anchor Steam Shipping Company traded its four steamers out of Nelson plying the West coast of the South Island. In Wellington, ironfounder Charles Segar used his ships in the Wellington Steam Packet Company to work the route between Wellington and Nelson. Similarly, in Auckland, J.J. Craig used his steamers to move coal and cargoes around nearby coastal regions, but his main competitor, the Northern Steamship Company, quickly dominated the northern coastal trade through sheer capacity. Though they only started in 1881 with six steamers, by 1889, the Northern Steamship Company had added another three ships and by 1901 they had 28 vessels on the water.³¹

Such developments were dwarfed by the capital applied to the Dunedin-based, Union Steam Ship Company. Starting only six years earlier in 1875 with five steamers, the projectors were headed on a course of aggressive expansion through constant recapitalisation of the company. Within three years of starting, James Mills and his fellow directors had added another 14 ships, working the coastal and inter-colonial trade with Australia. Over the next five years, another 10 ships were added as vessels increased in size and reach. Six more steamers were added in the two years to 1885, and by 1904, the firm had 53 steamers working the Australasian, South Seas, India, and Canada shipping routes with over 2,600 staff.³² Mills' domination of this trade did not go unchallenged; the Melbourne-based firm, Huddart, Parker and Co., put 17 steamers on the Australasian shipping routes from 1893.

³¹ *Cyclopedia of New Zealand*, vol.2, Auckland.

³² See Duncan Haws, *Union Steamship Company of New Zealand*, Pembroke: TCL Publications, 1997; Gordon McLauchlan, *The Line that Dared: a History of the Union Steam Ship Company, 1875-1975*, Auckland: Four Star Books, (1987).

PROCESS INNOVATION AND THE GOLD INDUSTRY

Gold was the second export staple to benefit from the effects of technological innovation. The alluvial gold rushes of the 1850s in Australia and 1860s in New Zealand triggered substantial population increases to these territories. In New Zealand, Otago initially benefited from the gold mania as immigrants and speculators poured into the region by the thousands. Gold was exported to either London or Melbourne for minting and exports increased dramatically. Within three years of the 1861 strike in Otago, gold exports had risen to over half a million ounces per year, remaining at this level until the early 1870s.

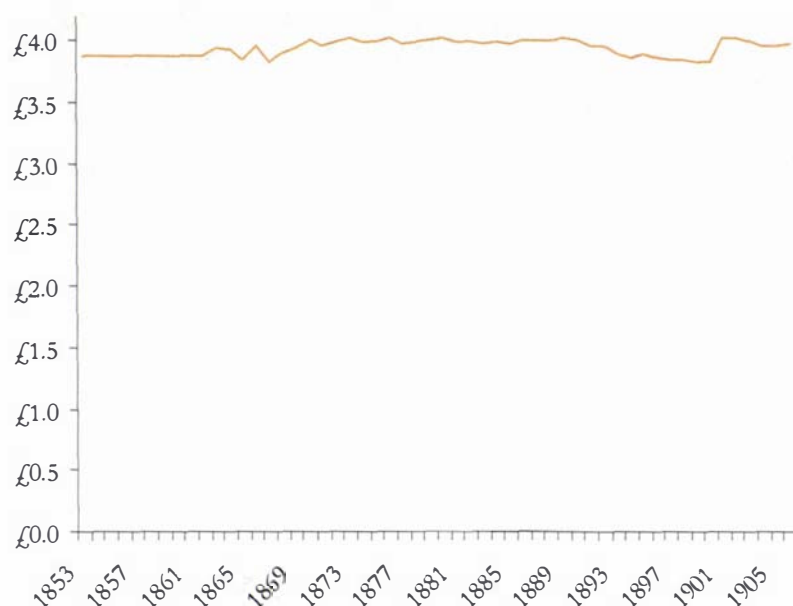
The high-point in gold exports occurred in 1871, when 730,000 ounces were exported at a value of £2,787,520. After this, output and returns fell away until 1880, when yearly exports dropped to under 300,000 ounces. While the incentive to commit such large amounts of capital and resources to gold production had been the advent of technological innovation, part of the explanation also lay in the price of gold.

Whereas the price of wool was subject to swings in value, gold provided more certain returns for those willing to divert capital and resources to technological exploration³³ As the graph below depicts, the price between 1880 and 1910 only moved between £3 16s and £4.³⁴

³³ The export prices for kauri gum, butter, cheese, and frozen meat were also relatively stable. Frozen meat showed the least price elasticity of any export staple in the 1880s.

³⁴ By way of comparison, the average percentage change in price per year between 1880 and 1900 for wool was almost -2 percent; for gold it was -0.2 of 1 percent.

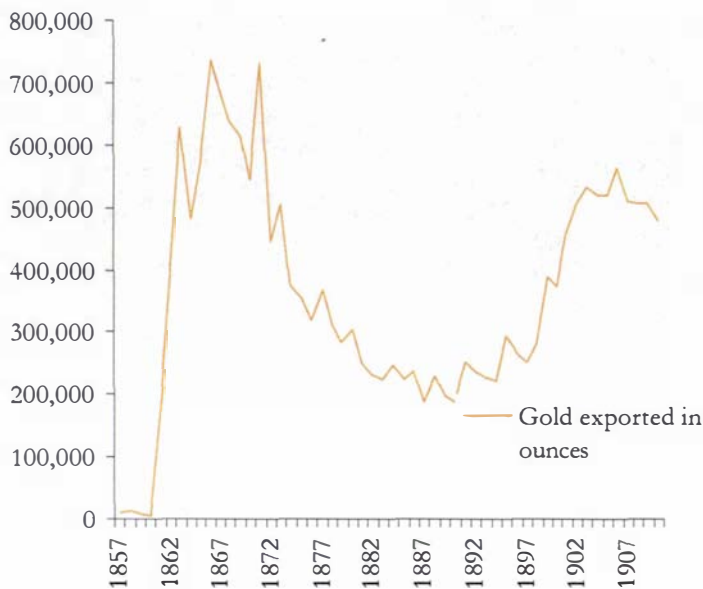
FIGURE 17
GOLD PRICE PER OUNCE: 1853-1910



Source: *Statistics of New Zealand: 1853-1910*

From the mid-1880s, encouraged by gold discoveries in the Coromandel near Auckland, a second wave of gold-fever erupted. This time, however, what eventuated was driven by technological innovation in the form of the hydraulic stamper battery. These batteries first crushed quartz into grains the size of sand then released the gold using chemical processes. In the 1881 census there were no hydraulic gold mining and dredging operations returned. By 1886, there were 124 operations employing over 600 people with over £220,000 of capital invested in plant and machinery.

FIGURE 18
GOLD EXPORTS IN OUNCES: 1857-1910



Source: Generated from *Statistics of New Zealand: 1857-1910*

Auckland promoters, in particular, rushed to divert capital to the goldfields. Between 1886 and 1890, eighty joint-stock companies were registered in the Auckland province for the purposes of gold and silver mining and quartz-crushing.³⁵ Some, such as the Paroquet Gold-mining and Quartz-crushing Company (1887), the May Queen Gold-mining Company (1889), the Occidental Gold-mining Company (1890), and the Carbine Gold-mining Company (1890) were significant concerns each with a nominal capital of £25,000. Others were smaller, such as the Caledonian Gold-mining Company (1889) with a capital of £6,000, the Freedom Gold-mining Company (1890) with a capital of £6,000, the Midas Gold-mining Company (1890) with a capital of £6,250, and the Perseverance Gold-mining Company (1890) with a capital of £9,000.³⁶ However, individual companies disguise the enormous scale of this enterprise. The combined share capital of these 80 new firms was £1,100,475.³⁷ In total, the capital in these new firms was equivalent to one fifth of all the industrial capital in the colony as recorded in the

³⁵ A full list of these firms is included in Appendix F.

³⁶ These figures and the years of incorporation are sourced from various years in the *Statistics of New Zealand*.

³⁷ In 2003 dollars this was equivalent to almost half a billion dollars (\$440 million).

1886 census.³⁸ Not surprisingly the *New Zealand Herald*, reported daily on the production figures from the gold batteries.

TABLE 5
GOLD EXPORTS: 1857-1910

| Year | Quantity in Ounces | Value | Year | Quantity in Ounces | Value |
|------|--------------------|------------|------|--------------------|------------|
| 1857 | 10,436 | £40,442 | 1884 | 246,392 | £988,953 |
| 1858 | 13,533 | £52,443 | 1885 | 222,732 | £890,056 |
| 1859 | 7,336 | £28,427 | 1886 | 235,578 | £939,648 |
| 1860 | 4,538 | £17,585 | 1887 | 187,938 | £747,878 |
| 1861 | 194,234 | £752,657 | 1888 | 229,608 | £914,309 |
| 1862 | 410,862 | £1,591,389 | 1889 | 197,492 | £785,490 |
| 1863 | 628,450 | £2,431,723 | 1890 | 187,641 | £751,360 |
| 1864 | 480,171 | £1,857,847 | 1891 | 251,161 | £1,007,172 |
| 1865 | 574,574 | £2,226,474 | 1892 | 237,393 | £951,963 |
| 1866 | 735,376 | £2,844,517 | 1893 | 227,502 | £915,921 |
| 1867 | 686,753 | £2,700,275 | 1894 | 221,614 | £887,865 |
| 1868 | 637,474 | £2,504,326 | 1895 | 293,493 | £1,162,181 |
| 1869 | 614,281 | £2,362,995 | 1896 | 263,694 | £1,041,428 |
| 1870 | 544,880 | £2,157,585 | 1897 | 251,647 | £980,204 |
| 1871 | 730,029 | £2,787,520 | 1898 | 280,175 | £1,080,691 |
| 1872 | 445,370 | £1,730,992 | 1899 | 389,570 | £1,513,180 |
| 1873 | 505,337 | £1,987,425 | 1900 | 373,614 | £1,439,602 |
| 1874 | 376,388 | £1,505,331 | 1901 | 455,558 | £1,753,784 |
| 1875 | 355,322 | £1,407,770 | 1902 | 507,852 | £1,951,426 |
| 1876 | 318,367 | £1,268,559 | 1903 | 533,314 | £2,037,832 |
| 1877 | 366,955 | £1,476,312 | 1904 | 520,323 | £1,987,501 |
| 1878 | 311,437 | £1,244,190 | 1905 | 520,485 | £2,093,936 |
| 1879 | 284,100 | £1,134,641 | 1906 | 563,843 | £2,270,904 |
| 1880 | 303,215 | £1,220,263 | 1907 | 508,210 | £2,027,490 |
| 1881 | 250,683 | £996,867 | 1908 | 506,381 | £2,004,799 |
| 1882 | 230,893 | £921,664 | 1909 | 506,371 | £2,006,900 |
| 1883 | 222,899 | £892,445 | 1910 | 478,286 | £1,896,318 |

Source: *Statistics of New Zealand 1853-1910*

A further burst of enthusiasm for gold mining was related to the introduction of the cyanide process.³⁹ This process added cyanide to crushed ore dissolving silver and gold into solution, which could then be collected and melted into bullion. The Crown mine, outside Waihi, on the banks of the Waitawheta Stream, was the first mine in the

³⁸ Some of this difference in total capital would likely be accounted for in working capital, as opposed to fixed capital that the census records.

³⁹ A description of the early use of the Cassell process and dry and wet-crushing can be found in McAra's account of the Martha Mine. See McAra, J.B., *Gold Mining at Waihi: 1878-1952*, Waihi: Waihi Historical Society, 1978, pp.89-94.

world to trial the Cassel cyanide process. The American-based Cassell Company took a percentage of the profits in payment for the use of its process. Encouraged by the success of the experiments, the company erected their own factory in 1890 to work the mine and other claims. New Zealand Crown Mines Ltd., constructed its first crushing plant in 1889 and by 1896 had constructed two considerably larger plants. Overall, between 1891 and 1896, capital investment in the hydraulic gold mining industry increased 228 percent and employment rose 50 percent, adding another 249 jobs. The rate of increase in job growth was 3.8 times faster than the population growth rate.

The hills of the Karangahake Valley outside Waihi reverberated with industry. Trains delivered quartz from the mines, new claims were blasted out of the hillsides, stamp-batteries pounded through the day. Each stamp head weighed 500 lbs and stamped at a rate of 110 stamps per minute, the noise could be heard a mile away. It did not deter entrepreneurs. In 1895, a 40-stamp battery was constructed with a cyanide plant to work the Ivanhoe claim, a 50-stamper plant at the Talisman claim in 1899, and a colossal 100-stamper battery erected at Waikino to work the Waihi mine of the Waihi Gold-mining Co. This was in addition to the 90-stamp battery in operation at the Waihi mill itself.⁴⁰

Where the plant and machinery for such industrial development came from was equally vital in economic development terms. The expansion of a local engineering industry was aided from the innovation in hydraulic gold mining. The development of the firm A. and G. Price was one such example. Brothers Alfred and George Price had both had served engineering apprenticeships at the woollen-milling town of Rodborough, England, before immigrating to New Zealand in 1868. With limited capital, they rented a small shed and stable in Onehunga as their first engineering shop. Being engineers, the pair were not only able to design and build their first product, a bench-mounted flax dressing machine, but they could also build their own six-horsepower steam engine to drive their various lathes and machinery, minimising their initial needs for capital.⁴¹

In the first 12 months of production, the Price brothers were able to sell 100 of their patent flax dressing machines and employ six staff. Within two years of founding

⁴⁰ At the turn of the century the Waikino battery was the second-largest stamp battery in the world. McAra, *Gold Mining at Waihi*, p.201.

⁴¹ Vennell, C.W., *Men of Metal: The Story of A. and G. Price Ltd. 1868-1968*, Auckland: Wilson and Horton Ltd, 1968, pp.6-7.

their business, staff numbers had increased to 23. For the Price brothers, limited start-up capital did not hinder their expansion. Their skill, as much as their finances, gave them entry into the market; the expanding economy enabled them to trade their way up. Taking advantage of the interest in the flax trade, the Prices produced all the equipment necessary for other would-be entrepreneurs to start their own flax mill. For £180, Prices supplied three flax dressing machines, a water wheel for driving the machines, shafts, pulleys, a press for packing fibre, and assorted equipment.⁴² They then followed a similar interest in the gold mining industry.

In 1871, the Price brothers took the gamble of relocating their fledgling factory from Auckland to Thames.⁴³ It was a risk, but if the hydraulic gold mining industry expanded then Prices were in an optimal geographic position to service the new market with heavy industrial equipment. Gold had been discovered in Thames in 1867. By 1871, 256 gold companies had been floated to exploit this new opportunity. Over 50 stamp batteries were in operation by the time the Price brothers arrived in Thames to set up their works. Price brothers manufactured equipment to order, capitalising on their expertise and the need for industrial equipment in isolated locations.

Over the next few years, they extended their range of manufactured articles to include water pumps, water wheels, ship engines, propellers, flax machines, and timber jacks. In 1881, Price brothers entered shipbuilding, constructing the 22-ton cutter-rigged paddle steamer, *Patiki*. During the expansion of mining activities at nearby Waihi, Prices provided much of the plant and equipment to the various stamper batteries. In 1891, for example, they outfitted the 20-head stamper battery for the Crown Mines Company at Karangahake with 900lb stamper heads. In addition, in 1895, they provided a 20-stamp battery for the Talisman Company, a 40-stamper plant for the Woodstock Company, constructed the 100-stamp Waikino plant, and supplied a 60-stamper battery for the Moanataiari mine. The firm remained under the direct control of the Price brothers as a partnership until 1907, when it was reconstructed as a limited liability company due to the death of Alfred Price, aged 70. Share capital was set at £60,000.⁴⁴

⁴² Interestingly, this figure of £180 was not too far from the £231 for plant and machinery per mill suggested by *Census* statistics in 1886, the first year the flax industry returned figures for capital investment.

⁴³ It appears that for three years the Price brothers kept both their Auckland works and the new Thames plant in operation as the Auckland market for flax machines was still quite buoyant. In addition, Price brothers used their Auckland plant to supply their first contract as railway engineers constructing carriages and wagons in 1873. See Vennell, *Men of Metal*, pp.8-9.

⁴⁴ Both of the Price brother's sons continued in the firm. See Vennell, *Men of Metal*, p.37.

The development of gold dredging in Otago provided similar contracts for the South Island engineering industry. Across the colony the number of engineering plants rose from 35 in 1880, to 102 by 1900; employment increased from 950 to 3397 and capital investment in the industry more than doubled to £366,363.

In number of works, the gold mining industry rose to a peak of 168 in 1895, then fell away to 90 by 1910. Auckland and Nelson were the dominant provinces for capital investment and productive capacity. By way of comparison, the capital directed to gold extraction in the Auckland region alone, was twice the capital invested nationally in the coal industry.⁴⁵ By 1900, there were over 4000 people working in the hydraulic gold industry and by 1902 gold production had again risen to 507,852 ounces per year at a value of £1,951,426.

So far in this section we have seen how innovation in gold extraction and production, through the application of hydraulic and chemical processes, re-invigorated the gold industry in the colony from the mid-1880s. Unlike the initial gold rushes, which had seen a movement of people, this second wave of gold-fever triggered a move of industrial capital. However, economic benefits also accrued from complementary innovation as firms benefited who were supplying entrepreneurs engaged in gold exploration. The following section explores the innovation of dairy products into United Kingdom and Australian export markets. Once again, entrepreneurs successfully pursued technological innovation, supported by small-scale capitalism.

INNOVATION IN DAIRY PRODUCTS

In the early period of New Zealand's existence, dairying was adopted as a means to augment subsistence farming, providing butter and cheese to local communities.⁴⁶ In these small communities, the general store acted as a point of exchange between farmers, who paid in butter or cheese, and the storeowner who sold the products to his other customers. Some records suggest that cash rarely changed hands.⁴⁷ The possibility of dairying as an industrial activity did not emerge until the period post-refrigeration. And as the subsequent increase in the number of dairy factories showed, its adoption was as

⁴⁵ In 1910, no figure for capital investment was given, however the figure for 1905 was £310,094. This had decreased from 1900, when investment in machinery and plant was £372,093.

⁴⁶ See Warr, Eric, *From Bush Burn to Butter: a Journey in Words and Pictures*, Wellington: Butterworths, p.36.

⁴⁷ See for example the accounts of James Roulston as cited in Nigel Smith's, *Heritage of Industry*, p.196.

much about the importation of technology, and the acceptance of the factory system for producing butter and cheese, as it was about advances in refrigeration.⁴⁸

It was evident that New Zealand cheese makers and butter producers in the 1870s did not have the expertise necessary to export and early attempts often failed. Butter was either packed in brine, tinned, or salted. Brine leached out of kegs, oil from timber leached into butter; tainted, the product resembled 'axle grease' with a pungent fish-like odour.⁴⁹ Interestingly, this was not the case with cheese makers in the United Kingdom and Ireland who, prior to refrigeration, supplemented New Zealand's local production.

Not surprisingly, some of the colony's earliest entrepreneurs who sought to enter this market adopted dairying technology from overseas. One of the first was the promoter behind the initial shipment of frozen meat in the *Dunedin*, William Davidson. Davidson, and his manager Thomas Brydone, representing the New Zealand and Australian Land Company constructed on the company's Edendale estate (north-east of Invercargill), a purpose built cheese and butter factory costing £1200. The plant was in operation prior to the sailing of the *Dunedin*. It was an ambitious, but well-planned scheme. Davidson laid out Edendale according to a plant he visited in Canada, and the dairy factory became a model for early producers. Initially, Edendale produced only cheeses commercially, successfully winning the government bonus in 1883 for the first export of 50 tons of cheese from the colony.⁵⁰

Other entrepreneurs hired skilled butter and cheese makers to help them enter the new market. For example, the success of Wesley Spragg in establishing the factory system in Pukekohe was due in part to hiring a Danish butter maker as factory manager.⁵¹ Spragg had originally headed the dairy department of the Auckland-based New Zealand Frozen Meat and Storage Company in 1883. After the company's demise, Spragg purchased an existing cheese and bacon factory and converted it to a milk receiving station. Knowing the problems with inconsistent quality in butter supply, Spragg aimed

⁴⁸ The first dairy factory opened in New Zealand in 1871 at Highcliff on the Otago Peninsula, the work of Scots-born John Mathieson. But it was another decade before cheese and butter production emerged as a viable export commodity. See for example Aldridge, G.F., and C.W. Burnard, *A history of the National Dairy Association of New Zealand 1894-1984*, Masterton: Printcraft, 1985, p.1-12.

⁴⁹ Indeed the advent of refrigeration did not solve all the problems of transporting such a perishable commodity over long distances and difficulties with butter packed in kegs persisted until the invention of the enamel-lined butter box by Auckland chemist James Pond in 1885.

⁵⁰ The bonus was £500.

⁵¹ See Warr, *From Bush Burn to Butter*, p.85.

to centralise the receiving of milk at Pukekohe, then send the cream by rail to Auckland for further processing. The Pukekohe factory was upgraded and expanded with financial backing from London-based firm, Lovell and Christmas, which marketed and distributed butter in the United Kingdom; by 1892, Spragg was processing cream from over 250 farms.

Likewise, Spragg's chief regional competitor, Henry Reynolds, hired American David Gennell to manage his first factory in the Waikato. Henry Reynolds, a Waikato entrepreneur, constructed his first dairy factory in 1886 at Pukekura, outside Cambridge. In a pattern similar to the rise of the Dunedin brewer, Speight's, Gennell's skill as butter maker assisted Reynolds to secure first prize at the Melbourne Exhibition in 1888. Sales increased as a result of this publicity, and Reynolds was able to export butter to Australia, China, Hong Kong and England. To facilitate his expansion in the United Kingdom, Reynolds constructed a butter cool store at Hay's Wharf in London—the largest of its kind. By 1894, his butter factories and creameries in the Waikato were producing 300 tons of butter per year.⁵² However, the ambitious entrepreneur encountered financial difficulties, and he was bought out by Spragg in 1896.⁵³

One of the important distinctions between dairying and frozen meat production was the different processing requirements. Cattle could be easily herded or transported to freezing works for processing. There was no interim processing stage, nor would stock deteriorate while waiting for slaughter. Milk offered a different kind of challenge. Product quality varied greatly, milk deteriorated quickly, and it had to be skimmed to remove cream before processing as butter. To achieve more efficient production, promoters constructed skimming stations as an intermediate step between farms and dairy factory. Interestingly, while industrial statistics detail the increase in dairy factories, they do not report the investment and growth in skimming stations, which were equally important in the productive process for butter. A single butter factory might support several dozen skimming stations, where milk would be received and the cream mechanically skimmed. For example, Warr records that on the sale of Spragg's business to the New Zealand Dairy Association in 1901, his two butter factories, Pukekohe and

⁵² Reynolds was also the originator of the 'anchor' brand.

⁵³ Equally the government initiatives in this industry benefited from the industry experience of Scottish-trained John Sawers the first Government appointed Dairy Expert in 1889.

Ngaruawahia, supported 40 skimming stations in the district. The output of these two factories was 1200 tons per year.⁵⁴

The skimming process changed gradually after 1897, when home separation was introduced providing farmers with the ability to separate cream from milk on the farm, often using Scandinavian-manufactured separators. The adoption of home separating machinery, a complementary good in Menger's economic schema, in itself provided an opportunity for promoters to enter a new market. Danish-born Carl Dahl, for example, commenced production of wholesale tents, cordage, and waterproof clothing in Palmerston North in 1885. In the 1890s, Dahl looked at diversifying and used his contacts in Denmark to import Danish cream separators. He supplied this new market from 1900 to 1921, when he sold his business to the National Dairy Association of New Zealand.

ENTREPRENEURS AND THE DAIRY INDUSTRY

As with the production of frozen meat for export, possibilities in the dairy industry attracted investors and promoters from outside the agricultural community. Historian David Yerex identified four types of entrepreneurs who entered the race to manufacture butter and cheese for export consumption: merchants, landowners, agents of British firms', and farmers' cooperatives.⁵⁵ These were the dominant groups, but Yerex did not accentuate the importance of the first group, the merchants, in the subsequent expansion of the dairy industry. Few had a farming background, yet it was their trade skills and commercial networks that that enabled them to maximise this new opportunity.

The merchants' position in the rural community as provider of goods, and more importantly credit, meant they had access to the raw material and the cash-flow with which to commence an enterprise. Taranaki merchant Chew Chong was a case in point. Exporting the 'Jew's ear' fungus to China gave him valuable exporting experience, while his branch network of rural stores provided useful links in the farming community. Commencing a dairy factory for Chew Chong was a way to increase his trade in butter and cheese, seizing a new and expanding opportunity with resources he already had. Chinese-born Chew Chong opened his Eltham butter factory in 1887.

⁵⁴ See Warr, *From Bush Burn to Butter*, p.86.

⁵⁵ See Yerex, David, *Empire of the Dairy Farmers*, pp.65-68.

Not all the entrants to the dairy industry were immigrants. New Zealand-born merchant Newton King established his first auctioneering business (aged 25) in partnership with Robert Bauchope. The partnership lasted a year. In 1881, King commenced the stock and station business, Newton King Limited. Following a programme of branch expansion in stock and station outlets serving the farming community around New Plymouth, it was perhaps not surprising that King too entered the dairy processing industry in 1888 with the Crown Dairy Company. Eventually, he maintained 21 dairy factories as part of his cooperative. Consistent with the entrepreneurial personality, King continued to pursue new ventures in emerging industries even late in life. In 1908, aged 53, he began supplying cars through the Calthorpe Car Agency; in 1909 he commenced importation and supply of milking machinery through the Ridd Milking Machine Company.⁵⁶

New Zealand-born Charles Wilkinson started work as a store manager before commencing his first venture, C.A. Wilkinson Merchants, in 1889. Like Newton King and Chew Chong, his mercantile interests with the rural community were an obvious launching point for commencing a dairy factory, which he did in 1891, aged 23.⁵⁷

Entrepreneurs entered the dairy industry with backgrounds other than the stock and station industry. Henry Brown and William Corpe were two dairy factory owners with backgrounds in the timber industry. English-born Henry Brown, a carpenter from missionary parents, opened his first sawmill in 1863 at the age of 21 in Inglewood. Brown, who was to become a central figure in the development of the town, branched out into other enterprises. He started a joinery factory, and in 1882, the same year as the *Dunedin* shipment, commenced the Moa Cooperative Dairy factory. For Brown it provided not only an avenue to enter what appeared to be an emerging industry, but also an outlet for products from his joinery factory including butter boxes and cheese crates.⁵⁸

William Corpe immigrated to the colony from England in 1858 aged 22, and his career bore similarities to the other dairy entrepreneurs. Corpe settled in Makino where

⁵⁶ 'Newton King Limited centennial, 1879-1979', *Taranaki Daily News*, 5 October, 1979.

⁵⁷ Another merchant also to enter the dairy industry was Henry Manoy. Born in New Zealand in 1879, Manoy and his brother owned a number of shops in Motueka outside Nelson. In addition the Manoy brothers ran a dairy factory and a bacon factory.

⁵⁸ A dairy factory owner also with a trade background was New Plymouth born James Patterson. Aged nine Patterson went to sea as a cabin boy and in 1882, after completing his blacksmith apprenticeship, opened his own blacksmith shop. He conducted this for 18 years before in 1900, aged 41, he began a process of farm buying and land development that was to characterise the rest of his business career. At his height he owned 35 farms, with some 4000 cows and dairy factory.

he worked as a clerk then farm manager. At the age of 32, he started what would be the first of six entrepreneurial ventures. In 1868, Corpe started a flax mill; in 1872, he in opened a general store and transport company, and from 1878 onwards, he established a number of sawmills supplying timber for railway contracts. In 1884, Corpe founded the Makino Butter and Cheese factory—a venture that would prove to be the most successful of his career. In 1903, he sold his Makino factory to another dairy entrepreneur with a mercantile background, Joseph Nathan.

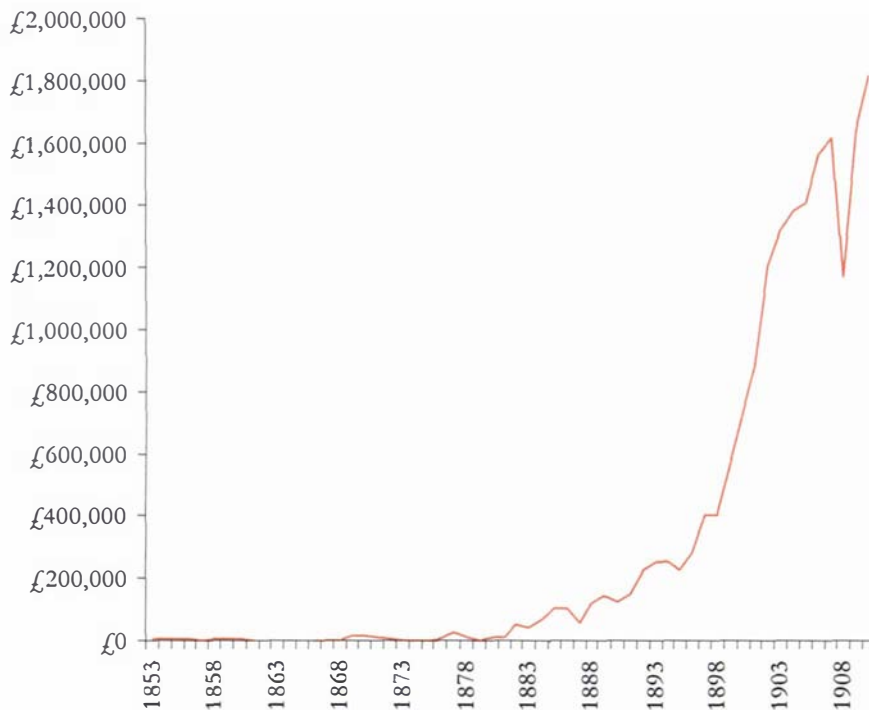
Nathan and William Goodfellow were two entrepreneurs who stood out in the history of the colonial dairy industry. Both the entrepreneurs were notable for different reasons; Nathan for his successful adoption of dried milk through the Glaxo brand; and Goodfellow for the amalgamation and centralised marketing of the dairy industry.

Goodfellow's entry into the dairy industry was not unlike the other merchants discussed. Born in Te Awamutu in 1880, he worked as a hardware merchant before starting a branch of an Auckland-based hardware firm in Hamilton, at the age of 21. Thereafter, he worked for Green and Colebrook general merchants as manager. In 1909, Goodfellow founded the Waikato Dairy Company after being left with dairy plant and machinery following a customer defaulting. It was not long before all of Goodfellow's interests were absorbed in the dairy industry. In 1915 he started the Waikato Cooperative Cheese Company. In 1919 he merged with his competitor, Spragg's New Zealand Dairy Association, forming the New Zealand Cooperative Dairy Company. The company then pursued a process of acquisition to become the largest dairy company in the colony. Goodfellow remained managing director of the cooperative until 1932, when he left to pursue other initiatives. Goodfellow undertook at least 11 different entrepreneurial ventures over the course of his commercial career. Interestingly, the same spirit of cooperation that characterised his management of dairy companies imbued his other schemes, which were often undertaken with partners. While it is fair to state that the farming community were a vital part of the rise and success of the dairy industry, it is also accurate to state that those who initially gave the industry the most momentum and created the largest economies of scale were those outside the farming community.⁵⁹

⁵⁹ One of the reasons for the rise in the popularity of the cooperative form of dairy factory ownership among farmers was financial. As Yerex pointed out in *Empire of the Dairy Farmers*, p.68. 'For others it was a matter of principle not to allow outsiders to dictate terms. More and more dairy farmers were becoming aware that the retailers and agents in Britain, the shipping companies and the factory owners in New Zealand, were all making sure of their profits; the suppliers got what was left.'

Wesley Spraggs, Chew Chong, William Corpe, Newton King, Joseph Nathan, and William Goodfellow entered the dairy industry from mercantile backgrounds. These men were able to leverage their talents as managers and entrepreneurs, as opposed to having in-depth technical skill in agriculture.⁶⁰ This was vital. As much as the dairy industry needed product development skills, it needed the development of effective factory management systems and efficient distribution channels. These skills were not agriculturally based—they were entrepreneurial and commercial skills.

FIGURE 19
BUTTER EXPORTS: 1853-1910



Source: *Statistics of New Zealand 1866-1910*

Some farmers did enter the production of dairy produce through the cooperative system of dairy company ownership. For some it was a financially advantageous

⁶⁰ The effect of entrepreneurship, especially mercantile and industrial entrepreneurship, on agricultural wealth has not been sufficiently explored in New Zealand business history. Steven Eldred-Grigg, for example, suggests social and political pressures as the reasons behind the fall of New Zealand's gentry, rather than the rise of an entrepreneurial class. See Eldred-Grigg, Steven, 'Whatever Happened to the Gentry? The Large Landowners of Ashburton County, 1890-1896', *New Zealand Journal of History*, 11:1 (1977), pp.3-27.

undertaking as having their own dairy factory gave them control of product quality and price. Yet, most of the cooperative dairy factories were small. By 1886, there were 36 cheese and butter factories in the colony, with the largest concentration (16) in the Auckland province. The average size of a dairy factory was three employees. Even so, they required a capital investment larger than many single proprietors could manage—average capital investment per factory in 1896 was £1320.

By 1891, the number of factories in the colony had doubled to 74, average capital investment per factory, £1357, and average staff size was four. It was the following five years that witnessed the most dramatic rise in dairy exports and factory fever. The number of cheese and butter factories more than doubled to 170; the number of factories in the Taranaki Province increased by 42. By 1896, the industry had risen to the 11th in terms of capital invested in land, buildings, and plant (£234,006), rivalling the investment in the colony in gold dredging.

Many of those companies registered between 1891 and 1896 had a share capital of a few thousand pounds. The Okain's Bay Co-operative Dairy Factory Company, for example, had a share capital of £1000; the Cheltenham Co-operative Dairy Factory Company in Feilding had a share capital of £2000; the Cheviot Co-operative Dairy Factory Company had a share capital of £4000. The three largest establishments founded during this period were the New Zealand Dairy Farmers Co-operative Company in Dunedin in 1893 with a share capital of £100,000, the New Zealand Farmers Dairy Union of Wellington (£50,000), and the Canterbury Farmers Co-operative Association, registered in 1894 with share capital of £50,000.

By 1901, the dairy industry had risen to seventh place in industrial capital investment in the colony. There were 247 factories in operation, which were benefiting from greater national cooperation following the 1894 Dairy Industry Act.⁶¹ By 1911, the number of butter and cheese factories in the colony had increased to 338. Overall, these factories employed nearly 1500 staff, and produced 541,851 cwt. of butter (valued at £2,685,103) and 474,111 cwt. of cheese (valued at £1,199,677).⁶² Compared to the colony's other major exports, in 1901 the dairy industry was worth more than gold exports, and only £900,000 behind exports of frozen meat. Over the next ten years, the dairy industry tripled in export value, rivalling wool products. By 1930, the dairy industry

⁶¹ Among other things the act allowed for export grading and factory inspection.

was the colony's leading export staple. This remarkable transformation had come about from a mix of forces for change working together: technology transfer, new product development, the adoption of the factory system, improved distribution systems, and the role of entrepreneurs outside the immediate agricultural community to coordinate and apply these innovations.

CONCLUSION

This chapter has argued that innovation, brought about by entrepreneurs, had a direct impact on the size and structure of the colonial economy. It has examined three of the export staples: frozen meat, gold, and dairy exports. In each of these industries, innovation, pursued by entrepreneurs, was the trigger for a subsequent expansion in the size of the industry and its ability to service foreign markets. In the export of frozen meat, this innovation was the advent of refrigeration; in the production of gold, the innovation was the application of hydraulic gold mining, then the use of the cyanide process. Finally, in the export of dairy products, the innovation was the use of the factory system—aided by technology transfer, which enhanced both the productive capability of the industry and its ability to get produce into foreign markets.

In each of these industries, the joint-stock company was used by entrepreneurs to galvanise interest in the venture and raise capital. It enabled capital to be sourced from a wide base. The large number of firms floated in these industries and their high capitalisation rates were evidence of the interest shown in commercial investment. Share capital, rather than loan capital, seemed to be the preferred form of industrial finance during this time.

As markets expanded in these export sectors the original promoters were joined by other entrepreneurs. Then, once the initial innovation had established its viability in the market, still more invested capital and resources. However, it is difficult to make a case for the diversion of capital from other possible forms of industrial investment, because the total industrial base of the economy expanded during this period. In other words, it was not apparent that a limited stock of funds was being diverted between preferred schemes. Rather, an increasing stock of funds was being invested in entrepreneurial ventures as well as other forms of industrial activity.

⁶² Only 126 of these enterprises were organised as cooperatives. The balance was a mix of sole proprietorships, public companies and private companies.

Complementary goods and services expanded in industrial activities allied to the initial innovation. The number of ships plying freight routes between the United Kingdom and New Zealand increased along with the size and capacity of these ships. Specially built vessels were brought in to allow the increased exploitation of the innovation. In the gold industry, the demand for stamper batteries, plant, and equipment enabled local engineering firms to expand to meet this demand. These firms then exploited other lines of business activity as their capacity to do so increased. In the engineering industry, the number of firms and the amount of capital and labour steadily increased. In the dairy industry, milking machines and cream separators allowing room for other entrepreneurs to provide and service such equipment.

In the three industries discussed in this chapter, primarily new firms exploited the emerging opportunities. Existing businessmen, promoters, and new entrepreneurs floated new companies, increasing the overall stock of firms in the market. Similarly, this chapter suggested that the pursuit of entrepreneurship was not the domain of existing enterprises; rather, new specialist firms were created to pursue the innovation.

In summary, what emerged in the colonial economy was a unique dichotomy that characterised the latter part of the nineteenth century in New Zealand. For paralleling the decline in staple prices, land prices, and increased migration rates was the development of new export markets and increased industrial activity. This was not to suggest that the economy of the 1880s and 1890s was one of endless advancement, untouched by failure or difficulty. This was not the case. Land prices fell, unemployment in some sectors rose, and there is some evidence that bankruptcy rates increased. But these indicators were only one side of a set of economic scales that were counterbalanced by aggressive population growth, continued government spending on infrastructure, continued positive balance of payments, and entrepreneurial activity that stimulated new industries, expanding overseas markets. If depression is a descriptor used of the 1880s and 1890s in New Zealand then enterprise must be an equally used term; the two events were not mutually exclusive.

This marks the conclusion of Part Two of this thesis that has considered the entrepreneurial economy. It has looked at some elements in the economic and political environment that worked to create a positive climate for entrepreneurial activity in the colonial economy. The following section of the thesis considers in more detail the actors themselves. It continues the theme stated in the introduction of this thesis, where it was suggested that the layers in the economy needed to be peeled back to allow a fuller

understanding of the forces at work in the colonial economy. The entrepreneurs, and the enterprises they created, will now be examined using case analysis to further understand entrepreneurship and its relationship to economic development between 1880 and 1910.



PART III

THE COLONIAL
ENTREPRENEUR

5

A CASE ANALYSIS APPROACH TO BUSINESS HISTORY

For such a project, the only possible method was observation – repeated until the eyes ached; than a call for assistance from the different human sciences; and above all systematic comparison, the bringing together of experiences of the same nature, without being afraid, when dealing with systems that changed so little, that anachronism would lay too many traps for us during these necessary confrontations.¹

From the outset of this thesis, it was stated that one of the aims of this research was to investigate the entrepreneur at several levels in the economy. The preceding chapters have examined some aspects of the economic context entrepreneurs found themselves in during this period of history. Case analysis of a group of entrepreneurs provided another perspective, and such a study has not been undertaken before in New Zealand business history. While the results cannot be taken as applicable to the general population, as case study does not generalise except to theory, the cases nevertheless exemplify entrepreneurial behaviour and business activity in New Zealand at this time, in a way that has not been available previously.

The purpose of this chapter is to discuss the research technique adopted for case analysis in this thesis and to present some of the basic findings of the research. A case group of 133 entrepreneurs were selected, and this chapter outlines how this was achieved. In particular, it will discuss the criteria used in selection and the types of questions investigated. It will present some of the summary characteristics of the case

¹ Braudel, Fernand, *Civilization and Capitalism 15th-18th Century, Volume II: The Wheels of Commerce*, London: William Collins Sons and Co, 1982, p.21.

analysis and discuss some of the similarities/differences between this study and other business history research using case analysis.

BACKGROUND: CASE ANALYSIS AND BUSINESS HISTORY

The use of statistical techniques and case analysis to analyse the past is not new. Business historians and social historians have used this technique to study industries, groups of firms, business elite, families, households, communities, occupations, and entrepreneurs. Perhaps the best-known of all such studies was that done by Alfred Chandler, *Strategy and Structure*, where he presented an analysis of four firms to illustrate his thesis that a firm's strategy and its organisational structure were inherently related: General Motors, Standard Oil Company, Sears Roebuck and Company, and DuPont.²

The advantages and disadvantages of such an approach are clear. New insights can be gained into the workings and characteristics of a particular group of individuals or cluster of firms, and these discoveries add to our understanding. Similarly, however, a number of business historians have cautioned the need to embed such an approach within the context of its environment. Geoff Jones noted recently:

It has been a long-term aim for many (if not all) business historians that their subject should evolve from producing well-written empirical historical case studies to delivering valid generalisations about business structures and behaviour. It would be an exaggeration to say that the 1990s has seen great advances in this respect, but a bold generalisation might be that there has been some movement in that direction.³

Using case analysis, business and economic historians have studied a range of questions concerning the entrepreneur. Some have examined particular debates, such as Bernard Sarachek's investigations in the Horatio Alger myth using case analysis of Jewish American and American entrepreneurs from the nineteenth century.⁴ William Miller's work has used similar groupings of American industrialists and political leaders to

² See Chandler, *Strategy and Structure*.

³ Jones, Geoffrey, 'Company History and Business History in the 1990s', *Business Records and Business History: Essays in celebration of the 50th Anniversary of the Danish National Business Archives*, Denmark: Ethvervsarkivet, 1998, pp.11-12.

⁴ For Horatio Alger myth see Sarachek, B., 'American Entrepreneurs and the Horatio Alger Myth', *Journal of Economic History*, 38 (1978), pp.439-56; Sarachek, B., 'Jewish American Entrepreneurs', *The Journal of Economic History* 2 (1980), pp.359-72.

consider the characteristics and backgrounds of the business elite.⁵ Case analysis of a particular entrepreneur or a particular firm has been a popular line of enquiry, and there are numerous studies that use this approach.⁶ Some researchers have used case analysis as a means of investigating particular industries, such as the work of G.B. Magee on the Victorian and Edwardian British paper industry.⁷ Other researchers have used case analysis to examine the prevalence of entrepreneurial activity in society at a particular time, such as Britain in the late nineteenth-century.⁸ Some, such as H. Berghoff and R. Möller, have used large case analysis in comparative studies between different cultures.⁹

The researchers conducting these investigations have often used similar methods. A sample or case group of entrepreneurs has been constructed using sources such as biographical dictionaries, *Who's Who*, industry histories, company histories, and biographies. The sample has then been analysed with respect to key criteria, such as the migrant status of the entrepreneurs, the father's occupation, educational levels, birth order, family social status, wealth, career mobility, and the entrepreneur's relationship with his father.

Among larger studies examining multiple entrepreneurs, the research has fallen broadly into two groups. The first group has comprised studies that have investigated business elites, defined as captains of industry, business leaders, CEOs, and managers who may have run large or dynamic firms, but were not the founder or owner of the firm. Studies, such as those by Miller and C. Wright Mills, which used these criteria, have found that the elite were well educated and came from upper social classes with wealthy

⁵ For business elite see Miller, W., 'American Historians and the Business Elite', *Journal of Economic History*, 9 (1949), p.184-208. Mills, C. W., 'The American Business Elite: A Collective Portrait', *The Journal of Economic History*, 5 (1945), p.20-44. Also, Supple, Barry E., 'A Business Elite: German-Jewish Financiers in Nineteenth-Century New York', *Business History Review*, 31:2 (1957), pp.143-177.

⁶ See for example Boje, P., 'A Career Approach to Entrepreneurship: The Case of Thomas B. Thrige', *Business History*, 35 (1993), pp.33-44.

⁷ Magee, G. B., 'Competence or Omniscience? Assessing Entrepreneurship in the Victorian and Edwardian British Paper Industry', *Business History Review* 71 (1977), pp.230-59.

⁸ For debates about entrepreneurial activity in Britain during the late nineteenth century see Kirby, M.W., *The Decline of British Economic Power Since 1870*. London: George Allen and Unwin, 1981; Mathias, P., *The First Industrial Nation: An Economic History of Britain 1700-1914*, 2nd ed. New York: Methuen, 1983; Pollard, S. 'Entrepreneurship, 1870—1914.' In Floud, R., and D. McCloskey (eds.), *The Economic History of Britain Since 1700*. 2nd ed. vol. 2, 1860-1939, Cambridge: Cambridge Univ. Press, 1994, pp.62-89.

⁹ Berghoff and Möller investigated over 1000 German and United Kingdom entrepreneurs comparing their social and educational backgrounds and achievements. Berghoff, H., and R. Möller, 'Tired Pioneers and Dynamic Newcomers? A Comparative Essay on English and German Entrepreneurial History, 1870-1914', *Economic History Review*, 47 (1994), p.262-87.

or prosperous families. They had professional or executive fathers, commenced work later in life, and they were not foreign born.¹⁰

Conversely, studies that have concentrated on owner-entrepreneurs, such as those by Sarachek for example, have found that entrepreneurs began work earlier in life, were less likely to have had a college education and came from middle-class families where the father was most likely to be a business owner.¹¹ While not applicable in every circumstance, findings such as these have expanded our understanding of the backgrounds and characteristics of entrepreneurs at particular times and periods. Arguably, some findings, such as the incidence of the fathers of entrepreneurs who were business owners, appear to be applicable regardless of time or culture.¹²

CASE ANALYSIS: GENERAL ISSUES

The selection of entrepreneurs for this study involved two stages: firstly, to establish criteria for deciding who might be in the study; secondly, to locate the entrepreneurs. The work of Frank Knight and Joseph Schumpeter was used to differentiate entrepreneurs from business people in general. Knight's definition of entrepreneurship emphasised the entrepreneur's ownership of the resources of production and responsibility for decision taking. Knight stated: 'The entrepreneur is the owner of all real wealth, and ownership involves risk; the coordinator makes decisions, but it is the entrepreneur that accepts the consequences of decisions.'¹³

In addition, Joseph Schumpeter provided useful clarity as to the functions and bounds of entrepreneurial behaviour, emphasising the newness or generative aspects of entrepreneurial endeavour. Noted Schumpeter: '...the function of entrepreneurs is to reform or revolutionise the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing new commodity or

¹⁰ See Mills, 'The American Business Elite', (1945); Miller, W., 'American Historians and the Business Elite', (1949); Berghoff, H., and Möller, R., 'Tired Pioneers and Dynamic Newcomers?' (1993).

¹¹ See Sarachek, 'American Entrepreneurs and the Horatio Alger Myth', (1978); Sarachek, 'Jewish American Entrepreneurs', (1980); Collins, O. F., D.G. Moore, and D.B. Unwalla, *The Enterprising Man*, East Lansing: MSU Business Studies, 1964.

¹² Lam, S. K. S., *Portraits of Successful Entrepreneurs and High-Flyers: A Psychological Perspective*. Aldershot: Ashgate, 1999; Cooper, A.C., and W.C. Dunkelberg, 'Entrepreneurial Research: Old Questions, New Answers, and Methodological Issues', *American Journal of Small Business*, 11 (1987), p.11-23.

¹³ See Knight, *Risk, Uncertainty and Profit*, p.45.

producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganising an industry and so on.¹⁴

Taken together these definitions encompass many of the elements described in the definition of entrepreneurship proposed at the end of chapter one in this research and were used for the case analysis because of their operational attractiveness. A short list of questions could be devised to decide whether or not someone came within the bounds of these definitions. The questions were:

- 1) Did this person have an ownership stake in the firm they were involved in?
- 2) Did they have responsibility for making decisions regarding the firm's activities and direction?
- 3) Did they have to accept the financial consequences, good or bad, of those decisions?
- 4) Were they expanding the firm beyond its original confines using innovation?

CASE ANALYSIS SIZE

There are advantages and disadvantages associated with small and large samples, and any study is a compromise between depth and breadth. One approach for the present research would have been to study a small number of individual entrepreneurs and their firms, say between three and six, using in-depth primary research. Such a case-study approach can yield rich insights into the motives and behaviours of a few individuals, and there are examples of such case-analyses in business history research using this approach.¹⁵

The other choice is breadth—to select a larger group of individuals (perhaps 100 or more), for case analysis. Such a choice inevitably loses the detail of the first approach, but is able to reveal trends, common characteristics, or even difference, across a group. Behaviours which appear significant across a few cases may be isolated characteristics,

¹⁴ Joseph A. Schumpeter, *Capitalism, Socialism and Democracy*, London: George Allen Unwin, 1976, p.132.

¹⁵ For discussion of case analysis and its limitations see Eisenhardt, K.M., 'Building Theories from Case Study Research', *Academy of Management Review*, 14 (1989) p.532-550; Eisenhardt, K.M., 'Better Stories and Better Constructs: The Case for Rigor and Comparative Logic', *Academy of Management Review*, 16:3 (1991), p.620-627. Also Miles, M. and A.M. Huberman, *Qualitative Data Analysis*, Beverly Hills, CA: Sage Publications, 1984; Yin, R., *Case Study Research*, Beverly Hills, CA: Sage Publications, 1984. Perhaps the best-known example of case analysis in the business history context is Chandler, A.D., *Strategy and Structure*, Cambridge, MA: MIT Press, 1962. In an organisational setting see Lawrence, P., and J. Lorsch, *Organization and Environment*, Boston: Graduate School of Business, Harvard University, 1967.

when compared with a much larger group. It is similar to a photographer taking two pictures of the same subject. For one picture, the photographer shoots a close-up of a small group. For the second photograph, the photographer stands back, and, after changing lenses, shoots again. This time the photographer takes a wide-angle picture of the larger crowd, that the small group were a part of. Both pictures capture the same scene, but with different perspective and different texture. The wide-angle lens was the choice for this study. Having studied two New Zealand entrepreneurs in detail, Robert Laidlaw and David Levene,¹⁶ I was interested to take a larger case group of entrepreneurs and look for recurring patterns, trends, and difference.

SELECTION

The entrepreneurs were selected from a variety of sources: Scholefield's *Biographical Dictionary*, *Dictionary of New Zealand Biography* (both earlier and later versions), the *Otago/Southland Biographical Dictionary*, *Who's Who*, the *Cyclopedia of New Zealand*, newspaper reports, company histories, biographies, industry histories, and publications, such as Graeme Hunt's, *The Rich List*. The case group was non-random and included 125 men and 8 women, all of whom were born before 1886.

The sources listed above provided a list of over 500 names. This list was culled by asking the four questions listed above of each person. These questions separated those who were managers of a firm from those who were owner/entrepreneurs. In addition, the questions separated those who may have owned a business, but were not transforming it beyond its original economic size. Today, we would recognise these people as buying or running a business for lifestyle reasons as opposed to those who were actively pursuing the further development and expansion of their firm.

One final question was then asked of those who remained: Were they active in business in the period under consideration? A large number of possible participants were eliminated by this final question. Essentially these were people who settled in New Zealand in the 1850s or 1860s, and had retired from active commercial life by the start of the 1880s. To be included in this study, entrepreneurs had to have been active in business in New Zealand for at least the first decade of the period under review.

¹⁶ Hunter, Ian *Robert Laidlaw: Man for Our Time*, Auckland: Castle Publishing, 1999; Hunter Ian, *David Levene: A Man and His Business*, Auckland: Castle Publishing, 1999.

BUSINESS ACTIVITY

Each year that a case analysis participant was behaving as an entrepreneur was recorded. For example, if someone completed their apprenticeship in 1880, then worked for 11 years before setting up their own business in 1891 (which lasted for the next 35 years), this person was recorded as being active as an entrepreneur in the decades: 1890-1899, 1900-1909, 1910-1919, and 1920-29. Any years an entrepreneur spent working for someone else, often at the start of his career, were not recorded as being involved in business activity, nor were those years after an entrepreneur retired. The table below indicates the spread of business activity from the entrepreneurs involved in this research.

TABLE 6
ENTREPRENEURIAL ACTIVITY

| Year | 1860s | 1870s | 1880s | 1890s | 1900s | 1910s | 1920s | 1930s | 1940s | 1950s | 1960s |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Number | 41 | 66 | 98 | 113 | 115 | 98 | 75 | 43 | 28 | 15 | 4 |
| Percentage | 30.8 | 49.6 | 73.7 | 85.0 | 86.5 | 73.7 | 56.4 | 32.3 | 21.1 | 11.3 | 3.0 |

Source: Case Analysis New Zealand Entrepreneurs

For the years, 1880 to 1909, the percentage of case analysis entrepreneurs undertaking new venture activity did not fall below 73 percent. The highest decade was 1900-09, with 115 entrepreneurs (86.5 percent) in the case group engaging in venture activity during this period. The 1870s and 1920s showed 49 percent or more of the case group engaged in entrepreneurial activity; by the 1960s, this figure had fallen to three percent, with only four entrepreneurs active. If anything, this analysis showed the extensive careers that many entrepreneurs undertook, with some continuing their business careers well into their seventies and eighties. Retirement, it seemed, was not a popular life choice among the entrepreneurial class.

Deciding how to characterise farming presented a particular challenge in this research. Was a farmer an entrepreneur? Farmers can display some characteristics associated with entrepreneurial behaviour. They can be self-employed, own the means of production, and bear risk, not knowing from one year to the next what their income might be. However, in the final analysis it was decided not to include farming as an entrepreneurial activity, but view it more as a professional or occupational choice in line with other overseas studies.

Notably, some entrepreneurs purchased land and invested in farming activities. This was often to support other venture activity, for example, growing wheat as Josiah Firth did for his Auckland flourmill, or for land development as the newspaper proprietor, George Alderton, did in Kerikeri. Farming, for these entrepreneurs, was one

of a number of ventures associated with controlling the supply chain, rather than the choice to be a farmer as a profession.

CASE GROUP SIZE

Three factors were considered when choosing the case group size: comparability, access, and execution. As regards comparability, it was the intention in this research to compare the findings with those of other researchers who have posed similar questions using entrepreneurs in different cultures and time periods. Other studies of this nature, such as those by Miller or Sarachek, have included 100 or more entrepreneurs in their samples. Having a similar sample size for this research would allow a more meaningful comparison.

Accessibility refers to the availability of material. Could sufficient material be located on 100 plus entrepreneurs to answer a question set? Like other international studies, this case analysis would make use of biographical material rather than primary records. For many entrepreneurs this was not difficult. Adequate biographical, company, family, or industry history existed that enabled the completion of case analysis. Other entrepreneurs proved more difficult. John Bycroft, James Pascoe, Robert Hannah, and others will have to wait for future studies, because sufficient biographical material could not be located.

Thirdly, execution: How many entrepreneurs could be realistically studied in the time available for this research? A pilot study of 10 cases was undertaken to gauge the time involved and test the question set. While a list of over 500 possible names was initially assembled, 133 cases were finally chosen for the research.

CASE ANALYSIS DOCUMENT

The case analysis document was constructed over the period of two years, and it went through four revisions over that time to add additional detail, or improve the collection of data. The final version is included in Appendix B. Additional fields have been added since the study was completed to further improve data collection and analysis should the case analysis be used again.

The case analysis instrument was divided into six sections: background information; business activity, strategy, lifestyle, partnership, and failure. Each section included a range of questions relevant to that topic; business activity was the largest section. In total, 174 fields were created in an Excel spreadsheet to collate the

information. After data input, basic statistical analysis was done on each category. What each section considered is now discussed.

BACKGROUND

Background information included the name, birth date, and death date of the entrepreneur, their age at death, place of birth, ethnicity, and the New Zealand town or city they resided in for the longest period in their life. Background information on the entrepreneur's parents was also collected, such as the occupation of entrepreneur's father, and whether or not this occupation was the same as that of the entrepreneur. The number and type of jobs the entrepreneur had prior to their first venture was collected as a way of understanding the level of experience and expertise an entrepreneur had prior to their first venture. Occupational data was collected to see if entrepreneurs experienced a wide range of work and career experiences, or they focused on a particular career or profession.

Migration was also investigated. A body of research exists on immigrant entrepreneurs and this study provided an opportunity to investigate this phenomenon in a New Zealand context. Questions considered included: What countries did immigrant entrepreneurs come from? When did they arrive? Were immigrants more entrepreneurial than New Zealand-born entrepreneurs?

BUSINESS ACTIVITY

The business activity section was the largest of all the sections. Firstly, basic business information was collected: the venture type (industry); the name of the venture (company or firm name); the year commenced (e.g. 1901); the duration of the venture; and the years the venture lasted (if known). The business strategy each entrepreneur used was recorded.

Did the venture last for five years or more? This question was chosen as a way of exploring the failure rate of new firms. Space was included in the case analysis to record up to ten ventures per entrepreneur. In most cases this proved sufficient. Where it was not, the detail of further ventures was not recorded, but the total number of ventures was noted.

Venture activity was also analysed as to the age at which the entrepreneur started their first venture and the age at which they started their most successful venture (usually the one they were most renowned for, or appeared the most lucrative). Other data was added to this, namely, the number of ventures prior to most successful, total ventures the

entrepreneur founded, and total number of ventures the entrepreneur was involved in—even where they were not the founder.

Three categories for analysis had to be constructed while the study progressed. The first was: Why did the entrepreneur commence their first venture? An initial investigation of the entrepreneurs in this study revealed nine different reasons why entrepreneurs commenced their first venture. On a subsequent pass through the case group, such reasons were assigned to the entrepreneurs where appropriate. The same process was used for the sources of capital for an entrepreneur's first venture. Again, these categories were not chosen, but collected during investigation of the case group, so as new categories revealed themselves these were added until a final set of responses was established. This is not to say these terms are all-encompassing categories, or every possible stimulus of entrepreneurial activity, but, they adequately represented the group of entrepreneurs investigated here.

STRATEGY

The classification for strategy included both commonly used terms and more specific strategies. At a general level it was recorded if entrepreneurs acquired other firms or if they started up their own activities. Did they use vertical integration or horizontal integration, that is, securing elements in the supply-chain from raw material to final product, or did they spread out acquiring firms at the same level in the supply chain doing the same kinds of activities? These categories were further analysed as to whether or not the entrepreneur had started the firm themselves, or had purchased it as a going concern. Other definitions of strategy types used in the research are as follows:

Focused Activity and Diversification: Diversification was a strategic decision to minimise business risk, diversifying the business operations of a company into different products, markets, or geographic locations. For the entrepreneur, a fall in profits in one area of business might be offset by profitable trading in another. Focus was the converse of this strategy; the entrepreneur concentrated activities in one area, cultivating in-depth expertise and industry knowledge.¹⁷

Aligned Activities: This term was used to describe an entrepreneur starting up an activity aligned with their present business, yet could not be described as horizontal or

¹⁷ A full discussion of focus strategy versus a diversification strategy can be found in Ries, A., *Focus: the Future of Your Company Depends on It*, New York: Harper Business, 1996.

vertical integration. For example, a bakery might commence a confectionery business. This was not in itself a replication of the initial activity, nor was it in the supply chain, rather it was an aligned activity, using similar processes, skills, and business knowledge as the first activity.

Branch Expansion: This term related to those entrepreneurs who either started or purchased branch operations in different geographic locations. The opposite of this was to concentrate activities on one site and expand this single business unit; perhaps encompassing retail, wholesale, and production activities in the one location. This strategy was termed capacity.

LIFESTYLE

This section of the case analysis investigated the public activities of the entrepreneurs. Were entrepreneurs involved in community boards, such as road boards, harbour boards, education boards, and drainage boards? Political involvement at a local or national level was recorded, as was involvement in sporting groups or associations. It was recorded if the entrepreneur gifted land, money, or art to the local community; similarly, if they were philanthropic in the treatment of their employees using measures, such as superannuation schemes, welfare schemes, and improved working conditions. Other questions in this section included: Did the entrepreneur retire to United Kingdom after they had finished their commercial careers? Were they involved in the Chamber of Commerce? Was the business they were involved in a family business? Did the entrepreneur's business continue after their death? Did family members continue in the business?

PARTNERSHIP

Early investigation of the entrepreneurs suggested that a number began their ventures as partnerships. This might mean joining an established partner who had an existing business or perhaps several partners with complementary skills starting a new business. It seemed a useful avenue for research to assess how prevalent this was as a form of start-up, and how successful these partnerships were. Partnership was defined as two or more entrepreneurs undertaking a business activity together. When this business activity was a family business, for example the Firth family commencing Ironclad Industries Ltd., this too was recorded as a partnership, as several family members came together at the same time to commence the business.

FAILURE

Entrepreneurial failure is a topic that has received attention both in the academic literature and the popular press. The claim that 50 percent or more of businesses fail within the first five years of operation has been made frequently, and it is open to debate.¹⁸ This study provided an opportunity to investigate the incidence of venture failure from a historical perspective. For each business venture an entrepreneur started it was recorded if the business lasted 0-5 years, or five years and over?

Failure was also considered in the case analysis through questions, such as: Did the entrepreneur have a business that failed, and if so, did they recover? Both of these terms need to be qualified. Failure in this research included a company put into voluntary liquidation, bankruptcy, or the entrepreneur closed the business to avert further losses. Failure also included the entrepreneur being ejected from the business they originally set up. This might occur through bankruptcy proceedings, or from a public company voting the founder off the board of directors. Recovery in terms of this study meant if the entrepreneur recovered financially to such an extent that they were able to develop a business again, and enjoy a measure of financial success.

CASE ANALYSIS

The cases were analysed using descriptive statistical analyses such as central tendency and variance. Categories were created for fields, such as age or year ranges (e.g. 0-10, 11-20). Questions, such as date of birth, age at death, wealth at death, or year of immigration, allowed obvious numerical responses. Other responses to questions could be coded as 0/1 (for yes/no questions), further responses remained qualitative. For example, questions as to the kind of business strategy employed, or the source of business capital, were collected as written responses and coded at a later stage.

¹⁸ Contemporary researchers differ in their definition of failure in terms of an entrepreneur closing down a business. A useful review of the literature on failure research, by Watson and Everett, claims that the rate at which entrepreneurs close down a venture because they cannot make a go of it is in the region of 9 to 17, percent depending on the industry. Closing down due to bankruptcy is between 1 and 2 percent. See Watson, J., and J.E. Everett, 'Do Small Businesses have High Failure Rates? Evidence from Australian Retailers', *Journal of Small Business Management*, 34, (1996), pp.45-63. More liberal approaches have deemed it failure when an entrepreneur and their start-up firm parted company. See for example, Churchill, B.C., 'Survival Patterns of the Postwar Business Population', *Survey of Current Business*, (1952), pp.12-19; and Baldwin, J. R., and P.K. Gorecki, 'Firm Entry and Exit in the Canadian Manufacturing Sector, 1970-1982,' *Canadian Journal of Economics*, 24, (1991), pp.300-323. This could be for any reason including the business going bankrupt, or voluntarily closing down, or being closed down in one location to open in another, or the entrepreneur selling their business to a partner or manager, leaving to pursue a better opportunity, or even as nonsensical as the entrepreneur selling the business at a profit to another company.

One example of this technique was to begin with the question: At what age did the entrepreneur commence their first major job? This was a straightforward numerical question. To further investigate the entrepreneur's career and understand their decision-making additional questions were added, such as: How many jobs did they have prior to their first venture? How many occupational classes did they engage in over their career? What was their most successful venture? Was their most successful venture in the same occupational field as their first job? How many ventures did they have prior to their most successful venture? How many years of commercial experience did they have prior to their first venture? Did they form a partnership? Was their most successful venture a partnership? 'What if', type scenarios could be constructed, for example: Of the entrepreneurs that experienced failure in their first venture, how many had less than 10 years commercial experience? Did the entrepreneurs who used inherited wealth as their source of capital, develop a larger business more quickly, than entrepreneurs who did not?

The benefit of using biographical information to analyse business behaviour was that it allowed the researcher to view a decision both before and after the fact. What occurred after they moved to a new city, or started a particular venture, or undertook a particular strategy? What were the outcomes on the firm of these decisions?

Such an approach was not without its difficulties. Biographical information was not always complete or readily accessible. The biographer or company historian did not collate their narratives with the business historian in mind. At times they accentuated activities or occurrences, which were outside the area of interest. This could mean a further investigation of newspaper records, company history, family history, or industry history to yield answers. Sometimes, even a question as straightforward as date of birth necessitated the response, 'unknown', as birth records were not collated in the country of origin at the time of birth, or held by the family.

SUMMARY FINDINGS

The following section presents summary characteristics of the case analysis that are not presented in other chapters. In particular, the data on the year of birth, life expectancy, father son relationship, occupational categories, industrial categories, settlement location and country of origin are shown. Case analysis research was compared to the population in general or to research from comparable studies, where this was possible.

BIRTH AND DEATH INFORMATION

Long life characterised the case group. Seventy-eight percent of the entrepreneurs lived over the age of 70; 39.8 percent of the case group lived into their eighties and nineties. Only six percent died before the age of 59. Fifteen percent died between the ages of 60 and 69. It is difficult to get a strictly comparable figure from the general population for the average lifespan given the variety of birth and death dates among the case group, and the limitations of statistical reporting during the period of study. However, one approximation is the average age at death. For the colony in 1901 this was recorded as 41.64 years.¹⁹ The average age at death of the case group was 76.6 years. It is only conjecture to suggest why a group of entrepreneurs may have had such a marked difference in life span to the general population. One might argue that the entrepreneur was able to assume a greater degree of control over their direction in life and welfare and as a consequence lived longer. Perhaps, due to their commercial success, the entrepreneur enjoyed higher living standards, hygiene and medical attention? The case analysis could not provide a definitive answer to this question.

SETTLEMENT

Where did the entrepreneurs in this study settle? This question gave an indication of where the entrepreneurs in the study lived, and the locations of their business activity. For while some of the entrepreneurs in the study operated national businesses, entrepreneurs still tended to live in proximity to the largest plant, or head office of their organisation. The data from this question was a representation of settlement patterns as well as representing the concentration of entrepreneurial activity among the case group. This information is shown both in tabular form and on the map of New Zealand that follows. Considering the concentration of entrepreneurs overall, the three main centres of Auckland, Dunedin and Christchurch were the only locations to record percentages of entrepreneurial settlement in double figures.

¹⁹ *New Zealand Yearbook*, 1911. The 1920/21 *New Zealand Yearbook* gave the average ages at death of the population in 1911 as 46.17 years for males and 42.37 years for females. By 1920 these averages had increased slightly to 48.74 years for males and 45.92 years for females. For a discussion of Maori life expectancy see Pool, Ian, *Te Iwi Maori: A New Zealand Population Past Present and Projected*, Auckland: Auckland University Press, 1991, pp.75-88.

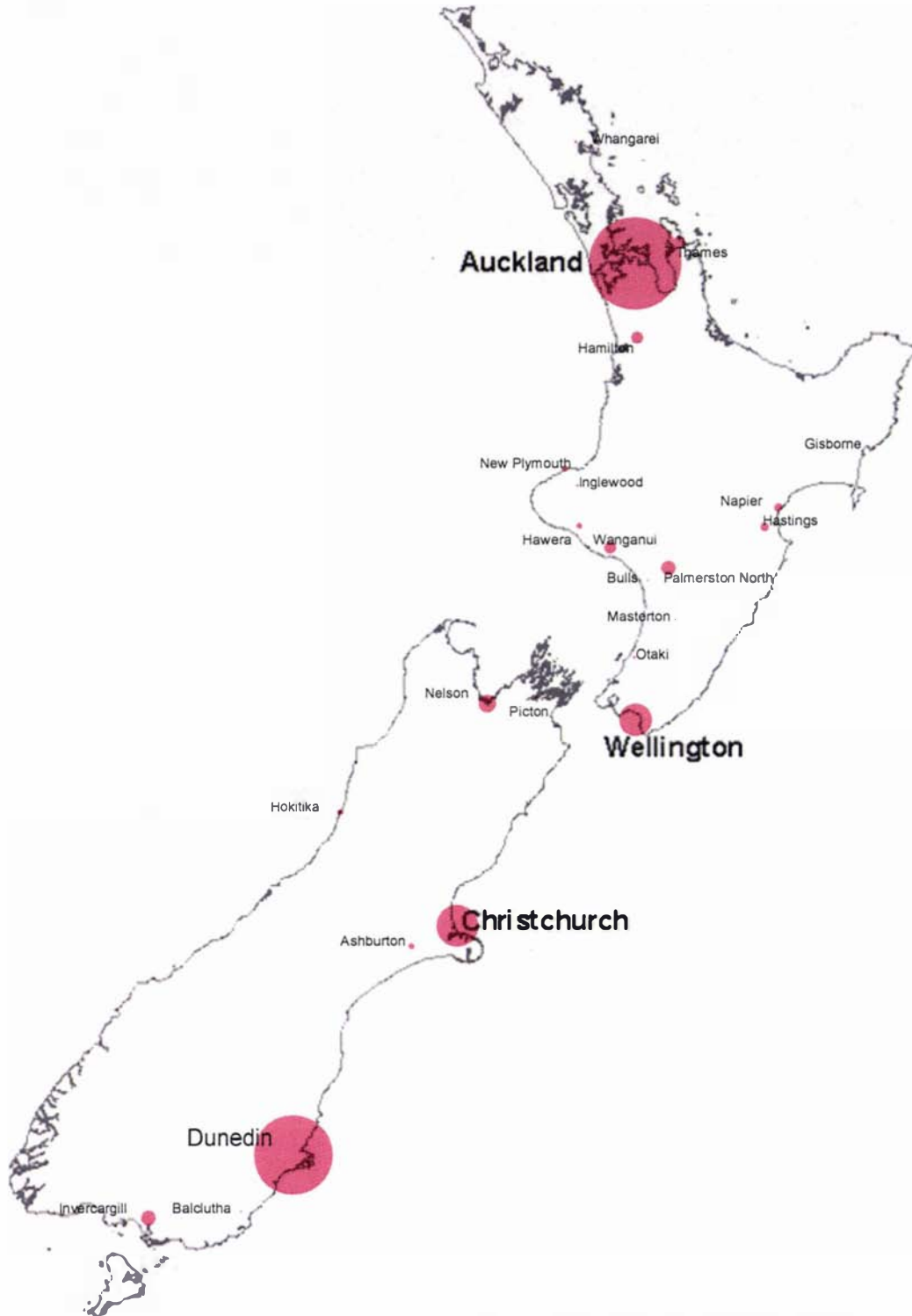
Auckland had 23.3 percent of the entrepreneurs from the case analysis; Dunedin had 20.3 percent; Christchurch had 10.5 percent, and Wellington, 8.3 percent. All other locations were below five percent. There was little similarity between the percentages of entrepreneurs the case analysis and the settlement patterns of the overall population (as given in the table for 1881). Other than the higher percentages of entrepreneurs in the larger settlement areas was to some degree in line with the general settlement pattern.

TABLE 7
SETTLEMENT LOCATION OF CASE ANALYSIS ENTREPRENEURS

| Location | Number | Percentage | Population 1881 | As Percentage |
|------------------|--------|------------|--------------------|---------------|
| Ashburton | 2 | 1.5 | 1526 | 0.3 |
| Auckland | 31 | 23.3 | 30952 | 6.2 |
| Balclutha | 1 | 0.8 | 820 | 0.2 |
| Bulls | 1 | 0.8 | 642 | 0.1 |
| Christchurch | 14 | 10.5 | 30715 | 6.1 |
| Dunedin | 27 | 20.3 | 42794 | 8.5 |
| Gisborne | 1 | 0.8 | 1737 | 0.3 |
| Hamilton | 4 | 3.0 | 1361 | 0.3 |
| Hastings | 3 | 2.3 | 617 | 0.1 |
| Hawera | 2 | 1.5 | 943 | 0.2 |
| Hokitika | 2 | 1.5 | 2600 | 0.5 |
| Inglewood | 1 | 0.8 | 395 | 0.1 |
| Invercargill | 5 | 3.8 | 6976 | 1.4 |
| Masterton | 1 | 0.8 | 2241 | 0.4 |
| Napier | 3 | 2.3 | 5756 | 1.1 |
| Nelson | 6 | 4.5 | 6764 | 1.4 |
| New Plymouth | 2 | 1.5 | 3310 | 0.7 |
| Otaki | 1 | 0.8 | 248 | 0.0 |
| Palmerston North | 5 | 3.8 | 1366 | 0.3 |
| Picton | 1 | 0.8 | 834 | 0.2 |
| Thames | 4 | 3.0 | 4863 | 1.0 |
| Wanganui | 4 | 3.0 | 4646 | 0.9 |
| Wellington | 11 | 8.3 | 20563 | 4.1 |
| Whangarei | 1 | 0.8 | 495 | 0.1 |
| Total | 133 | 100 | 173164 | 34.6 |

Note: Where the size of some towns that entrepreneurs were not given in the 1881 Census I have assigned them to the closest town, borough or city that was recorded. For example, an entrepreneur in Te Mata has been included in Thames figures.

FIGURE 20
SETTLEMENT LOCATION OF CASE ANALYSIS ENTREPRENEURS



Source: Case Analysis New Zealand Entrepreneurs

The settlement pattern of the entrepreneurs for the case analysis is also presented on the above map. The red circles proportionally represent the number of entrepreneurs from the case analysis in each of these locations. Curiously, while Auckland and Christchurch had 6.2 and 6.1 percent of the general population respectively residing in

these cities, Auckland had twice the number of entrepreneurs settling there from the case analysis. It is possible that this reflected to some degree the economic orientation of these two cities, and while Auckland had a more aggressive commercial focus, Christchurch had a more determined agricultural focus. However, it would require a more sophisticated sample to investigate this hypothesis in more detail.

FATHER-SON RELATIONSHIPS

Business historians have investigated the relationship of the entrepreneur to their father as well as the birth order of entrepreneurs in the family. In particular, Bernard Sarachek has undertaken two studies based on biographical research. The first investigated 187 American entrepreneurs; the second investigated 139 Jewish-American entrepreneurs. Typical of the entrepreneurs Sarachek selected were John Deere, George Eastman, Andrew Carnegie, William Colgate, and Granville Dodge.

Sarachek asked a number of questions of the entrepreneur and their relationship with their father. For instance: Did the entrepreneur have a supportive father, such as Chrysler, Ford, and Mellon, or were they completely rejected by their fathers like Jay Gould and Jean Paul Getty? From his investigation, he found that almost one-third experienced the death of their father before the age of 16; 41 percent had what he described as supportive fathers.

How supportive a father was to an entrepreneur was not investigated in the present research, nevertheless, there were still some similarities between Sarachek's research and the New Zealand case analysis. Considering the occupational background of the entrepreneur's father, the highest category across both studies was the percentage of fathers who owned their own businesses; 44 percent in the New Zealand study, and 38 percent in Sarachek's research.

Having a father who was in business provided several advantages. The adverse social stigma that can be created from a non-standard career path had been overcome in the immediate family.²⁰ The sons and daughters of business owners also benefited from early training in business by their father. Some entrepreneurs in the case analysis spent their first job working for the family firm before taking control of the family business or commencing their own business initiative. Finally, fathers who were in business might

²⁰ Gershenkron, A., 'Social Attitudes, Entrepreneurship, and Economic Development', *Explorations in Entrepreneurial History* 6, (1953), pp.1-19.

provide capital for their offspring to start a venture, or introduce their offspring to a network of suppliers for capital, goods and information.²¹

Was the first-born son likely to be entrepreneurial as opposed to other siblings?²² In Sarachek's research, 29 percent of entrepreneurs were the eldest child with the highest percentage of entrepreneurs coming from middle-order children (50%). For the New Zealand case group, it was only recorded whether or not the entrepreneur was the first-born son. For 84 of the 125 male entrepreneurs in the case group, their birth order could be reliably established. Of these, 34 (40 percent) were first-born sons, and 50 (60 percent) were not.

Sarachek has also investigated the skill level of the fathers of entrepreneurs. This was also done for the New Zealand case group. Both groups of entrepreneurs displayed a similar low percentage of fathers who were unskilled workers; with 6.8 percent for the New Zealand group and six percent for Sarachek's study. Similar across both studies was the percentage of fathers who were skilled workers. This was 18.8 percent in the New Zealand group and 12 percent in Sarachek's study.

The percentage of fathers who were farmers was greater in the American sample (29 percent) than the New Zealand case group (18.8 percent). The percentage of fathers who were major and minor executives in either study was low. Minor executives were 0.8 percent in the New Zealand study and 2.8 percent in Sarachek. Major executives were zero percent in each study.²³

²¹ For the New Zealand study, the number of entrepreneurs who followed the same occupational field as their father was also measured. Interestingly, seventy-nine percent did not follow their father's choice of occupational field, and only twenty-one percent did. Exposure to self-employment as part of the family habitat played a more important role in a child's later career decision, than the actual occupational field of the father.

²² There was no comparable population data on this.

²³ The absence of any major executives in any of the case groups is worth noting. For New Zealand, one argument might be that there were few major corporations for fathers to be major executives in. This was not the case. International banks and insurance companies were present in New Zealand, shipping companies, several retail chains had branches nationwide as well as large primary processing firms in the timber, dairy and woollen industries. However, one point that the present classification of the data omits is the scale of the business a father owned. In other words, we might ask of the fathers who were business owners, how many of these headed firms that were of such a large scale that the fathers might be considered major executives of their own businesses? Clearly, there were some, and the children of these business owners had exposure to business of a large scale from their early years. The exact number of siblings who fall into this category was not investigated, but it is worth further consideration to see what effect this exposure may have had on the scale of the ventures their sons and daughters then started.

In both studies it appeared least likely that an entrepreneur would come from one of two extremes; either from a family where the father was a labourer or unskilled worker, or where the father was a highly successful career executive.

TABLE 8
OCCUPATION OF ENTREPRENEURS' FATHERS

| Fathers Occupations | Case Analysis Fathers | As Percentage | Sarachek (Non-Jewish) | As Percentage |
|----------------------|-----------------------|---------------|-----------------------|---------------|
| Workers | 9 | 6.8 | 10 | 5.6 |
| Skilled Workers | 25 | 18.8 | 22 | 12.2 |
| Farmers | 25 | 18.8 | 52 | 28.9 |
| Professionals | 10 | 7.5 | 22 | 12.2 |
| Owners of Businesses | 52 | 39.1 | 68 | 37.8 |
| Minor Executives | 1 | 0.8 | 5 | 2.8 |
| Major Executives | 0 | 0.0 | 0 | 0.0 |
| Other | 0 | 0.0 | 1 | 0.6 |
| Unknown | 11 | 8.3 | 0 | 0.0 |
| Total | 133 | 100 | 180 | 100 |

Source: New Zealand Fathers, see text and Appendix; Sarachek (Non-Jewish Fathers) and Collins and Moore adapted from Sarachek, 'Jewish American Entrepreneurs,' p.361.

In addition, for both studies, the most frequent occupational category of fathers of entrepreneurs was proprietorship. Thirty-nine percent of the New Zealand group had a father who had his own business, compared with 37 percent of Sarachek's study. In both studies, entrepreneurs commenced their first venture early in life, regardless of their background. In Sarachek's study, six out of ten of the entrepreneurs started their first entrepreneurial venture before the age of 30; in the New Zealand study, seven out of ten had done so before the age of 30.

FIRST POSITION

The age an entrepreneur took their first full-time job was not always clear from biographical accounts. At times, it can be inferred from the events surrounding a first job; 13 of the entrepreneurs in this case group fell into this category. Overall, two entrepreneurs (1.5 percent) started their first job under the age of ten—both boys were

aged nine. Ninety entrepreneurs (67.7 percent) commenced full-time employment between the ages of 10 and 15.²⁴ Thirty-four New Zealand entrepreneurs commenced their first job between the ages of 16 and 18, and seven, were aged 19 and over before commencing their first full time work.²⁵ Of the seven, six were women. The women entrepreneurs in this case analysis often engaged in child-rearing or household responsibilities prior to starting out on a business venture. The reason women entered entrepreneurial activity was in some cases adversity, such as the death of a husband, or having an ineffectual husband as income earner.

TABLE 9

| AGE FIRST STARTED WORK | | |
|------------------------|--------|---------------|
| Age range | Number | As Percentage |
| 0 to 9 | 2 | 1.5 |
| 10 to 15 | 90 | 67.7 |
| 16 to 18 | 34 | 25.6 |
| 19 and over | 7 | 5.3 |
| Total | 133 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

OCCUPATION

Overall, the number of occupations held by the 133 entrepreneurs totalled 628.²⁶ The lowest number of occupations was one, and only three entrepreneurs displayed this. In each case, the entrepreneur moved directly into proprietorship. Two of these were women, and this move was triggered by adversity. The highest number of occupations by a single entrepreneur was ten. One in four entrepreneurs had four occupations and 47.4 percent of the case group had five or more occupations. The variety of these occupations is largely explained by entrepreneurs changing jobs prior to undertaking new

²⁴ By comparison, in Sarachek's study of Non-Jewish entrepreneurs this figure was 36 percent.

²⁵ The results of this study show an approximately 50 percent higher incidence of entrepreneurs who started work in the 10 to 15 age group, than North American studies whereas the percentage of entrepreneurs in the 16 to 18 year category is similar. The number of entrepreneurs starting full-time work after aged 19 and over in the New Zealand study is low (5 percent) and this is in direct contrast to Sarachek's studies of Jewish and Non-Jewish entrepreneurs which both recorded 29 percent. Millar's study of business elite was even higher, noting 45 percent of business leaders started their first regular job aged 19 or over (meaning they had received further education).

²⁶ Measuring occupation presents some interesting challenges. For instance, is the managerial role a different occupation to that of a worker in the plant? While the industry is the same, one could argue that the vital nature of the position had changed. The skills, knowledge and abilities required of the person to discharge their new role can be vitally different from their previous work. Is the move to proprietorship also a change in occupational class? For the New Zealand case analysis both management and proprietorship were recorded as different occupations.

venture activity. In addition, being the proprietor of a concern was recorded as a separate occupation as distinct from being an employee, even though the industry remained the same. This categorisation tended to accentuate the number of occupations without necessarily indicating a greater range of commercial experience by the entrepreneurs.

TABLE 10
NUMBER OF DIFFERENT OCCUPATIONS

| Number of occupations | Case Analysis Entrepreneurs | As a Percentage |
|-----------------------|-----------------------------|-----------------|
| 1 | 3 | 2.3 |
| 2 | 13 | 9.8 |
| 3 | 22 | 16.5 |
| 4 | 32 | 24.1 |
| 5 | 17 | 12.8 |
| 6 | 22 | 16.5 |
| 7 | 9 | 6.8 |
| 8 or more | 15 | 11.3 |
| Total | 133 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

NUMBER OF JOBS PRIOR TO FIRST VENTURE

This study counted the number of jobs, or full-time positions, that an entrepreneur held prior to starting up their first venture. This did not include unpaid work. Holding a position in this study was viewed as analogous to working for the same firm. When a person changed roles in their immediate firm it was not counted as an additional position. It was only counted as an additional position when they moved to another firm or place of employment. This was different from the occupation category, where changes in roles performed inside a single firm could also reflect in occupational changes.

The three entrepreneurs who held no jobs prior to undertaking their first venture included two women, Sophia Anstice and Shirefie Coory, who commenced their first business ventures out of adversity and without commercial previous experience. The other, Leo Walsh, entered an engineering business with his brother when he turned 18; there was no evidence of him having had a job prior to this. While having one job prior to starting a new venture, was the largest category, (31 percent), the case group was closely split between those who had between one and two jobs (54.9 percent) and those who had three or more (42.9 percent).

TABLE 11
NUMBER OF JOBS PRIOR TO FIRST VENTURE

| Number of jobs prior to first venture | Case Analysis Entrepreneurs | As a Percentage |
|---------------------------------------|-----------------------------|-----------------|
| 0 | 3 | 2.3 |
| 1 | 42 | 31.6 |
| 2 | 31 | 23.3 |
| 3 | 22 | 16.5 |
| 4 | 16 | 12.0 |
| 5 | 8 | 6.0 |
| 6 or more | 11 | 8.3 |
| Total | 133 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

ENTREPRENEURIAL ACTIVITY BY INDUSTRY

Table 12 indicates the case group's distribution of entrepreneurial activity by industry. This was not a straight-forward classification to make. Entrepreneurs may have more than one venture, in more than one industry, over their lifetime and the researcher must decide at what point to select the industry to use as a classification. Similar difficulties exist in sociological research analysing class mobility, where researchers have used the occupational category stated at the time of marriage. Others argue, however, that this may not be the most reliable indicator as it does not represent a person performing in their most mature career position.

TABLE 12
INDUSTRY ACTIVITY OF ENTREPRENEURS

| Industry | Case Analysis | As Percentage |
|-----------------------------------|---------------|---------------|
| Mercantile | 32 | 24.1 |
| Manufacturing | 20 | 15.0 |
| Newspapers and publishing | 17 | 12.8 |
| Services | 9 | 6.8 |
| Shipping | 9 | 6.8 |
| Brewing including Winemaking | 8 | 6.0 |
| Meat and Dairy processing | 6 | 4.5 |
| Engineering | 6 | 4.5 |
| Forestry and Sawmilling | 5 | 3.8 |
| Transportation Automobile | 4 | 3.0 |
| Production and Distribution | 3 | 2.3 |
| Financial Services | 3 | 2.3 |
| Land Development and Construction | 3 | 2.3 |
| Mining and oil exploration | 3 | 2.3 |
| Fishing | 2 | 1.5 |
| Education | 1 | 0.8 |
| Entertainment | 1 | 0.8 |
| Farm Development | 1 | 0.8 |
| Total | 133 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

For this research entrepreneurs were categorised according to that commercial activity they undertook which was the largest, or most financially successful of their career. Naturally, there was some degree of judgement in this, but it was a more reliable measure than using an entrepreneur's first business venture. Numerous entrepreneurs changed occupations after their first venture and were more successful, or spent greater duration of their working careers, in different occupations to their initial one.

Across the case analysis, mercantile activities (32 entrepreneurs, 24 percent) were the largest industry classification. This included: retail operations, stock and station agents supplying the farming community, department stores, and wholesale and distribution activities (in industries other than automobile distribution). Such a result reinforced the need for additional research into the retail sector in nineteenth-century New Zealand. For while it was clear that the colony experienced a manufacturing boom

in the latter part of the nineteenth century, it may be that its economic contribution was overshadowed by that of the mercantile trades.

The second largest cluster was in manufacturing, (20 entrepreneurs, 15 percent), followed by the newspaper and publishing industry (including printing) with 17 entrepreneurs (12.8 percent). This was not surprising. Partly due to the geographic isolation of many New Zealand communities in the late nineteenth and early twentieth century, a small township could support its own newspaper and commercial printing operation. This permitted some entrepreneurs a captive, if not ready, market from which to develop their enterprise and expand into other regions.

Services industries included activities such as auctioneering, advertising, and tourism and nine entrepreneurs (6.8 percent) of the case group were engaged in these types of activities. Shipping activities accounted for six percent as did brewing. Meat and dairy processing and engineering each accounted for 4.5 percent. The smallest categories were education, entertainment, and farming. For instance, one entrepreneur pioneered a regional art school, and another's primary activity was the buying, running and selling of multiple farms.

LIMITATIONS

Some of the limitations of this study have already been mentioned. It focused on a group of entrepreneurs and explored this group using available biographical materials rather than considerable primary sources. Such an effort would clearly yield further insights, though was beyond the bounds of the present study. Nor could such an approach, if adopted, rely on locating sufficient primary records for each entrepreneur considered.

Furthermore, while the study uses statistical techniques, the case analysis was non-random and was not designed to be representative of the population. However, in reality, obtaining a random case group of New Zealand entrepreneurs who were perfectly representative of industry groups and periods, and for whom adequate information is in existence to conduct research on their business activities, would be a difficult task, if not impossible. Given these kinds of constraints, the present research covers many of the entrepreneurs who might be reasonably studied using a case analysis technique at this period in New Zealand's history. In addition, the study includes entrepreneurs from many of the main population areas of New Zealand in the period, and represents a wide range of commercial activities.

NEW MEASURES

The appearance of a large, expensive, collective book on the history of household and family needs neither apology nor defence. This is a new, or a newly defined, area of study and its importance to human behaviour in the present as well as the past is manifest. The burgeoning subject stands in evident need of a body of comparative data and of an assemblage of techniques for their analysis.²⁷

In the book, *Household and Family in Past Time*, Peter Laslett and the Cambridge Group for the History of Population and Social Structure, presented new measures by which households and family could be examined and discussed. Mean Household Size (MHS) was one of these, and it encouraged other researchers to be equally creative producing new classifications and statistical measures for investigating families.²⁸ The study of entrepreneurship could also benefit from such an approach, and from the present study, three measures are proposed which others may find useful.

The first of these is Lifetime Venture Activity (LVA), which measures the number of ventures an entrepreneur undertakes over their career. Analysing the case group of entrepreneurs it became clear that while we may identify an entrepreneur with a single business venture for which they are well known, over their total career they often pursued multiple business ventures and start-ups. Indeed, to have only one venture in a lifetime was the minority not the majority experience. Eighty-one per cent of the case group was involved in more than one venture over their lifetime. This ranged from two or three ventures to five or more. Some ventures lasted only a few years; others lasted 40 years or more. Some ventures failed, but the key finding was that entrepreneurs habitually undertook multiple ventures over their lifetime, not just one.

A distinction could be made between the ventures that an entrepreneur started that were entirely new, and those ventures that an entrepreneur was involved in which were started by someone else. This could happen through acquisition, purchasing a business outright, or entering into a partnership with someone who had already begun a venture. Lifetime Venture Involvement (LVI) measured the latter category, that is, the total number of ventures that an entrepreneur was involved in regardless of whether or not they started the venture. A second measure, Lifetime Ventures Founded (LVF),

²⁷ Laslett, Peter, *Household and Family in Past Time*, London: Cambridge University Press, 1972, p.ix.

²⁸ Wachter, Kenneth, Eugene Hammel, and Peter Laslett, *Statistical Studies of Historical Social Structure*, London: Academic Press, 1978.

measured only those business ventures that the entrepreneur started (their own creation), either by themselves or with others. The two measures can give quite different results.

In the study of New Zealand entrepreneurs, LVF for the total group was 377. This was a mean LVF of 2.83 per entrepreneur. So, a New Zealand entrepreneur during this time period, on average, was responsible for the creation of almost three entirely new business units over their lifetime. These ventures ranged across a diverse group of industries including manufacturing, entertainment, retailing, accounting, auctioneering, shipping, and publishing. Each venture was a distinct combination of plant, capital, skills, networks, energy and vision. Sixteen per cent recorded a LVF of five or more ventures with the highest LVF for a single entrepreneur of twenty-six.²⁹

TABLE 13
LIFETIME VENTURE ACTIVITY

| Lifetime Ventures Founded (LVF) | Number | As Percentage | Lifetime Ventures Involved (LVI) | Number | As Percentage |
|------------------------------------|--------|---------------|-------------------------------------|--------|---------------|
| 0 Ventures | 8 | 6.0 | | | |
| 1 Venture | 35 | 26.3 | 1 Venture | 25 | 18.8 |
| 2 Ventures | 33 | 24.8 | 2 Ventures | 31 | 23.3 |
| 3 Ventures | 24 | 18.0 | 3 Ventures | 32 | 24.1 |
| 4 Ventures | 12 | 9.0 | 4 Ventures | 12 | 9.0 |
| 5 or more Ventures | 21 | 15.8 | 5 or more Ventures | 33 | 24.8 |
| Total Entrepreneurs | 133 | 100 | Total Entrepreneurs | 133 | 100 |
| Total Ventures | 377 | | Total Ventures | 475 | |

Source: Case Analysis New Zealand Entrepreneurs. Note: Eight entrepreneurs founded no ventures. Instead, they purchased the businesses they later developed

The Lifetime Venture Involvement (LVI) figure showed an even greater enthusiasm for new business opportunities. Total LVI for the 133 entrepreneurs was 475 with a mean of 3.5 per entrepreneur revealing the aggressive level of economic activity among these early New Zealand entrepreneurs. The minority of the case group, 18.8 percent, were involved in only one venture over their lifetime. The majority, 81.2 percent, recorded a LVI of two or more ventures with 24.8 per cent of New Zealand entrepreneurs in the case group recorded a LVI of five or more ventures. The highest LVI of a single entrepreneur was forty.

²⁹ Note that this does not include branch operations commenced by an entrepreneur, which would swell the total even more.

One of the interesting questions this raises for economists is what is the economic power of one entrepreneur? Job creation research has focused on the firm and shown that net new jobs come from small firms not large ones.³⁰ But the Lifetime Venture Activity (LVA), both LVF and LVI, suggest that an equally insightful unit of measurement is the individual entrepreneur. A single entrepreneur can commence or be involved in multiple ventures over their lifetime. What is the average accumulated wealth that an entrepreneur generates over a lifetime? What is the average contribution to GDP by an entrepreneur? How many jobs does a single entrepreneur create over a lifetime? These are questions that we do not yet have answers for.

In *Household and Family in Past Time*, Peter Laslett produced a work that was collaborative in nature, with uniform agreement by scholars on the key definitions of household and family. Such a consensus among intellectuals is an achievement in itself, but the payoff it produced was wide reaching. Mean Household Size (MHS) could be considered across time, national, and ethnic boundaries. In the historical study of entrepreneurs, the same consensus by a community of academics could produce dynamic results.

Was the entrepreneur a member of the business elite, CEO, self-employed, the founder of a firm, or just the owner of a firm? What ownership stake is considered large enough to be called entrepreneurs? Were those who purchase 'lifestyle' businesses entrepreneurs? Was the farmer an entrepreneur? Such questions have been answered differently by different academics. Studies emerge that use the term business elite, entrepreneur, and self-employed interchangeably, but behind each term lie different assumptions and definitions.³¹ Researchers question each other's findings, yet do so on the basis of different premises. It would be rewarding for the discipline to experience the reverse—investigations by business historians considering entrepreneurial activity in different regions, economies, countries and times, working from the same fundamental premises.

³⁰ Birch, D. L., *Job Creation in America*, New York: Free Press, 1987.

³¹ See Berghoff, H., and R. Möller, 'Tired Pioneers and Dynamic Newcomers?'; also Miller, W., 'American Historians and the Business Elite'; and Levenstein, M. 'African American Entrepreneurship: The View from the 1910 Census', *Business and Economic History* 24, (1995), pp.106-134.

CONCLUSION

This chapter has discussed the technique of case analysis as it has been used in business history. It has outlined some of the approaches taken by business historians, specifically considering case approaches involving entrepreneurs and the business elite. These studies have used both individual case analysis, industry case analysis, and case analysis involving 100-plus business elite or entrepreneurs. Each approach offers particular benefits, and the larger of the three options was chosen for this research. While this approach sacrifices some of the detail of the other two, it has not been used before in New Zealand business history and was felt to add a useful perspective to our understanding of the period and entrepreneurial behaviour.

This chapter also outlined the criteria used in the case analysis itself. It discussed the source of the cases, the questions used to decide eligibility, and the kinds of questions then applied to each of the cases for analysis namely: background information; business activity, strategy, lifestyle, partnership, and failure. These categories were entered into an excel spread sheet for further analysis.

Finally, three new measures for categorising entrepreneurial behaviour in case analysis were suggested. These were Lifetime Venture Activity (LVA), Lifetime Venture Involvement (LVI), and Lifetime Ventures Founded (LVF). None of these were challenging in their construction but merely sought to induce some measure of commonality to a field of research, that like many fields of study, suffers from a lack of common understanding and application in even its most fundamental premises, not the least of which is defining who is an entrepreneur. Resolving these difficulties might enable more comparable and productive research.

The next three chapters consider in turn different characteristics of the case group of entrepreneurs selected for this study. Chapter 6 examines the characteristics of immigrants as a sub-group of the case analysis and discusses both the role of immigration in the colonial economy and in particular the importance of skill in allowing new immigrant entrepreneurs to establish business enterprises. Chapter 7 explores the issues surrounding business capital in the colonial economy. For entrepreneurs, conventional wisdom might suggest that access to capital is a necessary requisite to starting a venture. However, the case group exemplified other characteristics. In the colonial economy, capital requirements to start a new enterprise were often limited, and capital economising techniques were used by entrepreneurs to access markets.

In Chapter 8, the general patterns among the case group are more broadly investigated to propose a life-cycle diagram for the colonial entrepreneur. This diagram depicts what might be considered the typical career path of the colonial entrepreneur and particular challenges, or transition points that were faced by these entrepreneurs as their enterprises developed in scale.



6

THE ENTREPRENEURIAL IMMIGRANT:
MIGRATION AND ENTERPRISE IN A
COLONIAL ECONOMY

In all subsequent colonization, the Wakefield principle has been acted upon, though imperfectly, a part only of the proceeds of the sale of land being devoted to emigration: yet wherever it has been introduced at all, as in South Australia, Victoria, and New Zealand, the restraint put upon the dispersion of the settlers, and the influx of capital caused by the assurance of being able to obtain hired labour, has, in spite of many difficulties and much mismanagement, produced a suddenness and rapidity of prosperity more like fable than reality.¹

This chapter discusses the role of immigration in the development of the New Zealand economy in the latter part of the nineteenth century.² It is argued that contrary to popular notions of large-scale agricultural immigration, significant numbers of immigrants in the late nineteenth century who became entrepreneurs were skilled workers. For these people, a combination of experience, networks, and skill meant that they had the necessary social and human capital to successfully exploit entrepreneurial opportunities in the late nineteenth century New Zealand economy. In part, the success that they enjoyed was due to their inherent personal qualities. But it was also due to structural characteristics in the colonial economy at this time, such as high population growth, government investment, and technological advancement, which made it

¹ Mills, John Stuart, *Principles of Political Economy*, v.3, p.966.

² An earlier version of this chapter was presented as a paper at the Business History and Europe Conference, University of Canterbury, Christchurch: 5-6 September 2003.

particularly receptive to entrepreneurial endeavour. The impact of these upon the economy has already been examined in this thesis.

This chapter is divided into three parts. Part One briefly discusses the immigration patterns over the period, identifying the three mechanisms by which immigrants travelled to New Zealand and the respective impacts of these mechanisms on population growth. In Part Two, a summary of the economic benefits of immigration is presented outlining the views of commentators at the time along with the contribution of scholars. While governments were aware of some of the economic benefits accruing from immigration, other benefits such as increased economic demand and new enterprise also occurred. Part Three presents the results of a case analysis of 107 immigrants (largely from Europe) who either on arrival, or during their working career, commenced one or more new enterprises. Their propensity to start entrepreneurial firms can be explained in part by their depth of skill and commercial experience, their access and use of family and trade networks as well as structural characteristics resident in the economy.

INTRODUCTION

The historical study of immigration and its economic effects is of particular interest to the business historian. Immigration, and government policies on immigration, in the nineteenth and early twentieth century shaped New Zealand society as well as that of other developing countries such as Canada and Australia.³ Much of the research on immigration in the New Zealand context has centred on the social conditions in the migrant's home country, their passage, or the establishment of community in the colony.⁴ While clearly important, these issues do not inform a debate on the longer-term economic effects of immigration.

The reasons why people leave one country and move to another are various; probably only eclipsed by the number of reasons why a person leaves employment to start a new business. Yet the debate surrounding immigration and whether it is beneficial or detrimental to an economy draws an emotive response. Claims that immigrants take

³ For discussions on colonisation especially from the English perspective see for instance, Plant, G.F., *Oversea Settlement: Migration from the United Kingdom to the Dominions*, London: Oxford University Press, 1951; Carrothers, W.A., *Emigration from the British Isles: With Special Reference to the Development of the Overseas Dominions*, London: P.S. King and Son, 1929; Marriott, John, *Empire Settlement*, London: Oxford University Press, 1927.

⁴ See for example Simpson, Tony, *The Immigrants*, Auckland: Godwit Publishing, 1997. Borrie, W.D., *Immigration to New Zealand: 1854-1938*, Canberra: Australian National University, 1991.

the jobs of the local population, are a drain on social services, or dilute the skill base of an economy are offset by counter claims that immigrants have a higher propensity to start new firms, create new jobs with their spending, and save at higher rates than the native population.⁵

PROFILE OF NEW ZEALAND IMMIGRATION

While three assisted migration schemes (colonisation society, nominated scheme and assisted passage), had operated in New Zealand at various points between the 1830s and 1910, over two-thirds of migrants arrived without assistance, drawn by social and economic activity.⁶ The movement was significant in numerical and economic terms. For example, between 1853 and 1892 approximately 326,000 people immigrated to New Zealand. Two-thirds of these people arrived by their own means, outside any kind of assisted immigration scheme: this out of a total population in 1892 of 650,433 persons.

Planned settlements such as those promoted by coloniser Edward Gibbon Wakefield, enjoyed a profile many times greater than their impact on population and economic activity. Historian Tony Simpson noted that even by 1858, at the end of the New Zealand Company's colonisation experiment, it only accounted for one in five settlers in New Zealand, little over 10,000 people. Two further forms of assisted immigration were the nominated scheme and assisted passages. From 1871 until it was ceased in 1892 (though there was a further brief period of assisted migration after the First World War) assisted and nominated schemes settled 112,000 people at an average cost of passage of between £12 and £15.

The pull-factors in the colonial economy behind immigration were various. Alluvial gold deposits provided a significant stimulus for immigrants in the 1860s and many tried their hand at digging even if only to leave for some more profitable activity. Ascertaining how many immigrants actually profited directly from gold is pure guesswork.⁷ Economist Gary Hawke suggested that in the 1870s, the expanding wool

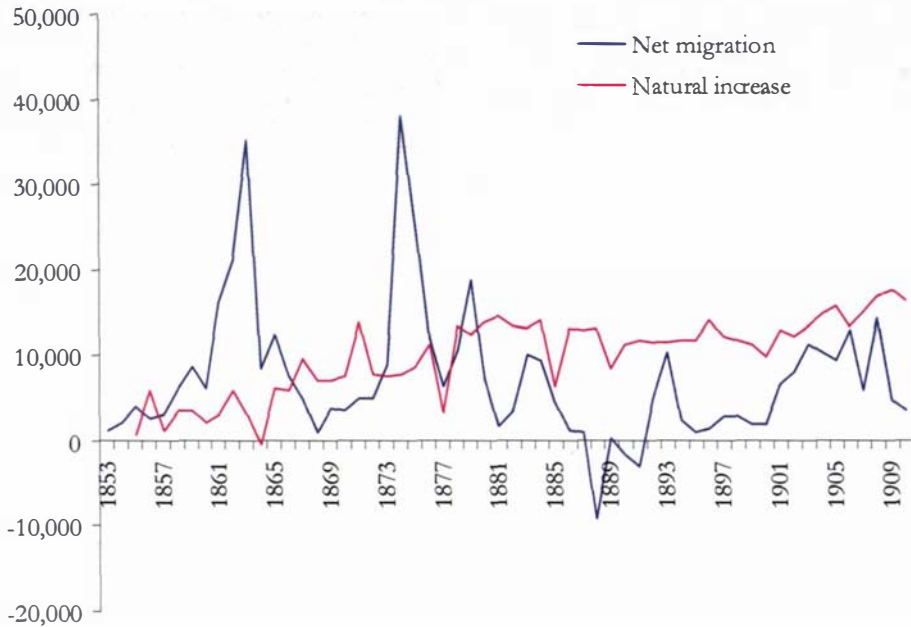
⁵ A more modern examination of the benefits accruing from immigration can be found in Simon, Julian, *The Economic Consequences of Immigration*, Oxford: Basil Blackwell, 1989. Using examples and studies from North America, Australia, New Zealand, Canada, and Israel he argues that immigrants have a number of positive effects on an economy including: immigrants display a higher propensity to start new businesses than natives, immigration narrows disparities in income, immigrants create new jobs with their spending and decrease native unemployment, they have a higher rate of participation in the labour force and save more than natives.

⁶ See Simpson, *The Immigrants*, p.70.

⁷ See comments in *NZPD*, 44 (1883), p.35 (J. Barnicoat).

production and investment in railway building through the Vogel scheme would have been an equally attractive draw card to immigrants as was the refrigeration boom of the early twentieth century.⁸

FIGURE 21
SOURCES OF NEW ZEALAND POPULATION INCREASE: 1853-1910



Source: Generated from *Statistics of New Zealand, 1853-1910*

The above graph shows the sources of New Zealand’s population increase. Considering net migration, the excess of immigrants over emigrants, the 1860s and 1870s were the most substantial decades; in the ten years from 1860 to 1869 net migration was 116,192. In the ten years from 1870 to 1879 this increased by 14 percent to 133,079.⁹ Net migration had two peaks; one occurred in 1863, with 35,120 net migrants arriving following the gold boom in Otago. The other peak occurred in 1874 during Vogel’s policy of immigration and public works (38,106 net migrants).¹⁰ Overall, immigration

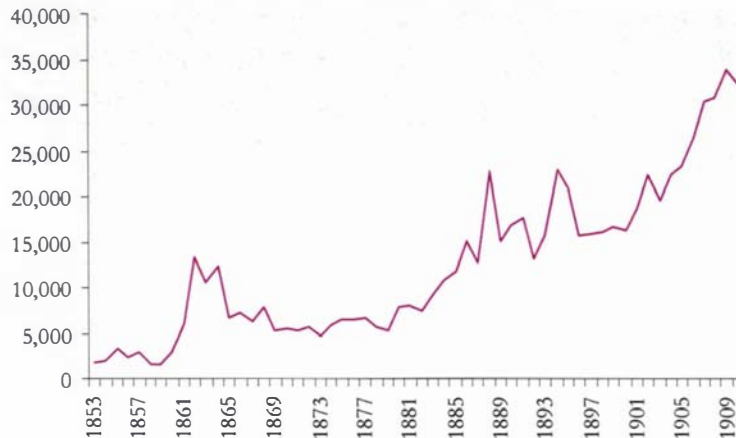
⁸ Hawke, *The Making of New Zealand*, pp.13-14.

⁹ *Statistics of New Zealand*

¹⁰ Interestingly, though 1874 is quoted at times as the year of highest migration to the colony, this was only as regards net migration, not absolute figures. In absolute figures the year of highest migration to the colony occurred in 1863 with 45,730 immigrants; 1874 recorded 43,965 immigrants. Similarly, while 1888 incurred the highest net migratory exodus, it was not the highest migration in absolute numbers. This occurred in 1894 with 22,985 emigrants.

was the dominant source of population increase for the colony of New Zealand from the 1840s until 1878.¹¹

FIGURE 22
EMIGRATION FROM THE COLONY OF NEW ZEALAND: 1853-1910



Source: *Statistics of New Zealand—1853-1910*

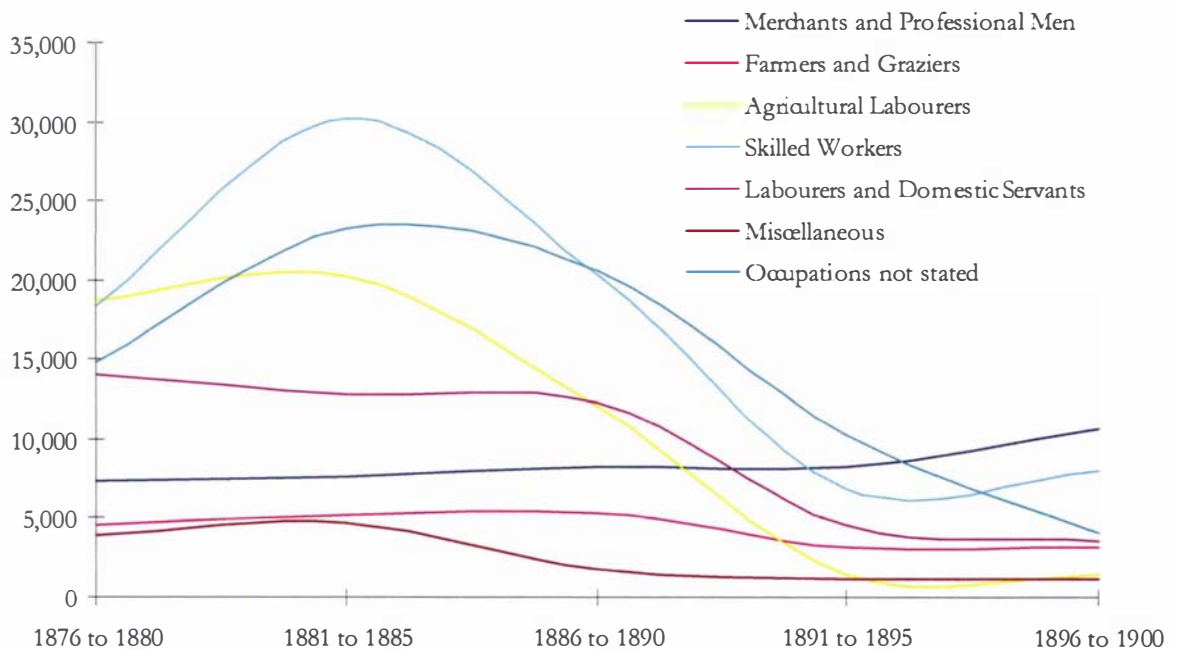
The 1880s witnessed a reverse in the colonial migration pattern. During the 1870s, the annual average excess of immigrants over emigrants had been 13,307. In 1880, it was 7231, the following year, 1616. This downward pattern continued. The worst year was 1888, when 22,781 people left the colony resulting in negative net migration of 9175. The following year was little better, with an increase of only 214 people from migration, followed by further negative migration for the subsequent two years. In 1890, departures exceeded arrivals by 1782, and in 1891, by 3198. The cumulative affect of such an exodus meant that over the decade of the 1880s there was a 78 percent fall in migrants staying, as compared to the previous decade. The 1890s fared no better, when the cumulative numbers of migrants remaining fell again to only 22,345.¹²

The view of some historians is to attribute the increasing emigration to the depressed economic conditions in the colony. The logical conclusion of such an argument is that the population exodus further aggravated the negative economic climate

¹¹ By way of comparison, in the United States, natural increase had already overtaken immigration by the turn of the nineteenth century. See Gibson, C. J. (1971), *Demographic History of New Zealand*, thesis (PhD) University of California, Berkley, pp.23-26.

some have suggested?¹⁵ Certainly there is evidence to suggest that this may have been the case into the 1870s, but not after this.¹⁶ English Board of Trade statistics between 1876 and 1900 suggest that from the United Kingdom, the largest occupational grouping of emigrant males to Australasia was skilled workers.¹⁷ This movement peaked between 1881 and 1885, and overall recorded fifty percent greater emigrants than its closest occupational category, agricultural labourers.

FIGURE 23
OCCUPATIONS OF ADULT MALE CITIZENS WHO LEFT UNITED KINGDOM FOR
AUSTRALASIA: 1876-1900



Source: Adapted from Thomas, Brinley, *Migration and Economic Growth: A study of Great Britain and the Atlantic Economy*, 2nd ed., London: Cambridge University Press, 1973.

¹⁵ See Arnold, R.D., *The Farthest Promised Land*, Wellington: Victoria University Press, 1981.

¹⁶ Hawke introduces this reservation in *Making of New Zealand*, p.14.

¹⁷ The most concentrated peaks occurred in the gold rush years between 1852 and 1865, when gold strikes in Victoria, followed by the West Coast of New Zealand, saw emigration to Australasia accounting for one in three United Kingdom emigrants. From 1866 to the mid 1870s, it dropped to under ten percent of United Kingdom emigrants until the mid-1870s when it peaked again and emigrants to Australasia attracted over 20 percent of United Kingdom emigrants. That emigration to Australasia drops to less than 20,000 per annum after 1891 would suggest that news of the recession in these colonies had filtered back to the United Kingdom to such an extent that it was beginning to have an affect on emigrant numbers.

The occupation of a migrant in their home country might bear little resemblance to their occupation in their adopted country.¹⁸ That one arrived in the colony classed as a farm labourer was no indication that this was the career pursued in the colonial economy. Such a claim is supported by the sample of immigrants discussed shortly. Only ten percent of the entrepreneurs studied farmed during their working lives, and those that did used it as a stepping stone to some other form of commercial endeavour. English-born William Winstone, for example, arrived in Auckland in 1859 aged 16. Following his father's example he took a job farming. Yet like the majority of the other entrepreneurs in this study, he used his initial employment as a means to an end rather than an end in itself. Winstone saved vigorously until he was able to start his first cartage business in 1864, five years later.¹⁹

Letters from the immigration officer in Auckland to the under secretary for immigration in 1879, also illustrated the tendency toward occupational mobility in the colonial economy. 'The nominated system is much more beneficial than the assisted,' commented Alfred Greenfield. 'The immigrants coming out under the former almost invariably find homes and employment on landing, while the assisted are not always so fortunate . . . Many of the nominators have not been more than six years in the colony, but are possessed of considerable property. Among these may be found a number of Government immigrants who are now hotelkeepers, farmers, country storekeepers, master mechanics, and in government employ.'²⁰ Likewise, Borrie cited a similar instance from *The New-Zealander*: 'Those who originally laboured for wages in this colony, but have now raised themselves to the position of employers.'²¹

THE ECONOMIC BENEFITS OF IMMIGRATION

Scholars have suggested a range of economic benefits of immigration. Early classical economists such as Say and Ricardo opposed the idea of emigration asserting that it would be detrimental to the home economy. Brinley Thomas asserts that this changed with the views of the coloniser, Edward Gibbon Wakefield, who advocated three advantages of colonisation on the home economy: colonisation would increase the

¹⁸ Immigrants often had two occupations; for example, Scots in the 1840s could be agricultural labourers or handloom weavers according to the season.

¹⁹ See Simpson, Frank, *The First Century: a Centenary Review of Winstone Limited*, Auckland: Winstone Limited, 1965.

²⁰ AJHR, Reports of Immigration Officers for the year ended 30th June, 1879. D-5, p.4.

²¹ Quoted in Borrie, p.16. From *The New Zealander*, Auckland. Jan. 30, 1856.

market for its products; it would give relief from over-population; it would promote foreign investment.²²

John Stuart Mill's classic work, *Principles of Political Economy*, applauded Wakefield's colonisation scheme and its beneficent results. Wrote Mill: 'In all subsequent colonization, the Wakefield principle has been acted upon, though imperfectly, a part only of the proceeds of the sale of land being devoted to emigration: yet wherever it has been introduced at all, as in South Australia, Victoria, and New Zealand, the restraint put upon the dispersion of the settlers, and the influx of capital caused by the assurance of being able to obtain hired labour, has, in spite of many difficulties and much mismanagement, produced a suddenness and rapidity of prosperity more like fable than reality.'²³

Mill was accurate in his appreciation of the economic outcomes of colonisation, but his arguments were incomplete as to what had caused them. Wakefield had composed his vision of settlement, while in an English prison, writing about a country he had never seen or visited. His vision of a carefully stratified society with just the right combination of capitalists and labour, brought about by measured emigration and funded by land sales to finance further development, was an untested hypothesis.²⁴

It was true that Wakefield settlements were initiated at New Plymouth, Otago, Nelson, Canterbury and Wellington. It was equally true that land sales and immigration were vital in the mix of colonisation. But what Wakefield had not sufficiently anticipated was enterprise. In particular, immigrants would be more diverse than just labourers and capitalists, and those with skills and ambition would decide to seize opportunities to rise and prosper.

The importance of immigration to the colony's economic development was well understood in government at the time. When the new Governor, Sir William Jervois, arrived in 1883 he noted that the limiting factor to New Zealand's continued progress was not lack of opportunity, nor natural resources, nor roads or railways, but

²² Thomas, Brinley, *Migration and Economic Growth*, 2nd edn., Cambridge: Cambridge University Press, 1973, pp.3-13.

²³ Mill, John Stuart, *Principles of Political Economy*, v.3, p.966.

²⁴ The arguments behind the positive effects of emigration can be found in Wakefield's, *A View of the Art of Colonization in Letters Between a Statesman and a Colonist*, Oxford: Clarendon Press, 1914; Wakefield, Edward Gibbon, *A Letter from Sydney and other Writings*, London: Dent, 1929.

population.²⁵ Immigrants were an aid to the work of settlement and brought with them new capital.²⁶

Government supported immigration allowed the government to expand settlement while also providing jobs for new immigrants. Planned settlements in locations such as Fitzherbert Town in Manawatu, Seventy-Mile Bush in Wellington, Tauranga, Patea, Fielding, Tauranga, or Jackson's Bay required the construction of new roads, drainage, tramways and railways, bridges, and telegraph lines.²⁷ Immigrant labour was used construct such infrastructure and then benefited from its use.

In 1871 the Minister for Public Works, W. Gisborne, also described the nature of this dual relationship between immigration and public works in the first annual report of the Immigration and Public Works Department.²⁸

An essential part of the Colonial Policy is Immigration.... the presence of an increased and increasing settled population, which shall to the greatest extent facilitate their construction and increase their use, is equally important, and, moreover, is necessary to the success, and even to the existence of the other. Progress cannot be expected in a young colony from public works alone. But the addition of settled population cannot be permanently secured without its attachment to the soil, and the Immigration and Public Works Act recognizes that necessity.²⁹

Other economic benefits also accrued from immigration but were not overtly discussed by the government. For example, J.B. Condliffe noted that immigrants became contributors to the economic system by virtue of being consumers.³⁰ A rapid increase in consumption, stimulated through immigration, demanded additional services and

²⁵ Stated Jervois: 'The increasing facilities of communication with Europe, the large area of land which is being opened for settlement by roads and railways and the establishment of new industries, offer year by year greater inducements for the introduction of capital, and at the same time point to the necessity of steadily continuing the assistance which is given from the public funds in aid of immigration.' *NZPD*, 44 (1883), p.2.

²⁶ Something Colonial Treasurer Harry Atkinson was particularly alert to when he delivered his 1883, Financial Statement. Atkinson stated: 'From this it will at once be evident, assuming our exports to remain the same, that, unless a sufficiently large influx of capital, the property of settlers, is maintained to justify the continuance of our imports at their average rate, or unless the produce of our local industries supplying the colonial consumption increases to the extent of any reduction that may take place in our imports, commercial depression must follow.' See *AJHR*, 1883, B.2, p.IX.

²⁷ W.D. Borrie, whose work *Immigration to New Zealand*, remains the authority on migratory patterns in the period, discussed at some length the benefits brought through migration, in particular the use of migrants to establish towns such as Fielding, Tauranga and Waipu. Borrie, W.D., *Immigration to New Zealand: 1854-1938*, Canberra: Australian National University, 1991.

²⁸ See First Annual Report of the Immigration and Public Works Department, *AJHR*, 1871, D.4.

²⁹ *ibid.*

³⁰ Condliffe, J.B., *New Zealand In the Making*, pp.29-31.

benefits from a range of secondary and tertiary industries, such as clothing and boot manufacture, food stuffs, printing, housing, schooling, insurance, and banking. Depending on the size of the influx of migrants, such an increase in demand might be met through an expansion of the present industries in a colony, or the addition of entirely new firms. This was precisely the position the colonial economy found itself in during the period under discussion. First from immigration, then from natural increase, New Zealand enjoyed a period of continual rapid population growth. As a result, Russell Stone suggests that local industries and commercial undertakings rose to this expansion in market demand by providing supplements and substitutes for imported commodities.³¹ Jackson suggests a similar effect for the Australian colonial economy, arguing that recently arrived immigrants brought new technological knowledge encouraging rapid development of new enterprises and low rates of technological inertia.³²

Further economic benefits of immigration may be characteristic of particular migrant groups. Some immigrant communities have displayed a greater or lesser propensity to undertake self-employment or start up new firms. Tom Brooking suggests that this was the case with Scottish immigrants to New Zealand in the late nineteenth century in both capital supply and company formation. Brooking stated:

The entrepreneurial contribution of the Scots was certainly proportionately greater than that of the more numerous English. Capital and labour were essential for development, but entrepreneurial skill was required to convert the potential for progress into material advancement. By taking risks, seizing initiatives and employing labour, Scots and English entrepreneurs assisted by the state helped transform a virtually underdeveloped colony into a prosperous capitalist nation. Colonies in their pioneer period encourage men to take risks in pursuit of material rewards. Scots seemed to take up that challenge more readily in nineteenth-century New Zealand than did any other major ethnic group. They were also better able to turn their experience in farming, industry and commerce to advantage. Jews were the only group of European migrants who were more successful as entrepreneurs.³³

³¹ Stone, R. C. J., *Makers of Fortune*, Auckland: Auckland University Press, 1973. Furthermore, Simon suggests that rapid population growth would not have a negative effect on the adoption of innovation. See Simon, Julian L., 'Some Theory of Population Growth's Effect on Technical Change in an Industrial Context', *Australian Economic History Review*, 26:2 (1986), pp.148-158.

³² See Jackson, R.V., 'The Colonial Economies: An introduction', *Australian Economic History Review*, 38:1 (1998), pp.7-8.

³³ Brooking, Tom, 'Tam McCanny and Kitty Clydeside – the Scots in New Zealand', in *The Scots Abroad: Capital Labour and Enterprise, 1750-1914*, Cage, R.A., (ed.), London: Croom Helm, 1985, pp.172-173.

A further example of this has been Andrew Godley's work on Jewish immigrant communities in America and Great Britain in the late nineteenth century. Godley demonstrates how the work of Jewish free loan societies, combined with the eagerness of Jewish migrants to undertake self-employment, often in textile manufacture and mercantile trades, produced rapid wealth creation in Jewish communities. Assisted by the advent of the sewing machine, clothing firms required limited start-up capital, could be economically run on a small-scale, and were easy to establish. It resulted in a trend among Jewish immigrants toward self-employment. Noted Godley, 'Contemporaries in both countries were astonished at the speed with which impoverished Jewish immigrants became entrepreneurs.'³⁴

Jewish immigrants in the case analysis displayed a similar eagerness toward entrepreneurial activity. These included: Arthur Myers, Hugo Friedlander, Joseph Nathan, Myer Caselberg, David Theomin, and Bendix Hallenstein. A tendency towards mercantile activities was strong among this group and five of them started out as merchants, either as importers/exporters or operating a general store. As such they were well placed to use their skill as traders to multiply their initial capital. Despite their often-small starts in business, four of these entrepreneurs developed enterprises that had a national representation. In addition, all of the case analysis Jewish entrepreneurs involved family members in their enterprises. A pattern that was consistent with American nineteenth-century Jewish entrepreneurs.³⁵

THE STUDY

The following section is based on the case analysis undertaken in this thesis of entrepreneurs during this period. While the study overall considered 133 entrepreneurs, this chapter looks in more detail at the activities of the 107 who were immigrants. For a discussion on the definitions of entrepreneurship and the methodology adopted in the study see Chapter Five.

Migrant entrepreneurs covered a wide range of people and commercial activities and this is included as an appendix. Some were well known, such as merchant Joseph Nathan, industrialist Joseph Firth, cartage operator William Winstone, newspaper

³⁴ See Godley, Andrew, *Jewish Immigrant Entrepreneurship in New York and London 1880-1914*, New York: Palgrave, 2001, p.51. Also, Godley, Andrew, 'Jewish Soft Loan Societies in New York and London and Immigrant Entrepreneurship,' *Business History*, 38, (1996), pp.101-116.

proprietor Alfred Horton, and stove-maker Henry Shacklock. Others were less well known, including entertainment entrepreneur Henry Hayward, architect and contractor Alfred Luttrell, grain merchant George Stead, and millwright Eben Hayes.

The 'Who's Who' character of the sample results in a set of exemplars for the profile and impact of the thousands of enterprising migrants to New Zealand in this period. The study investigated a range of variables including the immigrants' country of origin, education, family background, occupations, settlement patterns, new venture activity, business strategy and sources of capital. This chapter examines three of these areas: the immigrants' skill level; their propensity to undertake new ventures; the importance of networks in developing trade.

TABLE 14
IMMIGRANT ENTREPRENEURS – YEAR IMMIGRATED

| Year Immigrated | Number | Percentage |
|-----------------|--------|------------|
| 1840-49 | 3 | 2.8 |
| 1850-59 | 17 | 15.9 |
| 1860-69 | 43 | 40.2 |
| 1870-79 | 21 | 19.6 |
| 1880-89 | 13 | 12.1 |
| 1890-99 | 4 | 3.7 |
| 1900-1909 | 6 | 5.6 |
| Total | 107 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

The sample consisted of 102 male and five female immigrant entrepreneurs. The earliest immigrant to arrive in the case group was in 1843 and the latest in 1910. The decade that recorded the greatest number of immigrants in the case analysis was 1860-69 when 43 entrepreneurs arrived in the colony (40 percent of the case analysis group). Similarly, the second highest decade was that of Vogel's public works programme (1870-79), when a further 19.6 percent of the case group arrived. Twelve percent arrived the following decade (1880-1889), and only 9.3 percent after this. In sum, fifty percent of the case group arrived prior to 1866. The reason why such early immigrants were included in a study of entrepreneurship in the latter part of the nineteenth century is explained by the young age at which many of them immigrated.

³⁵ See comments by Sarachek, B., 'Jewish American Entrepreneurs', *The Journal of Economic History* 2 (1980), pp.370-72.

Most of those who arrived in the colony were youths. This was representative of the case analysis as well as the population as a whole, as discussed in Chapter 2. Of the case analysis group of immigrant entrepreneurs 85 percent arrived in the colony aged 29 or under. The largest grouping by age range occurred in the 20-29 year bracket consisting 45.8 percent of the immigrant entrepreneurs. Only 14.9 percent of the same arrived in the colony over the age of 30. One dominant characteristic of the immigrant entrepreneurs was youthfulness. At the date of their arrival the mean age of the immigrant entrepreneurs was 21. Thirty-nine percent arrived of an age when they were yet to make economic career choices.

TABLE 15
IMMIGRANT ENTREPRENEURS – AGE IMMIGRATED

| Age Immigrated | Number | Percentage |
|----------------|--------|------------|
| 0-9 | 14 | 13.1 |
| 10-19 | 28 | 26.2 |
| 20-29 | 49 | 45.8 |
| 30-39 | 11 | 10.3 |
| 40-49 | 4 | 3.7 |
| 50-59 | 1 | 0.9 |
| 60-69 | 0 | 0.0 |
| Total | 107 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

While some of the variables studied could not be generalised it was possible to compare the country of origin and the settlement patterns in the case analysis with the wider population. In 1881, as indicated in the table below, 6.5 percent of the New Zealand foreign-born population were born in Australia as compared to 8.4 percent in the case group. Forty-five percent of the New Zealand foreign-born population were born in England as compared to 47 percent for the case group. Similarly, Scotland was 20 percent for the population and 22.4 percent for the case group.

TABLE 16

NZ FOREIGN-BORN AND IMMIGRANT ENTREPRENEURS: 1881

| Birthplace | NZ Foreign Born | | Migrant Entrepreneurs | |
|---------------------------|-----------------|------|-----------------------|------|
| | No. | % | No. | % |
| Australia | 17277 | 6.5 | 9 | 8.4 |
| England | 119224 | 45.1 | 51 | 47.7 |
| Wales | 1963 | 0.7 | 0 | 0.0 |
| Scotland | 52753 | 20.0 | 24 | 22.4 |
| Ireland | 49363 | 18.7 | 11 | 10.3 |
| Other British Possessions | 4014 | 1.5 | 1 | 0.9 |
| France | 848 | 0.3 | 1 | 0.9 |
| Germany | 4819 | 1.8 | 3 | 2.8 |
| Other European Countries | 7046 | 2.7 | 2 | 1.9 |
| United States of America | 841 | 0.3 | 0 | 0.0 |
| China | 5033 | 1.9 | 3 | 2.8 |
| Other countries | 1190 | 0.5 | 2 | 1.9 |
| Total | 264371 | 100 | 107 | 100 |

Source: Case Analysis and Census statistics, 1881

Overall, European migrants accounted for 86 percent of the case group, compared to 90 percent of the domiciled immigrants in 1881. With the exception of Irish immigrants, the percentage of entrepreneurs in the case analysis approximately reflected their representation in the population. As noted before, however, immigrants are over-represented in the case group, proportionately to their presence in the general population.

The immigrants in the study settled in a variety of locations around New Zealand. In rank order, the first four cities of choice were Auckland, Dunedin, Christchurch, and Wellington. Auckland was the location for 23.4 percent of the immigrant entrepreneurs; Dunedin was 22.4 percent, Christchurch 11.2 percent and Wellington 9.3 percent. The three main centres of Auckland, Dunedin and Christchurch were the only locations to record percentages of settlement in double figures; all other locations were below five percent. A cluster of locations registered 2 and 3 percent, including the provincial towns of Nelson, Palmerston North, Hamilton, Invercargill, Napier, and New Plymouth.

Ironically only the smaller centres such as Napier, Masterton, and Balclutha showed proportional similarity between the case analysis of entrepreneurs and the settlement pattern of the overall population. In the major centres such as Dunedin, Auckland, Wellington, and Christchurch the proportions of immigrant entrepreneurs were higher than their population base would suggest. For example, Auckland in 1881 contained 6.3 percent of the population but accounted for proportionally nearly four times as many immigrant entrepreneurs from the case analysis (23 percent). Similarly, Dunedin had 8.7 percent of the population but 22.4 percent of the case analysis

entrepreneurs, emphasising its importance as a commercial centre in the colonial economy.³⁶

TABLE 17
IMMIGRANT ENTREPRENEURS – SETTLEMENT PATTERN

| Location | Number | Percentage | Population 1881 | As Percentage |
|---------------------|--------|------------|-----------------|---------------|
| Ashburton | 2 | 1.9 | 1526 | 0.3 |
| Auckland | 25 | 23.4 | 30952 | 6.3 |
| Balclutha | 1 | 0.9 | 820 | 0.2 |
| Christchurch | 12 | 11.2 | 30715 | 6.3 |
| Dunedin | 24 | 22.4 | 42794 | 8.7 |
| Gisborne | 1 | 0.9 | 1737 | 0.4 |
| Hamilton | 3 | 2.8 | 1361 | 0.3 |
| Hastings | 3 | 2.8 | 617 | 0.1 |
| Hokitika | 2 | 1.9 | 2600 | 0.5 |
| Invercargill | 4 | 3.7 | 6976 | 1.4 |
| Masterton | 1 | 0.9 | 2241 | 0.5 |
| Napier | 2 | 1.9 | 5756 | 1.2 |
| Nelson | 4 | 3.7 | 6764 | 1.4 |
| New Plymouth | 2 | 1.9 | 3310 | 0.7 |
| Palmerston North | 4 | 3.7 | 1366 | 0.3 |
| Thames | 3 | 2.8 | 4863 | 1.0 |
| Wanganui | 3 | 2.8 | 4646 | 0.9 |
| Wellington | 10 | 9.3 | 20563 | 4.2 |
| Whangarei | 1 | 0.9 | 495 | 0.1 |
| Total | 107 | 100 | 170102 | |

Source: Case Analysis New Zealand Entrepreneurs

Grouping the immigrants by their dominant business activity (the activity either they were best known for or most successful at during their career) gave the following results.

³⁶ By country of origin Dunedin had as many Scottish immigrant entrepreneurs from the case analysis as Auckland (8 each). Auckland had the greatest concentration of English-born entrepreneurs (13) compared with Christchurch (8) and Wellington (8).

TABLE 18

IMMIGRANT ENTREPRENEURS – INDUSTRY

| Industry | Number | Percentage |
|-----------------------------------|--------|------------|
| Mercantile | 24 | 22.43 |
| Manufacturing | 18 | 16.82 |
| Newspapers and Publishing | 17 | 15.89 |
| Services | 8 | 7.48 |
| Brewing | 7 | 6.54 |
| Engineering | 6 | 5.61 |
| Shipping | 6 | 5.61 |
| Dairy | 5 | 4.67 |
| Land development and construction | 3 | 2.80 |
| Timber | 3 | 2.80 |
| Automobile | 2 | 1.87 |
| Mining | 2 | 1.87 |
| Transport | 2 | 1.87 |
| Education | 1 | 0.93 |
| Entertainment | 1 | 0.93 |
| Financial Services | 1 | 0.93 |
| Fishing | 1 | 0.93 |
| Totals | 107 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

Two were automobile entrepreneurs. Hopeful Gibbons, the son of an Australian shipbuilder, commenced his first business, a brewery, in Patea in 1879. Gibbons was aged 61 before he started his most successful venture, the Colonial Motor Company. Scottish born Charles Todd started fellmongering with his father in 1883, and he had a career as a stock and station agent before branching into motorcars in 1920 aged 55.

Seven migrant entrepreneurs were involved in brewing and winemaking, including Irish born William Crawford, who started work at the age of 14 as an indentured merchants clerk, later starting his first business, the Albert Brewery, aged 32. Other brewers included Australian-born Arthur Myers, who entered the family firm, Campbell and Ehrenfried, aged 16. There were five entrepreneurs from the meat processing and dairy industry, including the son of an English farmer, Henry Reynolds, who himself went farming before starting his first venture, the Waikato Land Association, at the age of 28. In 1886, he established a dairy factory and the Anchor brand.

Six engineers were among the migrant entrepreneurs, including Eben Hayes, Alfred and George Price, who set up an engineering works producing flax dressing machines in Onehunga in 1868, and George Fraser, whose Phoenix Iron Foundry was the largest engineering works in Auckland. One migrant was involved respectively in education, entertainment, and financial services. Albert Sanford developed the family

fishing business that prospered through vertical integration into processing, retail stores and restaurants as well as harvesting. Three were involved in land development and construction.

The largest category (24 entrepreneurs), consisted of entrepreneurs with mercantile interests, such as grain merchant George Stead, draper Marianne Smith, stock and station agent Donald Reid, merchant Myer Caselberg, and draper Mary Milne. The second largest category (18 entrepreneurs), was manufacturing. It included migrants, such as John Whitney of the Colonial Ammunition Company, aerated water manufacturer Alexander Thomson, rubber products manufacturer George Skellerup, and pipe and brick manufacturer Peter McSkimming. Martin Kennedy and Charles Sew Hoy were best known for their mining interests. Seventeen of the migrants started newspaper and publishing firms. Alfred Reed first purchased the New Zealand Typewriter Company in 1902, then a Sunday School supplies business, prior to commencing his publishing firm A.H. Reed Ltd. in 1918. Other publishing entrepreneurs included magazine publisher George Russell, and newspaper proprietors, George Fenwick, Alfred Horton, and Joseph Ivess. Eight started businesses in service industries including John Inglis Wright in advertising, and Alexander Hatrick, the Wanganui tourism entrepreneur.

There were six shipping entrepreneurs including Alexander Donald, who ran a shipping firm to the Pacific Islands, and Joseph Cock, who originally started as a shipping clerk before he became a shipping company manager, then the proprietor of the Anchor Steam Shipping Company. Three entrepreneurs founded firms in the timber industry and two in transportation and cartage industry. These included a quarrying and cartage operator, William Winstone, and coach company proprietor, Hugh Cassidy.

PROPORTION IN THE CASE ANALYSIS

Of the 133 entrepreneurs in the overall case analysis, 107 of them (80 percent) were immigrants. One question to consider is: Was this merely representative of the make-up of New Zealand society at this time, or did it suggest that immigrants displayed a greater propensity toward entrepreneurial activity than the native-born population?

At this point, it does not appear that there is sufficient evidence to make a claim either way. This is primarily for two reasons. Firstly, it was apparent from the sample of immigrants that their business activities were more concentrated in the early years of the period and less so in the later. The converse held true for the native-born entrepreneurs. These were more concentrated in business activity in the period post 1890 as opposed to

beforehand. In this respect, one could argue that both groups were merely mirroring the population demographics of the colony, where immigrants naturally dominated all spheres of colonial life as they were the dominant source of population increase prior to 1878. Later, as the native-born population rose to age maturity, they assumed the dominant role in economic life.

There may be substance in this argument; however, any conclusions are not definitive. Not all the immigrants arrived in the colony at an age at which they could commence a business venture. For these children, and they often were, their capability to make economic decisions about their future careers was non-existent. Nor was there any surety that they would turn to an entrepreneurial career when they reached age maturity.

In numerical terms, 16 percent of the immigrants were aged 12 or under on arrival and 49 percent were 21 or under. In short, one could argue that half of the sample of migrants had neither the economic capacity to pursue entrepreneurial activity when they arrived in the colony, or they were of schooling age. Given that these immigrants decided to embark on an entrepreneurial career, did it mean that immigrants were more entrepreneurially-minded than the native born population?

In many cases in the case analysis group, it was the entrepreneur's parents who made the decision to immigrate—not the child. Strong family convictions regarding enterprise can be passed on to the child. Immigrant families, free from the societal norms in their home countries, may arrive with the aim of developing a more affluent life for themselves. In this regard, they may be more willing to enter into self-employment, where they might directly profit from their own labours. The evidence in favour of such a claim was that when a group of 500 business people were eventually limited to 133 entrepreneurs, 80 percent turned out to be immigrants, which was proportionately larger than the proportion of foreign-born residents in the colony in 1880.³⁷ However, a more

³⁷ In 1880, the proportion of New Zealand's population that was foreign born just exceeded the native-born population. This demographic rapidly slid in favour of the native-born population (as it had in other colonies) over the next 40-years. By 1896, foreign born consisted 37.15 percent of the population. By 1911, it was 30.26, and by 1921, 25.61 percent. Taking an average of census returns between 1881 and 1921, give the foreign-born element as 36.59 percent of the population.

prudent response may be that having a larger group of cases on which to investigate this question would be helpful.³⁸

TABLE 19
COMPARISON OF NATIVE AND IMMIGRANT ENTREPRENEURS

| | Age at Death (average) | Degree or trade qualified (%) | Age first started work (av.) | No. jobs prior to first venture (av.) | Age started first venture (av.) | Years in business prior first venture (av.) | Prior management role (%) |
|------------|---------------------------|-------------------------------------|------------------------------------|---|---------------------------------------|--|---------------------------------|
| Immigrants | 75.8 | 36 | 15 | 2.75 | 27.2 | 12 | 41 |
| Natives | 79.7 | 26 | 15 | 2.11 | 25.4 | 10 | 30 |

| | Years in bus. Before most success (av.) | Age most successful venture (av.) | Experienced business failure (av.) | Business continued past founder (av.) | Family continued in firm (av.) | Father entrepreneur in business (%) | Family business (%) |
|------------|---|---|--|---|--------------------------------------|---|------------------------|
| Immigrants | 19 | 35 | 30 | 78 | 57 | 42 | 71 |
| Natives | 15 | 31 | 30 | 61 | 42 | 50 | 65 |

Source: Case Analysis New Zealand Entrepreneurs

When we consider other characteristics of the immigrants in the case analysis compared to the native-born population, differences do not instantly emerge. And on one level there appear to be more similarities than differences between the two groups. In regards to the age they first started work, the average number of jobs they held, the age they started their first firm, and the percentage that experienced business failure there appeared strong similarities. These can be seen in the table above.

There was a difference between the two groups of entrepreneurs with regard to their venture pattern. Immigrants tended to start their venture activity slightly later than the natives, with more years of commercial experience behind them and on average, commence the venture that was the most successful of their career later than native entrepreneurs. The explanations for this are not immediately obvious, though the greater proportion of fathers who were entrepreneurs among natives versus immigrants, may account for some of the variation. Prospective entrepreneurs with a family history of this kind of activity may have been encouraged earlier towards new venture activity.

While similar percentages in the two groups had a family firm, at some point in their business careers, the immigrants in the case analysis showed greater longevity in family involvement. Seventy-eight percent of immigrant entrepreneurial businesses

³⁸ Bearing in mind that we do not yet have any real estimates on the size of commercial activity in the colony (across every sector) at this time, let alone what proportions were immigrants as opposed to native-born.

continued past the death of the original immigrant entrepreneur; this was compared to 61 percent of native entrepreneurs. Similarly, 57 percent of the families of immigrant entrepreneurs continued to play a role in the firms that had been commenced by the initial immigrant as opposed to 42 percent of native entrepreneur families who maintained some involvement. Part of the reason for this difference, may be the degree to which immigrants used family networks as a way to gain access to their adopted economy. Similarly, it appears that immigrants who arrived in the colony skilled in a trade were at an immediate advantage. Even if they found barriers to paid employment, they had the acquired skills to generate an income and build a business. Both of these points will now be discussed in more detail.

THE IMPORTANCE OF SKILL

In the milieu of colonial life, those immigrants with a skill were advantaged in various respects. They might gain employment faster and be better remunerated than those without skill; they also enjoyed elevated social standing among the working classes as entries in postal directories testify. Those suitably qualified could list themselves as journeyman painter, journeyman draper, journeyman tailor or journeyman butcher as opposed to those carrying out the equivalent trade without such status.

Indeed it is probably inappropriate to term this skilled group 'working class', for though they started life with these kinds of confines, having a skill equipped them to challenge the barriers of their class. For the immigrant this was an important distinction. In a developing economy, their skill gave them greater agency,³⁹ than in the established world order they left. Mill and other economists had projected that migrants to the colonies would work in a landless state for a select group of capitalists.⁴⁰ This did not always transpire. The colonial economy was far more dynamic than this. Immigrants with skill were the new 'enterprising class'.

³⁹ For a definition of agency I rely on that given by Ronald Inden, where he states: 'When I use the expression "human agency," I mean the realized capacity of people to act effectively upon their world and not only to know about or give personal or intersubjective significance to it. That capacity is the power to act purposively and reflectively, in more or less complex relationships with one another, to reiterate and remake the world in which they live ...' See Inden, Ronald, *Imagining India*, London: Basil Blackwell, 1990, p.23.

⁴⁰ See Mill, J.S., *Principles of Political Economy, with some of their Applications to Social Philosophy*, London: Longmans, Green, 1900.

Small-scale business was the dominant organisational form in the New Zealand colonial economy, and it has remained so until the present day.⁴¹ In this type of economic arrangement, knowledge proved more important than capital in starting a firm. Large-scale capital-intensive start-ups were not common, even though they have attracted a high profile from historians. Some operations were large, in gold mining, large mercantile firms, and dairy companies, but the natural entry point in this market for a willing entrepreneur was the British-style family firm,⁴² partnership or sole proprietorship. As noted in the previous section, 36 percent of the immigrant entrepreneurs from the case analysis commenced their first venture skilled in their trade. For the would-be printer, baker, boot maker, bicycle manufacturer, brewer or merchant, skill rather than capital was the important leverage point in starting a firm.

William Dawson was one such example. Dawson was already a fully qualified brewer by the time he emigrated to New Zealand, aged 21, and easily found employment at Wilson's Well Park Brewery in Dunedin. Three years later, in 1876, he and two other employees, James Speight and Charles Greenslade, left the firm and took over a redundant malt house to establish James Speight and Co.'s brewery. The partners had complementary skills. James Speight, the oldest in the group, had been the company traveller for his previous employer, and Charles Greenslade had been the maltster.

The new firm was not capital-rich to begin with. Each of the three partners took an equity share in the new business, and of the 500 £1 shares, Dawson and Greenslade took 200 each.⁴³ Initial staff in the firm numbered four in addition to the principals. Speight's historian, Donald Gordon, reported that initial income from sales was low and at times not enough to pay wages when due.⁴⁴ Yet the firm was able to achieve early product differentiation in the market through Dawson's skill as a brewer. In 1879, three years after founding, the firm received a highly commended for their product in the Sydney exhibition. On the back of this success, sales increased approximately 50 percent, a pattern that continued over the next few years as Dawson secured additional awards and recognition. At the Melbourne Exhibition in 1880, Speight and Co., won an assortment of gold and silver medals against international competition and again at the

⁴¹ As of 2003 only 14 percent of New Zealand organizations employ more than two people; this includes both profit and not-for-profit organizations. *Statistics New Zealand*.

⁴² A discussion regarding this style of organisation structure is developed in Chapter 8.

⁴³ Speight took only 100 shares though he assumed a leadership role as managing director.

⁴⁴ Gordon, Donald, *Speight's: The Story of Dunedin's Historic Brewery*, Dunedin: Avon Publishers, 1993, p.13.

Christchurch Exhibition in 1882.⁴⁵ Expansion in the firm was funded on the basis of increased sales revenue.⁴⁶ In 1887, only 11 years after starting production, Speight and Co., emerged as the leading brewery in Dunedin.

In short, Speight and Co., provides a useful profile of a firm founded on limited capital that by virtue of one partner's technical expertise and product quality was able to achieve sufficient sales to fund their expansion.⁴⁷ Such a process would not be able to continue indefinitely, but it could provide for the initial establishment and early expansion of the firm. By 1900, Speights shares were paying a 30 percent dividend, giving Dawson and Greenslade an annual income of £7500 from dividends, in addition to their salaries of over £1000.⁴⁸

A similar example can be seen in the activities of Henry Shacklock. Shacklock was born outside Nottingham, England, in 1839. In 1862, after serving an apprenticeship as an ironmoulder, he emigrated to New Zealand aged 23. Upon landing, Shacklock found work initially as a labourer and then in an engineering foundry in Oamaru. In 1871, Shacklock left to commence his own works in Dunedin after six years working in local foundries. The market he entered was not without competition. In Dunedin, Findlay and Company, James Walls, R.S. Sparrow and Company, and J. Davidson and Company were all close competitors and were active making and selling ironmongery.

⁴⁵ Likewise at the Christchurch International Exhibition in 1882.

⁴⁶ The founders ploughed the profits back in to the expansion of the firm. A new brew house was constructed and finished in 1880. Two years later a four-storey malt house and cellar building was erected adjoining the building. Speight and Co.'s capitalization did not change until 1895 when Speight and Co., became a limited liability public company with a paid up capital of £60,000 in 6000 £10 shares. These were held between Greenslade (2491 shares) and Dawson (2496 shares) with Speight holding 993. Speight's holding was passed by his widow to his son, Charles, who was active in the firm as head brewer and works manager.

⁴⁷ By 1889 Speight and Co., was brewing 3000 hogsheads of beer a week and kept 10,000 hogshead in stock. (*Otago Daily Times*, Dec 23, 1889). Hogshead is a 54-gallon cask of beer. A barrel is a 36-gallon cask. In 1923, eight New Zealand brewing companies joined in a merger to form New Zealand Breweries, not so much for market or economics of scale but in a concerted effort to fend off the campaign of Prohibitionists that looked set to gain the upper hand in the New Zealand temperance movement. Speights production volume was twice that of the next closest company in the merger, Lion Brewery. William Dawson, the original brewer, died a month after the merger went ahead.

⁴⁸ Speights historian, Donald Gordon, stated that the average income at this time was £100. See p.55.

However Shacklock's technical skill assisted his entry to the market. He had a purpose-built foundry constructed by purchasing the land on which to build his factory. He then mortgaged the land to raise the necessary finance for construction.⁴⁹ By mid-1872, he was under way with production and by February 1873, less than a year later, he had already discharged his mortgage on the basis of sales. Shacklock's early work included jobbing ironware for houses: grates, sash weights, and fire places. In 1873, he designed and constructed a coal range that was to differentiate him from his competitors and cement the firm's expansion. Shacklock's Orion range, designed to burn on local lignite coal, was technically and aesthetically superior to competitor's products.

Skill advantaged other immigrant entrepreneurs in this same fashion. Richard Hudson, founder of Hudson's biscuit and confectionary business, was a qualified baker when he arrived in New Zealand in 1865. Similarly, Richard Hellaby, co-founder of meat processing firm, R. and W. Hellaby, had served his apprenticeship as a butcher prior to emigrating to New Zealand in 1868. Engineer Eben Hayes, who would found the Hayes Engineering Company, served his apprenticeship as a millwright in Warwickshire before he emigrated with his wife to Otago in 1882. Overall, thirty-nine of the immigrants in the study were trade qualified. Of these, 81 percent obtained their qualification outside New Zealand.

COMMERCIAL EXPERIENCE AND PROPENSITY TO NEW VENTURES

Skill cannot just be measured in a trade qualification. It also must be conceived in terms of commercial experience. For the entrepreneur, this was an important distinguishing factor, both historically and to the present day. Having the benefit of experience in an industry (including product knowledge, supplier contacts, understanding of trade practice, standard commercial contracts, financing arrangements, seasonal movements and a sense of markets) advantaged the prospective entrepreneur. More than this, the sample suggested it was a distinguishing characteristic of the colonial entrepreneurial.

The average age at which the entrepreneurial immigrant left paid employment to start their own firm was 27. Overall, seventy-two percent of the sample group had

⁴⁹ John Angus records that Henry Shacklock mortgaged his section to Charles Croot a Kensington landowner in 1872, though remarkably just over a year later was able to discharge the mortgage. See Angus, John, *The Ironmasters: the First Hundred Years of H.E. Shacklock Ltd*, Dunedin: H.E. Shacklock Ltd, 1973, p.20-21.

started their first business venture before the age of 30. Youthfulness played a part in pursuing commercial adventure. This was not unique to the New Zealand economy. Comparable research by Bernard Sarachek on Jewish and Non-Jewish entrepreneurs in the late nineteenth and early twentieth century in America found that 60 percent had initiated their new ventures before the age of thirty.⁵⁰ But these were not blue-sky adventures. Rather, the majority of these young men and women launched their entrepreneurial firms after a decade of commercial experience, and more often than not, commenced their enterprises in the same industry in which they had been working. In doing so, they minimised commercial risk and maximised the benefit of their experience. Only 21 percent undertook a new venture in a business or industry in which they had no prior experience. Moreover, nearly half the sample (44 percent) had held a management position in a firm before they had their own business.⁵¹

For example, both Irish brewer William Crawford and Scottish flour miller Thomas Fleming, had the opportunity to purchase the firm they were working in. Others, such as the saw miller Henry Brown or newspaper proprietor George Edgumbe, saw an opportunity in their existing industry and pursued it. Edgumbe, for instance, had already been the manager for a newspaper before he took on the proprietorship of the *Waikato Times* in 1886. Similarly, Dunedin printer John McIndoe originally went into business with a fellow printer, David Cherrie, in 1893. Meanwhile, bookseller and printer John Blair, went into business with an established partner who already had amassed capital and plant. In Blair's case, this was Wellington bookseller William Lyon.

While we might say that opportunity or willingness favoured the young in the colonial economy, greater success often came later in life. Very few achieved immediate success, or success with their first firm. The more typical developmental pattern was that after a sustained period of employment, an immigrant started an initial business. At some point later in life, they commenced the firm in which they would enjoy their greatest success and this might be after one, two, three, or more ventures. For instance, Johann Husheer started the National Tobacco Company aged 47; Arthur McKee started his successful orchard business aged 51; retailer and draper John Court was 56 when he

⁵⁰ Sarachek, B., 'American Entrepreneurs and the Horatio Alger Myth', *Journal of Economic History* 38 (1978), pp.439-56. Sarachek, B., 'Jewish American Entrepreneurs', *The Journal of Economic History*, 2, (1980), pp.359-72.

⁵¹ It is also interesting to note that 42 percent of the sample also had a father who was self-employed.

commenced John Court Limited; Charles Sew Hoy was 50 when he commenced the Shotover Big Beach Gold Mining Company; newspaper proprietor George Bell was also 50 before he started the *Evening Star* newspaper; John Chambers was 53 when he started his specialist mining equipment distribution firm, John Chambers and Son, in 1892. Over the whole sample, immigrant entrepreneurs started their most successful undertaking, on average, eight years after their initial firm; aged 35, and with some 20 years of commercial experience behind them.⁵²

The theoretical work of Partick Liles and Mark Casson is helpful in understanding these statistics. Mark Casson's research suggests that experience aids an entrepreneur in their judgemental decision-making process. They are better equipped to assess risk, information, markets, and opportunity.⁵³ Similarly, Patrick Liles called this stage in the entrepreneur's life 'readiness'. The entrepreneur was at the point when they had achieved not only mastery over business problems and skills, but also over their personal lives, displaying greater self-confidence, and competence.⁵⁴ This readiness married opportunity with personal skills, relational networks, and opportunities for trade.

NETWORKS AND TRADE

The significance of trade in New Zealand's colonial economy has already been emphasised. The colony required a continued supply of consumer items and manufactured goods as it sought to supply the wants of the local population as well as the needs of the commercial sector for infrastructure. In addition, export markets, primarily in the United Kingdom, were a vital output for wool, meat, and dairy products, grains and other colonial produce. The development of both export and import markets necessitated commercial relationships. In this respect, immigrants with family and business contacts in their home countries were advantaged. Some who emigrated to the colonies came as agents for European business houses. This was the case with significant mercantile companies, such as New Zealand Loan and Mercantile Company, who had principals spanning both the United Kingdom and New Zealand. This was also apparent in smaller enterprises.

⁵² Curiously, half of these undertakings would be in the same field of endeavour as the entrepreneur's first full-time job. Similarly, half of these undertakings would not be by themselves, but in partnership with one or more other entrepreneurs.

⁵³ Casson, M. *The Entrepreneur: An Economic Theory*. Oxford: Martin Robertson, 1982, pp.334-338.

⁵⁴ See Liles, P. 'Who are the Entrepreneurs?' in Gorb, P., P. Dowell and P. Wilson (eds.), *Small Business Perspectives*, London: Armstrong, 1981, pp. 33-50.

Some immigrants, such as Arthur Myers, arrived in the colony with relatives already in commercial activity and joined their enterprises. Others used family links in other countries to help sustain their business enterprises. Throughout his career, clothing manufacturer and trader Bendix Hallenstein,⁵⁵ maintained a close association with his brother Issac, who ran a London office on his behalf, and another brother, Michael, who ran a Melbourne Tannery.

The Nathan family maintained similar links and it used these not only for trading purposes but to maintain the management structure of their firm.⁵⁶ The use of family in management structures was evident in the activities of other immigrant entrepreneurs.⁵⁷ Ten years after William Winstone immigrated to New Zealand, his brother George from Queensland joined him. In 1869, the two brothers cemented the partnership, with George purchasing one fifth of William's existing cartage business.⁵⁸

Immigrants at times retained commercial contacts from previous employment in their home country, using these supplier networks to provide them with product lines. Such was the case with the drapers, John Kirkcaldie and Robert Stains, who used their contacts in the United Kingdom to keep them abreast of fashions.⁵⁹ Thomas Warnock, another Wellington draper, did not achieve the same commercial success as his fellow competitors, but he too imported on his own account from the United Kingdom rather than exclusively going through local warehouses. Likewise, mail order entrepreneur Robert Laidlaw had the English firm of Laughland, Mackay and Co., purchase his British orders direct.⁶⁰

Some colonial entrepreneurs fostered entirely new commercial contacts to enable a new venture. Scot A.J. Burns may have decided Mosgiel was the location for his knitting mill, but he went on several trips to the United Kingdom to purchase machinery and engage staff for his New Zealand factory.⁶¹

⁵⁵ Brasch, Charles, and C.R. Nicolson, *Hallenstein: the First Century, 1873-1973*, Dunedin: Hallenstein Bros., 1973.

⁵⁶ See Millen, Julia, *Glaxo: from Joseph Nathan to Glaxo Wellcome: the History of Glaxo in New Zealand*, 2nd ed., Auckland: Glaxo Wellcome New Zealand, 1997.

⁵⁷ Though it could not be said that this was unique to immigrants alone.

⁵⁸ See Simpson, Frank, *The First Century: a Centenary Review of Winstone Limited*, Auckland: Winstone Limited, 1965.

⁵⁹ See Millen, Julia *Kirkcaldie and Stains: a Wellington Story*, Wellington: Bridget Williams Books, 2000

⁶⁰ Hunter, Ian, *Robert Laidlaw: Man for our Time*, Auckland: Castle Publishing, 1999, pp.78-79.

⁶¹ Stewart, Peter, *Patterns on the Plain: a Centennial History of Mosgiel Woollens Limited*, Dunedin: Mosgiel, 1975.

CONCLUSION

This chapter has argued that skilled immigrants, predominately from the United Kingdom, played a vital role in establishing the commercial and industrial fabric of New Zealand. From a sample of 107 late nineteenth century immigrant entrepreneurs, 36 percent were either trade or degree qualified and 60 percent had between 10 and 36 years commercial experience before they started their first venture.⁶² Forty-one percent had held a management position before starting their first firm. These people did not arrive as ready-money capitalists or unskilled labourers; they arrived as printers, boot makers, chemists, merchants, butchers, brewers, and engineers. As such, their greatest asset was not their financial wealth but their human and social capital. These factors were vital to a developing economy. Should they aspire to start a business, they were already well equipped.

These entrepreneurs often started young, but their ventures were the extension of commercial careers that had often lasted a decade. Market and product knowledge as well as managerial experience advantaged the first time entrepreneur. In addition, family and trading networks from their home countries assisted many with access to technology as well as market entry to either purchase or sell products.

The colony was receptive to the immigrant entrepreneur in part because of what they brought with them, and in part due to structural characteristics of the developing economy. Isolated communities with growing populations offered the immigrant entrepreneur significant scope for enterprise. Centres such as Thames, Wanganui, New Plymouth, Ashburton, Napier, Nelson, and Hastings required a spectrum of smaller-scale enterprise. Capital barriers and social barriers that may have prevented some from starting new enterprises in their home country were largely absent, and the small-scale of firms in these expanding communities provided a natural entry point for the immigrant entrepreneur.

Small-scale start-ups were not always destined to remain that way. The basic orientation of the entrepreneur was toward growth. And over time, as their experience and ability improved, as markets and population increased in scale and complexity, many immigrants turned their fledgling businesses into some of this country's most renowned commercial enterprises: Hallensteins, Speights, Winstones, Shacklocks, Skellerups, Wises, Firth, McKenzies, Farmers, and Hellabys to name a few.

The following chapter considers the question of entrepreneurial capital. Using the case group as a basis, the chapter investigates the sources of start-up capital used by colonial entrepreneurs and the ways in which they were able to develop enterprises on small amounts of initial capital. Contained in this chapter is also a discussion of the organisational forms adopted by entrepreneurs and a case is put for why the small-scale family firm was not a barrier to economic development.



⁶² Only five percent had less than three years commercial experience prior to starting their first venture.

7

CAPITAL AND THE COLONIAL
ENTREPRENEUR: ENTERPRISE IN THE
FACE OF SCARCITY

This chapter discusses how enterprise could develop in a society without extensive or mature capital markets.¹ In the colony of New Zealand between 1880 and 1910, entrepreneurs without significant capital resources commenced industrial and commercial enterprises that both catered for the expanding domestic market and serviced a rapidly expanding export trade. Large-scale capital-rich firms did not dominate economic activity in the colony. Neither did the absence of this kind of organisation limit economic expansion. New firms, new types of products, and new markets opened up as entrepreneurs applied what capital and expertise they had in innovative ways. Entrepreneurs were aided in this process by the nature of the economy at this particular time, wherein the isolation of urban areas and continued population growth provided a fertile seedbed for entrepreneurial activity.

This chapter is divided into three parts. Part One briefly discusses the capital markets in place in the colonial economy and identifies some of the means by which entrepreneurs funded business operations in an early stage. Part Two considers the varying entry costs between industrial activities. For many entrepreneurs it was possible to start a firm on limited funds because of low capital entry costs. This was due to the kinds of technology adopted, but also because of the dominant small firm structure in

¹ An earlier version of this chapter was presented as a paper at the 15th Accounting, Business and Financial History Conference at Aberdare Hall, Cardiff 10-11 September 2003.

place in the colonial economy. Part Three considers the stimulants to growth in the structure of the economy. The ease with which entrepreneurs could keep a firm going over this period may be attributed to the relative isolation of urban areas coupled with rapid population growth. Both of these factors permitted small firms to expand in size and scope while providing opportunities for new entrants. In addition, entrepreneurs substituted industry knowledge and technical skill for capital as they developed a successful enterprise.

CAPITAL MARKETS IN THE COLONIAL ECONOMY

The developing colony of New Zealand presents an interesting case for the business historian interested in the development of the firm through entrepreneurial endeavour. As population expanded rapidly in the colony, demand for commercial services, urban industries, and infrastructure increased.² In the 1870s and 1880s, Government borrowing from London together with private capital inflow, was distributed through the banking system and local bodies.³ These funds financed the development of infrastructure and utilities on a large scale, and assisted immigration.⁴ Roads, railways, harbours, lighthouses, public buildings, jails, custom houses, school buildings, hospitals, domains, drainage, gold field water races, telegraph lines, and dams were all constructed to accommodate the expanding society.⁵

For English and Scottish investors in particular, the colonies with their untapped natural resources offered an attractive alternative to home country investment.⁶ Capital

² See in particular Stone, R. C. J., *Makers of Fortune*, Auckland: Auckland University Press, 1973.

³ Hawke, G.R. (1985) *The Making of New Zealand: An Economic History*, Cambridge: Cambridge University Press, pp.80-81

⁴ The colony was an eager recipient of this kind of investment; sometimes too eager. In 1883, legislative councillor Dr. Morgan Stanislaus Grace, annoyed at what he considered profligate expenditure in the colony remarked: 'Capital is the very essence of development – if you do not husband it in money, in land, or in natural products you may very easily arrive at a condition of general insolvency.' *NZPD*, 44 (1883), p.43.

⁵ As detailed in a previous chapter, the New Zealand Loan Act, 1879 brought in £5 million. The New Zealand Loan Act, 1882, brought in another £3 million. That same year, the New Zealand Colonial-inscribed Stock Loan Act, 1882 and the North Island Main Trunk Railway Loan Act, 1882 between them raised another £1.25 million. This was followed two years later by another New Zealand Loan Act, 1884 for £1.5 million and the District Railways Purchasing Acts, 1885-86 raising £479,487. In 1886, another New Zealand Loan Act was passed for £1,325,000 and in another in 1888 for £1,000,000. By 1899, £29 million had been raised from loans for public works, and an additional £2.7 million diverted from the consolidated accounts and other funds. In total this amounted to £32,056,606.

⁶ For a discussion of the rise of the United Kingdom capital market and overseas investment, see Cain, P.J. and Hopkins, A.G., *British Imperialism: Innovation and Expansion 1688-1914*, London, Longman, 1993, pp.173-201. Also Sidney Pollard, 'Capital Exports, 1870-1914: Harmful or Beneficial?', *The Economic History Review*, 38:4 (1985), pp.489-514.

directed towards pastoralism, stock and station agents, and woollen mills and shipping produced significant returns. Large-scale commercial initiatives such as the New Zealand and Australian Land Company, the London-based National Mortgage Agency, the New Zealand Loan and Mercantile Agency Company, the Colonial Bank, the Bank of New Zealand, the New Zealand Insurance Company, the Union Steam Ship Company, and other firms benefited from networks of English and Scottish financiers across Australia and the United Kingdom.⁷

Where was the entrepreneur in this schema? For though firms such as those mentioned were important, the colony was not dominated by large-scale enterprise, in fact the exact opposite. How did small-scale private capital and enterprise work in this developing economy to husband capital and produce economic advance?

Entrepreneurs could draw on a number of sources of capital to finance enterprise in the colonial economy. Foreign banks were an important source of funds, and they directed overseas capital into the New Zealand market. These included the Bank of New South Wales, Union Bank of Australia, National Bank of New Zealand, and the Bank of Australasia. Two local banks were significant. The Colonial Bank (funded by Scottish capital) had 20 branches, and the Bank of New Zealand (principally English capital) had over 100 branches.⁸ Banks were not the main source of entrepreneur start-up finance in the colony and entrepreneurs found they had to look elsewhere. Bank finance, even when directed towards existing commercial customers, proved fickle at times. For example, Sinclair noted that as a result of the failure of the City of Glasgow Bank in 1878, New Zealand credit facilities were cut back by £1.5 million. This resulted in the ruin of many traders and shopkeepers and the collapse of the land boom.⁹

⁷ Brooking provides some excellent descriptions of these kinds of connections in the form of John Roberts of Murray, Roberts and Co., John Ross of Ross and Glendinning, and others. See Brooking, Tom, 'Tam McCanny and Kitty Clydeside – the Scots in New Zealand', in *The Scots Abroad: Capital Labour and Enterprise, 1750-1914*, Cane, R.A., (ed.), London: Croom Helm, 1985, pp.172-173. See also Ville and Fleming on the advantages of networks in colonial economic development. In addition to financial benefits, networks encouraged information sharing, reduced transaction costs, offered scope to exploit production and trade benefits, and permitted firms to respond quickly to technological change. See Ville, Simon and Grant Fleming, 'The Nature and Structure of Trade-Financial Networks: Evidence from the New Zealand Pastoral Sector', *Business History*, 42:1 (2000), pp.41-58.

⁸ Margaret Arnold's work on the finance market in New Zealand during this period showed the importance of English and Scottish capital to the colony. Arnold, M.N., 'The Market for Finance in Late Nineteenth Century New Zealand with special reference to Rural Mortgages,' unpublished MA thesis, Victoria University of Wellington, 1981. For a history of the Bank of New Zealand see: Chappell, Norman, *New Zealand Banker's Hundred: a History of the Bank of New Zealand, 1861-1961*, Wellington: Bank of New Zealand, 1961.

⁹ See Sinclair, *A History of New Zealand*, Auckland, 1991.

Outside the traditional banking sector there were other means of finance available. Stock and station agents and mercantile companies made advances on the wool clip, and private loan and finance companies set up in competition in the main trading centres providing funds for commercial activities and industrial development.¹⁰ An analysis of *Stones Postal Directory* of Dunedin in 1887, found 35 finance and loan firms, seven banks, 38 insurance companies, and 84 firms working as commission agents and share brokers.¹¹

Private persons advanced funds for speculative ventures, taking land or business as security, and daily newspapers such as the *New Zealand Herald* or *Otago Daily Times* advertised current rates of interest and amounts willing to be loaned. In addition, following the passage of the Joint Stock Companies Act 1860, local projectors floated a range of commercial ventures. Russell Stone noted that this was particularly prominent in the early 1880s; between 1881 and 1883 some 62 companies were floated in Auckland. Entrepreneurs sought finance across the spectrum of commercial activity, including rail companies, shipping, local manufacturing, such as sugar refining, rope manufacture, iron and steel, and rural investment including orchards, stock farms, and land investment. Some were new concerns in the market for capital to purchase land and plant; others were public conversions of small private companies. In most accounts, claimed Stone, there was an 'ambitiously high level of capitalisation in the new companies.'¹² This was evidently still the case by the end of the period. The 1911 *Census* recorded that paid-up capital across the 433 private companies operating in the colony was 88 percent of total authorised capital; similarly, it was 84 percent across the 566 public companies. Interestingly, the 1911 *Census* also gave figures for both fixed loans and debentures taken out by these firms. What the figures suggest was a strong preference among colonial commercial undertakings for equity finance as opposed to bank finance. Loan capital raised by private companies was 11 percent of their total subscribed capital and that raised by public companies was 14 percent.

Shares in some companies were widely held, and £1 shares were attractive to those of limited means who might wish to invest. Though the bubble burst on some of

¹⁰ See for example Gordon Parry's excellent account of the NMA. Parry, Gordon, *N.M.A.: the Story of the First 100 years: the National Mortgage and Agency Company of New Zealand Ltd., 1864-1964*, Dunedin: National Mortgage and Agency Co., 1964.

¹¹ Taken from *Stones Otago and Southland Directory*, Dunedin, 1887, pp.411-444.

¹² Stone, *Makers of Fortune*, p.74.

these joint-stock firms in the late 1880s, advances in gold extraction, dredging for alluvial gold, and advances in dairying in the early 1890s, bolstered the popularity of this form of investment. Consequently, new companies were still able to attract large amounts of capital from private investors. For instance, in the Auckland province between 1881 and 1886, eighty companies for the purposes of gold and silver mining and quartz-crushing were floated with a combined capital value of £1,100,475.¹³

Some entrepreneurs turned to ingenious methods to permit the expansion of their enterprises. Sailor Alexander McGregor immigrated to New Zealand in 1859. With the assistance of another family member, 31-year-old McGregor constructed a boat and began plying for trade around Auckland. Over the next six years, McGregor expanded his fleet to four ships. Realising that steam rather than sail would in the end prove more reliable in coastal waters, he sought to expand his fleet. Unable to furnish the capital himself to purchase a suitable ship, he formed a syndicate to build the first vessel.¹⁴ It proved so successful that he repeated this means of expansion using syndicates to finance the construction of another six steamers by 1881, eventually grouping his syndicates into the Northern Steam Ship Company Limited.¹⁵

Credit-funded capital might also be a stimulus for commercial expansion. For example, mail order entrepreneur Robert Laidlaw was able to secure a £10,000 line of revolving credit at five percent interest from the London buying house of Laughland, Mackay and Co., on the understanding that this firm conduct all his English buying.¹⁶ This enabled Laidlaw to divert his limited working capital into his building programme. Similarly, entrepreneurs undertaking government road, rail, and construction contracts were able to use the contract price as a mechanism for expanding the scope of their enterprises, in effect, using the certainty of government payment as a way of extending the scale of their own enterprise.¹⁷ Funding could also be obtained from lawyers, acting for clients with funds to invest; in addition, there was a certain amount of inter-company

¹³ From *Statistics of New Zealand*, Joint Stock Company Register. 1881-1886.

¹⁴ Syndicates also used in gold mining at that time.

¹⁵ Frankham, Charles, *The founding years' being the financial history of the Northern Steamship Co. Ltd. from its inception to capital reorganization in 1890*, unpublished MCom thesis, University of Auckland, 1977.

¹⁶ Hunter, Ian, *Robert Laidlaw: Man for our time*, Auckland: Castle Publishing, 1999, p.78.

¹⁷ The development of the haulage firm of William Winstone was one such example of this. The company was significantly advantaged in its expansion through winning government contracts for land reclamation around Auckland's waterfront in the late nineteenth century. See Simpson, Frank, *The First Century: a Centenary Review of Winstone Limited*, Auckland: Winstone Limited, 1965.

finance, with colonial manufacturers and merchants depositing funds between each other.

Aside from what capital might be sourced from external sources, the personal savings of an entrepreneur, or the combined savings of a family unit cannot be overlooked as a means of funding a new venture. Much enterprise in the colonial economy was small-scale; it did not necessitate the large-scale bank or joint-stock funding mechanisms already mentioned. In the smaller firm, some might be advantaged by capital injection, but equally, the firm's expansion hinged on the entrepreneur's skill in their trade, adeptness at commerce, and their ability to trade themselves up in scale through the reinvestment of profits.¹⁸ A lack of initial capital was not a barrier to gaining commercial power in the late nineteenth century.¹⁹

SOURCES OF CAPITAL: CASE ANALYSIS

There are several interesting questions that surround the issue of start-up finance. For instance, was bank capital the most common source of funding? Were public company or private company formations that drew in funds from investors a common means by which the nineteenth century entrepreneur raised funds? Further questions that might be of interest to the business historian are related to the capital needs of a firm but occur post-start-up. For example, did the small firm that commenced its activities on limited funds stay small, hampered by its choice of private capital? Or, as nineteenth-century English economist Alfred Marshall queried, were small firms expanding in size to challenge the more established larger firms? This suggested that the capital strength of the larger firm was not a deterrent to aggressive competition, nor was a lack of capital in smaller firms a barrier to expansion.

Between 1880 and 1910, the colony experienced rapid expansion in the number and scope of industrial enterprises. The number of factories and industrial units more than tripled from around 1700 to over 5000, along with industrial employment. Capital applied to fixed assets in factory production swelled from £3,579,295 to £19,141,497. These were times of dynamic change in the industrial landscape. At every census period,

¹⁸ Economist Alfred Marshall recognised this pattern. Marshall observed working men rising to head their own enterprises, large capital-rich firms at times with advantages over small firms and vice-versa, small firms able to exploit inherent advantages over larger concerns. See Marshall, *Principles*, pp.284-290.

¹⁹ See for example Nenadic's examination of Glasgow self-employed businessmen. Nenadic, Stana, 'Businessmen, the Urban Middle Classes, and the 'Dominance' of Manufacturers in Nineteenth-Century Britain', *Economic History Review*, 44:1 (1991), pp.68-85.

the total numbers of enterprises, capital and those employed in industry increased. In particular, economic historian Keith Rankin noted what he described as ‘something of an industrial revolution’ in manufacturing in the colony between 1880 and 1885.²⁰ According to Rankin, factory output rose 30% despite a lack of growth in per capita incomes.²¹

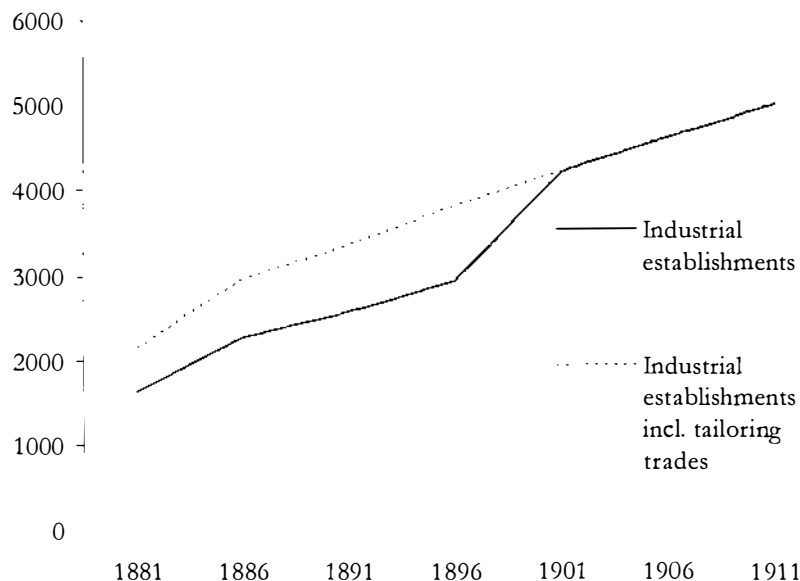
In 1881 at the outset of the period of this thesis, factory and industrial establishments counted by *Census* were 1643. Their number rose each census period and had its steepest increase between 1896 and 1901, when they increased by 1284. However, aggregate figures regarding industrial activity in the *Census* need to be treated with caution. For almost half of the apparent increase in enterprise between 1896 and 1901 can be accounted for by dressmaking and tailoring trades that were only counted for the first time by the *Census* in 1901. The effect of these trades is quite marked when looking at the development of enterprise in the colony over the period of this thesis. The following figure demonstrates this graphically. The blue line indicates the figures from *Census*. This shows a sharp rise in the 1896 to 1901 period, which is in line with conventional interpretations of an economic takeoff around 1895. However, when the tailoring trades are estimated by the same proportion that they appeared in the 1901 *Census* (13 percent of industrial enterprises), then a much smoother increase in new enterprise is evident. This is shown by the red dotted line.

²⁰ See Rankin, K., ‘Manufacturing Output in New Zealand: 1870-1940,’ p.9

²¹ Hawke asserts that real incomes over this period may have in fact been rising. See Hawke, *Making of New Zealand*, pp.76-83.

FIGURE 24

NUMBER OF INDUSTRIAL ESTABLISHMENTS: 1881-1911



Source: Compiled from *Census* statistics: 1881-1911

This portrayal of New Zealand's industrial development differs from that put forward by some economic historians. Simkin, for example, attributed one third of the rise in industrial employment between 1896 and 1911 to employment in clothing trades.²² However his observation was inaccurate. He did not realise that these classes of industry were being counted for the first time in the 1901 period and the increased employment figures were not new jobs, but existing categories being counted for the first time. Misinterpretation of census statistics like this has produced other inaccuracies. For example, Simkin also observed a fall in industrial employment between 1906 and 1911. He stated: 'It is significant from the standpoint of labour relations that the expansion of factory production took place before 1906; between 1906 and 1911 factory employment actually decreased.'²³ However, Simkin's summation, as well as the depressed economic cycle from 1907 to 1909 that he attributed to this downturn, was incorrect; he used the wrong data.

The figures for industrial establishments that Simkin used were those in the summary tables of the Factory and Industrial Statistics. These showed a fall from 49,806 persons employed in industry in 1906, to 45,965 employed in 1911. The resulting decline

²² See Simkin, *Instability of a Dependent Economy*, p.178.

²³ *ibid.*, p.179.

in employed persons was 3841. However, these figures did not include those employed in the dressmaking trades, monumental masons, electric tramways, electrical wire works and other classes of work. These additional classes of industry increased the total of industrial workers to 56,234 persons (a figure shown elsewhere in the 1911 tables). Moreover, it was the practice of government statisticians from 1901 to omit some classes of industry from the summary tables (and the summary totals), but include the data on these industries in more detailed industrial tables that followed. As a result Simkin's industrial employment totals did not include, among other industries, over 3,000 coal miners as well as over 4000 persons working in gold quartz mines. When these totals are combined with those figures in the summary tables they increased industrial employment to a total of 66,403 in 1911. In short, Simkin based his analysis on industrial employment figures that were understated by almost 50 percent, and the more accurate figures show a reverse trend to that which he observed.²⁴ Industrial employment did not fall between 1906 and 1911 but increased from 65,213 to 66,403 persons.

The explanations for this continued increase in aggregate industrial enterprise between 1881 and 1911 are various, and differ depending in some cases on the industry as well as clear regional and market variations. Technological innovation in some areas such as gold extraction, refrigeration and agriculture, have already been discussed in this thesis as important stimuli. Developments in local markets were also a significant trigger. In her survey of the New Zealand economy, economist Muriel Prichard noted in the latter part of the nineteenth century that: '... the greater part of industrial activity was concerned with the satisfaction of domestic needs, not only in clothing, footwear, confectionery, etc., but agricultural implements, vehicles, harness, etc.'²⁵ This chapter supports such a view.

THE SMALL-SCALE FIRM

In *Scale and Scope* Alfred Chandler contrasts the large scale American firm with the small-scale family firm that dominated the British economy before the First World War.²⁶ Chandler argued that the family firm, with its personal capital and inherent family

²⁴ Moreover, Simkin did not use the Factory and Industrial Statistics to inform his analysis of the 1880s period. Had he done so he would have observed a period of continued industrial investment and enterprise.

²⁵ Lloyd Prichard, M., *Economic History of New Zealand*, p.149.

²⁶ Chandler, Alfred D. Jr., *Scale and Scope: the Dynamics of Industrial Capitalism*, Cambridge Mass: Harvard University Press, 1990, pp.236-294.

managerial structure, limited the economic expansion possible when compared with the American model managerialism that allowed economies in scale and scope.²⁷ However, the New Zealand colonial experience of capitalism, with its roots in British-style personal capitalism, did not hinder the colony's development, but aided its development.²⁸

Historian Guy Scholefield made a case for this type of development in relation to the engineering industry in the colony. Rather than import English agricultural implements, colonial engineers used imported bar and sheet iron to construct wool presses, ploughs, disc harrows, chaff cutters, and seed-cleaners suitable for the local market, which were then exported.²⁹ The firms that these engineers established were often financed out of savings, relied on the entrepreneur's skill, and expanded over time as markets grew and profits were reinvested. Scholefield, writing in the early twentieth century, noted: 'Most of the engineering firms had their origin in the savings or the modest imported capital of some practical engineer or journeyman forty or fifty years ago. They have grown to their present proportions by the simple process of accretion during prosperity, by extensions out of revenue, by foreseeing want and providing for it before far distant engineers stepped in.'³⁰

Similar examples to those put forward by Scholefield in engineering emerged from the case analysis undertaken as part of this thesis research. An entrepreneur's first venture was often on limited funds. Later, as he undertook either further or more expansive enterprises, he looked for additional finance. Most importantly, the choice of the original source of finance did not appear to limit his success as he expanded his business. The inventive promoter brought in other parties, bought and sold businesses and used a number of means to bring in capital when it was needed to expand his business enterprises. In short, colonial ventures, even without the assistance of large capital at their inception, were still able to develop into sizeable enterprises.

²⁷ Also useful are: Chandler, Alfred D. Jr., 'The Beginnings of Big Business in American Industry', *Business History Review*, 33:1 (1959), pp.1-31; Chandler, Alfred D. Jr., 'The Structure of American Industry in the Twentieth Century: A Historical Overview', *Business History Review*, 43:3 (1969), pp.255-298.

²⁸ Simon Ville proposes a similar argument for Australian firms where he suggests that some of Australia's most successful and innovative firms remained under founder control in the nineteenth century. See Ville, Simon, 'Business Development in Colonial Australia', *Australian Economic History Review*, 38:1 (1998), pp.16-41.

²⁹ The development of Shacklock ranges was similar. See Angus, John, *The Ironmasters: the First One Hundred years of H.E. Shacklock Limited*, Dunedin: H.E. Shacklock Limited, 1973.

³⁰ Scholefield, *New Zealand in Evolution*, p.283.

CAPITAL

In all, eight potential sources of finance were identified in the research for funding new ventures. The following table gives the number and percentages of entrepreneurs in the case analysis that used each of these eight sources of funding.

TABLE 20
START-UP SOURCES OF CAPITAL

| Start-up sources of capital | Number of Entrepreneurs | As a Percentage |
|--|-------------------------|-----------------|
| Individual Savings | 49 | 36.8 |
| All partners contributed funds | 44 | 33.1 |
| Family backed (inheritance, family wealth) | 21 | 15.8 |
| Established partner's money. | 13 | 9.8 |
| Money earned from other activities (mining/farming/professional activities) | 3 | 2.3 |
| Clearly Borrowed Funds | 3 | 2.3 |
| Public Float | 0 | 0.0 |
| Private Float | 0 | 0.0 |
| Total | 133 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

The most common source of start-up capital among the 133 case analysis entrepreneurs was their own savings. This was so with 49 of the entrepreneurs in the case analysis (36.4 percent) and reflected two factors. Firstly, in some industries, the barriers to entry were low, so opening a retail store, small factory, or printing works, could be done with a few hundred pounds or less; secondly, large-scale capital commencement of new ventures was uncommon. It was more common for the individual entrepreneur to commence his first enterprise by himself, or with a few others, on a small scale with limited capital, expanding as trade, opportunity, and experience permitted. Such was the case with publisher, Alfred Reed.

Reed was the son of an English brick-maker, who after being forced to liquidate his brick works, brought his family to New Zealand in 1886. Alfred Reed was aged 12 at the time. Following a short period of schooling and a number of short-term jobs, Reed, who had taught himself short-hand, took a job in 1895 with the New Zealand Typewriter Company, selling and repairing typewriters. Two years later, aged 22, he was sent to open a Dunedin branch of the same firm. While there, and teaching Sunday school, Reed began importing Sunday school materials for his classes. Interest in the materials widened, and although Reed conceived of his undertaking as a hobby, he commenced a mail order list to other Sunday schools in New Zealand. Around 1900, he was offered the opportunity to purchase the Dunedin branch on extended payments. At

the same time interest in the Sunday school supply business increased; Reed decided with his wife that once the Sunday School business reached a turnover of £1000 per annum they would give themselves fully to this activity. In 1907, that goal was reached. Reed sold the typewriter business to his assistant, and on a capital of around £500 commenced the Sunday school supply business full time. Nine years later in 1916, Reed sold the business to enlist for the First World War. In the period 1907 to 1916 the annual turnover had increased to several thousand pounds. When he returned from service, he was given the opportunity to buy the business back; he did so in 1919. In the early 1920s, he began importing and selling educational books to schools, then in 1925 Reed purchased for £5000 the building that became the Dunedin head office of his operation. Although Reed had been in the Sunday school supply business for 18 years, this transaction, in particular, revealed the low capitalisation of the firm and the types of sources entrepreneurs looked to for funding. Reed noted:

The business was still undercapitalised, and all we could spare was £250, but we borrowed a few hundred pounds from my father, and a bit more from my brother, and put down a sufficient deposit, leaving us still with the burden of a first and second mortgage. We let a few offices, and after a little period of some anxiety it was a great relief to acquire the Atlas Assurance Company as tenants for half the ground floor, which left us with roughly half the floor space of the building for our own requirements, and gave us all the accommodation we needed. In finance we first attacked and wiped out the second mortgage, but it was years before we were able to pay off the first mortgage, and really feel that Reed's building was our own.³¹

In 1932, during what Reed himself described as the silver jubilee of the founding of the firm, Reed established a branch in Wellington and commenced his first main stream publishing venture in the form of *The Letters and Journals of Samuel Marsden*.³² Greater success for the firm would soon come, but 25 years of commercial endeavour passed before Reed even entered book publishing and even then on a limited capital. He financed his first book venture as a partnership with Dunedin printers Coulls Somerville Wilkie Ltd. The development of this firm was slow, yet Reed persisted and his business gradually expanded. Over the next 25 years, Reed published 788 titles and became a

³¹ A.H. Reed, *The House of Reed: 50 Years of Publishing in New Zealand*, p17.

³² *ibid.*, pp18-19.

significant New Zealand publishing company under the direction of Alfred's nephew, Alexander Reed.³³

Publisher Alfred Horton was a similar case in many respects. When Horton immigrated to New Zealand from England at the age of 18 in 1861, he had already worked as a reporter. After a further three years working as an apprentice printer at the *Press*, Horton left in 1864. He purchased a hand-operated printing press and travelled to Timaru, where he founded the weekly newspaper the *Timaru Herald*. Six years later, he sold this paper and went home to England. On his return, he and a partner, William Wilkinson, purchased the *Thames Advertiser*. Horton didn't stay long, and in 1876 the two partners went their separate ways. Horton, aged 33, moved to Auckland and purchased the *Daily Southern Cross*, which later that year merged with the *New Zealand Herald*, owned by the Wilson family. This newspaper would be the most successful undertaking of his career.

Other entrepreneurs, such as engineer John Chambers, storeowner Byron Brown, transport entrepreneur Thomas Newman, winemaker Assid Corban, and baker Annie Millar had similar experiences. In each case, the entrepreneur commenced his first venture on a small scale with limited capital, and then ploughed back his profits, expanding his enterprise either through branch expansion, as was the case with Byron Brown, or additional venture opportunities as was the case with Annie Millar.

The second most dominant source of capital, all partners contributing funds, was used by 44 entrepreneurs and represented 33.1 percent of the case analysis. This suggested that partnership was a feature of the colonial entrepreneurial experience. Partnership in this sense can be read as any venture starting as a result of a group of entrepreneurs coming together as opposed to a single proprietor starting a business. This could include family groupings as well as complementary partners.

It is common to think of entrepreneurs as individualists. Some of the cases in this study, such as William Goodfellow, James Fletcher, Francis Carter, Thomas Edmonds, Marianne Smith, Henry Brett, William Richmond, Arthur Myers, Henry Wise,

³³ The development of Alfred Buxton's landscape business in Christchurch had similarities to Reed's both in the modest start-up capital and the slow but continuous pace of expansion. Alfred Buxton moved from being an apprentice nurseryman to start his first venture in 1895 at the age of 21, by which stage he had had seven years experience in his trade. Buxton's first nursery, called St Albans, was started partly with savings and partly with loan finance. Buxton took out a mortgage of £300 to purchase the land, which cost £200 and used the balance to establish the new business. See Tipples, Rupert, *Colonial Landscape Gardener: Alfred Buxton of Christchurch, New Zealand 1872-1950*, Lincoln: Lincoln College, 1989, pp.32-34.

or Newton King stand out as renowned figures from New Zealand commercial history whose legacy might be interpreted as that of a single figure who developed a successful business from nothing.³⁴ This is a heroic, almost mythical picture of the entrepreneur. It may be an accurate representation of some. It does not adequately describe the entrepreneurs in this analysis nor does it appear more generally descriptive of the colonial entrepreneur. In half the cases of commercial enterprise covered by this case analysis, the venture was not the result of a lone promoter, but rather a group of entrepreneurs coming together to form an enterprise and pursue an opportunity. Overall, 50 percent of the entrepreneurs in this analysis commenced their first business venture as some form of partnership. Fifty-two percent commenced the venture that would be the most successful of their career with a partner or partners. From the list of renowned entrepreneurs given earlier in this paragraph, all started their first venture in some form of partnership and not as individuals. The important element here was the capital (not the expertise) provided by the partner.

Partnerships could have various types of funding. Complementary partnerships such as that which formed Speights (described earlier in this thesis), constituted several partners all contributing funds to the new enterprise and taking a shareholding in the firm to overcome the shortcomings of limited capital. But other forms were equally possible. Some partnerships were the result of a collective family effort and could be based on inherited or family wealth, such as the case with mattress manufacturer Arthur Ellis. His first business was a flax mill, the capital for which was provided by Arthur's father, a flock mill entrepreneur, Ephraim Ellis.³⁵ On a few hundred pounds, Ephraim had commenced the original flock-mill in 1877, with his brother-in-law, William Nicholson.³⁶ Likewise, warehouseman Percy Sargood arrived in New Zealand in 1891 to take over the Dunedin and Christchurch stores of his father's business. In 1902, Sargood took full control of the semi-autonomous New Zealand operation supported by family wealth. Similarly, some partnerships were formed with an entrepreneur joining an existing businessperson to develop their business further or foster some sort of opportunity together. Here the source of capital was the established partner who already

³⁴ Graeme Hunt provides excellent sketches of these and other well-known business personalities in Hunt, Graeme, *The Rich List*. See in particular pp.80-170 for the period covered by this thesis.

³⁵ See Kelly, Maurice, *Mill in the Valley: A Centennial History of Arthur Ellis and Co Limited*, Dunedin: Arthur Ellis and Co. Ltd., 1977, p.16.

³⁶ See *Mill in the Valley*, p.14.

had plant, machinery, and capital while the new entrepreneur brought other skills. This was the case with entrepreneurs such as automobile manufacturer and distributor Charles Todd who originally joined his father in a fellmongery and wool scouring business, or merchant Walter Johnson, who entered a number of partnerships; with his father in their Wellington mercantile firm Johnston and Company, then in Levin and Company, and then with his brother in the family firm after the retirement of their father in 1878. In a similar vein, clothing manufacturer James Clark entered the family firm Archibald Clark and Company in 1857, and shipper Joseph Cock, joined his brother John in 1880 to found the Anchor Steam Shipping Company, the assets of which John had derived from the estate of Nathaniel Edwards and Company. In total, this style of business partnership (joining an established partner) represented 12 percent of the entrepreneurs in the case analysis.

TABLE 21
REASONS FOR FIRST VENTURE

| Reasons for first venture | Number of Entrepreneurs | As a Percentage |
|---|-------------------------|-----------------|
| Complementary Partners – (same industry working in/complementary skills) | 34 | 25.6 |
| Saw an opportunity in an industry already working in and pursued it alone. | 22 | 16.5 |
| Determined self-employed (includes those who set up on own account in a business outside present industry). | 19 | 14.3 |
| Opportunity in industry with established partner (one with capital/existing business). | 17 | 12.8 |
| Natural extension of trade (move from apprentice to starting-up on own account). | 14 | 10.5 |
| Partners self-starting – all new to industry. | 12 | 9.0 |
| Adverse circumstances – death of a spouse/illness/unemployment/dear dissatisfaction. | 9 | 6.8 |
| Opportunity to buy firm working in. | 6 | 4.5 |
| Total | 133 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

None of the entrepreneurs in the case analysis made their initial start into entrepreneurial activity through either a public or private float of shares. These

mechanisms for gaining capital were used for development finance, or in the entrepreneurs subsequent ventures after their first one.

FUNDING FOR EXPANSION

The capital, by which case analysis entrepreneurs expanded their enterprises, came from six different sources: reinvesting profit; taking in new partners with additional capital; public float; selling off parts of a business to raise additional funds; buying and selling businesses to increase capital; or borrowed funds.

A feature of this analysis was commercial expansion at a modest rate through reinvesting profits as opposed to debt funding. This was the case with 59.4 percent of the case analysis entrepreneurs. In some firms, this type of expansion happened at a faster pace than others. For instance, the average duration of the first enterprise that an entrepreneur started among the case group was 20 years, yet the mode was only two. These results indicated a polarisation between those entrepreneurs whose first venture either failed (or quickly abandoned for something else) compared with those who commenced one firm and stayed with that undertaking for their entire life.³⁷ Those whose first venture continued for the remainder of their life were 43 of the 133 entrepreneurs (32 percent).³⁸ The adherence of colonial entrepreneurs toward the first enterprise that they started offers some explanation as to why reinvestment of profits was a sensible form of finance for expansion. These firms were, on balance, expanding at a modest pace, developing as the entrepreneur's own capacity to manage a larger undertaking grew.

An analysis of the sources of development capital used by the entrepreneurs in the case group gave further detail to the picture of colonial entrepreneurship. Having capital at the start of an enterprise was no guarantee of success. Entrepreneurs, such as A.G. Horton, William Winstone, and Robert Laidlaw started their first venture on a few hundred pounds, and in each case, over a decade or more, created a significant organisation employing hundreds of staff. Capital needs were only one aspect of their business activity. One could argue that in each case other factors were more critical to the entrepreneur's eventual success than capital. Alfred Horton, for example, aggressively adopted new printing technology, giving him the competitive advantage.

³⁷ Twenty-six entrepreneurs stayed in their first venture three years or less.

³⁸ This did not preclude other types of ventures at other points in their lifetime.

Robert Laidlaw's innovation in the adoption of American-style managerial practices enabled the rapid expansion of his mail order operation. William Winstone's move into vertical integration proved important in the expansion of his cartage and quarrying operations.

TABLE 22
BUSINESS EXPANSION: SOURCES OF CAPITAL

| Expansion Capital | Number of Entrepreneurs | As a Percentage |
|--|-------------------------|-----------------|
| Traded up - cashflow supported business expansion | 79 | 59.4 |
| Took in other parties – additional partners with new capital | 37 | 27.8 |
| Public Float | 8 | 6.0 |
| Sold significant ownership stake in business to grow to outside parties | 4 | 3.0 |
| Developed and sold businesses | 3 | 2.3 |
| Clear borrowings | 2 | 1.5 |
| Formed new private company with additional shareholders bringing capital | | 0.0 |
| Total | 133 | 100 |

Source: Case Analysis New Zealand Entrepreneurs

CAPITAL ENTRY COSTS

Up to this point, this chapter has argued that the personal savings of a single entrepreneur, or of a number of partners contributing funds, were the two most common forms of start-up capital among colonial entrepreneurs from the case analysis. Evidence from the Factory and Industrial Statistics section of the census supports this view. It suggests that the generally low capital requirements of industrial activities undertaken in the colony provided numerous opportunities for those of limited means. A three-stage analysis was undertaken of the Factory and Industrial Statistics between 1881 and 1911 to determine this.

Using spreadsheets, the industrial activities at each census year were ranked by the average capital investment per business establishment. Capital in this sense, included land, buildings, plant and machinery.³⁹ These industries were further ranked by the average capital investment in plant and machinery per business establishment (not

including land and buildings). This was done to ascertain the level of entrepreneurial opportunity available to entrepreneurs who used capital economising techniques—renting premises, for example, instead of constructing purpose-built plants.

Once these rank orders of industrial enterprise had been established, arbitrary bands were applied to these figures to investigate the proportions of enterprise at each level of capital investment. Industries were split into those requiring £10,000 and over per individual business enterprise, those between £5000-£9999, £2000-£4999, £1000-£1999 and £1-£999. Following this, the lowest category (£0-£999) was investigated in more detail to understand the kinds of industrial activities that were available to entrepreneurs as an initial investment funded by personal capital.

CAPITAL ANALYSIS

For each of the census periods between 1881 and 1911, the total capital investment per industrial establishment was established for each industrial class. The full set of tables is given in Appendix C. Industrial activities were ranked from the largest capital investment per plant to the least.³⁹ For example, the 1881 *Census* listed 56 different classes of industrial activity in the colony, covering 1643 firms, undertaking activities as diverse as printing and stocking weaving. Those 39 activities for which capital values were listed in the *Census* are shown in the table below. The table has been ranked by order of average capital investment per industrial establishment. The capital investment required per factory varied considerably, from £28,948 per woollen mill, to as low as £180 per wine making operation.

³⁹ It should be noted that the average capital investment per business enterprise in an industrial class was taken as an approximation of the entry-cost to that industry.

⁴⁰ In each of the tables only those industrial activities that had capital values given in the census were shown. In some classes of industrial activity the capital values were not given in the census as with only a few enterprises in a particular class actual companies might be identified, for example in sugar refining, paper making or match production.

CAPITAL

TABLE 23

CAPITAL INVESTMENT BY INDUSTRIAL CLASS: 1881

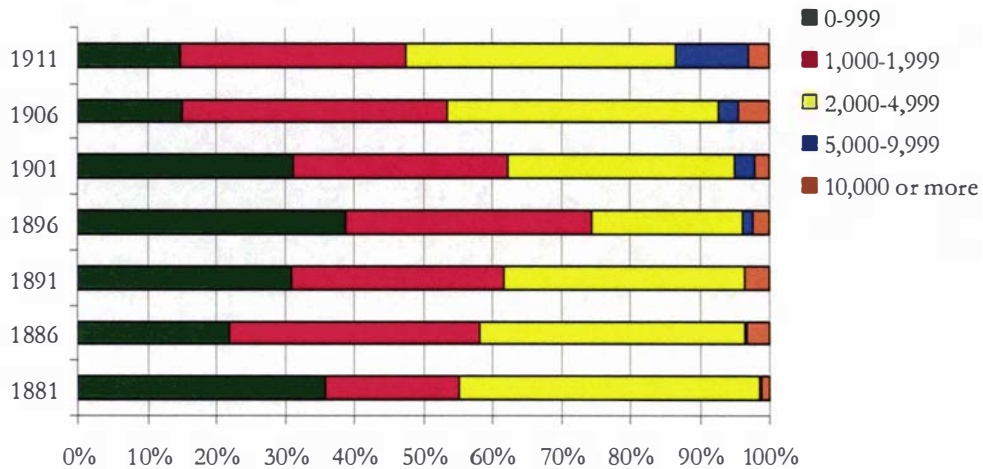
| | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only | | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only |
|--|----------------------|-----------------|---------------|-------------------|---|-----------------------------------|----------------------|-----------------|---------------|-------------------|---|
| <i>Manufactories and Works</i> | | | | | | <i>Manufactories and Works</i> | | | | | |
| Gasworks | 17 | 188 | £492,116 | £28,948 | £18,492 | Clothing Factories | 8 | 756 | £8,680 | £1,085 | £310 |
| Woollen Mills | 4 | 417 | £98,500 | £24,625 | £15,625 | Block and Pump manufacturers | 3 | 6 | £3,100 | £1,033 | £433 |
| Patent Slips | 4 | 31 | £36,920 | £9,230 | £7,555 | Rope and twine | 18 | 124 | £18,020 | £1,001 | £460 |
| Iron and Brass Foundries | 35 | 953 | £155,267 | £4,436 | £2,048 | Coach building and Painting Works | 49 | 387 | £46,330 | £946 | £220 |
| Collieries | 51 | 992 | £221,150 | £4,336 | £2,374 | Acrated Water and Cordial | 79 | 228 | £66,901 | £847 | £389 |
| Sawmills and sash doors | 223 | 4238 | £773,628 | £3,469 | £1,689 | Brick and Tile | 127 | 685 | £105,765 | £833 | £226 |
| Breweries | 99 | 526 | £317,398 | £3,206 | £850 | Bone Cutting Mills | 17 | 25 | £11,695 | £688 | £306 |
| Grain Mills | 131 | 450 | £357,178 | £2,727 | £1,146 | Hat and Cap Factories | 8 | 58 | £5,082 | £635 | £149 |
| Coffee Spice and Chicory | 9 | 63 | £22,350 | £2,483 | £628 | Sauce and Pickle | 3 | 15 | £1,700 | £567 | £300 |
| Boiling Down and Meat Preserving | 40 | 468 | £96,845 | £2,421 | £858 | Bacon Curing | 20 | 64 | £11,090 | £555 | £53 |
| Soap and Candle | 15 | 108 | £33,240 | £2,216 | £1,179 | Chair and washboard | 3 | 8 | £1,545 | £515 | £157 |
| Printing | 106 | 1779 | £229,166 | £2,162 | £1,224 | Spouting and Rdging | 9 | 20 | £4,395 | £488 | £211 |
| Agricultural Implement manufacturers | 23 | 315 | £43,854 | £1,907 | £707 | Cleaning and Dyeing Works | 10 | 26 | £4,825 | £483 | £66 |
| Stone Quarries | 10 | 136 | £18,693 | £1,869 | £216 | Sail Factories | 13 | 37 | £6,168 | £474 | £110 |
| Furniture making manufacturers | 45 | 466 | £75,927 | £1,687 | £100 | Chaff cutting works | 38 | 100 | £17,456 | £459 | £105 |
| Machinists and Millwrights | 8 | 90 | £13,393 | £1,674 | £838 | Ship and boat building works | 25 | 100 | £10,568 | £423 | £100 |
| Biscuit Factories | 18 | 148 | £28,345 | £1,575 | £554 | Lineworks | 23 | 63 | £6,580 | £286 | £88 |
| Boot Manufacturers | 31 | 1299 | £46,367 | £1,496 | £428 | Fish Curing | 14 | 68 | £3,560 | £254 | £65 |
| Malthouses | 34 | 67 | £48,516 | £1,427 | £20 | Colonial Wine | 5 | 15 | £900 | £180 | £15 |
| Fellmongering Tanning and Woollenweaving | 119 | 859 | £136,082 | £1,144 | £403 | | | | | | |

Source: Compiled from *Census* statistics: 1881. Note: for some industrial classes no capital figures were given and so are not shown above.

One of the characteristics in the above table is the large number of industrial classes that required limited amounts of capital investment, perhaps only a few hundred pounds, and the relatively small group of industries (gas works and woollen mills) that required £10,000 or more. This trend continued throughout the period of this study. On average, between 1880 and 1910, approximately 59 percent of all industrial enterprises were carried out on a total capital investment of £1999 or less. This proportion went as high as 74 percent of all industrial enterprises at the time of the 1896 *Census*, and as low as 47 percent at the 1911 *Census*. This trend is shown graphically in the figure below.

FIGURE 25

PERCENTAGE OF ESTABLISHMENTS BY CAPITAL INVESTMENT: 1881-1911



Source: Compiled from *Census* statistics: 1881-1911

The average capital investment per industrial enterprise was a measure of existing capital commitments in an industry; it could also be used as a guide to the capital entry costs in an industry. From this figure observations might be made about the ease of entry to some types of activities and the barriers to entry in others. However, average capital investment per industrial enterprise has some limitations. It is a measure of central tendency and it is not an indication of capital entry costs in all cases. Nor does it account for working capital. In some industries, working capital requirements were substantial where large amounts of work in progress was on hand, such as iron and brass foundries, or equally where the industry was highly labour intensive, such as the clothing industry, requiring working capital to pay wage bills.

Furthermore, entrepreneurs might be able to reduce their initial capital requirements using capital economising techniques, such as purchasing second-hand plant or renting factory premises. From the *Factory and Industry Statistics* it was possible to investigate the latter of these two techniques, where entrepreneurs did not require purpose-built premises. Industries that were of this type included boot and shoe manufacture, sawmill operation, printing works, agricultural implement manufacture, biscuit manufacture, and other activities. Overall, a sizeable number of industrial activities could be undertaken in basic commercial buildings that were not purpose-built. Merchants and retailers were also of this sort. Mercantile activities provided a uniquely low-cost introduction into new venture activity, where the entrepreneur's ability to generate additional capital was tied to their ability as a trader. Those who were able to

turn their stock over more frequently might generate more profit on the same amount of capital.⁴¹

OPPORTUNITIES ON LIMITED CAPITAL

Analysis was undertaken on the factory and industrial statistics to identify the capital entry requirements in those industrial activities that did not require purpose-built premises. The full results of this analysis are listed as part of the tables included in Appendix C. An example of this is shown in the following table. This ranks the industrial classes from the 1881 *Census* by average investment per establishment in plant and machinery. As a trend, it is apparent that in 1881 the plant and machinery costs of industrial establishments were typically less than half the total capital cost. This explains in part why entrepreneurs could enter industrial activities that appeared outside their initial capital limitations. For example, James Speight, William Dawson, and Charles Greenslade would not have been able to fund the cost of constructing a brewery at an average total investment of £3206; however, they could finance the plant and machinery cost which was on average only £850 for the industry.

⁴¹ It is interesting to note in this regard that 33 percent of the case entrepreneurs chose some sort of mercantile or retail pursuit as their first venture. In doing so, they not only selected a potentially low cost option in terms of capital requirements, but also placed themselves in the strong position of being able to generate additional capital quickly if they were particularly adept at trade. Not all stayed in mercantile pursuits. The percentage commencing their first venture as merchants or retailers was almost 50 percent higher than those who by the end of their careers could be classified as such. For example, storeowner Hugh Cassidy later branched out into other fields of endeavour that would prove more successful and more profitable. In Cassidy's case it was transportation as he commenced his third venture, Cassidy Clarke and Company in 1873, eight years after his first business enterprise.

TABLE 24

CAPITAL INVESTMENT IN PLANT AND MACHINERY: 1881

| | Total Establishments | Total Employees | Land and Buildings | Machinery and Plant | Total capital | Capital per plant | Average investment plant and machinery only |
|---|----------------------|-----------------|--------------------|---------------------|---------------|-------------------|---|
| Manufactories and Works | | | | | | | |
| Gasworks | 17 | 188 | £177,749 | £314,367 | £492,116 | £28,948 | £18,492 |
| Woollen Mills | 4 | 417 | £36,000 | £62,500 | £98,500 | £24,625 | £15,625 |
| Patent Ships | 4 | 31 | £6,700 | £30,220 | £36,920 | £9,230 | £7,555 |
| Collieries | 51 | 992 | £100,071 | £121,079 | £221,150 | £4,336 | £2,374 |
| Iron and Brass Foundries | 35 | 953 | £83,581 | £71,686 | £155,267 | £4,436 | £2,048 |
| Sawmills and sash doors | 223 | 4238 | £397,084 | £376,544 | £773,628 | £3,469 | £1,689 |
| Printing | 106 | 1779 | £99,449 | £129,717 | £229,166 | £2,162 | £1,224 |
| Soap and Candle | 15 | 108 | £15,550 | £17,690 | £33,240 | £2,216 | £1,179 |
| Grain Mills | 131 | 450 | £207,085 | £150,093 | £357,178 | £2,727 | £1,146 |
| Bioiling Down and Meat Preserving | 40 | 468 | £62,525 | £34,320 | £96,845 | £2,421 | £858 |
| Breweries | 99 | 526 | £233,218 | £84,180 | £317,398 | £3,206 | £850 |
| Machinists and Millwrights | 8 | 90 | £6,690 | £6,703 | £13,393 | £1,674 | £838 |
| Agricultural Implement manufacturers | | | | | | | |
| Coffee Spice and Chicory | 9 | 63 | £16,700 | £5,650 | £22,350 | £2,483 | £628 |
| Biscuit Factories | 18 | 148 | £18,380 | £9,965 | £28,345 | £1,575 | £554 |
| Rope and twine | 18 | 124 | £9,735 | £8,285 | £18,020 | £1,001 | £460 |
| Block and Pump manufacturers | 3 | 6 | £1,800 | £1,300 | £3,100 | £1,033 | £433 |
| Boot Manufacturers | 31 | 1299 | £33,100 | £13,267 | £46,367 | £1,496 | £428 |
| Fellmongering Tanning and | | | | | | | |
| Woolscouring | 119 | 859 | £88,156 | £47,926 | £136,082 | £1,144 | £403 |
| Aerated Water and Cordial | 79 | 228 | £36,201 | £30,700 | £66,901 | £847 | £389 |
| Clothing Factories | 8 | 756 | £6,200 | £2,480 | £8,680 | £1,085 | £310 |
| Bone Cutting Mills | 17 | 25 | £6,500 | £5,195 | £11,695 | £688 | £306 |
| Sauce and Pickle | 3 | 15 | £800 | £900 | £1,700 | £567 | £300 |
| Brick and Tile | 127 | 685 | £77,030 | £28,735 | £105,765 | £833 | £226 |
| Coach-building and Painting Works | 49 | 387 | £35,570 | £10,760 | £46,330 | £946 | £220 |
| Stone Quarries | 10 | 136 | £16,533 | £2,160 | £18,693 | £1,869 | £216 |
| Spouting and Ridging | 9 | 20 | £2,500 | £1,895 | £4,395 | £488 | £211 |
| Chair and washboard | 3 | 8 | £1,075 | £470 | £1,545 | £515 | £157 |
| Hat and Cap Factories | 8 | 58 | £3,892 | £1,190 | £5,082 | £635 | £149 |
| Chaff cutting works | 38 | 100 | £13,476 | £3,980 | £17,456 | £459 | £105 |
| Furniture making manufacturers | 45 | 466 | £71,415 | £4,512 | £75,927 | £1,687 | £100 |
| Ship and boat building works | 25 | 100 | £8,068 | £2,500 | £10,568 | £423 | £100 |
| Limeworks | 23 | 63 | £4,560 | £2,020 | £6,580 | £286 | £88 |
| Cleaning and Dyeing Works | 10 | 26 | £4,170 | £655 | £4,825 | £483 | £66 |
| Fish Curing | 14 | 68 | £2,655 | £905 | £3,560 | £254 | £65 |
| Bacon Curing | 20 | 64 | £10,030 | £1,060 | £11,090 | £555 | £53 |
| Malthouses | 34 | 67 | £47,850 | £666 | £48,516 | £1,427 | £20 |
| Colonial Wine | 5 | 15 | £825 | £75 | £900 | £180 | £15 |
| Sail Factories | 13 | 37 | £6,038 | £130 | £6,168 | £474 | £10 |

 Source: *Census* 1881

Furthermore, some industrial activities required much smaller amounts of capital to purchase the requisite plant and machinery. For example, the average plant and machinery cost for a hat and cap factory was £149. This was 23 percent of the total capital investment per establishment in that industry. Similar was furniture manufacture, of which there were 45 factories in 1881 with an average cost per establishment in plant and machinery of £100. Neither of these industries required purpose-built plants. For the entrepreneur of limited personal capital, these kinds of industries offered an opportunity for market entry.

This analysis was then extended to all the census periods covered by this thesis. The purpose of this was to identify firstly the market entry opportunities for single entrepreneurs of limited personal capital, and secondly, the market entry opportunities for groups of entrepreneurs funded by personal capital. For the purposes of analysis, two levels of personal capital funding were selected. For the individual entrepreneur, £250 of accumulated capital was set as an arbitrary figure, and for a group of entrepreneurs acting together, £750 was set as an arbitrary figure.⁴² As an indication of the kinds of opportunities open to entrepreneurs who only had very limited funds, the following table gives a ranking of industrial activities at ten-year intervals between 1881 and 1911. The industries shown are only those where the average cost of plant and machinery per business establishment was £250 or less.

In 1881, 16 industrial classes were possible entry points for entrepreneurs with £250 or less to invest in an industrial enterprise. By 1890, this had broadened to 29 different classes of industry, representing 32 percent of all industrial firms. The 1911 figures indicate a more restricted class of activities open to entrepreneurs. Part of this was due to a change in the statistical recording of industrial categories. For example, in 1900 waterproof factories were recorded as a distinct category, but by 1911 they were included with clothing factories as an industrial class. Hence, it is inaccurate to suggest that between 1890 and 1900 there was a burst of enthusiasm for industrial enterprise that had lessened by 1910. For even with the alterations to collection categories, the number of works open to an entrepreneur who might be self-funding their own venture was considerable. For instance, the 17 classes of industry in 1911 requiring a capital investment in plant and machinery of £250 or less represented 1342 establishments, 28 percent of the entire factory and industrial establishments recorded in the Census.

⁴² There was some evidence to suggest that they were representative of entrepreneurs in the study. It could be argued, for example, that an entrepreneur might save £250 over a 5-10 year period given that an average wage in the latter part of the nineteenth century was approximately £100 per year. For the period of this thesis *Statistics of New Zealand* gave the daily wage rates by occupation for the different provinces of New Zealand. A wage of between 8 to 12 shillings per day was commonplace for numerous trades and on average this constituted a yearly income of approximately £100. Historian Donald Gordon suggested the same figure as the average annual income in the period in his history of James Speight and Co. See for example Gordon, Donald, *Speight's*, p.55.

TABLE 25
AVERAGE CAPITAL ENTRY COSTS 10-YEAR INTERVALS

| 1881 | Capital Entry Cost | 1891 | Capital Entry Cost | 1901 | Capital Entry Cost | 1911 | Capital Entry Cost |
|-----------------------------------|--------------------|---------------------------------|--------------------|------------------------------------|--------------------|------------------------------|--------------------|
| Brick and Tile | 226 | Cycle | 245 | Baking powder manufacturer | 238 | Cycle | 216 |
| Coach-building and Painting Works | 220 | Clothing factories | 239 | Brush, broom | 235 | Venetian blind | 215 |
| Stone Quarries | 216 | Cooperages | 200 | Flock mills | 224 | Electro-plating works | 200 |
| Spouting and Ridging | 211 | Flock mills | 194 | Mattress factory | 219 | Lead headed nail | 177 |
| Chair and washboard | 157 | Tinware factories | 190 | Colonial wine | 211 | Sail and oilskin | 147 |
| Hat and Cap Factories | 149 | Stock-weaving | 190 | Bone Mills | 208 | Tobacco | 134 |
| Chaffcutting works | 105 | Sugar boiling and confectionary | 185 | Waterproof factories | 195 | Monumental masonry | 112 |
| Furniture making manufacturers | 100 | Bone Cutting Mills | 185 | Tinware factories | 165 | Sausage skin factories | 104 |
| Ship and boat building works | 100 | Ematite Paint factories | 180 | Furniture making manufacturers | 161 | Saddlery | 95 |
| Limeworks | 88 | Saddlery | 178 | Coachbuilding | 151 | Musical instrument factories | 94 |
| Cleaning and Dyeing Works | 66 | Coachbuilding | 175 | Cycle | 134 | Portmanteau manufacturers | 82 |
| Fish Curing | 65 | Chaff cutting works | 158 | Returns not incl. in other classes | 125 | Mattress factory | 72 |
| Bacon Curing | 53 | Fish curing | 126 | Fish curing | 123 | Wool rug and mat making | 67 |
| Malthouses | 20 | Malthouses | 123 | Basket and Perambulator | 122 | Picture Frame makers | 63 |
| Colonial Wine | 15 | Cleaning and Dyeing Works | 117 | Cleaning and Dyeing Works | 121 | Rubber stamp making | 52 |
| Sail Factories | 10 | Cap and Hat | 105 | Portmanteau manufacturers | 112 | Dressmaking and millinery | 41 |
| | | Portmanteau manufacturers | 105 | Herbal remedy factories | 108 | Tailoring Establishments | 40 |
| | | Furniture making manufacturers | 104 | Ship and boat building works | 85 | | |
| | | Brush, broom | 103 | Sausage skin factories | 83 | | |
| | | Venetian blind | 92 | Sail and oilskin | 74 | | |
| | | Sauce and Pickle | 74 | Venetian blind | 66 | | |
| | | Paper bag and cardboard box | 73 | Corset and belt | 56 | | |
| | | Baking powder manufacturer | 46 | Picture Frame makers | 50 | | |
| | | Colonial wine | 44 | Monumental masonry | 46 | | |
| | | Sausage skin and violin string | 35 | Saddlery | 45 | | |
| | | Ship and boat building works | 33 | Tailoring Establishments | 40 | | |
| | | Bacon curing | 33 | Dressmaking and millinery | 39 | | |
| | | Sail and oilskin | 26 | Rabbit preserving works | 17 | | |
| | | Basket and Perambulator | 22 | | | | |

Source: Generated from *Census* 1881-1911

Cycle manufacture was one example of an industry that provided this kind of low-cost entry point for entrepreneurs into the marketplace. In addition, those who took up the opportunity in the late nineteenth century either to assemble or distribute cycles, were taking a first-mover position in an emerging market that had only come into existence as a consumer market since the mid 1870s following the invention of the Penny farthing cycle in 1871.

New Zealand enthusiasts were quick to bring the product to the colonial market. The first cycle manufacturer in the colony was probably Thomas Boyd and Son, who started manufacture in Christchurch in 1878. They were followed soon afterwards by Richard Kent, also of Christchurch. However, a rapid increase in cycle manufacture and distribution in the colony occurred in from 1890 onwards as a number of new promoters set up enterprises in various regions of the colony. This could not be described as a gradual move to introduce a new product to the market; it was a rush of people and capital.

Between 1891 and 1896, many industries in the colony increased in capital and number of establishments.⁴³ However, of all the industries recorded in the 1896 census, capital accumulated fastest in the cycle industry. While the £17,542 added to the capital invested in cycle factories was small by comparison to the over £200,000 added to the meat freezing and preserving industry during the same period, the industry entrance costs in cycle manufacture were far lower. Hence, an additional £17,542 was theoretically enough to establish an additional 16 cycle-works and employ another 64 people.

The expansion in this industry almost mirrored these average figures. By 1896, the total number of establishments had risen by 12, and staff numbers had increased by 94. Some of these new entrants included Cooke, Howlison and Co., who opened their Dunedin premises in 1895. They were quick to secure first mover advantage and within six years had expanded their buildings to cover three blocks, producing the 'Record' and 'Jubilee' bicycle.⁴⁴ Another Otago promoter, Robert Murie, established his Invercargill cycle manufacturing business in Invercargill in 1893, producing the 'Phoenix' brand cycle.⁴⁵ Again, being the first to a region allowed the promoter to expand a single premise in scale or expand by opening further branches. Murie adopted the latter approach and soon had seven branches throughout Otago and Southland.

Similar was Auckland businessman and colonial cycling champion, E. Reynolds, who commenced his cycle manufacturing business in Auckland in 1895. Within a few

⁴³ Other industries where capital accumulated rapidly included hydraulic gold mining a 228 percent increase over this period, saddle manufacturers (195 percent) and sausage skin factories (175 percent). Cheese and butter factories increased in capital investment by 133 percent as did colonial wine making (132 percent), and sauce and pickle factories 134 percent.

⁴⁴ They in turn would spawn two further cycle entrepreneurs: Benjamin Stokes and William Errington started their own cycle works in 1903, having previously worked at Howlison and Co., and likewise, Alfred Ferguson, launched the Moa Cycle Works in 1902, also having trained at Howlison and Co. See *Cyclopedia of New Zealand*, vol. 4, Otago and Southland, pp.329-330.

⁴⁵ See *Cyclopedia of New Zealand*, vol. 4, Otago and Southland, p.846.

years Reynolds had branches in Wellington, New Plymouth, and Palmerston North. However, the largest firm in the colony was based in Christchurch, Oates, Lowry and Co.⁴⁶ Commencing in 1880, Nicholas Oates and Alexander Lowery operated the Zealandia Cycle Works, producing branded bicycles of the same name. By the late 1800s, they had established branches in Napier and Ashburton along with a two-storey Christchurch factory. With 40 staff their firm was over three times the 1896 industrial average of 12 employees per establishment.

The pattern of industrial development in the cycle industry paralleled that of the meat processing and gold industries discussed in previous chapters. Cycle manufacturers, bringing a new product into the market, were able to seize a first-mover position and expand their enterprises as the market for their product, and the overall market size increased in terms of the general population. The marked difference, however, between gold extraction or meat processing and the cycle manufacturing industry was that the latter offered entrepreneurs with only a few hundred pounds to invest, an opportunity to commence a new enterprise.

PARTNERSHIP

As mentioned in this chapter already, partnership appeared a common method by which colonial entrepreneurs combined skills and capital to commence a business. These examples included family partnerships, such as the Logan brothers in shipbuilding, the Walsh brothers in aviation, and the Coulls brothers in printing. In addition, some partners met while working in the same industry, combining complementary skills. Examples include drapers John Kirkcaldie and Robert Stains, who commenced their Wellington drapery firm shortly after arrival in the colony in 1863.⁴⁷ Similarly, harbour pilot James Bradney and engineer Ernest Binns joined forces in 1884 to start the mosquito-fleet shipping company Bradney and Binns. Likewise, Dunedin printer John McIndoe went into business with fellow printer, David Cherrie, in 1893. Some entrepreneurs, like bookseller and printer John Blair, went into business with an established partner who had amassed an amount of capital and plant. In Blair's case, it was a Wellington bookseller, William Lyon.

⁴⁶ See *Cyclopedia of New Zealand*, vol. 3, Canterbury, pp.314-315.

⁴⁷ Millen, Julia, *Kirkcaldie and Stains: a Wellington Story*, Wellington: Bridget Williams Books, 2000.

The previous section has considered what kinds of industrial activities were open to individual entrepreneurs with limited capital to commence their own business. The question can also be considered from the perspective of partnership; namely: What kinds of industrial activities were open to partnerships, when the start-up capital might still only be minimal, but greater than that available to the individual entrepreneur?

If we assume that two or three partners was a typical size then we might consider all classes of industry £750 or less. From the 1881 *Census*, this would open the following activities within the reach of a group of entrepreneurial partners: Agricultural implement manufacture (£707); Coffee spice and chicory manufacture (£628); Biscuit factories (£554); Rope and twine manufacture (£460); Block and pump manufacture (£433); Boot production (£428); Fellmongering tanning and wool scouring (£403); Aerated water and cordial manufacture (£389); Clothing manufacture (£310); Bone cutting (£306); and Sauce and pickle manufacture (£300). Combined, these two groups of activities where the average cost of plant and machinery per establishment was either under £750 or under £250, represented 51 percent of all the industrial establishments shown by the census.⁴⁸ By 1911, there was no apparent change to this trend. Forty-six percent of the 4875 enterprises for which capital values were given in the 1911 *Census* required an investment in plant and machinery of £750 or less per establishment.

The manufacturing of boots and shoes was one example of a colonial industry where entrepreneurial partners established enterprises on limited capital. By the 1880s, Canterbury was the centre for the boot and shoe industry in the colony and the largest firm appears to have been Alfred Tyree and Co. The firm was originally established as a partnership in 1873, it was purchased outright by one of the partners, Alfred Tyree, in 1896. Tyree employed over 300 hundred staff across several factories. His importing warehouse carried shoes from 120 different manufacturers.

However, Tyree did not have a monopoly position in the market.⁴⁹ The Maine brothers, William and James, started a boot and shoe factory in Christchurch in 1891, and by 1900, employed over 100 staff producing 8000 pairs a month. Irishman Michael O'Brien, whose brand name was to last a century, commenced production in 1884, and within 15 years he was employing over 150 staff producing 2000 pairs a week. Brothers Nathaniel, Joseph, and John Suckling, possibly ran the oldest boot and shoe factory in

⁴⁸ This excludes the 149 establishments for which no capital figures were given.

⁴⁹ *Cyclopedia of New Zealand*, vol.3, Canterbury.

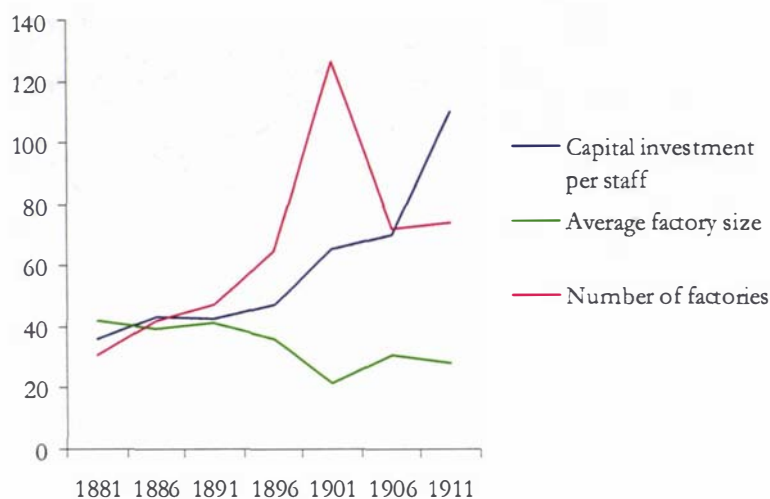
Canterbury (commenced in 1871) and were of a similar size to O'Briens. Another partnership, Skelton, Frostick and Co, were on the way to rivalling Alfred Tyree in size with a staff of 280.⁵⁰

In the North Island of New Zealand, there were two firms in Wellington producing over 8000 pairs of boots and shoes a month. Robert Hannah and Co., employed over 250 in his factory, with 50 additional staff in his 11 branches. W. and J. Staples and Co., managed by William Staples and William Brunskill, had 150 staff with a turnover of approximately £23,000 per annum. None of these firms had started out as large-scale enterprises, yet their cumulative economic effect both in employment and production was considerable. By 1890, the 47 boot and shoe factories in the colony employed nearly 2,000 staff, with an annual production of 832,554 boots and shoes—the sizeable output indicative of the pedestrian society. By 1895, the number of factories had risen to 65 and output to one million pairs.⁵¹ Fifteen years later, this had increased to 74 factories (the greatest concentration of factories was in Auckland), and production had increased to over 1.5 million pairs of boots, shoes, slippers, shoe-ettes and uppers. However, as the graph below demonstrates, by 1911 the industry was beginning to feel the effects of consolidation and mechanisation. The number of firms in the industry decreased, but production remained buoyant—the result of more capital-intensive industry.

⁵⁰ *ibid.*

⁵¹ *Statistics of New Zealand*

FIGURE 26
NEW ZEALAND BOOT AND SHOE FACTORIES: 1881-1911



Source: *Census* 1881-1911

INDUSTRIAL ADVANCE

This chapter has suggested that small enterprises constituted a significant proportion of colonial organisations. In the hands of progressive entrepreneurs, many small firms did not remain small, but advanced in capacity. While it is difficult to make definitive comments about the contribution of the entrepreneurial class to the economy, there are some things that can be deduced from the analysis of capital undertaken in this chapter. For instance, it is clear that by 1910, the number and classes of industries in the colony had advanced considerably in number and scope. In other words, new firms added to the mix of enterprise that existed in the 1880s.

In addition, the expansion in industrial enterprises over this period had a marked effect on job creation. For example, of the 91 different classes of industries recorded in the 1891 census, the six industries where capital increased more than 100 percent over five years—graving docks and patent slip works, flax mills, cycle factories, spouting and ridging factories, cheese and butter factories—contributed 3269 new jobs to the economy. These 3269 jobs represented 77 percent of the total increase in industrial jobs

over this period.⁵² In other words, six industries that between them only represented 2 percent of the total industrial capital in 1886, five years later, accounted for seven out of every ten new jobs in industry. New jobs did not come from general increases in industrial activity. Small pockets of innovation, where high growth industries were attracting capital, contributed the majority of the increase in total jobs.

ISOLATION AND POPULATION

One of the benefits to early entrepreneurs in the colonial environment was the isolation of population groups. Thames, for example, was a short distance from Auckland by sea, but overland, a far more hazardous and onerous trek. Given the limited colonial infrastructure and high costs of transportation, it made economic and practical sense for merchants, and manufacturers to establish operations within these population groups; especially, with perishable items or bulky goods, such as bricks or coal. As a result, by the 1880s, it was commonplace for communities in New Zealand to have their own brickworks, saw mills, printers, newspapers, boot makers, joinery factories, and coach builders; replication of industry was a dominant characteristic of the colonial economy. Steve Jones and D.R. Paul demonstrated this replication in the New Zealand brewing industry in the late nineteenth century.⁵³ Due to geographic and transportation barriers, a numerous local breweries developed to serve local markets. Their temporary monopoly status within these communities was not reduced until the early twentieth century. Geographic barriers lessened with advances in communication and merger waves created more national firms.

In the colonial economy, the same argument that Jones and Paul put forward for the brewing industry also applies in industries, such as brick making, coach building, baking, aerated water production, flour milling, joinery manufacture, printing, newspaper production, boot and shoe manufacture, to name some.⁵⁴ Isolated communities with

⁵² Total employment in factories increased from 25,655 in 1886 to 29,880 in 1891, an increase of 4225 jobs. Those industries where capital accumulated faster than population growth produced 5241 jobs.

⁵³ Jones, S.R.H. and D.R. Paul, 'Concentration and Regulation in the New Zealand Brewing Industry, 1850-1970,' *Australian Economic History Review*, 31:2 (1991), pp.66-93.

⁵⁴ Robson suggests that there were aerated water manufacturers every 20 miles in Canterbury. See Robson, Peter, *The Aerated Water and Soft Drink Industry in New Zealand, 1845-1986*, Auckland: New Zealand Soft Drink Manufacturers Association, 1995.

growing populations offered a spectrum of commercial activities; their isolation providing a natural barrier to market entry by outside competitors.⁵⁵

The town of Wanganui presents an example. By 1893, the population of Wanganui had reached 5100, and it was gaining attention as a resort town.⁵⁶ A brief survey of Wanganui's commercial district reveals a picture that was repeated in other New Zealand towns, such as New Plymouth, Hastings, Napier, Thames, Palmerston North, and Timaru as isolation proved both a barrier to competition and a stimulus to the local economy. Wanganui had a complement of both local and international firms covering a wide range of mercantile and industrial activities. International firms present in Wanganui included the Singer Sewing Machine Company, the Mutual Life Association of Australasia, the Phoenix Fire Insurance Company of London, and the South British Fire and Marine Insurance Company.

Wanganui also had its share of specialist industries that were producing solely for the local community. By 1893, it had its own cordial manufacturer, Edwin Hodren, and its own brick and tile manufacturer, the Wanganui Steam Brick and Tile Company, producing over 500,000 bricks per annum. Wanganui had its own soap maker, Thomas Dickson, along with sailmakers, importers and eight coachbuilders. The town had three manufacturing breweries, John Bennie's Crown Brewery in Hill Street, the better-known, Ridgway Brewery that had started in 1861 and was owned by Thomas Gibbs, and the Wanganui Brewery, established in 1878 by T.B. Williams.⁵⁷ It had seven drapery firms, five bakeries, 18 carters, 20 storekeepers and merchants, 14 butchers, five watchmakers, and approximately 15 bootmakers. The town also had seven tailors. Off the rack clothing would be a twentieth century innovation so made to measure suits, dresses, hats,

⁵⁵ Lionel Frost accentuates the importance of the town in the Australian colonial economy. Frost noted: 'As towns prospered and grew larger there was an incentive for their inhabitants to engage in innovation and technological change to improve business practices and facilities for trade. The increasing division of labour brought about structural change in the economy, which shifted resources from low-to high-productive areas.' See Frost, Lionel, 'The Contribution of the Urban Sector to Australian Economic Development before 1914', *Australian Economic History Review*, 38:1 (1998), p.69.

⁵⁶ Much of this was due to the efforts of one local projector in particular, Alexander Hatrick. Hatrick's business interests included a warehouse and bond store, flour store, coal yards and two branch stores of his general merchant business. Hatrick billed his service as 'The Wanganui Up-River Steam Packet and Tourist Steamer Line' operating the stern wheel steamer *Manuwai*, *Wairere*, and *Ohura* ferrying tourists and local customers on 'New Zealand's Rhine, having signed a contract with Thomas Cook and Son the previous year to ferry tourists on his steamer service from Wanganui to Pipiriki. Advertisements for this service appear in *Willis's Guide Book of New Route for Tourists Auckland - Wellington via the Hot Springs, Taupo, Volcanoes and the Wanganui River* by G.F. Allen, 1894.

⁵⁷ In 1895, young entrepreneurs Hope Gibbons and Harry Hole purchased the Wanganui Brewery.

boots, and shoes in the nineteenth century were a sizeable business activity.⁵⁸ The town supported two newspapers, two printing firms and a joinery firm, the Wanganui Sash and Door Factory in Ridgway Street.

Wanganui was also serviced by a range of New Zealand firms and institutions that had nationwide branch networks by the 1890s. This included Bendix Hallenstein's two companies, the New Zealand Clothing Company and the Drapery Importing Company (D.I.C.). In addition, Wellington merchant firm W. G. Turnbull and Co., had branches in Wanganui, as did prosperous boot and shoe maker, R. Hannah and Co. Four of the country's banks, the Colonial Bank of New Zealand, the Bank of New Zealand, the National Bank Zealand, and the Bank of New South Wales, had branches in Wanganui.

The sawmilling and sash and joinery industry provided further evidence of the replication of industry in the nineteenth century. Local towns and urban areas required timber for the construction of infrastructure, residential house building, and commercial structures. Because it was impractical to transport logs over long distances the logical development was for sawmills, like brick works, to be located close to population centres. This isolation produced an 'artificial' window in time where the economy might support a larger number of enterprises than would have been possible in a colony with greater infrastructure and fewer transport barriers.

Curiously, the building industry does not figure highly in some accounts of New Zealand's economic development. However, if wool was considered the export staple, then timber and the construction industry was the probably the equally powerful twin in the domestic economy.⁵⁹ Only a fraction of timber production was exported.⁶⁰ Out of a total production of 143 million feet of sawn timber in 1880, only 7.6 million feet was exported.⁶¹ The balance was consumed in the local economy. Census statistics under reported the value of the timber industry. These showed that the total value of timber

⁵⁸ Data sourced from Wanganui Street directory in *Stone's Wellington, Hawke's Bay and Taranaki Directory: 1894-5*, Stone Son and Co., Dunedin, 1894.

⁵⁹ See Stone, Russell, *Makers of Fortune*. Also Simpson, Thomas, *Kauri to Radiata: Origin and Expansion of the Timber Industry of New Zealand*, Auckland: Hodder and Stoughton, 1973.

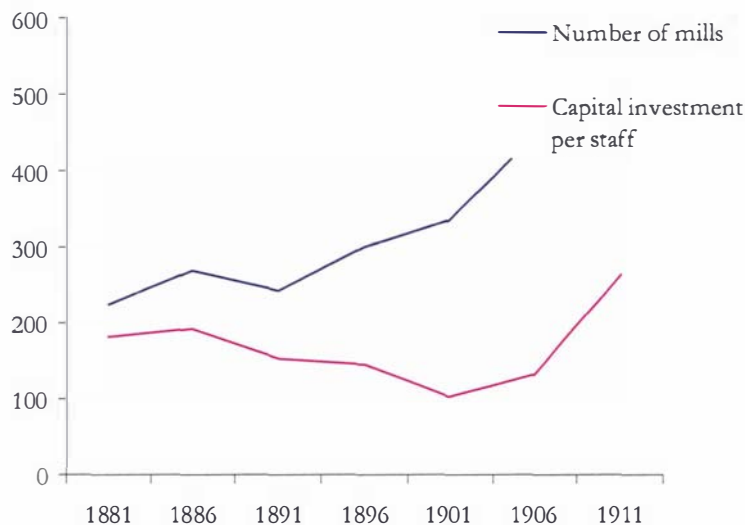
⁶⁰ A focus on trading figures as the main source of explanation for the nineteenth century New Zealand economy has tended to overlook significant industries in the colony in the nineteenth century that do not show up in trade statistics as they were neither importers or exporters such as the timber industry, the printing industry, gasworks, coal mining, brewing, woollen mills and iron and brass foundries. Indeed, some of these industries were more highly capitalised than the leading export industries and attracted equally large numbers of ambitious entrepreneurs.

⁶¹ *Statistics of New Zealand*

production of 143 million feet for the 1880 year was £68,550. However, only 7.6 million feet exported showed a value of £51,000. Factory and industry statistics reported wholesale prices of goods, whereas export prices, were estimated by the supplier at market value. When the value of sawn timber output for the year is recalculated at export prices, the value of domestic production increased from £68,000 to approx £959,000; a figure that was one third of the value of the wool export.

By 1880, sawmilling attracted the largest amount of capital of any industry in the colony (£773,628); this was 57 percent higher than the closest next industrial group, gasworks. All regions in New Zealand required timber for residential construction, railway construction, bridge building, or industrial use. Either cost or isolation meant that it was impractical, if not uneconomic, to move timber around the country for further processing once it was felled. The logical development was for sawmills to be located near both tracts of timber and centres of population. By 1880, the colony had 223 sawmills and sash-door factories, employing 4238 people. But these mills did not cover the country uniformly and the saw milling industry, like other industries, was concentrated in specific regions.

FIGURE 27
SAW MILLING AND SASH DOOR FACTORIES: 1881-1911



Source: *Census* 1881-1911

By 1878, Auckland had 29 sawmills and sash and door manufacturers, Wellington, 34; Canterbury, 35; and Otago, 56. Saw milling appeared to suffer a

downturn between 1878 and 1881 similar to other sectors of the economy; there were mill closures as a result of lower prices and decreasing investment. However, any downturn in the timber trade was not equally distributed over the provinces. Within three years, Otago and Canterbury had 16 mill closures. In Auckland, the emerging centre of colonial timber trade, 14 new mills commenced operations—nine more mills started in Wellington.

The industrial concentration of saw milling in the Auckland area was even more pronounced by 1890. The province of Otago still had the most mills in the colony (51) though the output from these mills was only a third that of Auckland's 47 mills. By 1890, the average investment in sawmills nationwide was £2058 with an average staff of 13. Yet in Auckland, larger mills and a stronger timber trade meant average staff numbers per mill were 21, while Wellington and Canterbury mills averaged 12 staff, and Otago mills averaged 13. This pattern reflected in capital investment as well. Auckland's average investment in a timber mill was £3802, compared to the rest of the country at £1640 per mill.

Between 1891 and 1896, capital accumulated in sawmills at a rate of 17 percent, with enterprise in saw milling most apparent in Wellington and Westland. In Wellington, sixteen additional entrepreneurs entered the market and opened mills. In Westland, there was almost a 100 percent increase in promoters entering this industry and the number of mills increased from 13 to 25. Overall, the total number of entrepreneurs in the industry rose 23 percent, taking the number of mills from 243 to 299, and lifting the number of jobs by a similar percentage (24 percent); creating an additional 793 positions.⁶² By 1900, a further 35 firms commenced taking the total of sawmills and sash and door factories to 334—employment rose by 2753 (67 percent), capital invested in the industry increased £117,198.

In the early twentieth century, as milling in Northland and Wellington forests intensified, further promoters and projectors entered the industry. Capital moved northwards. Between 1905 and 1910, three mills opened in Otago, while 35 new mills opened in Canterbury, 35 in Auckland, and 25 in Wellington. By 1910, there were 200

⁶² Indeed, what was striking from these figures was that given the average mill size of 14 people, this increase in jobs was within 9 people of what any estimate might have suggested the effect of increased entrepreneurial activity would have produced (that is, 14 people multiplied by 56 additional mills equals 784 people). Taking the average capital per mill of £1961, capital in the industry should have increased to £610,088. It was only three percent less than this at £586,422.

additional saw mills and sash and door factories in operation than had been ten years earlier. Considering the whole industry, 199 firms were owned by individuals, 211 by firm or limited partnership, and 123 were owned by either public or private registered company.⁶³ Between 1900 and 1910, capital invested in saw mills more than doubled to £1,806,628, along with the total value of manufactured output.

In saw milling, as in other industries, much of the expansion came from firms that were not capital-rich to begin with. These firms were the result of the foresight and timing of one or two enthusiastic promoters, who through their experience, commercial savvy, and at times sheer perseverance, reinvested their profits and developed a larger firm. This included: carpenter Henry Brown, who commenced saw milling in 1863; Robert Holt who commenced milling around 1869; and Francis Carter, who with his partners Lee and Wright, began saw milling in 1895.

CONCLUSION

This chapter has argued that even without significant capital resources, entrepreneurs in the colonial economy were able to start firms and develop them across a wide range of commercial activities. For example, between 1880 and 1910, the number of classes of industrial activity undertaken in the colony doubled; the number of industrial enterprises tripled, along with fixed capital invested in these activities and industrial employment. To meet these challenges of economic expansion, entrepreneurs took advantage of a variety of capital sources including bank and investment company finance, share issues in joint-stock companies, syndicates, and credit-funding, as well as their own savings or the financial contributions of several partners.

That an entrepreneur started a firm on limited capital did not mean that he would remain with a small enterprise. Isolated towns and markets provided natural barriers to entry against competitors, all the time requiring range of commercial services. Consequently, such communities offered significant scope for entrepreneurs to expand their activities. Entrepreneurs were able to capitalise on their industry knowledge and technical skill, trading up through reinvesting profits.

An analysis of census statistics has shown that during this period approximately 50 percent of all classes of enterprise were within the reach of either a single entrepreneur or two or three partners willing to commence a new firm. Capital entry

⁶³ There was also one cooperative.

costs in many industries, such as biscuit factories, aerated water manufacture, clothing factories, boot and shoe manufacture, and brick works were under £1000; in addition, further industrial activities could be commenced on £250 or less, providing numerous starting points for colonial entrepreneurs.

Branch expansion and increases in scale came about as markets expanded and the entrepreneur's management and organisational ability strengthened. In this economy, joint-stock companies were used for larger more capital-intensive activities, but for many undertakings, the dominant organisational structure was the small-scale, British-type family firm, partnership, or sole proprietorship. This form of organisation, with its emphasis on personal capitalism and loose managerial structures, was well suited to the particular demands and characteristics of the colonial business environment. Rather than prove a hindrance to economic advancement, it proved to be an asset.

Finally, this chapter has suggested that paralleling the development of export markets the internal economy underwent considerable expansion. Important industries, such as coal production, brick manufacture, and saw milling developed on a scale equivalent to the dominant export industries. Consumer products, such as aerated water manufacture, printing and cycle manufacture, as well as the building industry, all exhibited sustained expansion during the period of this thesis—output, capital investment, employment and the number of enterprises in each market increased. New entrants to these markets were often small-scale entrepreneurs who used capital economising techniques to enter the market, then, through reinvesting profits, expanded their firm.

The next chapter seeks to bring some of the themes developed in the previous three chapters together as it considers the similarities between colonial entrepreneurs in the case group, and how these entrepreneurs exemplified the entrepreneurial class in the colonial economy. A model describing the lifecycle of the colonial entrepreneur is presented, indicating common periods in the life of the colonial entrepreneur as well as common difficulties incurred undertaking entrepreneurial activity.



8

RISK, PERSISTENCE AND FOCUS: A
LIFECYCLE OF THE COLONIAL
ENTREPRENEUR

This chapter examines the similarities that existed between colonial entrepreneurs as they sought to establish and develop business enterprises.¹ In particular, it considers the research of Larry Greiner, whose landmark work on the five periods of organisation development offered an explanation for the tensions evident as organisations expanded over time. This chapter adopts a similar perspective, but uses as its research base the activities of 133 colonial entrepreneurs as opposed to the Fortune 500 companies that were used for Greiner's example.

Just as Greiner could discern a 'lifecycle' of organisation development through looking at historical changes in large-scale American organisations, a model can be constructed to describe the business activities of colonial entrepreneurs. However, such a model differs from that proposed by Greiner on several key points. A contemporary model describing phenomena in a modern industrial power has limited application to an emerging colonial economy in a previous century. However, the periodization of a firm's history or an individual's history has some merit, and this technique can be applied to the colonial business environment; in particular, to analysing the life and economic behaviour of the colonial entrepreneur. In addition, whereas Greiner's model examined

¹ As much as colonial entrepreneurs in the late nineteenth century seemed to come from the migrant classes, and commenced ventures on limited capital, other characteristics also emerged.

the development periods of a *single* organisation, it was evident from this research that colonial entrepreneurs participated in *multiple* organisations over their lifetime.

This chapter is divided into two parts. Part One offers a background discussion of Greiner's article and similar studies. Part Two proposes a model describing the lifecycle of a colonial entrepreneur; each stage in the five-part lifecycle is examined and some conclusions are offered.

BACKGROUND

Researchers are just beginning to study the specific developmental problems of structure, control, rewards, and management style in different industries and in a variety of cultures. One should not, however, wait for conclusive evidence before educating managers to think and act from a developmental perspective. The critical dimension of time has been missing for too long from our management theories and practices. The intriguing paradox is that by learning more about history we may do a better job in the future.²

Greiner's article, 'Evolution and revolution as organizations grow', first appeared in the *Harvard Business Review*, in 1972.³ Greiner argued that as organisations grew in size they underwent five stages of development. Each stage, or period, was characterised by particular challenges for the organisation and its markets, but most particularly, its management. The first stage Greiner termed 'Creativity.' During this stage the organisation was under the control of the founder, making and selling a new product, giving little attention to management issues. Period 2, Greiner termed 'Direction.' This period was characterised by professional management and the use of management control procedures after the exit of the founder. During Period 3, termed 'Delegation,' the organisation focused on the decentralisation of managerial control and responsibilities as it expanded into new markets and geographical areas. Period 4, Greiner termed 'Coordination.' He believed that as the organisation expanded into wider markets a further round of control procedures was instituted by head office management in an effort to assemble decentralised units into rational product groups and manage

² Greiner, Larry E., 'Evolution and Revolution as Organizations Grow', *Harvard Business Review*, 50:4 (1972), pp.37-47.

³ It has since been reprinted as a HBR classic in 1998. Greiner's added in an afterword that he considered that the four points of the model still held true in economic life. Though he believed there was greater failure amongst present day organisations and there was greater overlap between the periods as he originally depicted them.

these as investment centres. The final Period, 'Collaboration,' was characterised by the instillation of cross-functional teams and a more behavioural approach to solving managerial problems.

One contribution of Greiner's research was the identification of crisis points in the life of an organisation. These occurred, asserted Greiner, at the end of evolutionary periods in the life of an organisation. In short, an organisation maintained a stable pattern of management over a lengthy period. However, as an organisation increased in employee numbers, sales volume, and branch locations the problems of coordination and control multiplied and a period of turbulence ensued. These crisis periods Greiner termed 'revolutions.' During these revolutions the previous management practices were found to be unsuitable and new practices had to be implemented for an organisation to continue to expand, even survive. Thus, for example, at the end of the Period 1 a leadership crisis occurred where the founder was unable to manage the increased size and complexity of his organisation. The solution, observed Greiner, was the employment of a professional business manager or CEO with the requisite skills to manage this larger entity.

While Greiner's lifecycle model describes part of the process of industrial advance in a capitalist society, clearly there are elements that it does not do justice to. The entrepreneur is one of those, and arguably, so too is the family firm. Both of these economic actors played a vital part in the development of British and colonial capitalism.

THE FAMILY FIRM AND THE ENTREPRENEUR

Only a few business and economic historians have alluded to a lifecycle for an entrepreneur. Mark Casson, for example, briefly outlined the lifecycle of an entrepreneur, matching the age of an entrepreneur to their respective responsibilities in the firm. Casson suggested that entrepreneurs in their twenties would acquire knowledge of their industry before undertaking more innovative roles in their thirties. In their sixties, they assumed more figurehead or symbolic roles. Casson noted that only in some circumstances did the responsibilities of the entrepreneur develop along with the development of their own firm. He argued that it was more common for the

entrepreneur, especially the high-level entrepreneur, to gain their experience as an employee in a large firm to begin with.⁴

Alastair Owens examined what he termed the 'life-cycle' of family firms among Stockport cotton manufacturers, tailors, drapers, publicans, and brewers in the early industrial revolution.⁵ Owens centred his research on the strategies adopted by these entrepreneurs toward inheritance. These strategies ensured that the firm, or at least the assets of the firm, were passed on to another generation. As Owens identified many family firms were sold off or wound up on the death of the founder. Despite this, Owens argued that the small entrepreneurial family firm was still an effective economic entity, because inheritance strategies employed by Stockport entrepreneurs meant that the liquidation of one entrepreneur's assets provided the means for forming new firms.

Family partnerships dominated the commercial landscape of Britain in the eighteenth and nineteenth century and proved a useful organisational structure in escalating the development of the industrial revolution.⁶ Mary Rose noted:

Familial enterprise, therefore, by ensuring a degree of trust within firms, represented a business strategy designed to combat external uncertainty. Equally, reliance upon a business network which, whilst external to the firm, was internal to the family reduced transaction costs without the need for any formal integration of activity.⁷

There were other benefits too from this organic and loosely-held organisational structure. The family firm brought in alternative sources of capital outside the banking sector. In addition, other family members or relatives might contribute equity funding. Closely-held funding meant that decision-making ability remained in the hands of the founder or the founding family, instead of the lending institutions.

Family-networks allowed for speedy decision-making due to loose managerial structures. Nor was the family firm necessarily a barrier to innovation. One example this was the British toy-manufacturer, William Britain. Historian Kenneth Brown observed: 'On the whole, therefore, it is clear that that the Britain brothers between them displayed some very positive entrepreneurial virtues in the late Victorian and Edwardian

⁴ See Casson, Mark, 'Entrepreneurship and Business Culture' in *Entrepreneurship, Networks and Modern Business*, Brown, Jonathan, and Mary Rose (eds.), Manchester: Manchester University Press, 1993, pp.50-51.

⁵ See Owens, Alastair, 'Inheritance and the Life-Cycle of Family Firms in the Early Industrial Revolution', *Business History*, 44:1 (2002), pp.21-46.

⁶ See Rose, Mary, 'The Family Firm in British Business, 1780-1914', in *Business Enterprise in Modern Britain: From the Eighteenth to the Twentieth Century*, Kirby, Maurice, and Mary Rose (eds.), 1994, London: Routledge, pp.63-65.

period: new adaptations of technology, market awareness, clever marketing, and willingness to experiment.⁸ The Britain brothers' innovations included the introduction of the hollow core soldier, standardised sizes, the adjustable arm, and innovative marketing techniques. Britain brothers also successfully handled the changeover from one generation to the next. The firm was changed into a limited liability company after the death of the founder, William Britain Senior, in 1907. Britain's five sons and a daughter became directors.

Steve Toms examined the rates of capital accumulation among Lancashire cotton entrepreneurs in the decades preceding the First World War as further evidence of the success of the family firm structure in the late nineteenth century. In these firms there was a propensity to reinvest profits to provide long-term finance and a reluctance to borrow from commercial banks. Informal linkages and cross-directorships were able to reduce transaction costs, and were an aid to integration and adopting new technology. Furthermore, reinvestment by established entrepreneurs in new companies was a stimulant to the development of new enterprises. In this loose collective of firms and promoters, personal capitalism proved an effective means of economic advancement. In conclusion, Toms observed that the Lancashire cotton industry supported large entrepreneurial capitalists, but not managerial capitalism.

... the advocates of big firm restructuring nor the proponents of neoclassical rationality can fully explain all the forces that shaped Lancashire's destiny. An exemplification has been provided of the circumstances where "personal capitalism" based on small, specialised business units can work successfully if necessary conditions are met; most importantly external economies of scale and collective entrepreneurial activity across commodity, product, capital and labour markets.⁹

The debate over the importance of family firms in economic development has heightened in recent years. Researchers have pointed out many of the advantages of the family firm over the large-scale corporate organisation. Contemporary examples of efficient and effective family organisations in the modern context, such as the Japanese *Zaibatsu* or the Italian family firms, has shown there are family firms that can operate on a large scale or in niche markets equally effectively as mass-producer multi-divisional

⁷ *ibid.*, p.67.

⁸ See Brown, Kenneth D., 'Models in History: a Micro-Study of Late Nineteenth-Century British Entrepreneurship', *Economic History Review*, 42:4 (1989), pp.535-536.

enterprises. American business historians have identified the importance of small entrepreneurial businesses and family firms. Harold Livesay, when reviewing American economic advance, noted that much of the focus of research has been on small successful firms that developed into much larger firms.¹⁰ However, Livesay suggested that this was only one aspect of the economic contribution of small firms as not all small firms developed into larger enterprises. Some small firms remained small, but the rate at which small businesses as a whole generated wealth and jobs was a powerful stimulant to the economy.

In addition, and contrary to what Greiner asserted about the changing leadership of expanding firms, Livesay noted that even among small firms that expanded to become larger corporations, there was a propensity to be still managed either by the founder or the descendants of the founder.¹¹ Developing models more representative of this style of economic activity would seem a productive task. As Livesay noted in an earlier article, 'While the passage of time adds many once-individualistic enterprises to the rank of massive corporations run—and often run well—by cadres of anonymous managers . . . new firms continue to appear and grow under the command of a controlling owner. . . . [This] process has been a continuing feature of the American industrial economy. Its vitality suggests that capitalism contains not the seeds of its own destruction, but rather the seeds of its own regeneration . . .'¹²

What this chapter suggests is the convergence of these themes in the colonial economy. Firstly, the colonial entrepreneur was, as Livesay and others have asserted, an important and dynamic economic actor. Some undertook small and innovative firms adding to economic wealth. Others developed their firms into large-scale enterprises where they made significant coordination and control decisions. Secondly, a lifecycle model can be constructed to illustrate the economic behaviour of colonial entrepreneurs

⁹ Toms, Steven, 'Windows of Opportunity in the Textile Industry: The Business Strategies of Lancashire Entrepreneurs, 1880-1914', *Business History*, 40:1 (1998), p.16.

¹⁰ For instance, Livesay remarked: 'Individuals hold the key to enduring success. In all but the tiniest companies, they must function through an organization; therefore, they must know how to build teams, run them, and rebuild them when required. Functioning thus, they play a role often appreciated only in the failure that attends its absence, a role difficult to define tidily, a role that has carried many names, that they these days most often sports one of its older titles - "entrepreneurship"...' See Livesay, Harold, 'Entrepreneurial Dominance in Business Large and Small, Past and Present,' *Business History Review* 63 (1989), p.4.

¹¹ Livesay cited in particular the research of David Birch in this regard. See for example Birch's account of 1700 firms in Birch, David, 'Down but not Out', *INC*, May 1988.

¹² Livesay, Harold, 'Entrepreneurial Persistence through the Bureaucratic Age', *Business History Review* 51 (1977), p.419.

at different periods of their working careers. The second part of this chapter presents such a lifecycle on the basis of evidence from the 133 case analysis entrepreneurs.

THE LIFE-CYCLE OF THE COLONIAL ENTREPRENEUR

Nineteenth-century writers, even in the colony of New Zealand, used at least six different names to describe the entrepreneurial class: undertaker, speculator, adventurer, Projectors, promoter, and capitalist. From the research undertaken in this thesis, it was clear that there were further subtleties within each of these groupings—entrepreneurs came from different backgrounds, commenced enterprises for different reasons, and adopted different strategies to expand their enterprises. Equally plain was that there were not infinite variations in form of the entrepreneur. On some criteria, it was possible to discern a pattern over the course of their life.

The lifecycle model presented here suggests that there were five periods in the careers of colonial entrepreneurs: these periods were preparation, embarkation, exploration, expansion, and transformation. Like Greiner's model, it is suggested a separation occurred between these periods marking the end of one period and the start of another. Greiner used the word *crisis* to indicate this period of revolutionary change; however, this term seemed overly dramatic to describe the nature of what occurred in the life of colonial entrepreneurs. The descriptor used instead was *transition point*. A transition point characterised by opportunity occurred at the end of period one, when the entrepreneur initiated their first venture. A further transition point appeared at the end of the embarkation period, when the entrepreneur concluded their first venture and commenced another. The nature of this transition point was often the cessation of a business venture. The choice of the word 'cessation' as opposed to 'failure' was deliberate. For this chapter will show that rather than being characterised by high failure rates, colonial ventures were characterised by high cessation rates, with business failure only one reason for ceasing trade.

During Period 3 (Exploration) the entrepreneur undertook multiple ventures before commencing that venture that would be the most successful of their career. Typically, exploration like this occurred while the entrepreneur was in their thirties. During this time the entrepreneur experimented with different business ventures until they fastened on the activity to which they devoted their energies and talents for a considerable period of time. This search for the optimal venture, while it may not have

been overtly purposeful at the time by the entrepreneur, is evident from looking back at the career moves of the entrepreneur.

A further transition point preceded the expansion of the entrepreneur's firm as the entrepreneur was faced with managerial problems of coordination, control, formalisation, and structure. Once these obstacles had been addressed, the firm then continued its evolution until reaching a transition point characterised by decisions surrounding governance. In this period the colonial entrepreneur passed the business on to their sons. As a result, the transformation period was characterised by more intense attention to management of the enterprise, and often it resulted in the firm being restructured into a limited liability company with shares allotted among the various partners or family members. This model does not describe the lifecycle of all colonial entrepreneurs. Some had much faster developmental cycles; some encountered business failure and did not progress past period 2 or period 3. Yet the model seems descriptive of general patterns evident among numerous entrepreneurs and may assist our understanding of entrepreneurial economic behaviour.

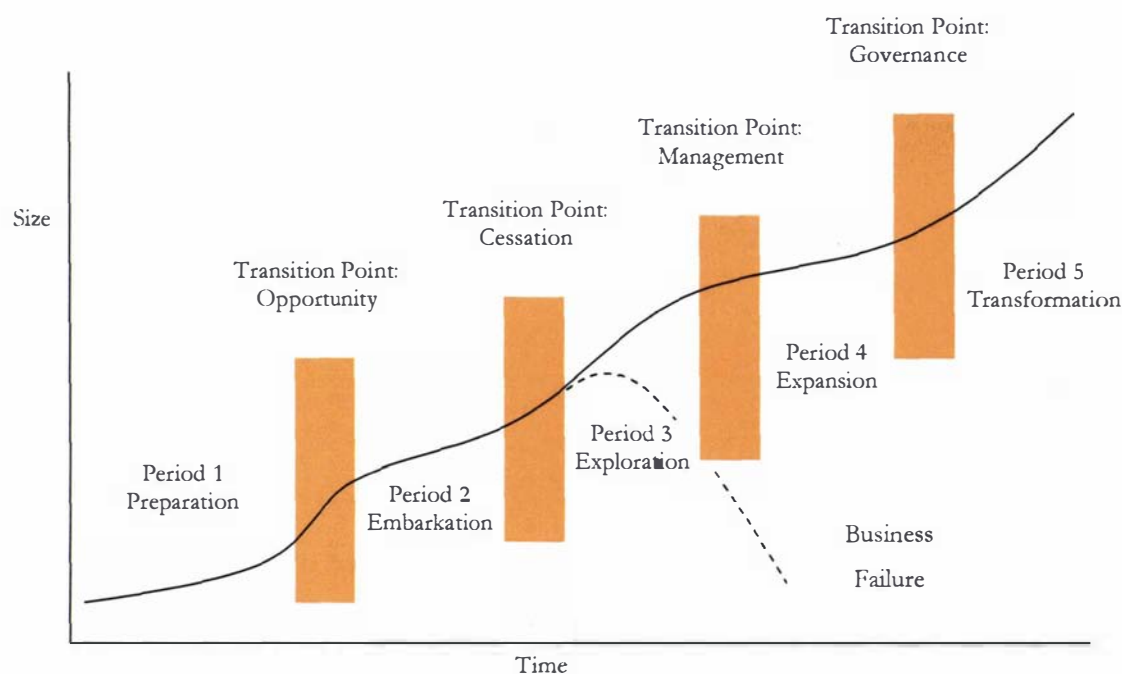
In the model provided below, the horizontal axis represents time and is the duration of the entrepreneur's life. Actual years have not been allotted to the various periods. While Period 2 typically commenced when the entrepreneur was in their mid-twenties, this was not the case with all entrepreneurs. Some did not begin Period 2 until their forties or fifties. Similarly, the spacing between the transition points is indicative only. Some entrepreneurs, for example Robert Laidlaw or Bendix Hallenstein, addressed the management transition point early on in their entrepreneurial careers; enabling them to expand their enterprises much faster than if they had not done so.

The vertical axis is troublesome to label. It is tempting to call it size; that is the label given in the diagram. However, that term is only of limited applicability. The vertical axis, for example, could equally signify wealth, capability, or judgemental decision-making ability—all of which we might expect to increase during the developmental periods of the entrepreneurs life.

In a similar vein, the single solid line of the diagram moving in a curvi-linear upward direction is meant to signify that the entrepreneur's progression in life—the accumulation of wealth or economic power. It is generally upward, although it does not move in a uniform fashion indicating periods of turbulence as shown by the transition points. Similarly, the single line represents the life of the entrepreneur and not their firm. For as Period 3 makes plain, the majority of colonial entrepreneurs had multiple

enterprises and if these were to be added to the diagram it might show more than a dozen lines. Finally, during the cessation transition point at the end of Period 2, a downward dotted line represents cases of the complete economic failure of the entrepreneur. This is indicative only. Such events did happen, on occasion, and might occur at any time during the life of the entrepreneur, not just at the end of Period 2. The periods are now discussed in more detail.

FIGURE 28
LIFECYCLE OF THE ENTREPRENEUR



PERIOD 1: PREPARATION

The early years of an entrepreneur's life acted as a preparation stage for their eventual business activities. The key characteristics of this stage included early work experience, acquisition of technical skill, the accumulation of capital, the formation of initial networks, the accumulation of trade and industry knowledge, and the identification of a business opportunity. These are now discussed in more detail.

The social and economic background of entrepreneurs varied, though as this research has already noted, there were some distinct similarities. It was more common, for example, for entrepreneurs to come from families where the father was already a business owner, rather than families where the father was in the professions or in an executive position. In this respect, these potential entrepreneurs were advantaged by

having had exposure to the nuances of business life and the tensions and challenges of self-employment from a young age. British economist, Alfred Marshall, discussed something of this phenomenon in his work, *Principles of Economics*, where Marshall pointed out the advantages enjoyed by the sons of businessmen.

It is obvious that the son of a man already established in business starts with very great advantages over others. He has from his youth up special facilities for obtaining the knowledge and developing the faculties that are required in the management of his father's business: he learns quietly and almost unconsciously about men and manners in his father's trade and in those from which that trade buys and to which it sells; he gets to know the relative importance and the real significance of the various problems and anxieties which occupy his father's mind: and he acquires a technical knowledge of the processes and the machinery of his trade; but the greater part will be serviceable in any trade that is in any way allied with that; while those general faculties of judgement and resource, of enterprise and caution, of firmness and courtesy, which are trained by association with those who control the larger issues of any one trade, will go a long way towards fitting him for managing almost any other trade. Further, the sons of successful business men start with more material capital than almost anyone else except those who by nature and education are likely to be disinclined for business and unfitted for it: and if they continue their fathers' work, they have also the vantage ground of established trade connections.¹³

Also, significant among colonial entrepreneurs was a lack of specialisation in education—something Mark Casson noted could heighten the supply of entrepreneurs in an economy.¹⁴ The common pattern among the colonial entrepreneurs was that at the age of 15, after only a limited high school education, the entrepreneur went into paid employment. These early working years were an important time in the life of the entrepreneur and influenced their later business and entrepreneurial decisions. Fifty-six percent of the case group had their most successful business venture in the same industrial field as their first job, regardless of how many diverse occupations they had held following their first job.

For some, as immigrants to a new country, the preparation stage was dramatic. Some arrived as part of family groups; others travelled independently and had to establish themselves without the benefit of a support network. Curiously, numerous

¹³ Marshall, *Principles*, pp.298-299.

¹⁴ Casson highlighted this as one factor important to the supply of entrepreneurs in an economy. See Casson, Mark, 'Entrepreneurship and the Business Culture,' in Brown and Rose (eds.), *Entrepreneurship, Networks and Modern Business*, Manchester: Manchester University Press, 1993, pp.30-54

immigrant entrepreneurs would find that the family and support they left behind would one day prove an asset in establishing a firm in the new colony, giving them valuable access to home markets.

The length of the preparation stage varied, though on average it lasted from the entrepreneurs' mid-teens until their mid-twenties. On average, colonial entrepreneurs were 27 when they started their first venture having had the benefit of 12 years commercial experience. Early trade networks formed during the preparation stage were vital. Business associations and relationships during these preparation years formed the basis of many entrepreneurial partnerships. Drapers John Kirkcaldie and Robert Stains, for example, met while working in the same industry, as did harbour pilot James Bradney and engineer Ernest Binns. In this regard, networks were not only a means of reducing transaction costs, but they were also a means of entry for some into entrepreneurial careers.

Some entrepreneurs used the preparation stage to undertake a trade qualification in areas, such as drapery, carpentry, engineering, or printing. This skill enabled them to trade on their technical expertise, setting up their first business venture, leveraging particular industry knowledge that others did not have.

Finally, during the preparation stage some entrepreneurs rose to management positions in the firms they were working in; by the time they commenced their own business, they were well-versed in the requirements of running a larger concern. Capital accumulation also characterised the preparation period. The sum was not usually large, and often it was the savings of the entrepreneur, or the combined savings of one or two partners. For example, drapers John Kirkcaldie and Robert Stains each contributed capital of £350 to start their Wellington firm.

The transition point at the end of the first period of the lifecycle was the emergence of an opportunity. For the first-time entrepreneur, opportunity emerged in several forms. It was common for entrepreneurs to see an opportunity in an industry they were already working in; perhaps a range of products not being sold by their present employer, perhaps an opportunity to start the same type of firm as their present employer in a different region that was not served. Some saw under-utilised resources not being exploited or a technological innovation in their industry not being pursued by their present employer. Less commonly, the entrepreneur produced their own invention in the industry they were working in and decided to pursue it alone. In addition, the severing of the master/apprentice relationship provided a natural trigger for the

entrepreneur to commence trade on their own account. In all the cases mentioned here, the uniting factor was a single entrepreneur deciding to start a firm in an industry of which they had prior knowledge.

Also having the benefit of prior knowledge were those entrepreneurs who had the opportunity to purchase the firm they were working in. In some instances the owner wanted to retire, or wanted to sell off a particular branch of the firm, or had decided to pursue another line of business. Such an arrangement did not necessarily mean the entrepreneur had amassed considerable capital to purchase the firm, as the purchase price could be paid for out of future earnings.

For some, the transition point characterised by opportunity at the end of Period 1 was exploited by a partnership of entrepreneurs combining their talents. In total, partnership represented half of all new business starts by colonial entrepreneurs in the case analysis. The most common instance was of partners commencing an enterprise in an industry that they were already working in, leveraging their existing skills and networks. Less commonly, entrepreneurial partners started a firm in an industry that was completely unknown to them. Some who left paid-employment to start a new venture in a partnership did so as unequal partners, as they joined with a businessman who already had an existing firm. The entrepreneur brought new skill, talent, inventiveness, or technical skill to the firm enabling it to enter a new period of growth.

A few bold entrepreneurs commenced business ventures by themselves in areas that were completely new to them. We might term them in the modern sense, 'career changers.' Similarly, some were thrust into entrepreneurial activity through no real desire on their part. Either they had become unemployed, or suffered the death of a spouse, or through illness they could no longer continue in their present employment. For these people, self-employment was sometimes the only viable career alternative. The numbers like this were never great, but there were always a few entrepreneurs who would start their new enterprises in this fashion.

It is fashionable to associate risk with the behaviour of entrepreneurs. However, colonial entrepreneurs displayed risk-minimising behaviour. This was evident in the reasons behind their first move into a new venture. Low risk entry strategies could be considered those where: the entrepreneur purchased a business they had been working in; started a firm by themselves or with partners in an industry they had been working in; moved from an apprenticeship into a business in the same trade; or joined a partner with existing capital in a business. All these reasons behind starting a new enterprise were

low-risk as they were made on the basis of some degree of experiential knowledge and the assurance of continued custom. This represented 70 percent of the case analysis entrepreneurs. The other 30 percent, being those who exhibited high risk strategies into their first venture, included those who were pushed into entrepreneurial activity through adversity (such as job loss or the death of a spouse) or those who started in an industry in which neither the entrepreneur, nor his partners, knew anything about. In short, while the image of the entrepreneur as someone who undertakes highly risky activities on which they produce great profits might be an attractive image in the media, such risks, did not typify the behaviour of colonial entrepreneurs. For these men and women, significant skill, experience, and capital economising entry strategies all served to minimise the risk involved in their first venture. Risk, as it is popularly conceived, did not emerge as an entrepreneurial characteristic.

PERIOD 2: EMBARKATION

In Period 2 the entrepreneur commenced their first enterprise. The dominant characteristics of this period of the entrepreneurial lifecycle included: the establishment of a new enterprise; difficulties in market acceptance of new product or service innovation; limited capital used for expansion and expansion through reinvestment of profits; increase in trade networks and industry knowledge; fostering of trust in regards to suppliers, customers, staff, and at times, venture failure.

The initial venture of an entrepreneur was often small and with good reason. None of the entrepreneurs studied in this research undertook their first venture on publicly-raised venture capital, though it was not impossible in the colonial market to have done so. The reasons for this were to do with the natural maturation process of the entrepreneur both as a promoter and as a businessman.

New ventures typically expanded slowly, along with the entrepreneur's capacity to manage them. Knowledge of markets, products, networks, staff-management, finance, and the ability to make informed decisions evolved as the entrepreneur developed their enterprise. As a result, some entrepreneurs remained with a single enterprise, as in Greiner's lifecycle, and developed this firm over their lifetime. A case in point was Palmerston North merchant, Leopold Collinson. Collinson had worked for ten years as a department store assistant before he opened a small retail drapery store in 1904, renting premises with his partner, John Cunninghame. Over the next 20 years their firm expanded gradually into a well-known, provincial department store. *Similar*, was

Dunedin cabinet maker Francis Butterfield, who started his first business in 1865, aged 27. Butterfield stayed with this business his entire life and focused on increasing productive capacity on a single site at a moderate pace.

The transition point between the initial venture and further ventures was cessation – the entrepreneur ceasing one business to commence another. It is vital to use the word cessation and not failure to describe this transition. Failure in respect of entrepreneurship alludes to total commercial failure or bankruptcy on the part of the entrepreneur. It is an image of a beaten entrepreneur, retreating back to paid employment and a life more ordinary. This accounted for a few entrepreneurs in the case analysis—but only a few. A brief examination of the reasons for cessation of initial enterprises shows how a wider understanding of entrepreneurial *failure* is necessary.

Cessation took many forms. Some entrepreneurs started their first venture and then closed this down to pursue some more enticing opportunity. Charles Sew Hoy, for example, left his mercantile interests in 1888 to pursue a venture using new gold dredging technology in the Shotover Big Beach Goldmining Company—a venture that paid handsomely. Some sold their first firm to start another one in a different town or city; such as West Coast brewer, Thomas McCarthy, who sold his first brewing company in 1877, then moved to Wellington where he purchased another larger operation. Similarly, Arthur McKee sold his newspaper the *St Helens Chronicle*, then moved to New Zealand, where he started in a printing partnership as McKee and Gamble. Retailer John McKenzie sold his first retail stores in Melbourne to relocate to Sydney then Tasmania with his sister Ella, where he started a further discount retail operation.

Alternatively, some entrepreneurs left a partnership to launch out on their own. John McIndoe, for instance, after seven years, left his first partnership with David Cherrie to start on his own as a printer in 1900. Publisher George Russell sold his interest in the *Manawatu Herald* to his brother, only to start up the *Waikato Gazette*. Later, he also sold this newspaper to commence the printing business, Russell and Willis.

Several entrepreneurs ceased their first venture for patriotic reasons. Shipper Roose Caesar, for example, sold his shipping business to enlist in the First World War. Upon his return in 1918, Caesar founded a saw mill and then in 1922, re-entered the shipping industry as Roose Shipping Company. Others entrepreneurs simply went broke. The Walsh brothers, for example, ran a family engineering business, an aeroplane manufacturing company, and a flying school; the latter two eventually closed down due to lack of trade, before the brothers returned to engineering. Rudolph Wigley, the

founder of Mt Cook Tourism, had a similar varied entrepreneurial career, with a mix of successful and less than successful ventures, such as a rental car business, motor tours, an aviation company, tourism business and a hotel.

Some entrepreneurs had to close a business down to avoid further losses, as Albert Sanford did with the Thames branch of his fishing venture, or the Auckland shipper, James Bradney, who was forced to close down his first attempt at a shipping business. In some cases a premises burnt down, and in the nineteenth century when promoters often carried either limited or no insurance, this could cause acute financial difficulty. Such occurred with brewer Frederick Kuhlze in 1877. A fire in his newly-built North East Valley Brewery in Dunedin forced him into insolvency. Motueka merchants, the Manoy brothers, faced a similar situation in 1938, after a fire wiped out their stores and they had to rebuild their enterprise.

In some cases, a particular innovation was not accepted in the marketplace as it may have been too revolutionary or too ambitious in terms of capital and process for the colonial marketplace. This occurred with John Chambers' New Zealand Iron and Steel Company in 1883, which barely lasted a year. The Walsh brothers had similar difficulties keeping their flying school solvent after the First World War. Barnstorming was fashionable, but flying schools, or any attempt at air-freight or passenger services, ran into difficulties. At times, a whole industry faced a downturn and the entrepreneur went out of business not necessarily because of their lack of skill as a businessman, but due to changes in the wider economy. This was the case with Canterbury grain merchant, George Stead, who was forced into bankruptcy as a result of falling grain prices in the early 1880s.¹⁵ However, like some other colonial entrepreneurs, Stead also exhibited the valuable trait of persistence.

The heyday of the New Zealand grain industry was between 1868 and 1883. Prices had been high, productive volumes increased, and demand for oats, wheat, corn, and maize encouraged large parts of the Canterbury plains to be sown in grain crops.¹⁶ Between 1874 and 1881, the number of grain mills in Canterbury increased from 23 to 39; in Otago the number of mills increased from 29 to 38, and staff employed in the

¹⁵ *Cyclopedia of New Zealand*, vol. 3, Canterbury, 1903, pp.344-345.

¹⁶ The total area in the colony under grain crops was 657,890 acres with Canterbury providing 58 percent of this (384,621 acres) and the total export in 1880 was £908,810. Understandably, the exporting of grains, primarily to the United Kingdom, was now New Zealand's third largest export staple.

industry rose from 214 to 450. No other areas in the colony rivalled the concentrated investment of these two provinces.¹⁷

Importers, who brought in the latest technology, such as the mechanical reaper, harvester, seed-cleaning machines, and binders, supported the industry. Technological innovation enabled local producers to achieve greater production and cost savings. Mercantile firms, such as Miles and Company, the National Mortgage and Agency Company of NZ Ltd., and by the 1880s, the New Zealand Grain Agency and Mercantile Company Ltd., offered growers cash advances on crops—buying in New Zealand, selling in London. Such firms provided the interface in the market, the essential link between the producers and consumer. And, while most of the mercantile companies traded in a variety of goods—importing and exporting butter, cheese, wool, grain, machinery and dealing in land—some specialist grain buyers emerged. One such buyer was George Stead.

Stead arrived in Lyttelton in August 1866, just before his twenty-fifth birthday. He worked for the Christchurch branch of the Union Bank of Australia before accepting an invitation from grain exporter, William Royse, to join him in his firm. They began trading under the title, Royse Stead and Company. Margins in the industry were sound and Stead added a malt house to the firm, seed-cleaning equipment, and he constructed three large grain stores at Addington.

After Royse retired, Stead began looking for a replacement partner. He found one in Peter Cunningham, and the New Zealand Grain Agency and Mercantile Company was formed in 1881. They purchased grain on the local market, stored it in Stead's large warehouses at Addington, and exported it to England. In turn, the firm imported threshers, tractors, and harvesters from the United Kingdom for sale to local producers.

In 1883, grain producers enjoyed the biggest harvest ever in the history of the New Zealand grain industry. Strong prices were achieved on world markets at an average of almost four shillings a bushel. Then came the fall. Not suddenly, but over the early months of 1884 it became apparent that the high market was not going to continue.¹⁸ By early April, the prevailing market price at 3s 6d. per bushel was a shilling lower than the rate for the previous season. What was more alarming was that regardless of price,

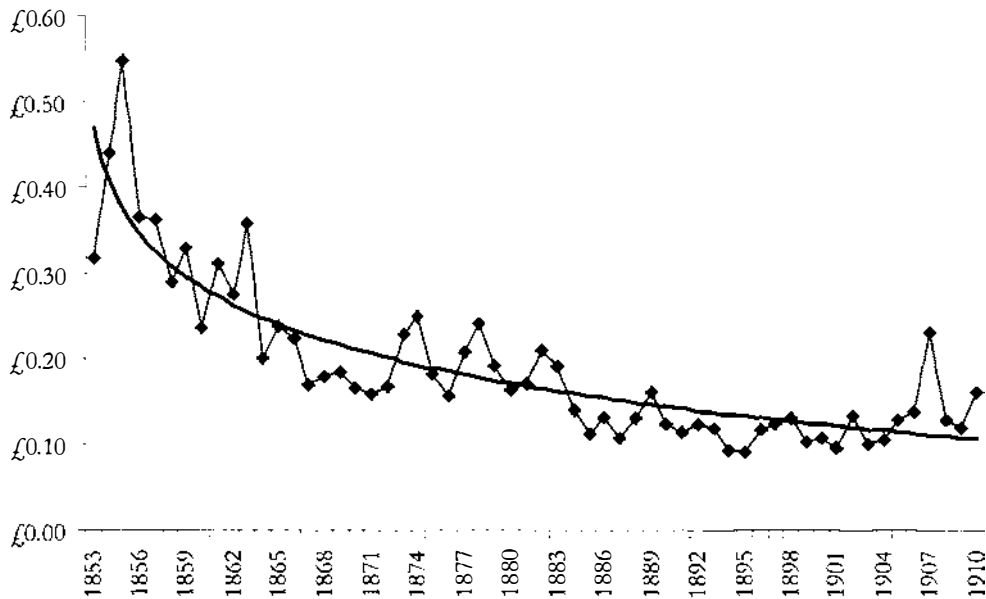
¹⁷ *Statistics of New Zealand*.

¹⁸ In early March the grain correspondent of the Christchurch *Press* remarked: 'The spirit of speculation would seem to have all but disappeared, judging by the almost passive attitude of grain traders.' *The Press*, 7 March 1884, p.2.

literally no high volume was changing hands.¹⁹ A large harvest in England and sizeable quantities of cheap grain arriving from America and India had flooded the already oversupplied British market.

By the end of the year, the average price had fallen 26 percent. The following year it fell another 21 percent and was hovering just above two shillings per bushel. Over the next decade, the mean price continued its slide downwards. In the 1880s, the average annual export of grain was 5.1 million bushels. By 1894, this had fallen to 2.3 million bushels and the price had flattened to fewer than two shillings per bushel. It created smaller margins for growers, agents, warehousemen, and merchants.

FIGURE 29
ANNUAL AVERAGE GRAIN PRICES: 1853-1910



Source: *Statistics of New Zealand - 1853-1910*

The old Canterbury firm of Miles and Co. was forced into liquidation.²⁰ Similarly, Stead and Cunningham went bankrupt with debts of £72,000; the partnership was dissolved. Rather than enter paid employment, Stead aged 43, showed remarkable

¹⁹ See comments in the *Press*, 4 April 1884, p.2.

²⁰ The assets of Miles and Co. were duly purchased by the Timaru branch manager, John Mee, who continued to trade in wool, seed and grain but under his own name. See *Cyclopedia of New Zealand*, vol.3, Canterbury, p.1012.

persistence in the face of commercial failure.²¹ Entering the grain markets again, only this time as George G. Stead and Company, he first set about paying off his previous creditors (which he achieved) and then began to diversify his business interests. He invested in dairy companies as butter and cheese markets began to show promise. In 1890, aged 49, he purchased the *Christchurch Press*. Other investments followed. Stead bought into farms, entered the entertainment business through the Theatre Royal in Christchurch and he was one of the founders of the Union Fire and Marine Insurance Company. His retirement from the grain business in 1903, took the same pattern as his entry, 30-years earlier. In 1897, he took on a young partner, Joseph Palmer, in much the same way that William Royle had taken him in 27 years earlier.

The example of George Stead in particular highlights the need to distinguish between a business venture failing, and the entrepreneur himself failing. Namely, did the venture itself fail and close down, or was it only that this particular entrepreneur's involvement with the venture came to an end? In the life of George Stead, his original firm ceased to exist and was closed down. But in cases involving other entrepreneurs, their failure became the basis for some other promoter's success.

This point is exemplified in the experience of Josiah Firth. Firth, who was one of the more ambitious colonial entrepreneurs, started his first venture, a brick yard, in 1854. Two years later he commenced the Wharf Steam Flourmills in Auckland. The venture would last for 33 years and become one of Firth's most successful—the largest flourmill in the Auckland province. In 1866, he commenced farming in Matamata. This was in part a move by Firth into backward integration to supply wheat for his flourmill.

Firth, quick to invest in new opportunities, was then an early entrant into the dairy industry, starting his own cheese factory at Waharoa in 1883, a year after the sailing of the *Dunedin*. He followed this with enterprises in canning and preserving, coal mining, and hydraulic gold mining. However, Firth's heavy and continued capital expenditure upon his extensive Matamata farm (ninety thousand acres at its height) was causing him

²¹ Brewer William Crawford exhibited similar persistence to George Stead. Crawford arrived in Auckland in 1864, aged 20 having worked as a clerk to a city merchant in Dublin. He spent four years working as gold miner and bushman on the West Coast before moving to Thames to open a store with his wife. By 1876, Crawford had moved to Gisborne and purchased the brewery of R. Whitson and Sons, that he had helped set up. As a result of financial difficulties arising from the collapse of the City of Glasgow Bank in 1878, Crawford was bankrupted in 1882. His response was to build a new larger brewery a year later. When this burned down in 1895, Crawford showed his determination and built yet another brewery on the same site.

financial difficulty. When he was unable to make his mortgage payments, the Bank of New Zealand assumed ownership of his Matamata estate in July 1887.²²

For Firth, it was a collision of unfortunate events. Perhaps too ambitiously he had accepted the tender six months earlier for £8486 to construct a five-storey roller flour mill in Auckland. Demand for white flour had been increasing and Firth's original Wharf Flour Mill was unable to produce this product. By early 1887, Firth had decided to invest in a new mill; even then he had no obvious means of paying for his construction other than borrowing. The mill commenced production in March 1888. Its technology was impressive; twenty double-roller machines, supplied by Nordyke and Marmon of Indianapolis, were capable of milling sixty tons of wheat daily into flour. Annual production was estimated at over one million bushels of wheat. Firth entertained 300 visitors at an opening ceremony in grand fashion. Twelve months later, Firth's mill had shut down; his mortgagee, The New Zealand Loan and Mercantile Company, had foreclosed on him. Firth was declared bankrupt later that year. The mill was sold for £5000 and was restarted by new promoters. As Firth's biographer remorsefully stated: 'The years have proved how unerring was his judgement; for three-quarters of a century the Roller Flour Mills have prospered, going from strength to strength, and, as far as I know, running without a break; but the family the mills were built to maintain in comparative affluence has never had so much as the fourth part of a penny out of their ever-increasing profits.'²³

Firth was not alone in this kind of predicament. Entrepreneur James Walker Bain could easily have continued with the Mataura Paper mill had not the mill consumed so much of his capital. The £25,000 he had sunk into the mills development he could no longer add to, nor were the returns enough to justify that amount of capital investment. However, the Coulls brothers, purchasing the mill for £5,000,²⁴ not only got a bargain, but also found it easier to sustain a return on that amount of capital than five times that figure. Consequently, in both of these cases, the venture continued under new ownership, even though the original promoter had failed to retain his investment.

Business failure occurred relatively frequently among colonial entrepreneurs. Overall, one in three of the case analysis entrepreneurs (31 percent) experienced the

²² Gordon, Moana, *Golden Age of Josiah Clifton Firth*, p.215.

²³ *ibid.*, p.255.

²⁴ Angus, *Papermaking Pioneers*, pp.44-46.

commercial failure of a venture at some point in their careers where venture failure was defined as bankruptcy, closing down to avoid further losses, or being ejected from the firm a founder started. In total numbers, this represented 43 enterprises, nine percent of the total undertaken by the entrepreneurs. Yet, what was equally obvious among the entrepreneurs in the case analysis was that business failure by an entrepreneur was not the conclusion of their business activities. Eighty-seven percent of all those entrepreneurs who failed commenced another business venture and regained a position of financial independence. Cessation of business activity then, was not the end of the lifecycle for the entrepreneur, but a developmental period. As indicated here, for the majority of the colonial entrepreneurs, it was the transition point between ceasing one venture and commencing another.

PERIOD 3: EXPLORATION

During the third stage in the lifecycle the colonial entrepreneur looked to start further ventures. This stage was characterised by new initiatives, innovation, new partners, additional capital, commercial success, and risk of failure. It was during this stage of the entrepreneur's career that they would typically embark on the venture that would be the most successful of their career. They would enjoy heightened levels networks, knowledge, trust, and decision-making skill.

Commencing further ventures was a developmental stage in the life of the entrepreneur for three reasons. Firstly, instant success with their first business venture was not the case of the majority of entrepreneurs in this study. The more common pattern was that the entrepreneur started a venture, ceased this activity, and then started another venture (or several ventures) prior to commencing that which would be the most successful venture of their careers. Secondly, further ventures were a distinct developmental stage because of the time delay between the two stages. Period 2 described the experience of many entrepreneurs in their mid to late twenties, while Period 3 was more representative of entrepreneurs in their mid to late thirties. Finally, to ascribe any kind of model to colonial entrepreneurs that only depicted a single organisation would be contrary to the facts. Eighty-two percent of the case group of

colonial entrepreneurs undertook multiple business ventures over their lifetime. Some have since termed these 'serial founders.'²⁵

This pattern included 23 percent who were involved in two ventures and 57.9 percent in three or more business ventures. Only eighteen percent of the case group had a single business enterprise that they developed over their lifetime. The most business ventures undertaken by a single entrepreneur was 40, and this was by newspaper entrepreneur, Joseph Ivess, who made a career out of founding and selling town newspapers. Overall, the 133 entrepreneurs in the study represented 475 enterprises across the spectrum of commercial activities. The mean number of ventures each entrepreneur was involved in was 3.6. Of the 475 enterprises, 377 enterprises had been specifically founded by the entrepreneurs in the case analysis and did not exist previously. In total employment numbers, at their height these ventures represented approximately 24,000 jobs.

TABLE 26
LIFETIME VENTURE ACTIVITY

| Lifetime Ventures Founded (LVF) | Number | As Percentage | Lifetime Ventures Involved (LVI) | Number | As Percentage |
|------------------------------------|--------|---------------|-------------------------------------|--------|---------------|
| 0 Ventures | 8 | 6.0 | | | 0.0 |
| 1 Venture | 35 | 26.3 | 1 Venture | 25 | 18.8 |
| 2 Ventures | 33 | 24.8 | 2 Ventures | 31 | 23.3 |
| 3 Ventures | 24 | 18.0 | 3 Ventures | 32 | 24.1 |
| 4 Ventures | 12 | 9.0 | 4 Ventures | 12 | 9.0 |
| 5 or more Ventures | 21 | 15.8 | 5 or more Ventures | 33 | 24.8 |
| Total Entrepreneurs | 133 | 100 | Total Entrepreneurs | 133 | 100 |
| Total Ventures | 377 | | Total Ventures | 475 | |

Source: Case Analysis New Zealand Entrepreneurs

The explanations behind why colonial entrepreneurs behaved in this manner lie partly in the nature of the colonial economy and partly in the nature of the entrepreneur *per se*. Clearly the colonial economy with its dramatic changes in population, technology, infrastructure and markets created opportunities for individuals and firms to exploit change. Previous chapters have discussed some of these opportunities in the gold mining industry, the timber industry, the dairy processing industry, the engineering industry, and mercantile markets.

²⁵ See for example: Westhead, Paul, and Mike Wright, 'Novice, Portfolio and Serial Founders: are they Different?', *Journal of Business Venturing*, 13:3 (1998), pp.173-205.

Yet, the compelling evidence behind colonial entrepreneurs instigating multiple ventures over the span of their working lives seem to be more to do with the characteristics of the entrepreneurial class in general, in particular, what we might regard as the maturation process of the entrepreneur. For example, first time success in commercial activity was not the majority experience of colonial entrepreneurs. Only 38 percent of the case group commenced the most successful venture of their career as their first venture. The more common pattern was that an entrepreneur would have two or three ventures before starting the most successful undertaking of their career.

What was interesting was the time period that lapsed between the first business venture and the most successful business venture. From the case analysis, the average age at which colonial entrepreneurs commenced their first business venture was 27, while the average age at which they commenced the most successful venture of their careers was 34. During this seven-year gap the entrepreneur gained further commercial experience, managerial capability, market insight, and developed greater networks. The capacity of an entrepreneur to run a more successful enterprise heightened over time—along with their ability to make better judgemental decisions.²⁶

Starting another enterprise did not necessarily mean that the original enterprises commenced by the entrepreneur were shut down. Such was the case with George Skellerup, William Goodfellow, and Bendix Hallenstein, all of whom pursued multiple business ventures during their careers and did so without discarding their earlier ventures. Moreover, there were numerous examples of entrepreneurs who behaved like them. Southland entrepreneur, James Walker Bain, had run two newspapers and founded the Southland Building Land and Investment Society in 1869, before he commenced the Mataura Paper Mill in 1875, that he ran for nine years. The mill was sold in 1884 to the English-born Coulls brothers. Taking over the Mataura mill was not the Coulls brother's first venture. Thomas Coulls had previously founded two newspapers, and at the time he purchased Mataura mill was busily expanding the family printing business in Dunedin.

Tasmanian-born entrepreneur, Hopeful Gibbons, commenced the Patea Brewery in 1879, to which he added a hotel and then shifted his efforts to the Wanganui brewery in 1895. In 1905, Gibbons on the back of the rising interest in cycling commenced importing bicycles under the company, Hope Gibbons Limited. In 1917, he began the

Colonial Motor Company that undertook not only sale and distribution of motorcars but also car assembly. In 1924, aged 68, he started his fifth venture. Making use of his agency for importing tractors, Gibbons founded a road-contracting firm, New Zealand Roads Limited.

The transition point between Period 3 and Period 4 could again be commercial failure. While the entrepreneur had commenced a more successful undertaking than their first venture, and had the benefit of greater managerial and entrepreneurial ability they were not immune from commercial failure. This was exemplified in the Jewish merchant, Bendix Hallenstein. Hallenstein displayed many of the characteristics discussed in this chapter. He had undergone a thorough period of training at the start of this career. Born in Brunswick, Germany, in 1835, his first job was in a Manchester shipping office. In his early twenties, he followed his brothers to the Australian goldfields and together opened their first mercantile store in Victoria. In 1863, with the decline in the gold trade, Hallenstein moved to New Zealand and opened a general store in Invercargill. Unable to turn a profit, he moved to Queenstown where he opened another general merchandise store. Four years later he started a flourmill with his partner, J.W. Robertson, at Kawarau.

By the early 1870s, and in his mid-thirties, Hallenstein was operating as a highly effective entrepreneur. He had undertaken multiple ventures, and through his skill as a trader and using family networks he had managed to extend his general store business to branches at Arrowtown, Lawrence, and Cromwell. It was then that he determined to open a clothing factory in Dunedin to assure a consistent supply of men's clothing. The venture was a combined partnership between the three Hallenstein brothers, Issac, Michael, and Bendix, and Melbourne clothing manufacturer, J.F. Anderson. Anderson provided no capital, but relocated to Dunedin to commence work as plant manager in 1873.

Hallenstein's plans for a clothing factory proved too ambitious. While the international staffing levels in clothing factories were falling,²⁷ Hallenstein put in place plans for a factory of 200 plus workers. Like many new ventures, teething problems in

²⁶ Furthermore, given that the entrepreneur has a tendency toward reinvestment as economist Jacques Turgot claimed, we might expect that profits were more likely to be directed toward increasing the scale of the existing enterprise, or engaging in some other sort of business activity.

²⁷ See Godley, Andrew, *Jewish Immigrant Entrepreneurship*, who points out that during this time the average factory size of tailoring and dressmaking establishments in New York and London were falling to around twenty staff.

production, coupled with a lack of expertise selling stock meant that operating expenses soon outpaced turnover. Compounding the early difficulties was Hallenstein's distance from the venture. He had elected to remain in Queenstown while the Dunedin factory commenced production, but those in charge did not have the necessary managerial experience or owner's best interest in mind.

In 1874, Hallenstein sold up his Queenstown interests to move to Dunedin and concentrate on his new venture. The timing was difficult and following an accident Hallenstein found himself incapacitated and unable to walk for several months. Perhaps hoping that the sales would improve or that the factory needed to achieve economies of scale, Hallenstein placed a tender for a £4000 warehouse attached to the main building. It was a large sum of money and a further debt the business could ill afford.

By 1875, letters between Issac and Bendix expressed the latter's concern at the factory operation. Hallenstein reiterated an earlier desire for retail shops to clear factory production. By October 1875, with heavy stocks, and a still unfinished warehouse, Hallenstein was looking to the bank to accommodate an increasingly precarious cash position. Issac Hallenstein came across from Melbourne to discuss matters with his brother. Not long after he left, Bendix Hallenstein negotiated a deal with the National Insurance Company to sell the factory and the unfinished warehouse for £11,700. In return, Hallenstein leased it back from the firm for £700 per annum.

Early the following year, Hallenstein fired the factory management and assumed direct control. More importantly, Hallenstein took over the lease of a retail store in the centre of Dunedin and began retailing discount clothing. He added branches in Christchurch and Timaru that same year. In 1877, he added branches in Oamaru, Greymouth, and Wellington in the North Island. By 1879, three years into his retail business, Hallenstein had added further branches in Auckland, Napier, Ashburton, Wanganui, Invercargill, Nelson, New Plymouth, and Thames.

This pace of expansion continued; by 1900, Hallenstein had expanded his operation to 36 branch stores throughout New Zealand. His clothing factory employed 350 staff, producing 2500 garments per week on 80 sewing machines.²⁸ This staffing figure did not include management and sales staff in the retail branches. The subsequent success of Hallenstein's clothing store highlighted his characteristics as an entrepreneur. Firstly, his skill or competitive advantage lay as a retailer and not as a manufacturer.

Retailing was the industry in which he had most of his prior experience and where he could arguably make the best decisions. This was evident in the launch of Hallenstein's second retail venture, the Drapery and General Importing Company of New Zealand (DIC).

Starting in Dunedin in 1884, Hallenstein commenced a Christchurch branch of the firm the following year and a Wellington branch in 1890. The name, Drapery Importing Company, was misleading. Through this firm Hallenstein extended his early interest in general merchandise. He operated it as a wholesale warehouse selling goods, such as Manchester, crockery, furniture, millinery, crockery, and bicycles. Hallenstein's persistence in the face of failure and his propensity to start multiple business ventures demonstrated the success of a focused approach to business strategy. While Hallenstein held other directorships in diversified business interests, he was unquestionably a gifted and skilled retailer, his quick recovery from financial difficulty and the remarkable expansion of his clothing firm, as well as the Drapery Importing Company, demonstrated this.²⁹

PERIOD 4: EXPANSION

Period 4 of the lifecycle described the particular strategies by which entrepreneurs developed their enterprises. It was characterised by the entrepreneur concentrating on their most successful business venture to date; new capital often entered the business; the growth strategy of the entrepreneur became apparent; the entrepreneur began to invest in other ventures with some diversifying their business interests; and family members entered the business.

The transition point between Period 3 and Period 4 was characterised by management concerns. As the entrepreneur's venture expanded in size, either on the same site or through branch expansion, problems of coordination, control, organisational structure, and formalisation occurred. All these problems were essentially components of what has always been management. To expand his enterprise, the entrepreneur had to find solutions to these issues.

Some entrepreneurs used family members in charge of various departments for a measure of control, as was the case at the Dunedin mattress manufacturer, Arthur Ellis,

²⁸ See *Cyclopedia of New Zealand*, vol.4, Otago and Southland, pp.306-307.

²⁹ See Brasch, *Hallensteins: the First Century 1873-1973*, pp.16-17.

or William Winstone's brother joining him in the firm. Similarly, members of the Nathan family were appointed to run particular departments of this expanding international organisation. The entry of family into the entrepreneur's business had two immediate positive benefits. Firstly, it allowed for employment of the family. Secondly, the firm might function with a degree of implicit trust in the decision making process due to their family association. Yet, managerial control and coordination—systems of checks, reporting requirements, coordination of work, work layout, organisational structure, strategy—were problems that the entrepreneur had to solve as his venture expanded in scale.

Firth's example of the eight-hour mill, though a failure on his part, showed careful attention to the management of the enterprise, in particular the attention he gave to the layout of the factory and the technology he assembled to automate flour production.³⁰ In addition, the management practices adopted by Firth were designed to produce an efficient organisation. Firth's policy of an eight-hour shift in 1888 was forward-thinking at the time, as was his use of staff dining rooms, dressing rooms, and bathrooms. Similar attention to factory layout was apparent at Henry Shacklock's South End foundry.³¹

Bendix Hallenstein addressed the problems of management apparent at his fledgling clothing factory by assuming leadership of the new venture personally. His more purposeful ability as regards management was seen in his regular tours of the expanding branch retail network, and the weekly financial returns required by the Dunedin head office. The systemisation put in place by entrepreneur Robert Laidlaw in the early twentieth century was an even more deliberate policy. It permitted Laidlaw to expand his mail-order business far more quickly than would have been possible without such measures. Before the First World War, Laidlaw had organised his business along departmental lines; he appointed departmental heads, instituted firm and management meetings, used card-index systems to track stock and customers, adopted ratio analysis in accounting, and used time and motion studies and productivity reports.³²

The attention of colonial entrepreneurs to management was also seen in their choice of strategy. The strategy of the entrepreneur was not necessarily the same as the

³⁰ See Gordon, *Golden Age*, pp.257-258.

³¹ See Angus, John H., *The Ironmasters: the First One Hundred Years of H.E. Shacklock Limited*, Dunedin: H.E. Shacklock, 1973.

³² See Hunter, *Robert Laidlaw: Man for Our Time*, pp.65-81.

corporate strategy of the large firm. In a managed enterprise, strategy can be devised and enacted as a corporate function; in the entrepreneurial firm it was still the embodiment of the founder. It was common, for example, for entrepreneurs with strong technical skills to advance their firm on the basis of product innovation. Speight and Co., could differentiate their beer and command a market leadership position due to the founder's skill as a brewer. Similarly, the engineering skills of the Price brothers, the technical skills of Henry Shacklock, George Fraser, George Skellerup, and Richard Hudson, allowed a way for these entrepreneurs to enter the market using product innovation; thereafter, product innovation became the defining strategy of their business enterprises as they expanded. Shacklock brought out a constant range of stove variations; the Price brothers consistently produced a wide variety of new and novel engineering goods. At times, the in-depth experience that a qualification provided enabled the entrepreneur to introduce new product innovations, improve production systems, minimise costs, or take advantage of technological advances in their field faster than competitors.³³

In a similar way, entrepreneurs of superior trading ability used this advantage as their dominant strategic approach. The comparative advantage of Bendix Hallenstein, John Aitken, John Court, David Theomin, Hugo Friedlander, Byron Brown, Myer Caselberg, Newton King, and Charles Wilkinson lay in their being expert traders. For these entrepreneurs, buying well, and using sales promotion and marketing was their patterned entrepreneurial behaviour—their habitual response to business opportunity. Business expansion for these entrepreneurs often meant developing branch stores.

In addition, some entrepreneurs showed a strategic advantage as networkers. Such networks had a variety of forms, perhaps with a political or elitist basis, or they might be family-based with national or international connections. Networks gave an entrepreneur trading advantages, access to capital, support for venture initiatives, or political approval. Turning to networks of associates was not a one-off activity for such entrepreneurs, but a typical behavioural pattern by which they exploited opportunity.

³³ Other researchers have suggested similar taxonomies of entrepreneurs based on dominant business behaviours or backgrounds. See, for example, Gartner, William and Terence R. Mitchell and Karl H. Vesper, 'A Taxonomy of New Business Ventures', *Journal of Business Venturing*, 4:3 (1989), pp.169-186.

Entrepreneurs who behaved in this way included aerated water manufacturer Alexander Thomson, meat exporter William Richmond, publisher George Edgecumbe, shipper Donald Alexander, engineer John Chambers, and merchants Nathaniel Levin and Joseph Nathan. These entrepreneurs were able to pursue a first-mover advantage through their network connections, rather than relying on particular technical expertise they might have.

As entrepreneurs fastened on to the speciality that became the mainstay of their business career, further observations could be made about preferred growth strategies. For instance: did entrepreneurs undertake all their ventures in a similar industry? Or, did the entrepreneurs undertake their ventures in different industries indicating that they were spreading risk? Both occurred among the case group of colonial entrepreneurs, but a clear preference arose for focused rather than diversified activities. In total, 77 percent of the case analysis entrepreneurs pursued a focused strategy in a single industry rather than diversify their business interests. This reluctance to stray far from known areas of expertise so infused the colonial entrepreneurial experience that 56 percent of the case group had their most successful venture of their careers in the same occupational field as their first job, regardless of how many jobs or diverse positions they held in the intervening years.

For example, Dunedin-based Alexander Thomson's first job was as an aerated water worker and he remained in this industry throughout his life. William Stevenson's first job was as a grocery worker and even though he had numerous ventures throughout his life including a condensed milk factory, a shipping firm, woollen manufacture and starch manufacture; his most successful was in the grocery partnership, Irvine and Stephenson. Frederick Pirani's first job was as a journalist and he remained in the newspaper industry, with his most successful venture the paper *Manawatu Standard*. Robert Holt's first job was as a joiner, and although he also worked as a millwright and undertaker, once he started his own firm, he remained in the sawmilling and timber industry, with his most successful venture, Robert Holt and Sons.

What this suggests was that rather than shift resources at whim from industry to industry when margins were not high enough or competition was too intense, the colonial entrepreneur tended to move into an industry and there remain. Such a strategy

produced some long-lasting firms.³⁴ With seventy-eight of the 103 entrepreneurs who adopted a focus strategy, their most successful business venture continued past their death and was passed on to another generation. Those who displayed this kind of focus strategy included Nelson dressmaker Sophia Anstice, who commenced her dressmaking and drapery firm S. Anstice, Son and Co., in 1876, remaining in it for her working life. Similar was Francis Carter, who had at least nine different sawmilling or joinery company ventures. Carter's only venture outside the timber industry was a flaxmill, which he had for a brief period between 1900 and 1905. The flax mill was closed down as it was unprofitable, a blight Carter did not suffer from in the timber industry and he went on to set up saw mills at Taihape, Ohakune, Horopito, Raetihi, Pakihi, Karamea, and Pureora. In 1947, aged 77, Carter began purchasing retail stores, commencing a move into forward integration that would be continued by his sons after his death in 1949.³⁵

Accountant and real-estate agent, Peter Barr of Barr, Leary and Co., focused his activities in accounting, finance, and real-estate (accountants engaged in all three in the nineteenth century). Auckland shipper, Donald Alexander, did not diversify his interests out of the shipping industry. Alexander started with a sail making business and also for a time owned a ship chandlery, then a succession of shipping firms, the last of which he commenced in 1896, at the age of 54. Others who displayed a similar rigid industry focus included draper John Court, transport operator Thomas Newman, ammunition manufacturer John Whitney, and saw miller, William Butler.

Economist Mark Casson's emphasis on judgemental decision making as an entrepreneurial characteristic goes some way to explaining the propensity of colonial entrepreneurs to remain in a single industry. Casson noted that entrepreneur's decisions were made on the basis of experience, insight, synthesis, and imperfect information—information that the entrepreneur believed they held, not others. In an industry unknown to the entrepreneur it would be more difficult, and involve higher risk, for an entrepreneur to make a decision. It would follow that entrepreneurs would be less likely to diversify their business interests and more likely to specialise or focus their activities within a range of commercial activities known to them. Diversification was not a risk-limiting business strategy for an entrepreneur, but rather increased their exposure to risk.

³⁴ See for instance, Collins, James C., and Gerry I. Porras, *Built to Last: Successful Habits of Visionary Companies*, New York: HarperBusiness, 1994.

³⁵ See Simpson, Thomas, *Kauri to Radiata*, Auckland: Hodder and Stoughton, 1973, pp.325-328, for a more detailed account of Francis Carter's business activities.

Comparing this view of decision making with the established firm, one can argue that the firm and the entrepreneur make judgemental decisions on entirely different premises. What one regards as a low risk business strategy to diversify the business interests of the owners across a wide range of investments, the other perceives as a high-risk strategy, venturing capital into areas he knows little about.³⁶

Perhaps not surprisingly, the entrepreneurs in the case analysis also showed a preference for start-ups of additional ventures, as opposed to acquisitions. In either horizontal integration or vertical integration, it was almost twice as likely that the entrepreneur would start-up their own firm as opposed to acquire one that was already in existence. In total, 18 percent of the entrepreneurs undertook vertical integration through acquisition of existing firms already operating at points in the supply chain. Thirty-seven percent of the entrepreneurs undertook vertical integration, through starting up their own additional enterprises in the supply chain, or expanding their activities either through backward or forward integration.³⁷

Such was the case with fisherman, Albert Sanford. English-born Sanford began fishing in Auckland's Hauraki Gulf in 1864. Living at Devonport, he retailed his catch directly to the customer. Seventeen years after starting his venture he had amassed enough capital, and secured enough demand for his product, to acquire his own premises in Auckland for marketing fish. For thirteen years, Sanford continued in this way until securing larger premises on the corner of Albert Street and Customs Street West in 1894. Sanford's sons, now coming of age, were actively involved in the firm. In 1904, when Sanford's was converted into a limited liability company, the firm had a branch in Thames and its own ships. In 1907, another branch and fish curing plant opened at Tauranga. Sanford sold fish locally into the Auckland market and sent product by iced boxes to the other centres in the North Island. Managerial control in the business was assured through Sanford's sons heading branch operations.

Vertical integration was also noticeable in building and construction. It occurred both ways; from architectural firms, such as the Luttrell brothers, that extended back into the supply chain and purchased or started their own construction companies, and

³⁶ That entrepreneurs remained relatively fixed in a single industry over their lifetime supports such a proposition.

³⁷ Similarly, when considering horizontal integration, 30 percent of the case entrepreneurs undertook horizontal integration through acquiring existing businesses, whereas 56 percent undertook horizontal integration through their own new initiatives.

through saw milling entrepreneurs who started up their own merchant yards, such as Francis Carter.

PERIOD 5: TRANSFORMATION

Period 5 would signify the end of the colonial entrepreneur's career. This period was characterised by the changeover to the next generation as leadership of the firm often passed to the founder's family members, with associated changes in company structure. Some ventures at this point were also marked by cessation. When there was no heir apparent, the death of the founder effectively brought the venture to an end as a family firm. Period 5 typically occurred when the founder was in their sixties, seventies or eighties.

Problems of governance prompted the final period of transformation. During this transition point the entrepreneur faced passing on his enterprise or enterprises to the next generation. For some this meant involving family in their venture. In many cases, the founder's sons or brothers were brought in to the venture when they came of age, often during Period 3 or 4, and by the start of Period 5, had moved into managerial positions. For example, Henry Shacklock's four sons all entered the South End Foundry as it expanded and took on areas of responsibility suited to their particular temperament and skill. Shacklock's son John became the general manager, his sons Henry and Percy both worked in the general office, and his son Francis worked in production.

Similarly, Ephraim Ellis, the Dunedin mattress manufacturer, was succeeded by his son Arthur in 1894, who in turn was succeeded by his sons Norman, Roland, and Maurice. Dunedin biscuit maker, Richard Hudson passed his business own to his six sons, all of whom stayed in the business. Auckland cartage entrepreneurs, William and George Winstone, were succeeded by sons George Winstone Jnr., Percy Winston, and Eric. Nathaniel Levin, the Wellington merchant and exporter, was succeeded by his son William Hort Levin. Auctioneer Alfred Buckland, after the failure of the New Zealand Frozen Meat and Storage Company Limited in 1889, reorganised his activities as the firm Alfred Buckland and Sons, though he continued to play a role until his death in 1903, aged 77.

Overall, among the case analysis entrepreneurs, 71 percent involved family members in their enterprises. About half of the enterprises (54 percent) left by colonial entrepreneurs continued to be operated by their families after their death.

Recapitalisation of the business often marked this latter stage of the life of the colonial entrepreneur. Many firms in the early twentieth century, just prior to the founder's death, or shortly afterwards, were restructured as public or private limited liability companies with shares allotted among the various family members. Speight and Co., was one example. In 1895, Speights became a limited liability public company with a paid up capital of £60,000 in 6000 £10 shares. These were held between original partners, Charles Greenslade (2491 shares), William Dawson (2496 shares), and Speight's proportion of 993 shares was held by his widow. This was in turn passed over to his son Charles, who was active in the firm as head brewer and works manager.

The transformation into a new form of organisation could also accompany a change in strategic direction for the entrepreneur's original enterprise. The changeover at Winstones, for instance, from founder control by William to his nephews George Jr., and Percy, was effectively handled in 1895, long before Winstone's death in 1924. In 1904, Winstones was turned into a limited liability company and further family members entered the firm. The founder's descendents transformed the firm, branching out into the manufacture and supply of building and drainage products.

In some cases, where the original founder had concentrated his activities on a single site, his sons pursued branch expansion. This was the case at the Dunedin cabinet-making business of Francis Butterfield. Butterfield's sons undertook forward integration, moving into retail stores and branch expansion. It was also the case with automotive and mechanical engineers, John Chambers and Sons, who added 15 branches to the original firm in the early twentieth century.

Effective changeover to the next generation was not always completed early in the life of an entrepreneur, as entrepreneurs showed a reluctance to disassociate themselves from their business enterprises. Overall, only 38 percent retired from active involvement in their firms after apparent retirement. Moreover, it was not uncommon for entrepreneurs to continue founding additional ventures well into their sixties, and even seventies. The idea of the old colonist making his fortune and then retiring to England appeared exactly that. Colonial entrepreneurs kept working rather than retire and only five percent left to spend their retirement and their wealth in Britain.

Periods 4 and 5 were also characterised by the entrepreneur's involvement in the community. As they rose in prominence in commercial affairs, entrepreneurs tended to take a greater role in the community. Thirty-three percent were overtly philanthropic, gifting funds in support of initiatives such as children's camps, orphanages, charities,

parks, woodlands, education, and hospitals. Regional administration was also common and 55 of the entrepreneurs were involved on boards of some sort including district road boards, drainage boards, harbour boards, and education boards. Eight percent founded a school; 34 percent involved themselves either in local or national politics.

CONCLUSION

This chapter has argued that similarities existed between colonial entrepreneurs, to the extent that a lifecycle model could be constructed to represent their economic behaviour over their lifetime. The entrepreneur was different in orientation and behaviour to the existing firm. Moreover, the large-scale firm modelled by Larry Greiner in his 1972 lifecycle model, did not adequately represent the colonial entrepreneur, leading to a new interpretation. Entrepreneurship, because of the blend of ownership and control, meant that the decisions and qualities of the founder were embodied in the enterprises they established. Moreover the strategies that these enterprises pursued, could represent the founders own particular business strengths.

A five-period lifecycle model was proposed in this chapter. Each period of the lifecycle corresponded to a particular stage in the life of the entrepreneur. The five periods were preparation, embarkation, exploration, expansion, and transformation. Between each of the stages, the entrepreneur experienced a particular transition point, or as Greiner termed it, a period of *revolutionary* change. These transition points represented times in the development of the entrepreneur's career during which major life decisions or economic or organisational challenges were encountered, that necessitated some kind of response from the entrepreneur.

In brief, the five periods and their transition points were as follows. Period 1 (preparation) signified the period before any entrepreneurial activity when the entrepreneur left schooling and entered the workforce. During this time he added to his commercial knowledge, put aside capital, undertook a trade, accepted management positions and expanded his networks. This period, on average, lasted just over a decade until the entrepreneur was in his later twenties. The transition point an entrepreneur faced at the end of this stage was the decision to go into business for himself. What this research suggested was that rather than being a decision characterised by high risk, first-time entrepreneurs mitigated risk through their extensive product and industry knowledge, capital economising techniques, partnership, and managerial experience.

During Period 2 (embarkation) the entrepreneur left paid employment and commenced their first venture. Half of all the colonial entrepreneurs studied did so with a partner. Less than 40 percent of all entrepreneurs commenced (as their first venture) the enterprise that would be the most successful of their careers. More commonly, the first venture would turn out to be a stepping stone to other entrepreneurial ventures of greater success. The transition point at the end of Period 2 was termed cessation to signify this. The majority of colonial entrepreneurs ceased their first venture and started another enterprise. Cessation was shown to be a much broader term than failure. A selection of reasons as to why colonial entrepreneurs ceased their first business ventures was given: some were for economically beneficial reasons, for example, the sale of a business for a profit; others included bankruptcy or the closing down a business to avoid further losses. Overall, it was found that approximately one third of colonial entrepreneurs experienced business failure at some point in their careers. Equally revealing was that 87 percent of them re-entered entrepreneurial activity and again rose to a position of economic independence. In short, persistence rather than failure was a more accurate descriptor of the economic behaviour of colonial entrepreneurs.

The exploration period of the entrepreneurial lifecycle typically described the entrepreneur in their thirties. Colonial entrepreneurs were found to start, on average, over three new enterprises during their careers. Many had at least two ventures, before commencing that enterprise that would be the most successful of their career. They started this enterprise during the exploration period. This period was also characterised by heightened judgemental decision-making skills, heightened commercial knowledge, increased networks, and access to capital. It was noted, however, that even among seasoned entrepreneurs, cessation, even business failure, might still occur.

As the entrepreneur sought to expand their enterprise they entered Period 4 through a transition point characterised by management issues. Expansion meant that additional measures of coordination, control, and organisation needed to be put in place that demanded increased attention on the part of the entrepreneur to management problems. As these were addressed and overcome, the ability of the entrepreneur to expand their enterprise over a wider scale was increased. Business strategies employed by entrepreneurs were observed to be reflections of their personal strengths rather than arbitrary commercial choices. In addition, entrepreneurs displayed a reluctance to move themselves and their resources away from industries where they had in-depth knowledge and expertise. A focus strategy, leveraging on the entrepreneur's ability to use imperfect

information was more common than diversifying business interests. As a result, horizontal or vertical integration was not typically undertaken by entrepreneurs through acquiring economic units; rather, by starting their own additional firms. Through this, entrepreneurs were observed to be economic actors who added new enterprises and new jobs to the economy, as opposed to merely exchanging ownership of existing firms and resources.

Such a claim is important for understanding the economic contribution of entrepreneurs. For it would suggest that an entrepreneur moves an economy forward not only by establishing a venture that produces supra-normal returns, as economist Jacques Turgot demonstrated, but also by establishing new enterprises in new lines of business that add to the total number of enterprises in an economy and generate new jobs.

The fifth period (transformation) signified the stage in the life of the entrepreneur when they either passed their enterprise on to future generations, or it ceased on their death. A high degree of family involvement was noted among the enterprises started by colonial entrepreneurs. In half the cases studied, ventures started by colonial entrepreneurs were continued by family members after the death of the founders. The transformation of the original enterprises came about as some were converted into limited liability status and their shares were more widely held—often this was the consequence or concomitant of growth. In addition, the strategic direction of the firm commenced by the entrepreneur was apt to change under new ownership. Some diversified their product ranges and offerings, while some moved into other parts of the supply chain through forward or backward integration. In sum, colonial entrepreneurs were observed to be people who leveraged skill, networks and experience to start an enterprise. They undertook multiple ventures and persisted in the face of business failure. They made effective use of the family firm structure and often succeeded in creating significant enterprises that were passed on to another generation.

The next chapter concludes this thesis. It offers a summary of the main arguments presented in the thesis as well as a discussion of the areas in which the thesis contributes to New Zealand history and the theory of entrepreneurship. Limitations of the thesis are discussed along with areas for future research.



CONCLUSION: ENTREPRENEURSHIP AND A NEW VIEW OF 'THE LONG DEPRESSION'

No doubt our course is charted out for us but we must act as though, in a measure, we are architects of our fortunes. We must push and puff even if it is pre-ordained that we shall never succeed in life. We have a perfect right to look about us in every direction for a bettering of ourselves. I pity the man who has no ambition. I am clear for pushing my way, for having always a moderate amount of ambition, for hard working, for keeping clear of all trickery and cheaterly in commercial matters, for avoiding all speculation which cannot be carried on without some trickery, and surely I will get a competency at least, if not riches.¹

This thesis has examined the relationship between entrepreneurship and economic development in New Zealand between 1880 and 1910, considering the context within which entrepreneurs operated as well as the entrepreneurial actors themselves. By 1880, the problem of economic development was not new. Political economists, such as Adam Smith, David Ricardo, and Jean-Baptiste Say, had been debating the formation of wealth for over a century. Conventional economic wisdom suggested that land and agriculture were the source of wealth creation, but the industrial revolution was changing this view. Branches of trade and industry had arisen that had not existed previously and wealth gravitated to projectors and promoters outside the landed gentry or pre-industrial capitalist. By the late nineteenth century, as economist Alfred Marshall observed, the 'entrepreneur' as an economic class was gaining increasing prominence.

¹ Excerpt from the diary of John Macfarlane Ritchie, September 5, 1862. Written while Ritchie was aged 20 and cited in Parry, Gordon, *N.M.A.: the Story of the First 100 Years: the National Mortgage and Agency Company of New Zealand Ltd., 1864-1964*, Dunedin: National Mortgage and Agency Co., 1964, p.7.

CONCLUSION

It is within this changing economic order that this thesis is set. Determined colonisation of New Zealand had taken place since the 1840s. However, forty years on, the acute difficulties of settlement in an industrialised world became increasingly apparent. Eager colonisers, such as Edward Gibbon Wakefield, held a view of colonisation that in the end proved more idyllic than real. The creation of carefully planned and organised settler colonies, with distinct social classes, did not take place. They never could have. No amount of planning and foresight could have managed the rush of people and capital to Canada, Australia, and New Zealand in the mid-nineteenth century with the problems that such vigorous migration of people, ideas, and technology produced.

By the end of the 1870s, politicians on both sides of the Tasman Sea may have felt confident that they had mastered something of the challenge of colonial settlement. In both Australia and New Zealand, many of the initial obstacles of establishment had been overcome; the obvious points of population settlement had been recognized and the rule of law, property rights, and basic governance had been put into place. The Australian and New Zealand colonies had invested substantially in infrastructure, using millions of pounds of borrowed English capital. Road construction, rail transport, harbour facilities and telegraph communications were substantial areas of public investment. On some aggregate measures the colonies seemed to be successful in their move toward a more developed status. Australian GDP and income levels, for example, were higher than Britain between 1870 and 1891,² and historians generally agree that both Australia and New Zealand in the latter parts of the nineteenth century had among the highest living standards in the world.³

Heavy borrowing by the colonies could not continue indefinitely. Financial difficulties occurred in New Zealand before the Australian colonies, triggered by the collapse of the City of Glasgow Bank in 1878, falling land prices, and a downturn in international wheat and wool prices. In Australia, the boom continued until 1891, when

² See Greasley, David, and Les Oxley, 'A Tale of Two Dominions: Comparing the Macroeconomic Records of Australia and Canada since 1870', *Economic History Review*, 51:2 (1998), pp.294-318.

³ The European population of New Zealand was the first in the world to reach more than 55 years life expectancy in the 1870s. See for example Pool, Ian, *Te Iwi Maori: A New Zealand Population Past Present and Projected*, Auckland: Auckland University Press, 1991, p.77. In addition, see Pool, Ian, and Jit Cheung, 'Why Were New Zealand Levels of Life Expectation so High at the Dawn of the Twentieth Century?', University of Waikato, Discussion Paper, Population Studies Centre, 43 (2002); Gibson, C. J., 'Demographic History of New Zealand', Ph.D. thesis, University of California, Berkeley, 1971, p.173.

a financial crisis was precipitated by growing balance of payments difficulties and the cessation of British lending following the Baring crisis of 1890.⁴

In New Zealand, the severity of the immediate economic shock seemed to dissipate swiftly. When examining the period around 1878-79, economist Muriel Prichard observed that: 'Public works expenditure was reduced and borrowing attempted in London was made difficult by lack of confidence. The position was, however, presently relieved by the successful raising of a loan of £5 million. Gradually prospects brightened and speculation in land picked up again.'⁵ The editor of the *New Zealand Herald* echoed similar sentiments in 1880:

The New Year opens well, the shadow of a period of depression is getting fainter, and all points to better times. The termination of Parliamentary difficulties and the floating of the loan have restored public confidence. The just claims on the State can be satisfied, public works, though on a reduced scale can be proceeded with, the banks will be able to afford increased facilities to the trader, and the enhanced price of wool will encourage speculation, and the excellence of the crops adds a solid sum to the national wealth.⁶

Despite such optimism the economy still faced crucial challenges to its longer-term viability. The single-export staple economy that had defined the colony's early years of settlement was not sufficient to achieve a strong foundation for longer-term economic development. The export of wool, while its production was obviously suited to the Zealand environment, eventually proved an inadequate basis for economic advance and the support of a greater population, given its price volatility and variable yield. By 1880, a search was underway at national and provincial levels for alternate means to supplement the 'golden fleece'. For the colony to be successful over the longer-term, politicians believed that they had to attract continued population inflows while developing a comprehensive economic base.

What this thesis has attempted to show is that the economic development that was accomplished in the colony came about neither by central planning, nor by large-scale enterprise, nor by government instituted economic reform. Economic advance occurred at a lower level in the economy, primarily through private enterprise, and through the initiatives of entrepreneurially minded colonists providing a solution to the colony's economic difficulties.

⁴ Greasley, David, and Les Oxley, 'A Tale of Two Dominions', p.304.

⁵ See Prichard, *Economic History of New Zealand*, p.155.

CONCLUSION

The context within which these actions took place is a crucial part of the story. As this thesis has demonstrated, the rapid population growth experienced by the colony between 1880 and 1910 produced fresh demand for goods and services in new areas of settlement, and it accentuated economic demand in already urbanised locations. The temporary isolation of regional markets, caused by the colony's geography and its limited communication and transportation networks, assisted early entrepreneurs by producing a barrier to competition that remained in place until the early twentieth century. Technological innovation imported in the form of new products, machinery, and ideas brought change to productive processes as well as a range of new consumer products. New goods, such as the telephone, sewing machine, typewriter, automobile, and bicycle created opportunities for new lines of business.

In addition, the economic environment was enhanced by continued state investment in public goods. This produced a prolonged demand for local raw materials supporting the work of joinery firms, timber mills, quarries, cartage companies, and building contractors. As a result of this investment, harbour facilities, roads, railways, bridges, waterways, hospitals, schools, customs buildings, court houses, police stations, tunnels, water races, and parks were all added to the structure of colonial society. Largely these public goods were constructed by private firms as a result of competitive tenders. This process enabled firms to supplement their private work with government contracts, thus expanding the size of their enterprises.

Furthermore, a positive entrepreneurial climate was encouraged through a supportive fiscal policy. There was no tax on company profits until 1896. Even then, for most of those liable for income tax, it amounted to approximately two percent on earnings. This aided the entrepreneur in two ways. Firstly, there was increased motivation to commence new enterprise as the entrepreneur kept the reward for his labours. Secondly, with a propensity to reinvest in his enterprise, the entrepreneur had more funds at his disposal to do so, as these funds were not taken in income taxes. When this policy was coupled with a nil government duty on the importation of production machinery, and an absence of conspicuous consumption, the result was a strong inducement to commence industrial enterprise and benefit from whatever profits could be generated. In sum, the colonial economy was both supportive of entrepreneurial endeavour and driven forward by it.

⁶ *New Zealand Herald*, Thursday, January 1, 1880, p.3.

Although there was an admiration of—and emulation of—United States business methods (for example by Firth and Laidlaw), the colonial entrepreneur was not a mirror image of his American counterpart. Neither the virtues of the Horatio-Alger myth, nor the ethos of the business elite have been perpetuated in New Zealand society. A distinct set of values emerged, as the *Auckland Observer* newspaper reported when describing one successful colonist in 1880: ‘He was not a scion of nobility, he was not born with a silver spoon in his mouth. Blue blood is not needed to make a successful colonist. Bone and muscle, pluck and thrift, enterprise and industry, carry a man to the pinnacle of fortune, where blue blood often goes to the gutter.’⁷ However, such tributes to the virtues of entrepreneurship were few. To the present day, the entrepreneur has remained a dim figure in New Zealand’s historical record.

In addition, the scale and breadth of activities undertaken by American entrepreneurs did not eventuate in the colony. The colony of New Zealand never was, nor has it evolved, to support the large-scale manufacturing and service operations that characterise the North American economy. Instead, British-style personal capitalism has been central to the development of the New Zealand economy. Historian Alfred Chandler suggested that such a form of enterprise essentially retarded the development of the British economy in the late nineteenth and early twentieth centuries. This thesis, along with other historians, contests Chandler’s propositions.⁸ It was evident that the micro-size of New Zealand’s industrial structure did not equate to a sluggish economy. Rather, the small-scale firm, with its emphasis on individual drive, craft skills, personal capitalism, and family ownership aided colonial economic development. Between 1880 and 1910, the average size of the colonial industrial enterprise was between 12 and 20 persons. But this small scale did not limit wealth creation. As this thesis has demonstrated, significant innovations in frozen-meat processing, dairy processing, hydraulic gold mining, and engineering were advanced by small firms and individual entrepreneurs. Furthermore, trust networks with strong provincial ties worked to minimise transaction costs, raise capital, and assist business development. The rise of

⁷ The *Observer*, Saturday, October 9th, 1880, p.28. The editor was remarking on the commercial career of colonial share broker and financier, Reader Wood. Similar sentiments were later used to describe Josiah Clifton Firth: ‘In conclusion, I may point to Mr Firth as a type of the successful colonist who has won his way to independence by industry, thrift, enterprise, shrewdness, and great personal pluck and determination, combined with adherence to those Christian principles which were inculcated in his youth.’ See The *Observer*, Saturday, December 4th, 1880, p.100.

CONCLUSION

cooperatives in the dairy industry was one example of this, as was the combination of mercantile, shipping, engineering, and farming interests in the development of the frozen meat industry.

The colony during the period covered by this thesis did not have mature capital markets. It was the end of the nineteenth century before a government loan was raised by internal subscription. Yet, for colonial entrepreneurs, their limited access to significant capital did not operate as a barrier.

This pattern of economic mobility has been observed by other historians in different contexts. Crouzet, for example, observed that during the early stages of the industrial revolution in Great Britain entrepreneurs used capital economising techniques, such as partnership and renting factory space, as a way of gaining entry into factory production. Once established, these entrepreneurs traded their way up through the gradual reinvestment of profits.⁹ Historian Katrina Honeyman observed a similar pattern in her study of British entrepreneurs in the lead mining, cotton spinning, and lace industries in the late eighteenth and early nineteenth century. Describing a pattern of internal upward mobility among entrepreneurs, Honeyman noted that limited capital was a feature of entrepreneurial activity in these industries and emphasised the importance of technical skill in effecting social mobility for entrepreneurs. Primarily, new entrepreneurs came from within the industries they worked; newcomers without sufficient industry knowledge often failed.¹⁰

Elements of the industrial environment that these historians identified in the early industrial revolution were prevalent in the colonial economy half a century later. In the absence of an established economic order, and without traditional power structures in place, rapid social and economic change in New Zealand produced a democratisation of industry. Consequently, the small man with limited capital, skill, and an enterprising spirit could achieve upward mobility. The case analysis of colonial entrepreneurs undertaken in this thesis supported such a proposition; 70 percent of colonial entrepreneurs commenced their first venture having had previous experience in that industry; 72 percent started their first venture using only limited personal capital. In both

⁸ See for example: Payne, P.L., *British Entrepreneurship in the Nineteenth Century*, 2nd ed., London: Macmillan, 1988.

⁹ See Crouzet, F., 'Capital Formation in Great Britain during the Industrial Revolution', in Crouzet, F., (ed.), *Capital Formation in the Industrial Revolution*, London, 1972.

of these instances, partnership played an important role, useful as a capital economising technique and a way of maximising knowledge and skill. Fifty percent of colonial entrepreneurs started their first venture as some form of partnership (family-based or otherwise). For immigrant entrepreneurs, this combination of factors was particularly useful for entering an uncontested field—skill, imperfect information, and networks were a means to enter the colonial economy.

Furthermore, an analysis of capital markets and census statistics identified that numerous classes of industry could be commenced on limited capital. Between 1880 and 1910, on average, 59 percent of industrial establishments had a total capital investment of £1999 or less. For those who rented premises, purchased second-hand machinery, or used supplier credit the cost of entry to entrepreneurial activity was significantly less—in some industries entrance costs could be measured in hundreds of pounds. In any census period between 1880 and 1910, almost 30 percent of industrial establishments had an average capital investment in plant and machinery of £250 or less. In the colonial economy, entrepreneurs could use personal savings to commence an enterprise and then develop the scale of their enterprises through the reinvestment of profits.

What this study has also showed, was that while some of the enterprises created by these entrepreneurs look significant in hindsight, a closer examination showed that these enterprises expanded at a modest, but steady pace. From the case analysis, 59 percent used the reinvestment of profits to expand their enterprises, while a further 27 percent took in additional partners who contributed capital. Rapid success was not characteristic of the entrepreneurial venture in the colonial economy.

Chapter eight proposed an entrepreneurial lifecycle and found that colonial entrepreneurs advanced their ventures through several stages of organisational development, commenced multiple ventures over their careers, and that they often commenced their most successful business enterprises in their mid-thirties after they had been in entrepreneurial activity for almost a decade. These findings were provoked by the work of Larry Greiner on the organisation lifecycle, but it is questionable as to whether Greiner's model is applicable to New Zealand. In particular, it was argued that entrepreneurs might advance organisations beyond the first stage of Greiner's lifecycle and that a lifecycle could be constructed that was more descriptive of the entrepreneur in

¹⁰ See for example Honeyman, Katrina, *Origins of Enterprise: Business Leadership in the Industrial Revolution*, Manchester: Manchester University Press, 1982, pp.164-165.

CONCLUSION

the colonial context. In addition, it was evident from this research that an initial entrepreneurial failure was not an end to an entrepreneur's career, but more often a developmental step on the path to further enterprise. Thirty-one percent of the case analysis entrepreneurs encountered venture failure at some point in their careers, but nearly ninety percent of these started another enterprise to again achieve financial independence and commercial success.

The experience of the colonial economy during the period of this thesis lends support to some of the theoretical claims that Mark Casson has made for the entrepreneur. Casson observed that:

The demand for entrepreneurs depends upon the pace of change in the economy. The faster change occurs, the greater will be the demand and the higher the reward to the entrepreneur ... In summary, therefore, the reward to entrepreneurship depends upon the pace of economic change, the distribution of personal wealth, and the social and institutional framework of the economic system as a whole.¹¹

In many respects the colonial economy as it has been presented in this thesis, with its rapid social and economic changes provides a case in point for Casson's observation. The periods of progress, as Frank Knight termed them: the increase in population; education and training; accumulation of capital; improvement of technology and business organisation; discovery of new natural resources; and changes in the character of human wants; occurred with such fervour and intensity that entrepreneurs found themselves in an economy rich with opportunity.¹² For example, between 1880 and 1910 New Zealand's population doubled from 500,910 to 1,025,406 and during this time the population concentration moved from the South Island to the North Island. Local industrial enterprise kept pace with such changes. In 1880, there was one industrial enterprise for every 235 persons in the colony. In 1910, there was one industrial enterprise for every 204 persons in the colony—new entrepreneurs and enterprises had entered the market to meet the demand created by rapid population increase and urbanisation.

¹¹ Casson, Mark, *The Entrepreneur: An Economic Theory*, pp.337-338.

¹² See Knight, *Risk, Uncertainty and Profit*, pp.141-174 and 319.

CONTRIBUTIONS TO OUR UNDERSTANDING OF NEW ZEALAND HISTORY

This thesis has, one hopes, made several contributions to the understanding of New Zealand history and the debates about the period in particular. The first was the analysis of government investment in public works undertaken in Chapter 3. Historians have generally held that any state investment in public works ceased after the 1878/79 period. For example, Raewyn Dalziel observed that Vogel's public works investment continued under Grey's 1877 government, but concluded after this. Dalziel noted: 'This government resumed borrowing, ordered more immigrants and drew up new proposals for spending on public works. In 1879 these plans came to an abrupt halt when the world economy went into a sharp recession.'¹³ Similarly, Sutch observed:

In 1877 and 1878 government loan-spending was halved and in 1879 it was further reduced; at the same time the prices of wool and wheat fell heavily. Atkinson, the Treasurer, reduced expenditure by cutting civil service salaries by 10 per cent, but still had some loan money to spend. In 1879 the banks started contracting credit, for the English were withdrawing their deposits from the New Zealand banks, and the Australian banks in New Zealand were sending money to Australia for more profitable uses there. In 1880 the Bank of New Zealand held £1.5 million in deposit in London because it believed there was no outlet in New Zealand for the money. At various times during the 'eighties the banks sent money to London and Australia while distress in New Zealand was increasing. Private capital also was withdrawn from New Zealand and helped accentuate the depression.¹⁴

Simpson noted in his work on immigration: 'But in 1879 there was a banking crisis in Britain when the City of Glasgow Bank collapsed. Thanks both to this and to an expansion of economic activity in Victoria which made that a more attractive field for investment, credit in New Zealand collapsed about the same time.... Much of the financial activity which had stimulated the economy was thus brought to a standstill, with consequential rising levels of bankruptcies and unemployment.'¹⁵

This thesis has put forward a counter-view and argued that the policy of large-scale investment in public works did not abruptly halt in 1879, as these historians have suggested; rather, it continued until the end of the nineteenth century as further loans were drawn down and loan monies as well as general revenue diverted into public works.

¹³ See Dalziel, Raewyn, 'Railways and Relief Centres 1870-90', in *The Oxford Illustrated History of New Zealand*, 2nd ed., Sinclair, Keith, (ed.), Auckland: Oxford University Press, p.110

¹⁴ Sutch, *Poverty and Progress: A Re-assessment*, pp.89-90.

¹⁵ Simpson, *Immigrants*, p.186.

Figures presented in this thesis have shown that between 1880 and 1889, a further £12 million was spent on immigration and public works including £1.1 million on public buildings, £5.7 million on railroad construction and £1.9 million on road construction. Such investment continued to stimulate the economy in much the same way as the £14 million invested during the Vogel period had done. As historian Keith Sinclair noted, there was a difference between political rhetoric and political action. Sinclair stated: 'In 1879 the Ministry sanctioned the largest loan of all. Even thereafter, though retrenchment was the watchword of successive Governments, borrowing continued until the late eighties.'¹⁶ As a result infrastructure continued to expand, private firms continued to tender for government contracts, and demand remained high for local suppliers of timber, bricks, tiles, quarries, and transportation.

Following this theme, this thesis supports the misgivings that some historians have had about the emphasis placed upon the long depression. Traditional views of the long depression have accentuated an overall slump in economic activity between 1879 until 1895, highlighting the falling land values, contraction of capital markets, falling export prices and rising unemployment. For example, Condliffe stated: 'The ramifications of the depression of the eighties extend into every department of economic life . . . The collapse of public expenditure, and the cumulative credit stringency of the eighties, naturally threw the local urban industries, which had been encouraged in the boom period, into most difficult straits. Unemployment was not new in New Zealand.'¹⁷ Simkin added, reflecting on the period after 1885:

Then followed eleven years of prolonged depression unrelieved by any general upswing, although farmers were helped by a substantial rise in wool prices between 1888 and 1891, only to be pushed further into the mire by an even more severe slump in prices. The efforts of the Bank of New Zealand to ease itself of a monstrous encumbrance of frozen assets proved unavailing, and the long depression culminated in a banking crisis. As world prices rose after 1895 the depression steadily lifted, and the development of meat and dairy exports led to a period of great prosperity.¹⁸

Similarly, Borrie stated: 'Little could be done for urban industries, which had been started during the boom, and which had collapsed with the decline of public works

¹⁶ See Sinclair, *History of New Zealand*, p.161.

¹⁷ See Condliffe, *New Zealand in the Making*, pp.148-153.

¹⁸ Simkin, *Instability*, p.191.

and building.’¹⁹ However, this thesis has put forward an alternative view of the long depression based on a detailed investigation of industrial development, investment and infrastructure development. The claims of Condliffe and Borrie regarding the decline of urban industries were not substantiated by census figures over this period. Moreover, Simkin’s analysis was shown to have used census figures incorrectly for later periods and not at all for the period of the long depression.

Between 1881 and 1891, industrial establishments increased in number from 2136 to 3341; an increase of 56 percent over ten years. Similarly, industrial employment during this time rose 66 percent from 17,928 in 1881, to 29,880 by 1891, and industrial capital increased 59 percent from £3,579,295 in 1881, to £5,697,246 in 1891.²⁰ These figures support Gary Hawke’s concern about the misuse of the word depression to describe the period 1880-1896 as well as Russell Stone’s claims that the period was one of important infrastructure development, urban growth, and improved capital assets.²¹ It is undeniable that the colonial economy grew substantially between 1880 and 1896. In every successive census period the number of industrial enterprises increased, those in industrial employment increased, and a greater range of industrial products were produced. Added to this, rail, road, telegraph infrastructure continued to expand at a steady pace as well as school construction, hospital construction and other municipal buildings. Land values and the price of some goods fell, but as Hawke has shown, real incomes remained intact. Moreover, entirely new industries, such as hydraulic gold mining, frozen meat exports, and dairy processing commenced. These industries added millions of pounds in export earnings during the period, while existing firms increased their investment in industrial capital. Such indicators are not consistent with the modern notion of a ‘depression’; rather they are consistent with an expanding economy. As stated earlier in the thesis, the period between 1880 and the mid-1890s is better described as a time of economic discontinuity and turbulence, rather than depression, as this period was not characterised by a long-term economic slump.

In addition, this thesis has suggested that a reliance on external trading figures or commodity prices alone as a means of interpreting the state of the economy is insufficient. Historians, if they are to describe accurately periods of New Zealand’s

¹⁹ Borrie, *Immigration to New Zealand*, p.142.

²⁰ In addition, these figures would increase between 10-13 percent if drapery trades were to be estimated as part of these totals.

²¹ See for instance, Stone, *Makers of Fortune*, p.195.

CONCLUSION

economic advance must look beyond aggregate measure of economic well-being, as they do not accurately describe the nature of the colonial economy. Aggregate figures not only hide regional variations but also blind us to sectors of the economy that did not import or export to any degree. In this regard one could mention the timber industry, the printing industry, the building industry, the brick making industry, and the mercantile trades—all of which tend to get overlooked when discussing the economic well-being of the country using trade-related data. However, all of these industries attracted significant investments in industrial capital and produced output totalling in the millions of pounds.

Finally, a contribution of this thesis to our understanding of New Zealand history is a renewed emphasis on the importance of commercial life and business in the development of this country. The undertakings of entrepreneurs, joint-stock companies, traders, merchants, and industrialists shaped the economic, social, and cultural state of the colony. It was impossible for this not to be the case. While there has been some important company, industry, and regional research, there is ample scope for much more.

CONTRIBUTIONS TO OUR UNDERSTANDING OF THE ENTREPRENEUR

This thesis has tried to make several contributions to the thinking on entrepreneurship. The first has been the measures of entrepreneurial activity in the form of the LVF, (the number of ventures that an entrepreneur founded over their lifetime), and secondly, the LVI, (the number of ventures that an entrepreneur was involved in over their lifetime). Contemporary research into entrepreneurs who undertake multiple ventures has identified novice, portfolio, and serial entrepreneurs.²² However, contemporary studies tend to take a snapshot in time. Case-based biographical research, of the type used in this thesis, which considers the life span of the entrepreneur, can provide useful information on this line of investigation. For example, this research found that serial entrepreneurship was not a sub-group, but a central characteristic of the colonial entrepreneur. The adoption of a common measurement tool such as the LVI or LVF would allow comparison between the economic activities of entrepreneurs in different regions and periods, to see if this kind of behaviour is descriptive of the entrepreneurial class as a whole.

²² Westhead, Paul and Mike Wright, 'Novice, Portfolio and Serial Founders: are they Different?', *Journal of Business Venturing*, 13:3 (1998).

In addition, the observation that colonial entrepreneurs undertook multiple ventures during their lifetime is contrary to the argument put forward by Joseph Schumpeter, who believed that entrepreneurial activity would lessen over the career of an entrepreneur as they moved from entrepreneurial behaviour to more managerial behaviours. Schumpeter's view was not supported by the case analysis of colonial entrepreneurs, which found that 82 percent of those studied commenced more than one venture during their career. Similarly, a number continued founding enterprises well into what are normally considered retirement years.

A further contribution of this thesis to theory has been the lifecycle diagram of entrepreneurial activity presented in Chapter 8. This model attempts to represent the disjunctures in the life of a colonial entrepreneur—times of decision and change in the career of a nineteenth-century entrepreneur. In addition, the model underscores the difference in behaviour and orientation between the entrepreneur and the firm. While the founder/entrepreneur was acting as decision maker, the strategies and actions of his company were very much an embodiment of himself.

In addition, the lifecycle of the colonial entrepreneur drew attention to the distinction between cessation and failure in the new venture process. Numerous reasons were given for entrepreneurs ceasing ventures, of which, only one was venture failure. While 31 percent of the case analysis entrepreneurs experienced venture failure during their careers, it seldom brought about the end of their entrepreneurial activity. Nearly 90 percent started further ventures and achieved a level of financial independence and commercial success. Furthermore, entrepreneurs showed a preference when undertaking forward or backward integration, to commence their own additional economic enterprises, rather than acquire those started by others.

LIMITATIONS OF THIS STUDY

This study of the colonial entrepreneur has been primarily concerned with the New Zealand economy, and needs to be read as such. While comparisons with Australia, the United Kingdom, Canada, and the United States have been made on occasion, the focus of this research has not been to write a comparative study. Rather, it has been to focus on a single economy over a discrete period of time. Furthermore, this study has investigated the uniqueness and characteristics of the colonial entrepreneur. Further research would be necessary to understand how these characteristics may have altered,

for instance, in the twentieth century as further structural changes occurred in the New Zealand.

This study is also limited in the number of industries that it has been able to investigate in regards to its claims about capital and productivity. Factory and industrial statistics during the period do not give any indication of the retail sector of the New Zealand economy. This is unfortunate. Indications are that this sector was probably larger in productive output and employment than the industrial sector, and equally vigorous from an entrepreneurial perspective. In addition, while statistics were entered on all classes of factory and industrial activity recorded in census, space has not permitted a more comprehensive discussion as to the characteristics of these industries, how they developed over time, or what provincial differences existed.

In addition, this thesis does not examine in-depth the social or cultural aspects of colonial settlement, nor does it examine the labour reforms of the 1890s, or other areas that might constitute topics of investigation for historians in this period. This was a deliberate choice in order to focus on the entrepreneur and his characteristics. However, further work in this area would present an expanded account of New Zealand's economic and social development and the place of the entrepreneur. In some respects, this thesis has provided the ground-work for such a study.

In addition, this thesis is silent as to the characteristics of professional firms, multi-national firms, or even the 'non-entrepreneurial' firm in this period. How significant their role was in the economy during this period, and how they contributed to economic advancement is an issue requiring further research. Finally, the case analysis portion of research completed for this thesis, while it accounted for 133 participants from a spread of industries and geographic locations would benefit from a larger sample across a wider time period, if more substantial claims are to be made of the New Zealand entrepreneur.

AREAS FOR FUTURE RESEARCH

The area of entrepreneurship and New Zealand business history is one that is open for further investigation. There have been limited systematic long-term studies of entrepreneurship in New Zealand economic development to date. The work of Simon Ville on stock and station entrepreneurs, the work of Steve Jones on the brewing industry, and Russell Stone's study of late nineteenth century Auckland entrepreneurs are three outstanding contributions. All would admit that large portions of New Zealand's

economic development including industries, regions, and periods remain untouched at present. Most pressing would be work on mercantile and retail industries in both the nineteenth and twentieth centuries. The nature of the colonial economic development with its intensive trading mentality encouraged many merchant entrepreneurs. These await study as a group—no one has yet to accurately quantify this industry in the nineteenth century.

Similarly, this thesis asserted that some of Butlin's claims about Australian economic development, in particular the impact of urbanisation, may also explain the development of the New Zealand economy. Butlin's thesis, in part, was based upon the rate of population growth in Australia during the colonial period and that urbanisation had a more defining impact on economic development than trade.²³ This thesis showed that during the same period of Butlin's examination of the Australian economy, the colony of New Zealand had a higher rate of population increase—though without the same mass of population. Further research is required to examine these claims in more depth. In addition, the impact of business culture on society in the nineteenth century New Zealand has not been investigated in any depth and would warrant further study, as would more detailed investigations on particular regions and their development. Far less, for example, is known about the economic development of Marlborough or Auckland in the early twentieth century than is known about the development of Wellington or Dunedin.

SUMMARY

The argument of this thesis was that the unique combination of forces at play in the New Zealand economy between 1880 and 1910 produced a vigorous engine for economic growth. In this economy, enterprise developed faster and in a more sophisticated fashion than is generally held and the internal economy (internal markets and industry) provided a nucleus for wealth creation regardless of what was occurring in larger export markets.

The economic expansion that transpired during this period was not the result of large-scale initiatives by landed capitalists. Nor did it come about from established firms expanding in scale and scope, increasing economic activity. Rather, what has been

argued is that the small firm, governed by the proprietor, partnership, or family was the dominant business organisation in the colonial economy and acted as an important mechanism by which expansion occurred. From this, one might argue that Chandler's thesis of the multi-divisional firm as necessary in economic expansion is accurate in some respects but wanting in others. Economies of scale may assist the established economy to achieve mass production and the price benefits that this offers, but it was not the only means to achieve rapid economic development. The experience of New Zealand in the late nineteenth and early twentieth centuries demonstrated that it was possible to develop an economy without the multi-divisional form, where entrepreneurship and innovation were generating new markets. In one sense, the economic prosperity enjoyed by New Zealand in the early twentieth century could not have been so without the enormous investment in public goods and commercial assets in the last quarter of the nineteenth century.

The colonial entrepreneur was a non-specialist as we conceive of such a term today. Importing, exporting, wholesaling, retailing, manufacturing, dealing—these were not specialities to him, or 'strategic choices' as they are conceived of in modern management. To add allied activities onto his main line of business was not a foreign notion, but merely an additional opportunity to pursue commercial enterprise. In occupation he could be a merchant, a trader, a journeyman, a promoter of schemes, a manufacturer, an innovator. He was often an immigrant, although not always, and he was not likely to be an educated man in the modern sense, though he may have served an apprenticeship. By definition he was someone alert to the main chance—changes in society, technology, and commerce that might be exploited for economic benefit. He was someone who tended to remain within the areas of commerce and industry he knew well, using what imperfect information and knowledge he had accumulated. To undertake business ventures he would often use non-traditional and varied sources of capital, such as lawyers, suppliers, savings, family wealth, investments by friends, relatives or partners, and shareholdings—private and public. At times, the financing might be as innovative as the business venture itself.

²³ Butlin's argument has been echoed in the work of Lionel Frost, who accentuated the importance of the town as a centre for economic development. See Frost, Lionel, 'The Contribution of the Urban Sector to Australian Economic Development before 1914', *Australian Economic History Review*, 38:1 (1998), pp.42-73

He was an owner of his business and as such bore the responsibilities of ownership with the advantages and disadvantages that these entailed. He was someone who appeared largely free from the social stigma of pursuing a non-traditional career path. To be a New Zealand entrepreneur was not a celebrated vocation, but neither was it an unusual one. He was starting in business; to his society such a choice may have been as natural a 'career path' as what we conceive of today as a professional 'business career'. He was a promoter, a speculator, a merchant, an adventurer, a projector, a trader, an undertaker—an entrepreneur in the modern sense of the word.

The micro-size of the New Zealand commercial organisation that was prevalent in the nineteenth century has continued until the present day. Small and medium-sized enterprises were the mechanism by which public and private capital was constructed. By the turn of the twentieth century many of these organisations did not have a long history. Yet, they were rapidly establishing loose partnerships of family, colleagues, and promoters.

It was the number of these firms and their variety that defined the colonial economy. Printers, bakers, shoe makers, tailors, joiners, millers, merchants, bankers, coachbuilders, ship builders, carters, iron moulders, engineers, and drapers, were demanded by the hundreds as the population in urban areas increased at exhausting rates. As a result, replication of commercial activity characterised the late nineteenth century New Zealand commercial landscape. Commercial capital was not the quintessential ingredient in colonial entrepreneurial advance. Pluck, timing, skill, ambition and perseverance were equally important; those who exhibited such, both immigrant and native, found ample space in the colonial economy to exercise such an enterprising temperament.



CONCLUSION

APPENDICES

APPENDIX A

ENTREPRENEURS IN CASE ANALYSIS

| | Surname | First Name | Yr Birth | Place of Birth | Primary venture |
|----|-------------|------------|----------|------------------|-------------------------------|
| 1 | Ah Chan | Joe | 1882 | China | Market gardener |
| 2 | Aitken | John | 1849 | Scotland | Merchant |
| 3 | Alderton | George | 1854 | Surrey | Newspaper |
| 4 | Alison | Ewen | 1852 | Auckland | Ferry Company |
| 5 | Andrews | Samuel | 1836 | England | Plasterer |
| 6 | Anstice | Sophia | 1849 | London | Dressmaker/Drapery |
| 7 | Bain | James | 1841 | Edinburgh | Newspaper |
| 8 | Barr | Peter | 1861 | Dunedin | Accountant |
| 9 | Basten | Alice | 1876 | Auckland | Accountant |
| 10 | Bell | George | 1809 | Yorkshire | Newspaper |
| 11 | Blair | John | 1843 | Scotland | Publisher |
| 12 | Bradney | James | 1853 | Staffordshire | Shipper |
| 13 | Brett | Henry | 1843 | Hastings | Newspapers |
| 14 | Brown | Byron | 1866 | Wellington | General Store Keeper |
| 15 | Brown | Henry | 1842 | Penwardine | Sawmilling |
| 16 | Buckland | Alfred | 1825 | Devon | Auctioneering |
| 17 | Butler | William | 1858 | Warwickshire | Sawmilling |
| 18 | Butterfield | Francis | 1838 | Hobart | Furniture Manufacture |
| 19 | Buxton | Alfred | 1872 | Hanley | Landscaper |
| 20 | Carter | Francis | 1869 | Moutoa | Sawmiller |
| 21 | Caselberg | Myer | 1841 | Poland | Merchant |
| 22 | Cassidy | Hugh | 1840 | Ireland | Coach co. |
| 23 | Chambers | Joseph | 1859 | Te Mata | Winemaker |
| 24 | Chambers | John | 1839 | England | Distributor of Engineering Eq |
| 25 | Chong | Chew | 1836 | Canton | Butter fact. |
| 26 | Clark | James | 1833 | Scotland | Clothing Manufacture |
| 27 | Cock | Joseph | 1855 | Cornwall | Shipping |
| 28 | Collinson | Leopold | 1878 | Palmerston North | Dept. Store |
| 29 | Coory | Shirefie | 1865 | Lebanon | Retail store |
| 30 | Corban | Assid | 1864 | Lebanon | Winemaker |
| 31 | Corpe | William | 1836 | England | Butter factory |
| 32 | Coull | Thomas | 1829 | London | Printing |
| 33 | Court | John | 1849 | England | Retailer |
| 34 | Crawford | William | 1844 | Ireland | Brewing |
| 35 | Dahl | Carl | 1856 | Denmark | Tent Manufacturere |
| 36 | Dawson | William | 1852 | Scotland | Brewing |
| 37 | Donald | Alexander | 1842 | Scotland | Shipper |
| 38 | Duncan | Peter | 1838 | Scotland | Engineering |
| 39 | Edgecumbe | George | 1845 | Wiltshire | Newspaper |
| 40 | Edmonds | T | 1858 | London | Baking powder manufacturer |
| 41 | Edwards | Edwin | 1862 | Surrey | Newspaper |
| 42 | Ellis | Arthur | 1868 | Leeds | Mattress Manufacturer |
| 43 | Elsom | Sarah | 1867 | Dunedin | Florist |
| 44 | Fenwick | George | 1847 | Sunderland | Newspaper |
| 45 | Firth | Josiah | 1826 | Yorkshire | Flourmilling |
| 46 | Fleming | Thomas | 1848 | Scotland | Flourmilling |
| 47 | Fletcher | James | 1886 | Scotland | Builder |
| 48 | Fraser | George | 1832 | Scotland | Engineering |
| 49 | Frear | Joseph | 1846 | England | Builder |
| 50 | Friedlander | Hugo | 1850 | Prussia | Grain merchant |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

| | Surname | First Name | Yr Birth | Place of Birth | Primary venture |
|-----|-------------|------------|----------|----------------|------------------------------------|
| 51 | Gear | James | 1839 | Somerset | butchery |
| 52 | Gibbons | Hopeful | 1856 | Tasmania | Brewing |
| 53 | Goodfellow | William | 1880 | Te Awamutu | Dairy Processor |
| 54 | Hallenstein | Bendix | 1835 | Germany | Merchant |
| 55 | Hatch | Joseph | 1838 | London | Chemist |
| 56 | Hatrick | Alexander | 1857 | Victoria | Tourism |
| 57 | Hayes | Eben | 1851 | England | Engineering |
| 58 | Hayward | Henry | 1865 | England | Motion Pictures |
| 59 | Hellaby | Richard | 1849 | Derbyshire | butchery |
| 60 | Holland | Henry | 1859 | England | Engineering |
| 61 | Holt | Robert | 1833 | England | Sawmilling |
| 62 | Horton | Alfred | 1843 | England | Newspaper |
| 63 | Hudson | Richard | 1841 | England | Biscuit manufacturer/confectionery |
| 64 | Ivess | Joseph | 1844 | Limerick | Newspaper |
| 65 | Johnston | Walter | 1839 | London | Merchant |
| 66 | Kennedy | Martin | 1840 | Ireland | Mining |
| 67 | King | Newton | 1855 | New Plymouth | Stock and Station |
| 68 | Kirkcaldie | John | 1838 | Kemmpway | Dept Store |
| 69 | Kirkpatrick | Samuel | 1854 | Ireland | Canning |
| 70 | Kuhtze | Frederick | 1863 | Germany | Brewing |
| 71 | Laidlaw | Robert | 1885 | Scotland | Mail-order |
| 72 | Logan | Archibald | 1865 | Scotland | Boatbuilders |
| 73 | Luttrell | Alfred | 1865 | Tasmania | Design and Construction Co |
| 74 | Macarthy | Thomas | 1834 | London | Brewing |
| 75 | Macdonald | Thomas | 1847 | France | Accountant/Auctioneering |
| 76 | Manoy | Henry | 1879 | NZ | Retail |
| 77 | McGeorge | Alexander | 1868 | Dunedin | Gold dredging |
| 78 | McGregor | Alexander | 1828 | Canada | Shipping |
| 79 | McIndoe | John | 1858 | Scotland | Printer |
| 80 | McKee | Arthur | 1863 | Liverpool | Industrialist |
| 81 | Mckenzie | John | 1876 | Australia | Dept. Store |
| 82 | McMinn | Alexander | 1842 | Ireland | Newspaper |
| 83 | McSkimming | Peter | 1848 | Scotland | Pipe/Brick Man. |
| 84 | Menzies | Robert | 1854 | Scotland | Aerated Water |
| 85 | Millar | Annie | 1855 | Scotland | Bakery |
| 86 | Mills | James | 1847 | Wellington | Shipping |
| 87 | Milne | Mary | 1840 | Ireland | Drapery |
| 88 | Mitchelson | Edwin | 1846 | Auckland | Sawmilling |
| 89 | Myers | Arthur | 1867 | Ballarat | Brewing |
| 90 | Nathan | Joseph | 1835 | London | importer/exporter |
| 91 | Nelson | William | 1843 | England | Meat Processing |
| 92 | Newman | Thomas | 1859 | Nelson | Carrier |
| 93 | Niccol | George | 1858 | Auckland | Shipbuilder |
| 94 | Partington | Joseph | 1858 | Auckland | Flourmilling |
| 95 | Patterson | James | 1859 | New Plymouth | farm owner |
| 96 | Perano | Joseph | 1876 | Dunedin | Whaler |
| 97 | Pirani | Frederick | 1858 | Melbourne | Newspapers |
| 98 | Price | Alfred | 1838 | England | Engineering |
| 99 | Reed | Alfred | 1875 | Middlesex | Publisher |
| 100 | Reid | Donald | 1833 | Scotland | Stock and Station |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

| | Surname | First Name | Yr Birth | Place of Birth | Primary venture |
|-----|------------|-------------|----------|------------------|----------------------------------|
| 101 | Reynolds | Henry | 1849 | Cornwall | Dairy Exporter |
| 102 | Richardson | George | 1835 | Middlesex | Shipper |
| 103 | Richmond | William | 1869 | Scotland | Meat Processing |
| 104 | Riley | Arthur | 1860 | England | Art school |
| 105 | Roose | Caesar | 1886 | Mercer | Shipping |
| 106 | Russell | George | 1854 | London | Newspapers |
| 107 | Sanderson | Ernest | 1866 | Dunedin | Cycle/car importer |
| 108 | Sanford | Albert | 1844 | Devon | Fishing |
| 109 | Sargood | Percy | 1865 | Melbourne | Merchant (drapery) |
| 110 | Seifert | Alfred | 1877 | Canterbury | Flaxmilling |
| 111 | Sew Hoy | Charles | 1837 | Canton | Goldmining |
| 112 | Shacklock | Henry | 1839 | England | Coal range man. |
| 113 | Skellerup | George | 1881 | Victoria | Rubber manufacturer |
| 114 | Smith | Helen | 1873 | Otago | Retail |
| 115 | Smith | Marianne | 1851 | Ireland | Retail |
| 116 | Stead | George | 1841 | London | Grain Exporter |
| 117 | Stevenson | William | 1856 | Scotland | Canning |
| 118 | Theomin | David | 1852 | England | Merchant |
| 119 | Thomson | Alexander | 1845 | Barthgate | Aerated water |
| 120 | Todd | Charles | 1868 | Scotland | Sock and Station |
| 121 | Walsh | Leo | 1881 | Yorkshire | Engineering Business |
| 122 | Warnock | Thomas | 1850 | Northern Ireland | Drapery retail |
| 123 | Wellwood | Robert | 1836 | Kilkenny | Auctioneering and Commission |
| 124 | Whitney | John | 1836 | England | Ammunition Manufacturer |
| 125 | Wigley | Rodolph | 1881 | Canterbury | Tourism |
| 126 | Wigram | Henry | 1857 | London | Seed merchant |
| 127 | Wilkinson | Charles | 1868 | Oakura | Merchant |
| 128 | Williams | Frederic | 1854 | Poverty Bay | Merchant |
| 129 | Wilson | Robert | 1832 | Omagh | Merchant |
| 130 | Winstone | William | 1843 | Sommersetshire | Transport |
| 131 | Wise | Henry | 1835 | Edinburgh | Directory Publishing |
| 132 | Wright | John Inglis | 1861 | Scotland | Advertising |
| 133 | Wright | John | 1828 | England | Stock and Station/ Auctioneering |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

JOB 4 _____
 JOB 5 _____
 JOB 6 _____
 JOB 7 _____
 JOB 8 _____

VENTURE INFORMATION

AGE STARTED FIRST VENTURE _____
 YEARS IN BUSINESS PRIOR TO FIRST VENTURE _____
 YEARS IN BUSINESS BEFORE MOST SUCCESSFUL VENTURE _____
 AGE MOST SUCCESSFUL VENTURE _____
 NUMBER OF VENTURES PRIOR TO MOST SUCCESSFUL VENTURE _____
 NAME MOST SUCCESSFUL VENTURE _____
 WAS THE FIRST VENTURE THE MOST SUCCESSFUL YES NO
 DID THE ENTREPRENEUR FOUND THEIR MOST SUCCESSFUL VENTURE YES NO
 WAS THEIR MOST SUCCESSFUL VENTURE IN SAME OCCUPATIONAL FIELD AS FIRST JOB YES NO
 WAS FIRST VENTURE A PARTNERSHIP YES NO
 WAS THE MOST SUCCESSFUL VENTURE A PARTNERSHIP YES NO
 TOTAL NUMBER OF VENTURES INVOLVED IN _____
 TOTAL NUMBER OF VENTURES FOUNDED _____
 DID THEY DISPLAY EXCEPTIONAL DRIVE YES NO

OCCUPATIONAL INFORMATION

OCCUPATION 1 _____
 OCCUPATION 2 _____
 OCCUPATION 3 _____
 OCCUPATION 4 _____
 OCCUPATION 5 _____
 OCCUPATION 6 _____
 OCCUPATION 7 _____

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

OCCUPATION 8 _____

OCCUPATION 9 _____

NUMBER OF DIFFERENT OCCUPATIONS _____

VENTURE ACTIVITY INFORMATION

VENTURE 1 _____

NAME OF BUSINESS _____

YEAR STARTED _____

DURATION _____

DESCRIPTION OF DOMINANT GROWTH STRATEGY _____

DID BUSINESS LAST LESS THAN FIVE YEARS YES NO

VENTURE2 _____

NAME OF BUSINESS _____

YEAR STARTED _____

DURATION _____

DESCRIPTION OF DOMINANT GROWTH STRATEGY _____

DID BUSINESS LAST LESS THAN FIVE YEARS YES NO

VENTURE 3 _____

NAME OF BUSINESS _____

YEAR STARTED _____

DURATION _____

DESCRIPTION OF DOMINANT GROWTH STRATEGY _____

DID BUSINESS LAST LESS THAN FIVE YEARS YES NO

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

DURATION _____

DESCRIPTION OF DOMINANT GROWTH STRATEGY _____

DID BUSINESS LAST LESS THAN FIVE YEARS YES NO

VENTURE 8 _____

NAME OF BUSINESS _____

YEAR STARTED _____

DURATION _____

DESCRIPTION OF DOMINANT GROWTH STRATEGY _____

DID BUSINESS LAST LESS THAN FIVE YEARS YES NO

VENTURE 9 _____

NAME OF BUSINESS _____

YEAR STARTED _____

DURATION _____

DESCRIPTION OF DOMINANT GROWTH STRATEGY _____

DID BUSINESS LAST LESS THAN FIVE YEARS YES NO

VENTURE 10 _____

NAME OF BUSINESS _____

YEAR STARTED _____

DURATION _____

DESCRIPTION OF DOMINANT GROWTH STRATEGY _____

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

DID BUSINESS LAST LESS THAN FIVE YEARS YES NO

BUSINESS STRATEGY

WAS THIS A NATIONAL BUSINESS YES NO

HOW MANY BUSINESSES FAILED _____

HOW MANY SPORTS BODIES DID ENTREPRENEUR
ACTIVELY SUPPORT _____

DID THE ENTREPRENEUR BUY SIMILAR FIRMS YES NO

DID THEY ENGAGE IN VERTICAL INTEGRATION BY ACQUISITION YES NO

DID THEY ENGAGE IN HORIZONTAL INTEGRATION BY ACQUISITION YES NO

DID THEY ENGAGE IN HORIZONTAL INTEGRATION BY START UP YES NO

DID THEY ENGAGE IN VERTICAL INTEGRATION BY START UP YES NO

DID THEY ENGAGE IN ALIGNED ACTIVITIES YES NO

DID THEY DIVERSIFY YES NO

DID THEY FOCUS THEIR ACTIVITIES YES NO

DID THEY USE BRANCH EXPANSION YES NO

DID THEY EXPAND THEIR ENTERPRISE ON A SINGLE SITE YES NO

DID A BUSINESS FAIL YES NO

DID THE ENTREPRENEUR RECOVER YES NO

DID THE FIRM THEY START CONTINUE PAST THEIR DEATH YES NO

DID FAMILY CONTINUE IN THE BUSINESS AFTER THEY DIED YES NO

WHAT WAS THE REASON FOR THEIR FIRST START UP _____

WERE THEY NEW TO LAND/TERRITORY IMMEDIATELY
PRIOR TO START-UP YES NO

WHAT WAS THEIR PRIMARY VENTURE _____

PRIMARY VENTURE TWO (IF NECESSARY) _____

WHAT WAS THEIR SOURCE OF START-UP CAPITAL _____

WHAT WAS THEIR SOURCE OF GROWTH CAPITAL _____

LIFESTYLE INFORMATION

WERE THEY A MEMBER OF THE CHAMBER OF COMMERCE YES NO

WERE THEY A CHURCH-GOER YES NO

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

| | | |
|---|-----|----|
| WERE THEY OVERTLY PHILANTHROPIC | YES | NO |
| DID THEY ENTER POLITICS | YES | NO |
| DID THEY RETIRE TO ENGLAND | YES | NO |
| WERE THEY AN IMMIGRANT | YES | NO |
| YEAR IMMIGRATED _____ | | |
| AGE IMMIGRATED _____ | | |
| DID THEY HAVE A MANAGEMENT ROLE PRIOR TO THEIR FIRST VENTURE | YES | NO |
| WAS THE ENTREPRENEUR'S FATHER A BUSINESS OWNER | YES | NO |
| DID THE ENTREPRENEUR RETIRE | YES | NO |
| WAS IT AT ANY TIME A FAMILY BUSINESS | YES | NO |
| HOW MANY COMMUNITY BOARDS DID THE ENTREPRENEUR SERVE ON _____ | | |
| _____ | | |
| DID THEY SPECIFICALLY GIFT LAND OR MONEY | YES | NO |
| DID THEY FOUND A SCHOOL | YES | NO |

BUSINESS ACTIVITY MEASURE

INDICATE EACH YEAR INVOLVED IN ENTREPRENEURIAL ACTIVITY

| | |
|-------|-------|
| 1860s | _____ |
| 1870s | _____ |
| 1880s | _____ |
| 1890s | _____ |
| 1900s | _____ |
| 1910s | _____ |
| 1920s | _____ |
| 1930s | _____ |
| 1940s | _____ |
| 1950s | _____ |
| 1960s | _____ |
| 1970s | _____ |
| 1980s | _____ |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

SUMMARY RESEARCH INFORMATION

PRIMARY MODE OF ENTREPRENEURIAL OPERATION _____

INDUSTRY CLASSIFICATION _____

DESCRIBE DOMINANT STRATEGY _____

THIS ENTREPRENEUR WAS BEST KNOWN FOR _____

KEY WORDS _____

HAS THERE BEEN A BIOGRAPHY WRITTEN _____

WHAT BOOKS ARE AVAILABLE ON THIS ENTREPRENEUR _____

APPENDIX C

INDUSTRIAL ACTIVITIES RANKED BY CAPITAL PER PLANT: 1881

Source: Generated from information contained in census statistics, respective years.

| Manufactories and Works | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only | Manufactories and Works | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only |
|--|----------------------|-----------------|---------------|-------------------|---|-----------------------------------|----------------------|-----------------|---------------|-------------------|---|
| Gasworks | 17 | 188 | £492,116 | £28,948 | £18,492 | Clothing Factories | 8 | 756 | £8,680 | £1,085 | £310 |
| Woollen Mills | 4 | 417 | £98,500 | £24,625 | £15,625 | Block and Pump manufacturers | 3 | 6 | £3,100 | £1,033 | £433 |
| Patent Ships | 4 | 31 | £36,920 | £9,230 | £7,555 | Rope and twine | 18 | 124 | £18,020 | £1,001 | £460 |
| Iron and Brass Foundries | 35 | 953 | £155,267 | £4,436 | £2,048 | Coach-building and Painting Works | 49 | 387 | £46,330 | £946 | £220 |
| Collieries | 51 | 992 | £221,150 | £4,336 | £2,374 | Aerated Water and Cordial | 79 | 228 | £66,901 | £847 | £389 |
| Sawmills and sash doors | 223 | 4238 | £773,628 | £3,469 | £1,689 | Brick and Tile | 127 | 685 | £105,765 | £833 | £226 |
| Breweries | 99 | 526 | £317,398 | £3,206 | £850 | Bone Cutting Mills | 17 | 25 | £11,695 | £688 | £306 |
| Grain Mills | 131 | 450 | £357,178 | £2,727 | £1,146 | Hat and Cap Factories | 8 | 58 | £5,082 | £635 | £149 |
| Coffee Spice and Chicory | 9 | 63 | £22,350 | £2,483 | £628 | Sauce and Pickle | 3 | 15 | £1,700 | £567 | £300 |
| Boiling Down and Meat Preserving | 40 | 468 | £96,845 | £2,421 | £858 | Bacon Curing | 20 | 64 | £11,090 | £555 | £53 |
| Soap and Candle | 15 | 108 | £33,240 | £2,216 | £1,179 | Chair and washboard | 3 | 8 | £1,545 | £515 | £157 |
| Printing | 106 | 1779 | £229,166 | £2,162 | £1,224 | Spouting and Ridging | 9 | 20 | £4,395 | £488 | £211 |
| Agricultural Implement manufacturers | 23 | 315 | £43,854 | £1,907 | £707 | Cleaning and Dyeing Works | 10 | 26 | £4,825 | £483 | £66 |
| Stone Quarries | 10 | 136 | £18,693 | £1,869 | £216 | Sail Factories | 13 | 37 | £6,168 | £474 | £10 |
| Furniture making manufacturers | 45 | 466 | £75,927 | £1,687 | £100 | Chaff cutting works | 38 | 100 | £17,456 | £459 | £105 |
| Machinists and Millwrights | 8 | 90 | £13,393 | £1,674 | £838 | Ship and boat building works | 25 | 100 | £10,568 | £423 | £100 |
| Biscuit Factories | 18 | 148 | £28,345 | £1,575 | £554 | Lameworks | 23 | 63 | £6,580 | £286 | £88 |
| Boot Manufacturers | 31 | 1299 | £46,367 | £1,496 | £428 | Fish Curing | 14 | 68 | £3,560 | £254 | £65 |
| Malthouses | 34 | 67 | £48,516 | £1,427 | £20 | Colonial Wine | 5 | 15 | £900 | £180 | £15 |
| Fellmongering Tanning and Woolscouring | 119 | 859 | £136,082 | £1,144 | £403 | | | | | | |

INDUSTRIAL ACTIVITIES RANKED BY CAPITAL PER PLANT: 1886

| Manufactories and Works | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only | Manufactories and Works | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only |
|--|----------------------|-----------------|---------------|-------------------|---|--------------------------------|----------------------|-----------------|---------------|-------------------|---|
| Woollen Mills | 6 | 867 | £203,279 | £33,880 | £22,143 | Furniture making manufacturers | 75 | 707 | £93,032 | £1,240 | £123 |
| Gasworks | 20 | 344 | £656,405 | £32,820 | £22,416 | Brick and Tile | 126 | 598 | £151,411 | £1,202 | £398 |
| Boiling down, meat freezing and preserving works | 44 | 838 | £442,962 | £10,067 | £2,774 | Baking powder manufacturer | 2 | 9 | £2,400 | £1,200 | £75 |
| Graving docks patent ship | 4 | 15 | £33,395 | £8,349 | £7,130 | Coachbuilding | 89 | 664 | £106,238 | £1,194 | £269 |
| Paper mills | 2 | 37 | £12,800 | £6,400 | £4,400 | Venetian blind | 7 | 39 | £7,950 | £1,136 | £214 |
| Chemical Works | 6 | 56 | £30,409 | £5,068 | £1,647 | Spouting and Ridging | 10 | 70 | £10,670 | £1,067 | £465 |
| Soap and candle | 18 | 204 | £75,928 | £4,218 | £2,614 | Musical instrument factories | 3 | 7 | £3,130 | £1,043 | £110 |
| Iron and Brass foundries | 58 | 1750 | £239,938 | £4,137 | £2,053 | Ematite Paint | 5 | 19 | £5,175 | £1,035 | £398 |
| Sawmills | 268 | 5042 | £964,095 | £3,597 | £1,600 | Fruit preserving and jam | 20 | 216 | £20,520 | £1,026 | £394 |
| Clothing Factories | 11 | 1269 | £37,530 | £3,412 | £521 | Stone (building) quarries | 14 | 196 | £13,566 | £969 | £558 |
| Breweries | 98 | 475 | £323,756 | £3,304 | £845 | Basket and Perambulator | 10 | 39 | £9,225 | £923 | £29 |
| Machinists and Millwrights | 5 | 90 | £15,820 | £3,164 | £1,154 | Aerated water | 112 | 273 | £93,478 | £835 | £329 |
| Agricultural Implement manufacturers | 17 | 336 | £50,205 | £2,953 | £1,005 | Chaff cutting works | 83 | 265 | £64,969 | £783 | £170 |
| Grain Mills | 121 | 448 | £329,304 | £2,722 | £1,100 | Stock-weaving | 5 | 168 | £3,900 | £780 | £190 |
| Printing Establishments | 135 | 2107 | £331,723 | £2,457 | £1,219 | Bone Cutting Mills | 7 | 19 | £5,269 | £753 | £249 |
| Rope and Twine | 21 | 242 | £49,821 | £2,372 | £1,333 | Chair and washboard | 4 | 11 | £2,995 | £749 | £405 |
| Coffee and Spice | 14 | 149 | £32,439 | £2,317 | £759 | Bacon curing | 37 | 137 | £26,709 | £722 | £63 |
| Gold quartz mining and crushing | 101 | 1156 | £211,021 | £2,089 | £2,089 | Brush manufacturer | 7 | 42 | £4,775 | £682 | £144 |
| Biscuit factories | 22 | 185 | £43,805 | £1,991 | £592 | Glue manufacturer | 3 | 11 | £1,850 | £617 | £300 |
| Barbed wire | 2 | 43 | £3,850 | £1,925 | £1,025 | Cleaning and Dyeing Works | 10 | 33 | £6,150 | £615 | £67 |
| Collieries | 79 | 1448 | £148,773 | £1,883 | £1,883 | Flax mills | 30 | 249 | £18,016 | £601 | £231 |
| Cap and Hat | 8 | 118 | £14,790 | £1,849 | £128 | Cycle works | 2 | 8 | £1,037 | £519 | £183 |
| Hydraulic gold mining and gold dredging | 124 | 617 | £224,787 | £1,813 | £1,813 | Cooperages | 14 | 60 | £7,255 | £518 | £215 |
| Malthouses | 35 | 85 | £60,300 | £1,723 | £96 | Sail and oilskin factories | 32 | 118 | £15,370 | £480 | £21 |
| Timware factories | 3 | 40 | £5,070 | £1,690 | £523 | Flock mills | 4 | 12 | £1,610 | £403 | £250 |
| Boot and shoe | 42 | 1654 | £70,935 | £1,689 | £376 | Fish Curing | 21 | 122 | £8,146 | £388 | £89 |
| Fellmongering, tanning and woolscouring | 97 | 1093 | £138,750 | £1,430 | £411 | Sauce and Pickle | 9 | 35 | £3,445 | £383 | £77 |
| Lameworks | 24 | 80 | £33,290 | £1,387 | £347 | Heel and toe plate | 3 | 17 | £1,050 | £350 | £150 |
| Sugar boiling and confectionary | 11 | 110 | £14,610 | £1,328 | £596 | Ship and boat building works | 53 | 172 | £17,094 | £323 | £104 |
| Cheese and butter | 36 | 110 | £47,513 | £1,320 | £493 | Colonial wine | 10 | 15 | £3,198 | £320 | £10 |
| Boiler makers | 2 | 13 | £2,580 | £1,290 | £300 | | | | | | |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

INDUSTRIAL ACTIVITIES RANKED BY CAPITAL PER PLANT: 1891

| Manufactories and Works | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only | Manufactories and Works | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only |
|--|----------------------|-----------------|---------------|-------------------|---|---------------------------------|----------------------|-----------------|---------------|-------------------|---|
| Graving docks patent slip | 9 | 64 | £347,769 | £38,641 | £22,487 | Brick and Tile | 106 | 494 | £119,780 | £1,130 | £396 |
| Woollen Mills | 8 | 1175 | £259,955 | £32,494 | £20,786 | Tinware factories | 12 | 93 | £13,155 | £1,096 | £190 |
| Gas works | 27 | 249 | £730,490 | £27,055 | £22,932 | Cycle | 7 | 31 | £7,289 | £1,041 | £245 |
| Meat preserving, freezing and boiling down | 43 | 1568 | £476,151 | £11,073 | £4,171 | Furniture making manufacturers | 94 | 585 | £96,543 | £1,027 | £104 |
| Soap and candle | 19 | 209 | £74,443 | £3,918 | £2,501 | Sugar boiling and confectionary | 12 | 53 | £10,921 | £910 | £185 |
| Iron and Brass Foundries | 79 | 1787 | £268,887 | £3,404 | £1,829 | Coachbuilding | 108 | 678 | £96,225 | £891 | £175 |
| Clothing factories | 19 | 1290 | £59,735 | £3,144 | £2,39 | Flax mills | 177 | 3204 | £146,792 | £829 | £377 |
| Grain mills | 129 | 499 | £391,828 | £3,037 | £1,288 | Cleaning and Dyeing Works | 12 | 48 | £9,581 | £798 | £117 |
| Chemical Works | 8 | 55 | £23,766 | £2,971 | £1,103 | Stone(building) quarries | 9 | 35 | £6,744 | £749 | £528 |
| Spouting and Radjag | 12 | 100 | £29,670 | £2,473 | £573 | Veneen blind | 9 | 29 | £6,727 | £747 | £92 |
| Printing Establishments | 142 | 2569 | £341,683 | £2,406 | £1,224 | Paper bag and cardboard box | 8 | 35 | £3,594 | £699 | £73 |
| Breweries | 102 | 476 | £236,825 | £2,322 | £554 | Stock-weaving | 6 | 51 | £4,040 | £673 | £190 |
| Woodenware and wood turning | 5 | 51 | £11,440 | £2,288 | £588 | Fruit preserving and jam | 15 | 117 | £10,042 | £669 | £251 |
| Paint varnish | 3 | 8 | £6,813 | £2,271 | £1,450 | Brush, broom | 11 | 81 | £7,233 | £658 | £103 |
| Antimony mining and Manganese Works | 3 | 91 | £6,750 | £2,250 | £1,367 | Aerated water | 112 | 261 | £73,147 | £653 | £254 |
| Biscuit mills | 22 | 331 | £48,960 | £2,225 | £909 | Bone Cutting Mills | 9 | 25 | £5,239 | £582 | £185 |
| Hydraulic gold mining and gold dredging | 74 | 495 | £154,270 | £2,085 | £2,085 | Chaff cutting works | 63 | 205 | £36,300 | £576 | £158 |
| Sawmills | 243 | 3266 | £300,272 | £2,059 | £1,015 | Baking powder manufacturer | 8 | 27 | £4,520 | £565 | £46 |
| Agricultural Implement manufacturers | 36 | 528 | £73,478 | £2,041 | £751 | Sail and oilskin | 32 | 124 | £16,799 | £525 | £26 |
| Coffee and Spice | 17 | 81 | £30,850 | £1,815 | £414 | Cooperages | 11 | 53 | £5,720 | £520 | £200 |
| Gold quartz mining and crushing | 155 | 1971 | £241,715 | £1,790 | £1,790 | Fish curing | 27 | 140 | £12,842 | £476 | £126 |
| Boot and shoe | 47 | 1943 | £82,137 | £1,748 | £396 | Portmanteau manufacturers | 4 | 14 | £1,870 | £468 | £105 |
| Collieries | 95 | 1655 | £155,671 | £1,639 | £1,639 | Bacon curing | 33 | 84 | £14,180 | £430 | £33 |
| Cap and Hat | 16 | 112 | £26,005 | £1,625 | £105 | Sauce and Pickle | 12 | 41 | £5,096 | £425 | £74 |
| Lime and cement works | 21 | 98 | £33,580 | £1,599 | £580 | Homatite Paint factories | 3 | 9 | £1,250 | £417 | £180 |
| Malthouses | 27 | 87 | £42,442 | £1,572 | £123 | Colonial wine | 14 | 24 | £5,530 | £395 | £44 |
| Rope and Twine | 24 | 222 | £36,086 | £1,504 | £731 | Flock mills | 4 | 9 | £1,230 | £308 | £194 |
| Fellmongering Tanning and Woolscouring | 104 | 1196 | £153,592 | £1,477 | £365 | Basket and Perambulator | 23 | 63 | £6,152 | £267 | £22 |
| Saddlery | 8 | 184 | £11,699 | £1,462 | £178 | Ship and boat building works | 37 | 145 | £8,772 | £237 | £33 |
| Cheese and butter | 74 | 269 | £100,426 | £1,357 | £370 | Sausage skin and violin string | 5 | 73 | £345 | £109 | £35 |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

INDUSTRIAL ACTIVITIES RANKED BY CAPITAL PER PLANT: 1896

| | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only | | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only |
|--|----------------------|-----------------|---------------|-------------------|---|---------------------------------|----------------------|-----------------|---------------|-------------------|---|
| Manufactories and Works | | | | | | Manufactories and Works | | | | | |
| Gas works | 27 | 295 | £766,673 | £28,395 | £23,913 | Bacon curing | 37 | 123 | £22,518 | £609 | £124 |
| Meat preserving, freezing and boiling down | 30 | 1960 | £697,436 | £23,248 | £10,431 | Lime and cement works | 14 | 79 | £22,419 | £1,601 | £855 |
| Sawmills, sash and door factories | 299 | 4059 | £586,422 | £1,961 | £999 | Spouting and Ridging | 9 | 90 | £19,729 | £2,192 | £709 |
| Hydraulic Gold mining | 105 | 744 | £505,674 | £4,816 | £4,816 | Fruit preserving and jam | 22 | 193 | £18,867 | £858 | £204 |
| Printing Establishments | 154 | 2351 | £396,915 | £2,577 | £1,323 | Ship and boat building works | 40 | 108 | £14,288 | £357 | £99 |
| Grain mills | 90 | 419 | £355,847 | £3,954 | £1,993 | Boiling down works | 13 | 77 | £13,615 | £1,047 | £338 |
| Gold quartz mining and crushing | 168 | 2814 | £335,474 | £1,997 | £1,997 | Woodenware and wood turning | 19 | 81 | £13,427 | £707 | £286 |
| Graving docks patent slip | 6 | 29 | £331,806 | £55,301 | £52,162 | Colonial wine | 19 | 53 | £12,832 | £675 | £88 |
| Iron and Brass Foundries | 90 | 1642 | £252,135 | £2,802 | £1,402 | Sauce and Pickle | 24 | 68 | £11,909 | £496 | £66 |
| Gold dredging | 35 | 258 | £248,002 | £7,086 | £2,457 | Cooperages | 21 | 76 | £11,175 | £532 | £215 |
| Cheese and butter | 170 | 576 | £234,006 | £1,377 | £677 | Basket and Perambulator | 17 | 76 | £10,850 | £638 | £42 |
| Breweries | 85 | 465 | £230,416 | £2,711 | £751 | Cap and Hat | 15 | 72 | £10,560 | £704 | £142 |
| Woolen Mills | 9 | 1416 | £223,473 | £24,830 | £16,007 | Baking powder manufacturer | 10 | 19 | £10,155 | £1,016 | £188 |
| Fellmongering Tanning and Woolscouring | 117 | 1629 | £171,405 | £1,465 | £451 | Cleaning and Dyeing Works | 16 | 58 | £9,980 | £624 | £109 |
| Collieries | 164 | 1799 | £148,367 | £905 | £905 | Fish curing | 27 | 75 | £9,729 | £360 | £76 |
| Boot and shoe | 65 | 2349 | £110,035 | £1,693 | £407 | Bone Cutting Mills | 15 | 46 | £9,449 | £630 | £334 |
| Coachbuilding | 116 | 807 | £105,802 | £912 | £210 | Brush, broom | 15 | 65 | £9,005 | £600 | £129 |
| Aerated water | 132 | 347 | £89,341 | £677 | £284 | Sugar boiling and confectionary | 12 | 42 | £8,925 | £744 | £205 |
| Furniture making manufacturers | 71 | 496 | £84,673 | £1,193 | £140 | Paper bag and cardboard box | 9 | 86 | £7,956 | £884 | £341 |
| Brick and Tile | 108 | 455 | £76,585 | £709 | £256 | Venetian blind | 15 | 45 | £7,236 | £482 | £93 |
| Agricultural Implement manufacturers | 34 | 581 | £71,267 | £2,096 | £883 | Musical instrument factories | 5 | 15 | £6,070 | £1,214 | £106 |
| Biscuit mills | 17 | 425 | £58,866 | £3,463 | £1,527 | Waterproof factories | 4 | 93 | £5,316 | £1,329 | £192 |
| Soap and candle | 22 | 190 | £58,826 | £2,674 | £1,311 | Stock weaving | 7 | 133 | £4,565 | £652 | £285 |
| Clothing factories | 27 | 2058 | £56,704 | £2,100 | £306 | Stone (building) quarries | 12 | 59 | £4,070 | £339 | £339 |
| Chemical Works | 7 | 114 | £44,471 | £6,353 | £2,655 | Herbal remedy factories | 4 | 10 | £3,410 | £853 | £85 |
| Chaff cutting works | 52 | 212 | £42,378 | £815 | £313 | Ematite Paint factories | 5 | 12 | £3,015 | £603 | £200 |
| Rope and Twine | 24 | 150 | £40,961 | £1,707 | £1,119 | Sheep dip factories | 6 | 29 | £2,716 | £453 | £196 |
| Malthouses | 31 | 95 | £37,504 | £1,210 | £94 | Mattress factory | 5 | 15 | £2,680 | £536 | £56 |
| Saddlery | 23 | 266 | £34,559 | £1,503 | £184 | Flock mills | 5 | 10 | £2,570 | £514 | £214 |
| Flax mills | 52 | 647 | £31,359 | £603 | £238 | Heel and toe plate | 4 | 9 | £2,371 | £593 | £252 |
| Coffee and Spice | 18 | 119 | £31,095 | £1,728 | £419 | Lead headed nail | 7 | 12 | £2,325 | £332 | £79 |
| Tinware factories | 34 | 289 | £25,849 | £760 | £227 | Chair and washboard | 6 | 8 | £2,020 | £337 | £28 |
| Cycle | 19 | 125 | £24,831 | £1,307 | £246 | Sausage skin factories | 6 | 56 | £1,500 | £250 | £46 |
| Sail and oilskin | 39 | 143 | £23,623 | £606 | £18 | | | | | | |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

INDUSTRIAL ACTIVITIES RANKED BY CAPITAL PER PLANT: 1901

| | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only | Manufactories and Works | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only |
|--|----------------------|-----------------|---------------|-------------------|---|------------------------------|----------------------|-----------------|---------------|-------------------|---|
| Manufactories and Works | | | | | | | | | | | |
| Graving docks patent slip | 7 | 32 | £230,165 | £32,881 | £29,279 | Corset and belt | 6 | 25 | £5,659 | £943 | £56 |
| Gasworks | 30 | 572 | £971,559 | £32,385 | £27,238 | Coachbuilding | 160 | 1185 | £150,811 | £943 | £151 |
| Woollen Mills | 10 | 1693 | £277,422 | £27,742 | £17,270 | Cycle | 71 | 395 | £65,403 | £921 | £134 |
| Meat preserving, freezing and boiling down | 34 | 2221 | £893,720 | £26,286 | £11,595 | Cleaning and Dyeing Works | 11 | 51 | £9,635 | £876 | £121 |
| Electric Lighting works | 6 | 52 | £64,156 | £10,693 | £8,708 | Basket and Perambulator | 21 | 118 | £18,180 | £866 | £122 |
| Gold quartz mining and crushing | 120 | 4333 | £735,927 | £6,133 | £6,133 | Chaff cutting works | 55 | 266 | £46,786 | £851 | £436 |
| Gold dredging | 145 | 965 | £690,430 | £4,762 | £3,646 | Aerated water | 125 | 452 | £105,178 | £841 | £298 |
| Chemical Works | 8 | 95 | £37,793 | £4,724 | £2,390 | Saddlery | 115 | 652 | £96,559 | £840 | £45 |
| Grain mills | 78 | 515 | £358,656 | £4,598 | £2,322 | Returns not incl. Above | 74 | 296 | £59,659 | £806 | £125 |
| Biscuit factories | 20 | 667 | £90,243 | £4,512 | £1,987 | Bone Mills | 8 | 17 | £6,230 | £779 | £208 |
| Clothing factories | 21 | 2512 | £89,247 | £4,250 | £544 | Dressmaking and millinery | 290 | 2888 | £193,998 | £669 | £39 |
| Engineering works | 37 | 1442 | £155,081 | £4,191 | £1,743 | Flax mills | 101 | 1698 | £64,446 | £638 | £283 |
| Breweries | 74 | 682 | £294,592 | £3,981 | £1,039 | Venetian blind | 12 | 51 | £7,469 | £622 | £66 |
| Rope and Twine | 17 | 192 | £55,309 | £3,253 | £2,321 | Fish curing | 28 | 137 | £17,235 | £616 | £123 |
| Iron and Brass Foundries | 65 | 1955 | £214,282 | £3,250 | £1,647 | Stone(building) quarries | 8 | 58 | £4,660 | £583 | £53 |
| Range-making works | 9 | 193 | £27,919 | £3,102 | £708 | Flock muls | 5 | 10 | £2,650 | £530 | £224 |
| Printing Establishments | 188 | 3134 | £559,538 | £2,976 | £1,541 | Ship and boat building works | 32 | 211 | £15,198 | £475 | £85 |
| Hydraulic Gold mining | 130 | 962 | £380,344 | £2,926 | £1,598 | Sausage skin factories | 10 | 98 | £3,949 | £395 | £83 |
| Soap and candle | 24 | 232 | £66,809 | £2,784 | £1,216 | Rabbit preserving works | 7 | 62 | £362 | £52 | £17 |
| Coffee and Spice | 18 | 78 | £47,572 | £2,643 | £445 | Condensed milk | 1 | 33 | £0 | £0 | £0 |
| Collieries | 145 | 2460 | £372,093 | £2,566 | £2,566 | Sugar refining | 1 | 256 | £0 | £0 | £0 |
| Lime and cement works | 15 | 184 | £38,436 | £2,562 | £1,622 | Tobacco | 2 | 20 | £0 | £0 | £0 |
| Malthouses | 33 | 145 | £75,038 | £2,274 | £303 | Ice factories | 2 | 5 | £0 | £0 | £0 |
| Sugar boiling and confectionary | 26 | 305 | £56,955 | £2,191 | £691 | Glue factories | 1 | 5 | £0 | £0 | £0 |
| Sawmills, sash and door factories | 334 | 6812 | £703,620 | £2,107 | £1,222 | Oleomargarine works | 1 | 9 | £0 | £0 | £0 |
| Manure Works | 5 | 30 | £10,266 | £2,053 | £728 | Barrow and ladder factory | 1 | 5 | £0 | £0 | £0 |
| Fellmongering Tanning and Woolscouring | 119 | 1963 | £235,952 | £1,983 | £679 | Paper mills | 3 | 98 | £0 | £0 | £0 |
| Grass seed dressing | 25 | 60 | £48,195 | £1,928 | £543 | Tobacco pipe | 1 | 2 | £0 | £0 | £0 |
| Boiling down works | 14 | 61 | £26,838 | £1,917 | £748 | Glass factory | 2 | 9 | £0 | £0 | £0 |
| Agricultural Implement manufacturers | 33 | 586 | £61,339 | £1,859 | £613 | Glass bevelling works | 2 | 7 | £0 | £0 | £0 |
| Baking powder manufacturer | 11 | 29 | £18,200 | £1,655 | £238 | Electro-plating works | 2 | 11 | £0 | £0 | £0 |
| Paper bag and cardboard box | 7 | 81 | £11,499 | £1,643 | £514 | Pumice works | 1 | 28 | £0 | £0 | £0 |
| Fruit preserving and jam | 13 | 167 | £20,935 | £1,610 | £457 | Heel and toe plate | 3 | 7 | £0 | £0 | £0 |
| Sauce and Pickle | 23 | 128 | £36,715 | £1,596 | £314 | Lead headed nail | 1 | 3 | £0 | £0 | £0 |
| Bacon curing | 39 | 196 | £62,192 | £1,595 | £432 | Iron pipe and fluming works | 2 | 5 | £0 | £0 | £0 |
| Cheese and butter | 247 | 1188 | £388,750 | £1,574 | £820 | Musical instrument factories | 3 | 11 | £0 | £0 | £0 |
| Spouting and Ridging | 35 | 261 | £52,687 | £1,505 | £284 | Cork cutting | 1 | 3 | £0 | £0 | £0 |
| Hematite Paint factories | 4 | 12 | £5,943 | £1,486 | £698 | Lapidaries | 3 | 8 | £0 | £0 | £0 |
| Hat and cap | 13 | 117 | £19,217 | £1,478 | £253 | Billiard table | 3 | 7 | £0 | £0 | £0 |
| Varnish | 4 | 19 | £5,765 | £1,441 | £541 | Rubber stamp making | 2 | 3 | £0 | £0 | £0 |
| Boot and shoe | 126 | 2696 | £176,992 | £1,405 | £392 | Ammunition factories | 1 | 105 | £0 | £0 | £0 |
| Sail and oilskin | 30 | 231 | £40,893 | £1,363 | £74 | Cultery factory | 1 | 2 | £0 | £0 | £0 |
| Waterproof factories | 6 | 114 | £7,845 | £1,308 | £195 | Bellows factory | 1 | 2 | £0 | £0 | £0 |
| Picture Frame makers | 9 | 22 | £11,750 | £1,306 | £50 | Whipthong | 2 | 5 | £0 | £0 | £0 |
| Colonial wine | 14 | 59 | £18,183 | £1,299 | £211 | Block and pump | 1 | 2 | £0 | £0 | £0 |
| Herbal remedy factories | 8 | 23 | £10,305 | £1,288 | £108 | Wool rug and mat making | 2 | 17 | £0 | £0 | £0 |
| Tailoring Establishments | 175 | 1621 | £211,016 | £1,206 | £40 | Perfumery | 1 | 4 | £0 | £0 | £0 |
| Furniture making manufacturers | 144 | 1310 | £170,338 | £1,183 | £161 | Ink | 3 | 5 | £0 | £0 | £0 |
| Hosiery | 17 | 282 | £19,997 | £1,176 | £506 | Starch works | 3 | 32 | £0 | £0 | £0 |
| Brush, broom | 12 | 128 | £13,829 | £1,152 | £235 | Sheep dip factories | 3 | 7 | £0 | £0 | £0 |
| Vinegar works | 4 | 23 | £4,480 | £1,120 | £405 | Match factories | 2 | 183 | £0 | £0 | £0 |
| Mattress factory | 12 | 55 | £13,165 | £1,097 | £219 | Blacking factories | 3 | 3 | £0 | £0 | £0 |
| Portmanteau manufacturers | 6 | 22 | £6,460 | £1,077 | £112 | Coconut oil mill | 2 | 10 | £0 | £0 | £0 |
| Shirt-making | 25 | 531 | £26,528 | £1,061 | £251 | Textile-bag and sack | 1 | 6 | £0 | £0 | £0 |
| Brick and Tile | 108 | 838 | £114,567 | £1,061 | £331 | Monumental masonry | 27 | 81 | £17,391 | £646 | £46 |
| Woodenware and wood turning | 28 | 156 | £28,227 | £1,008 | £328 | Fruit canning works | 1 | 5 | £0 | £0 | £0 |
| Tinware factories | 60 | 337 | £56,914 | £949 | £165 | Cigarette manufacturers | 3 | 18 | £0 | £0 | £0 |
| Cooperages | 23 | 138 | £21,787 | £947 | £361 | Fat refining works | 1 | 14 | £0 | £0 | £0 |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

INDUSTRIAL ACTIVITIES RANKED BY CAPITAL PER PLANT: 1906

| | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only | | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only |
|--|----------------------|-----------------|---------------|-------------------|---|--|----------------------|-----------------|---------------|-------------------|---|
| <i>Manufactories and Works</i> | | | | | | <i>Manufactories and Works</i> | | | | | |
| Graving docks patent slip | 7 | 24 | £447,420 | £63,917 | £7,878 | Feltmongering Tanning and Woolscouring | 99 | 1336 | £182,682 | £1,845 | £545 |
| Meat preserving, freezing and boiling down | 37 | 3190 | £1,476,782 | £39,913 | £17,197 | Billiard table | 4 | 25 | £7,263 | £1,816 | £261 |
| Casworks | 38 | 954 | £1,375,241 | £36,191 | £29,135 | Fruit preserving and jam | 24 | 311 | £42,317 | £1,763 | £478 |
| Woollen Mills | 10 | 1549 | £307,759 | £30,776 | £18,846 | Fruit canning works | 24 | 311 | £42,317 | £1,763 | £478 |
| Electric Lighting works | 13 | 118 | £323,428 | £24,879 | £17,228 | Sauce and Pickle | 27 | 219 | £44,982 | £1,666 | £284 |
| Gold quartz mining and crushing | 88 | 3869 | £1,040,104 | £11,819 | £11,819 | Bacon curing | 52 | 224 | £78,966 | £1,519 | £437 |
| Biscuit factories | 12 | 587 | £121,366 | £10,114 | £4,400 | Tinware factories | 54 | 473 | £80,270 | £1,486 | £367 |
| Rope and Twine | 10 | 195 | £70,095 | £7,010 | £5,521 | Flax mills | 240 | 4076 | £355,840 | £1,483 | £498 |
| Lime and cement works | 20 | 280 | £116,746 | £5,837 | £3,782 | Shirt-making | 22 | 399 | £31,680 | £1,440 | £338 |
| Grain mills | 77 | 540 | £411,558 | £5,345 | £2,323 | Woodenware and wood turning | 39 | 304 | £55,815 | £1,431 | £547 |
| Chemical Works | 17 | 178 | £86,181 | £5,069 | £1,520 | Brush, broom | 11 | 154 | £15,657 | £1,423 | £436 |
| Breweries | 72 | 731 | £334,931 | £4,652 | £1,331 | Boiling down works | 19 | 70 | £26,825 | £1,412 | £439 |
| Engineering works | 61 | 1868 | £249,901 | £4,097 | £1,964 | Furniture making manufacturers | 172 | 1528 | £239,375 | £1,392 | £239 |
| Iron and Brass Foundries | 71 | 1848 | £284,875 | £4,012 | £1,826 | Coachbuilding | 183 | 1465 | £251,717 | £1,376 | £205 |
| Clothing factories | 23 | 1914 | £90,641 | £3,941 | £659 | Aerated water | 123 | 586 | £166,470 | £1,353 | £466 |
| Printing Establishments | 239 | 3898 | £920,022 | £3,849 | £1,727 | Glass factory | 4 | 14 | £5,340 | £1,335 | £50 |
| Hosiery | 10 | 374 | £36,697 | £3,670 | £2,694 | Cleaning and Dyeing Works | 13 | 46 | £16,155 | £1,243 | £194 |
| Soap and candle | 19 | 238 | £68,566 | £3,609 | £1,662 | Cooperages | 22 | 116 | £26,736 | £1,215 | £421 |
| Gold dredging | 139 | 1165 | £477,780 | £3,437 | £3,437 | Tailoring Establishments | 308 | 2997 | £372,026 | £1,208 | £35 |
| Malthouses | 22 | 90 | £74,807 | £3,400 | £461 | Picture Frame makers | 14 | 34 | £16,775 | £1,198 | £15 |
| Agricultural Implement manufacturers | 29 | 793 | £95,467 | £3,292 | £1,269 | Sail and oilskin | 29 | 163 | £32,692 | £1,127 | £100 |
| Range-making works | 11 | 230 | £33,461 | £3,042 | £741 | Colonial wine | 22 | 51 | £24,792 | £1,127 | £168 |
| Hat and cap | 16 | 237 | £47,010 | £2,938 | £1,058 | Portmanteau manufacturers | 8 | 64 | £8,930 | £1,116 | £108 |
| Coffee and Spice | 13 | 120 | £36,095 | £2,777 | £867 | Venetian blind | 9 | 35 | £9,476 | £1,053 | £103 |
| Hydraulic Gold mining | 93 | 650 | £255,844 | £2,751 | £2,751 | Saddlery | 106 | 544 | £108,674 | £1,025 | £67 |
| Bone Mills | 16 | 216 | £43,755 | £2,735 | £978 | Monumental masonry | 23 | 118 | £22,567 | £981 | £98 |
| Sawmills, sash and door factories | 444 | 9111 | £1,204,843 | £2,714 | £1,463 | Fish curing | 21 | 106 | £20,372 | £970 | £365 |
| Mattress factory | 11 | 53 | £29,735 | £2,703 | £214 | Cycle | 97 | 452 | £83,666 | £863 | £124 |
| Paper bag and cardboard box | 8 | 100 | £19,012 | £2,377 | £639 | Sheep dip factories | 4 | 7 | £3,402 | £851 | £240 |
| Cheese and butter | 264 | 1484 | £616,266 | £2,334 | £1,307 | Chaff cutting works | 47 | 197 | £39,035 | £831 | £604 |
| Sugar boiling and confectionary | 36 | 571 | £83,752 | £2,326 | £952 | Dressmaking and millinery | 338 | 3039 | £269,000 | £796 | £20 |
| Brick and Tile | 125 | 1254 | £273,831 | £2,191 | £756 | Baking powder manufacturer | 7 | 25 | £4,785 | £684 | £140 |
| Grass seed dressing | 25 | 92 | £54,508 | £2,180 | £627 | Basket and Perambulator | 26 | 148 | £17,190 | £661 | £119 |
| Boot and shoe | 72 | 2206 | £153,991 | £2,139 | £797 | Sausage skin factories | 12 | 151 | £6,807 | £567 | £61 |
| Collieries | 162 | 3329 | £310,094 | £1,914 | £1,914 | Ship and boat building works | 30 | 237 | £14,722 | £491 | £177 |
| Spinning and Ridding | 16 | 159 | £30,245 | £1,890 | £484 | | | | | | |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

INDUSTRIAL ACTIVITIES RANKED BY CAPITAL PER PLANT: 1911

| Manufactories and Works | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only | Manufactories and Works | Total Establishments | Total Employees | Total capital | Capital per plant | Average investment plant and machinery only |
|--|----------------------|-----------------|---------------|-------------------|---|--------------------------------|----------------------|-----------------|---------------|-------------------|---|
| Electric tramways | 5 | 1663 | £1,387,635 | £277,527 | £241,819 | Cycle | 71 | 315 | £144,877 | £2,041 | £216 |
| Meat preserving, freezing and boiling down | 41 | 3978 | £1,741,170 | £42,468 | £18,269 | Electrical engineering works | 15 | 128 | £28,576 | £1,905 | £207 |
| Electric Lighting works | 14 | 170 | £404,681 | £28,906 | £16,762 | Brush, broom | 10 | 133 | £18,714 | £1,871 | £563 |
| Woolen Mills | 11 | 1410 | £289,089 | £26,281 | £16,405 | Stone(building) quarries | 18 | 221 | £33,217 | £1,845 | £1,845 |
| Gasworks | 48 | 757 | £1,079,387 | £22,487 | £15,696 | Coachbuilding | 180 | 1439 | £320,974 | £1,783 | £282 |
| Lime and cement works | 17 | 456 | £255,614 | £15,036 | £9,804 | Returns not incl. Above | 35 | 207 | £60,458 | £1,727 | £559 |
| Rope and Twine | 8 | 190 | £98,342 | £12,293 | £8,421 | Venetian blind | 5 | 34 | £8,589 | £1,718 | £215 |
| Biscuit factories | 9 | 381 | £89,974 | £9,997 | £5,133 | Cooperages | 20 | 171 | £33,881 | £1,694 | £743 |
| Gold quartz mining and crushing | 90 | 4014 | £837,156 | £9,302 | £9,302 | Aerated water | 124 | 570 | £200,965 | £1,621 | £535 |
| Collieries | 118 | 3331 | £1,015,921 | £8,610 | £0 | Furniture making manufacturers | 207 | 1689 | £327,682 | £1,583 | £267 |
| Breweries | 60 | 741 | £499,357 | £8,323 | £2,665 | Tinware factories | 65 | 414 | £98,589 | £1,517 | £322 |
| Distillery | 14 | 527 | £92,159 | £6,583 | £4,001 | Sauce and Pickle | 23 | 143 | £34,751 | £1,511 | £286 |
| Agricultural Implement manufacturers | 19 | 646 | £118,631 | £6,244 | £2,406 | Baking powder manufacturer | 11 | 68 | £16,223 | £1,475 | £338 |
| Grain mills | 66 | 424 | £407,720 | £6,178 | £2,614 | Colonial wine | 12 | 20 | £17,290 | £1,441 | £457 |
| Printing Establishments | 241 | 4222 | £1,302,497 | £5,405 | £2,438 | Sail and oilskin | 34 | 224 | £46,593 | £1,370 | £147 |
| Range-making works | 11 | 271 | £58,542 | £5,322 | £1,337 | Umbrella factories | 5 | 61 | £6,768 | £1,354 | £107 |
| Paper bag and cardboard box | 13 | 240 | £60,915 | £4,686 | £2,101 | Wirework Factories | 14 | 64 | £18,708 | £1,336 | £225 |
| Soap and candle | 20 | 252 | £92,609 | £4,630 | £1,579 | Monumental masonry | 26 | 122 | £34,221 | £1,316 | £112 |
| Engineering works | 120 | 2442 | £514,809 | £4,290 | £1,993 | Hydraulic Gold mining | 197 | 895 | £247,623 | £1,257 | £1,257 |
| Sugar boiling and confectionary | 33 | 729 | £141,074 | £4,275 | £1,893 | Glass factory | 12 | 84 | £15,070 | £1,256 | £256 |
| Flax mills | 81 | 1244 | £342,638 | £4,230 | £928 | Chaff cutting works | 13 | 37 | £16,266 | £1,251 | £495 |
| Malthouses | 28 | 107 | £114,170 | £4,078 | £891 | Saddlery | 117 | 594 | £142,974 | £1,222 | £95 |
| Bone Mills | 10 | 92 | £40,175 | £4,018 | £1,840 | Spouting and Ridging | 17 | 92 | £20,541 | £1,208 | £391 |
| Value industries less than 4 of one sort | 113 | 1008 | £422,988 | £3,743 | £1,337 | Fibrous-plaster works | 13 | 66 | £15,445 | £1,188 | £62 |
| Iron and Brass Foundries | 69 | 1305 | £241,381 | £3,498 | £1,266 | Tobacco | 9 | 20 | £10,501 | £1,167 | £134 |
| Brick and Tile | 94 | 966 | £326,290 | £3,471 | £1,329 | Basket and Perambulator | 26 | 157 | £29,115 | £1,120 | £40 |
| Sawmills, sash and door factories | 534 | 6877 | £1,806,628 | £3,383 | £2,214 | Electro-plating works | 6 | 13 | £6,650 | £1,108 | £200 |
| Billiard table | 4 | 35 | £13,407 | £3,352 | £327 | Portmanteau manufacturers | 6 | 39 | £6,611 | £1,102 | £82 |
| Fellmongering Tanning and Woolscouring | 79 | 1372 | £261,456 | £3,310 | £1,142 | Tailoring Establishments | 448 | 4225 | £483,719 | £1,080 | £40 |
| Boiling down works | 23 | 117 | £75,260 | £3,272 | £1,126 | Fish curing | 20 | 59 | £20,724 | £1,036 | £382 |
| Textile-bag and sack | 4 | 45 | £12,885 | £3,221 | £571 | Cleaning and Dyeing Works | 14 | 59 | £14,141 | £1,010 | £262 |
| Bag and sack works | 4 | 45 | £12,885 | £3,221 | £571 | Sausage skin factories | 13 | 174 | £13,101 | £1,008 | £104 |
| Gold dredging | 82 | 632 | £263,336 | £3,211 | £3,211 | Asphalt works | 7 | 33 | £7,044 | £1,006 | £350 |
| Grass seed dressing | 37 | 110 | £116,011 | £3,135 | £694 | Dressmaking and millinery | 382 | 4128 | £359,819 | £942 | £41 |
| Boot and shoe | 74 | 2072 | £227,057 | £3,068 | £1,226 | Toy factories | 4 | 19 | £3,538 | £885 | £270 |
| Cheese and butter | 338 | 1504 | £954,122 | £2,823 | £1,368 | Musical instrument factories | 6 | 17 | £5,274 | £879 | £94 |
| Clothing factories | 69 | 2947 | £194,481 | £2,819 | £568 | Woodenware and wood turning | 9 | 30 | £7,228 | £803 | £258 |
| Chemical Works | 13 | 98 | £36,488 | £2,807 | £690 | Picture Frame makers | 14 | 37 | £11,132 | £795 | £63 |
| Ship and boat building works | 29 | 589 | £74,741 | £2,577 | £644 | Wool rug and mat making | 5 | 15 | £3,950 | £790 | £67 |
| Fruit preserving and jam | 22 | 289 | £55,461 | £2,521 | £954 | Lapidaries | 4 | 6 | £2,747 | £687 | £105 |
| Bacon curing | 42 | 201 | £103,266 | £2,459 | £788 | Lead headed nail | 6 | 10 | £3,650 | £608 | £177 |
| Coffee and Spice | 12 | 66 | £25,977 | £2,165 | £386 | Mattress factory | 42 | 128 | £23,978 | £571 | £72 |
| Varnish | 4 | 17 | £8,555 | £2,139 | £529 | Rubber stamp making | 5 | 6 | £2,640 | £528 | £52 |

APPENDIX D

TWENTY LARGEST INDUSTRIAL ACTIVITIES BY CAPITAL INVESTMENT

Source: Generated from information contained in census statistics, respective years.

| 20 Largest industries by capital invested: 1881 | | | | | | | | | | | | | | | | |
|---|----------|----------|------------|------------|-------------|--------|----------|------------|-------|--------|-------|---------|-----------------|--------------------|---------------------|---------------|
| Manufactories and Works | Auckland | Taranaki | Wellington | Hawkes Bay | Marlborough | Nelson | Westland | Canterbury | Otago | Totals | Males | Females | Total Employees | Land and Buildings | Machinery and Plant | Total Capital |
| Sawmills/ash and door works | 43 | 6 | 43 | 8 | 16 | 22 | 10 | 28 | 47 | 223 | 4198 | 40 | 4238 | 397084 | 376544 | £773,628 |
| Gasworks | 2 | 1 | 2 | 1 | | 1 | 2 | 4 | 4 | 17 | 188 | | 188 | 177749 | 314367 | £492,116 |
| Grain mills | 18 | 6 | 13 | 5 | 2 | 10 | | 39 | 38 | 131 | 450 | | 450 | 207085 | 150093 | £357,178 |
| Breweries | 15 | 4 | 11 | 5 | 5 | 14 | 7 | 19 | 19 | 99 | 526 | | 526 | 233218 | 84180 | £317,398 |
| Printing works | 20 | 3 | 16 | 6 | 4 | 9 | 5 | 15 | 28 | 106 | 1735 | 44 | 1779 | 99449 | 129717 | £229,166 |
| Collieries | 5 | | | | | 9 | 3 | 6 | 28 | 51 | 992 | | 992 | 100071 | 121079 | £221,150 |
| Iron and Brass Foundries | 10 | | 6 | 1 | 1 | 1 | 1 | 5 | 10 | 35 | 952 | 1 | 953 | 83581 | 71686 | £155,267 |
| Fellmongery Tanning and Woolscouring | 12 | 2 | 12 | 17 | 6 | 4 | 3 | 34 | 29 | 119 | 838 | 21 | 859 | 88156 | 47926 | £136,082 |
| Brick and Tile works | 30 | 4 | 19 | 5 | 4 | 5 | 2 | 23 | 35 | 127 | 666 | 19 | 685 | 77030 | 28735 | £105,765 |
| Woolen mills | | | | | | | | 1 | 3 | 4 | 193 | 224 | 417 | 36000 | 62500 | £98,500 |
| Boiling Down and Meat Preserving | 4 | 3 | 9 | 5 | 9 | | | 7 | 3 | 40 | 465 | 3 | 468 | 62525 | 34320 | £96,845 |
| Furniture making manufacturers | 14 | 4 | 4 | 2 | 3 | 3 | | 7 | 8 | 45 | 438 | 28 | 466 | 71415 | 4512 | £75,927 |
| Aerated Water and Cordial | 14 | 4 | 11 | 4 | 3 | 4 | 4 | 12 | 23 | 79 | 223 | 5 | 228 | 36201 | 30700 | £66,901 |
| Malthouses | 3 | | 1 | 1 | 3 | 5 | | 12 | 9 | 34 | 67 | | 67 | 47850 | 666 | £48,516 |
| Boot Manufacturers | 12 | | 4 | | | | | 4 | 11 | 31 | 956 | 343 | 1299 | 33100 | 13267 | £46,367 |
| Coach-building and Painting works | 10 | 2 | 5 | 4 | 1 | 3 | | 15 | 9 | 49 | 387 | | 387 | 35570 | 10760 | £46,330 |
| Agricultural Implement manufacturers | 6 | | 2 | 1 | | | | 7 | 7 | 23 | 315 | | 315 | 27582 | 16272 | £43,854 |
| Patent Slips | | | 2 | | | | | | 2 | 4 | 31 | | 31 | 6700 | 30220 | £36,920 |
| Soap and Candle factories | 4 | | 2 | | | 1 | | 6 | 2 | 15 | 108 | | 108 | 15550 | 17690 | £33,240 |
| Biscuit factories | 5 | | 3 | | | 1 | | 2 | 7 | 18 | 146 | 2 | 148 | 18380 | 9965 | £28,345 |
| Total | 227 | 39 | 165 | 65 | 57 | 92 | 37 | 246 | 322 | 1250 | 13874 | 730 | 14604 | 1854296 | 1555199 | £3,409,493 |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

| 20 Largest industries by capital invested: 1886 | | | | | | | | | | | | | | | | | |
|--|------------|-----------|------------|------------|-------------|------------|-----------|------------|------------|-------------|--------------|------------|--------------|----------------|----------------|---------------------|-------------------|
| Manufactures and Works | Auckland | Taranaki | Hawkes Bay | Wellington | Marlborough | Nelson | Westland | Canterbury | Otago | Totals | Males | Females | Total Staff | Land | Buildings | Machinery and Plant | Total capital |
| Sawmills | 49 | 8 | 22 | 41 | 14 | 44 | 13 | 27 | 50 | 268 | 5031 | 11 | 5042 | 393079 | 118131 | 452885 | £964,095 |
| Gasworks | 4 | 1 | 1 | 2 | 1 | 1 | 2 | 4 | 4 | 20 | 344 | | 344 | 73626 | 134450 | 448329 | £656,405 |
| Boiling down, meat freezing and preserving works | 8 | 2 | 6 | 7 | 4 | | | 5 | 12 | 44 | 820 | 18 | 838 | 172529 | 148393 | 122040 | £442,962 |
| Printing establishments | 28 | 5 | 8 | 23 | 3 | 10 | 6 | 16 | 36 | 135 | 1999 | 108 | 2107 | 79300 | 87907 | 164516 | £331,723 |
| Grain mills | 15 | 5 | 4 | 14 | 3 | 8 | | 32 | 40 | 121 | 448 | | 448 | 76029 | 120115 | 133160 | £329,304 |
| Breweries | 15 | 5 | 6 | 11 | 6 | 12 | 7 | 19 | 17 | 98 | 475 | | 475 | 89276 | 151622 | 82858 | £323,756 |
| Iron and Brass foundries | 13 | | 2 | 8 | | 2 | 2 | 11 | 20 | 58 | 1748 | 2 | 1750 | 67658 | 53218 | 119062 | £239,938 |
| Hydraulic gold mining and gold dredging | | | | | 1 | 14 | 5 | | 104 | 124 | 617 | | 617 | | | 224787 | £224,787 |
| Gold quartz mining and crushing | 32 | | | 1 | | 45 | 1 | | 22 | 101 | 1156 | | 1156 | | | 211021 | £211,021 |
| Woollen mills | | | | | | | | 3 | 3 | 6 | 478 | 389 | 867 | 9620 | 60800 | 132859 | £203,279 |
| Brick and Tile works | 29 | 3 | 9 | 23 | 2 | 5 | | 16 | 39 | 126 | 594 | 4 | 598 | 66363 | 34916 | 50132 | £151,411 |
| Collieries | 7 | | | | | 11 | | 9 | 52 | 79 | 1448 | | 1448 | | | 148773 | £148,773 |
| Fellmongering, tanning and woollscouring | 9 | 3 | 11 | 12 | 6 | 3 | 1 | 22 | 30 | 97 | 1087 | 6 | 1093 | 40530 | 58330 | 39890 | £138,750 |
| Coachbuilding | 15 | 3 | 4 | 15 | 2 | 5 | 2 | 26 | 17 | 89 | 662 | 2 | 664 | 42615 | 39725 | 23898 | £106,238 |
| Aerated water | 27 | 4 | 6 | 15 | 6 | 4 | 5 | 19 | 26 | 112 | 264 | 9 | 273 | 31060 | 25538 | 36880 | £93,478 |
| Furniture making manufacturers | 21 | 4 | 7 | 9 | 3 | 1 | 2 | 11 | 17 | 75 | 654 | 53 | 707 | 38390 | 45410 | 9232 | £93,032 |
| Soap and candle | 4 | | 1 | 3 | | 1 | | 5 | 4 | 18 | 204 | | 204 | 8810 | 20070 | 47048 | £75,928 |
| Boot and shoe | 15 | | | 5 | | | | 6 | 16 | 42 | 1294 | 360 | 1654 | 24025 | 31099 | 15811 | £70,935 |
| Chaff cutting works | 24 | 2 | 1 | 9 | 4 | 7 | | 15 | 21 | 83 | 263 | 2 | 265 | 36952 | 13873 | 14144 | £64,969 |
| Malthouses | 2 | | | 3 | 2 | 5 | | 11 | 12 | 35 | 85 | | 85 | 18625 | 38315 | 3360 | £60,300 |
| Total | 317 | 45 | 88 | 201 | 57 | 178 | 46 | 257 | 542 | 1731 | 19671 | 964 | 20635 | 1268487 | 1181912 | 2480685 | £4,931,084 |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

| 20 Largest industries by capital invested: 1891 | | | | | | | | | | | | | | | | | |
|---|----------|----------|------------|------------|-------------|--------|----------|------------|-------|--------|-------|---------|------------|---------|-----------|---------------------|---------------|
| Manufactories and Works | Auckland | Taranaki | Hawkes Bay | Wellington | Marlborough | Nelson | Westland | Canterbury | Otago | Totals | Males | Females | Total Emp. | Land | Buildings | Machinery and Plant | Total capital |
| Gas works | 5 | 1 | 2 | 4 | 1 | 2 | 2 | 4 | 6 | 27 | 249 | | 249 | 49763 | 61564 | 619163 | £730,490 |
| Sawmills | 47 | 11 | 13 | 48 | 6 | 34 | 13 | 20 | 51 | 243 | 3260 | 6 | 3266 | 160750 | 92848 | 246674 | £500,272 |
| Meat preserving, freezing and boiling down | 7 | 3 | 6 | 8 | 3 | | | 6 | 10 | 43 | 1561 | 7 | 1568 | 67206 | 229607 | 179338 | £476,151 |
| Grain mills | 13 | 5 | 2 | 14 | 4 | 8 | | 40 | 43 | 129 | 499 | | 499 | 77237 | 148410 | 166181 | £391,828 |
| Graving docks patent slip | 4 | | | 1 | | | | 2 | 2 | 9 | 64 | | 64 | 141333 | 4050 | 202386 | £347,769 |
| Printing Establishments | 30 | 6 | 7 | 28 | 5 | 7 | 6 | 16 | 37 | 142 | 2373 | 196 | 2569 | 71366 | 96542 | 173775 | £341,683 |
| Iron and Brass Foundries | 21 | 1 | 2 | 12 | 2 | 4 | 2 | 15 | 20 | 79 | 1785 | 2 | 1787 | 65085 | 59312 | 144490 | £268,887 |
| Woolen Mills | 1 | | | 1 | | | | 2 | 4 | 8 | 602 | 573 | 1175 | 24600 | 69067 | 166288 | £259,955 |
| Gold quartz mining and crushing | 62 | | | | | 45 | 4 | | 24 | 135 | 1971 | | 1971 | | | 241715 | £241,715 |
| Breweries | 12 | 5 | 7 | 14 | 4 | 16 | 7 | 19 | 18 | 102 | 476 | | 476 | 66764 | 113565 | 56496 | £236,825 |
| Collieries | 9 | | | | | 13 | | 6 | 67 | 95 | 1655 | | 1655 | | | 155671 | £155,671 |
| Hydraulic gold mining and gold dredging | 1 | | | | | 4 | 6 | | 63 | 74 | 495 | | 495 | | | 154270 | £154,270 |
| Fellmongering Tanning and Woolscouring | 12 | 2 | 10 | 13 | 7 | 2 | | 25 | 33 | 104 | 1190 | 6 | 1196 | 48753 | 66886 | 37953 | £153,592 |
| Flax mills | 71 | 6 | 3 | 34 | 12 | 7 | 2 | 16 | 26 | 177 | 3196 | 8 | 3204 | 51905 | 28238 | 66649 | £146,792 |
| Brick and Tile | 14 | 3 | 2 | 20 | 4 | 11 | 1 | 18 | 33 | 106 | 484 | 10 | 494 | 39313 | 38541 | 41926 | £119,780 |
| Cheese and butter | 22 | 11 | 1 | 10 | | | | 4 | 26 | 74 | 218 | 51 | 269 | 41369 | 31648 | 27409 | £100,426 |
| Furniture making manufacturers | 24 | | 7 | 14 | 2 | 5 | 2 | 19 | 21 | 94 | 551 | 34 | 585 | 41570 | 45178 | 9795 | £96,543 |
| Coachbuilding | 18 | 2 | 6 | 18 | 5 | 7 | 2 | 32 | 18 | 108 | 675 | 3 | 678 | 45727 | 31646 | 18852 | £96,225 |
| Boot and shoe | 22 | 1 | | 6 | | | | 10 | 8 | 47 | 1475 | 468 | 1943 | 26010 | 37500 | 18627 | £82,137 |
| Soap and candle | 6 | | 1 | 2 | | 3 | | 4 | 3 | 19 | 201 | 8 | 209 | 11282 | 15650 | 47511 | £74,443 |
| Total | 401 | 57 | 69 | 247 | 55 | 168 | 47 | 258 | 513 | 1815 | 22980 | 1372 | 24352 | 1030033 | 1170252 | 2775169 | £4,975,454 |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

20 Largest industries by capital invested: 1896

| Manufactories and Works | Auckland | Taranaki | Hawkes Bay | Wellington | Marlborough | Nelson | Westland | Canterbury | Otago | Totals | Males | Females | Total Emp. | Land | Buildings | Machinery and Plant | Total capital |
|--|----------|----------|------------|------------|-------------|--------|----------|------------|-------|--------|-------|---------|------------|--------|-----------|---------------------|---------------|
| Gas works | 5 | 1 | 2 | 4 | 1 | 2 | 2 | 4 | 6 | 27 | 293 | 2 | 295 | 41422 | 79610 | 645641 | £766,673 |
| Meat preserving, freezing and boiling down | 5 | 2 | 4 | 5 | 1 | | | 4 | 9 | 30 | 1908 | 52 | 1960 | 64184 | 320324 | 312928 | £697,436 |
| Sawmills, sash and door factories | 49 | 19 | 23 | 64 | 4 | 42 | 25 | 22 | 51 | 299 | 4055 | 4 | 4059 | 186958 | 100667 | 298797 | £586,422 |
| Hydraulic Gold mining | | | | | | 20 | 43 | | 42 | 105 | 744 | | 744 | | | 505674 | £505,674 |
| Printing Establishments | 31 | 9 | 8 | 39 | 3 | 9 | 6 | 20 | 29 | 154 | 2123 | 228 | 2351 | 68847 | 124369 | 203699 | £396,915 |
| Grain mills | 12 | 4 | 1 | 9 | 1 | 8 | | 32 | 23 | 90 | 419 | | 419 | 41730 | 134714 | 179403 | £355,847 |
| Gold quartz mining and crushing | 105 | | | | 2 | 31 | 6 | | 24 | 168 | 2814 | | 2814 | | | 335474 | £335,474 |
| Graving docks patent slip | 3 | | | 1 | | | | 1 | 1 | 6 | 29 | | 29 | 13825 | 5011 | 312970 | £331,806 |
| Iron and Brass Foundries | 22 | 1 | 2 | 15 | 2 | 2 | 1 | 21 | 24 | 90 | 1639 | 3 | 1642 | 70811 | 55152 | 126172 | £252,135 |
| Gold dredging | | | | | | 3 | | | 32 | 35 | 258 | | 258 | | 161999 | 86003 | £248,002 |
| Cheese and butter | 21 | 53 | 8 | 18 | 2 | 10 | | 14 | 44 | 170 | 548 | 28 | 576 | 27335 | 91601 | 115070 | £234,006 |
| Breweries | 11 | 5 | 5 | 12 | 3 | 12 | 4 | 16 | 17 | 85 | 465 | | 465 | 51533 | 115033 | 63850 | £230,416 |
| Woolen Mills | 1 | | | 1 | | | | 3 | 4 | 9 | 655 | 761 | 1416 | 11050 | 68358 | 144065 | £223,473 |
| Fellmongering Tanning and Woolscouring | 15 | 4 | 16 | 17 | 5 | 3 | | 29 | 28 | 117 | 1623 | 6 | 1629 | 41490 | 77186 | 52729 | £171,405 |
| Collieries | 11 | | | | | 18 | 4 | 13 | 118 | 164 | 1799 | | 1799 | | | 148367 | £148,367 |
| Boot and shoe | 28 | | | 5 | | 1 | | 17 | 14 | 65 | 1752 | 597 | 2349 | 36989 | 46610 | 26436 | £110,035 |
| Coachbuilding | 22 | 6 | 9 | 24 | 4 | 4 | 2 | 27 | 18 | 116 | 807 | | 807 | 41376 | 40076 | 24350 | £105,802 |
| Aerated water | 26 | 7 | 9 | 23 | 4 | 9 | 2 | 30 | 22 | 132 | 330 | 17 | 347 | 19476 | 32439 | 37429 | £89,344 |
| Furniture making manufacturers | 16 | 2 | 7 | 13 | | 3 | 2 | 15 | 13 | 71 | 472 | 24 | 496 | 34767 | 39974 | 9932 | £84,673 |
| Brick and Tile | 21 | 3 | 13 | 17 | 3 | 6 | | 15 | 30 | 108 | 454 | 1 | 455 | 24074 | 24917 | 27594 | £76,585 |
| Total | 44 | 116 | 107 | 267 | 35 | 183 | 97 | 283 | 549 | 2041 | 23187 | 1723 | 24910 | 775867 | 1518040 | 3656583 | £5,950,490 |

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

20 Largest industries by capital invested: 1901

| Manufactories and Works | Auckland | Taranaki | Hawkes Bay | Wellington | Marlborough | Nelson | Westland | Canterbury | Otago | Totals | Males | Females | Total Emp. | Land | Buildings | Machinery and Plant | Total capital |
|--|------------|------------|------------|------------|-------------|------------|------------|------------|------------|-------------|--------------|-------------|--------------|----------------|----------------|---------------------|-------------------|
| Gas works | 6 | 2 | 2 | 6 | 1 | 2 | 2 | 4 | 5 | 30 | 568 | 4 | 572 | 65555 | 88874 | 817130 | £971,559 |
| Meat preserving, freezing and boiling down | 7 | 2 | 2 | 5 | 1 | | | 4 | 13 | 34 | 2172 | 49 | 2221 | 79713 | 419775 | 394232 | £893,720 |
| Gold quartz mining and crushing | 78 | | | | 1 | 15 | | | 26 | 120 | 4333 | | 4333 | | | 735927 | £735,927 |
| Sawmills, sash and door factories | 48 | 23 | 26 | 66 | 8 | 46 | 29 | 18 | 70 | 334 | 6805 | 7 | 6812 | 187398 | 108015 | 408207 | £703,620 |
| Gold dredging | | | | | 1 | 13 | 10 | | 121 | 145 | 965 | | 965 | | 161830 | 528600 | £690,430 |
| Printing Establishments | 35 | 12 | 4 | 40 | 2 | 8 | 3 | 35 | 49 | 188 | 2627 | 507 | 3134 | 109130 | 160787 | 289621 | £559,538 |
| Cheese and butter | 27 | 102 | 8 | 37 | 4 | 7 | 3 | 17 | 42 | 247 | 1165 | 23 | 1188 | 38780 | 147307 | 202663 | £388,750 |
| Hydraulic Gold mining | | | | | 1 | 10 | 51 | | 68 | 130 | 962 | | 962 | | 172594 | 207750 | £380,344 |
| Collieries | 11 | | | | | | 16 | 13 | 105 | 145 | 2460 | | 2460 | | | 372093 | £372,093 |
| Grain mills | 8 | 3 | 2 | 8 | 2 | 5 | | 23 | 27 | 78 | 513 | 2 | 515 | 44688 | 132817 | 181151 | £358,656 |
| Breweries | 9 | 3 | 5 | 10 | 2 | 10 | 4 | 16 | 15 | 74 | 677 | 5 | 682 | 78694 | 139014 | 76884 | £294,592 |
| Woolen Mills | 1 | | | 1 | | | | 3 | 5 | 10 | 769 | 924 | 1693 | 11264 | 93454 | 172704 | £277,422 |
| Fellmongering Tanning and Woolscouring | 16 | 4 | 15 | 14 | 4 | 4 | | 29 | 33 | 119 | 1957 | 6 | 1963 | 52319 | 102855 | 80778 | £235,952 |
| Graving docks patent slip | 3 | | | 1 | | | | 2 | 1 | 7 | 32 | | 32 | 10860 | 14350 | 204955 | £230,165 |
| Iron and Brass Foundries | 13 | 1 | 2 | 13 | 2 | 3 | 3 | 14 | 14 | 65 | 1950 | 5 | 1955 | 58686 | 45517 | 107079 | £211,282 |
| Tailoring Establishments | 32 | 12 | 3 | 67 | | 10 | 7 | 22 | 22 | 175 | 722 | 899 | 1621 | 135541 | 68408 | 7067 | £211,016 |
| Dressmaking and millinery | 41 | 8 | 12 | 78 | 5 | 9 | 3 | 69 | 65 | 290 | 23 | 2865 | 2888 | 109428 | 73264 | 11306 | £193,998 |
| Boot and shoe | 31 | 4 | | 24 | | 2 | 3 | 27 | 35 | 126 | 1906 | 790 | 2696 | 57415 | 70189 | 49388 | £176,992 |
| Furniture making manufacturers | 26 | 14 | 7 | 36 | 1 | 4 | 4 | 20 | 32 | 144 | 1243 | 67 | 1310 | 75200 | 71884 | 23254 | £170,338 |
| Engineering works | 10 | | | 9 | | 2 | | 8 | 8 | 37 | 1437 | 5 | 1442 | 55760 | 34834 | 64487 | £155,081 |
| Total | 402 | 190 | 88 | 415 | 35 | 150 | 138 | 324 | 756 | 2498 | 33286 | 6158 | 39444 | 1170431 | 2105768 | 4935276 | £8,241,475 |

APPENDIX E

AVERAGE FACTORY SIZE IN STAFF NUMBERS: 1880-1910

Source: Generated from information contained in census statistics, respective years.

| Manufactories and Works | 1881 | 1886 | 1891 | 1896 | 1901 | 1906 | 1911 | Manufactories and Works | 1881 | 1886 | 1891 | 1896 | 1901 | 1906 | 1911 |
|--------------------------------------|------|------|------|------|------|------|------|--|------|------|------|------|------|------|------|
| Aerated Water and Cordial | 3 | 2 | 2 | 3 | 4 | 5 | 5 | Ice and toe plate | | 6 | 7 | 2 | 2 | 3 | 2 |
| Agricultural Implement manufacturers | 14 | 20 | 15 | 17 | 18 | 27 | 34 | Iron and Brass Foundries | 27 | 30 | 23 | 18 | 30 | 26 | 19 |
| Ammunition factories | | | | 45 | 105 | 130 | 85 | Iron pipe and fluming works | | | 2 | | 3 | n/a | n/a |
| Antimony mining and Manganese Works | | 35 | 30 | 3 | | | | Lapidaries | | | | | 3 | 1 | 2 |
| Bacon Curing | 3 | 4 | 3 | 3 | 5 | 4 | 5 | Lead headed nail | | | 8 | 2 | 3 | 3 | 2 |
| Bag and sack works | | | | | | | | Leather and grindery | | | 3 | | | | |
| Baking powder manufacturer | | 5 | 3 | 2 | 3 | 4 | 6 | Limeworks | 3 | 3 | 5 | 6 | 12 | 14 | 27 |
| Barbed wire | | 22 | | | | | | Linseed oil mill | | 6 | | | | | |
| Bark mill | | 8 | 6 | | | | | Machinists and Millwrights | 11 | 18 | | | | | |
| Barrow and ladder factory | | 3 | 4 | 4 | 5 | n/a | n/a | Malthouses | 2 | 2 | 3 | 3 | 4 | 4 | 4 |
| Basket and Perambulator | | 4 | 3 | 4 | 6 | 6 | 6 | Manure Works | | | | | 6 | n/a | n/a |
| Bellows factory | | | | 1 | 2 | n/a | n/a | Match factories | | | | 61 | 92 | 103 | 94 |
| Billiard table | | | | 2 | 2 | 6 | 9 | Mattress factory | | | | 3 | 5 | 5 | 3 |
| Biscuit mills | 8 | 8 | 15 | 25 | 33 | 49 | 42 | Meat preserving, freezing and boiling down | | | 36 | 65 | 65 | 86 | 97 |
| Blacking factories | | | | 3 | 1 | 4 | 3 | Manganese Works | 10 | 1 | | | | | |
| Block and pump | 2 | 2 | 1 | 1 | 2 | 1 | 1 | Monumental masonry | | | | | 3 | 5 | 5 |
| Bellows making manufacturers | 5 | | | | | | | Musical Instrument factory | 3 | 2 | 6 | 3 | 4 | 4 | 3 |
| Boiler makers | | 7 | | | | | | Oilskin factories | 4 | | | | | | |
| Boiling Down and Meat Preserving | 12 | 19 | | 6 | 4 | 4 | 5 | Ointment | | 5 | | | | | |
| Bone Cutting Mills | 1 | 3 | 3 | 3 | 2 | 14 | 9 | Oleomargarine works | | | | 12 | 9 | n/a | n/a |
| Boot Manufacturers | 42 | 39 | 41 | 36 | 21 | 31 | 28 | Ornamental Silk Manufactories | 1 | 1 | | | | | |
| Breweries | 5 | 5 | 5 | 5 | 9 | 10 | 12 | Paint varnish | | | 3 | | | | |
| Brick and Tile | 5 | 5 | 5 | 4 | 8 | 10 | 10 | Paper bag and cardboard box | | 7 | 4 | 10 | 12 | 13 | 18 |
| Brush Manufacturers | 24 | 6 | 7 | 4 | 11 | 14 | 13 | Paper mills | 10 | 19 | 24 | 28 | 33 | 39 | 33 |
| Cap and Hat Factories | 7 | 15 | 7 | 5 | 9 | 15 | n/a | Perfumery | | 4 | 6 | 5 | 4 | n/a | n/a |
| Cardboard box | | 8 | | | | | | Picture Frame makers | | | | | 2 | 2 | 3 |
| Cartridge | | 21 | 80 | | | | | Portmanteau manufacturers | 2 | 2 | 4 | 4 | 4 | 8 | 7 |
| Chaff cutting works | 3 | 3 | 3 | 4 | 5 | 4 | 3 | Precious stone cutting | | 2 | 2 | | | | |
| Chair and washboard | 3 | 3 | 3 | 1 | | | | Printing | 17 | 16 | 18 | 15 | 17 | 16 | 18 |
| Cheese and butter | | 3 | 4 | 3 | 5 | 6 | 4 | Pumice works | | | | | 20 | 28 | 12 |
| Chemical Works | 6 | 9 | 7 | 16 | 12 | 10 | 8 | Pyrites-saving machine | | 7 | | | 16 | 9 | n/a |
| Cigarette manufactories | | | | | 6 | n/a | n/a | Rabbit preserving works | | | | | | | n/a |
| Cleaning and Dyeing Works | 3 | 3 | 4 | 4 | 5 | 4 | 4 | Range-making works | | | | | | 21 | 21 |
| Clothing Factories | 95 | 115 | 68 | 76 | 120 | 83 | 43 | Returns not incl. Above | | | | | 4 | n/a | n/a |
| Coach-building and Painting Works | 8 | 7 | 6 | 7 | 7 | 8 | 8 | Rope and Twine | 7 | 12 | 9 | 6 | 11 | 20 | 24 |
| Coconut oil mill | | | 3 | 2 | 5 | n/a | n/a | Rubber stamp making | | | | | 1 | 2 | 1 |
| Coffee Spice and Chicory | 7 | 11 | 5 | 7 | 4 | 9 | 6 | Saddlery | | | 23 | 12 | 6 | 5 | 5 |
| Collieries | 19 | 18 | 17 | 11 | 17 | 21 | 28 | Sail and oilskin | 3 | 4 | 4 | 4 | 8 | 6 | 7 |
| Colonial Wine | 3 | 2 | 2 | 3 | 4 | 2 | 2 | Sauce and Pickle | 5 | 4 | 3 | 3 | 6 | 8 | 6 |
| Condensed milk | | | 2 | 10 | 33 | 29 | 28 | Sausage skin factories | | | 15 | 9 | 10 | 13 | 13 |
| Cooperages | | 4 | 5 | 4 | 6 | 5 | 9 | Sawmills, sash and door factories | 19 | 19 | 13 | 14 | 20 | 21 | 13 |
| Copper boiling works | | 100 | 4 | | | | | | | | | | | | |
| Cork manufacturer | | 5 | 3 | 3 | 3 | 4 | n/a | | | | | | | | |
| Corset and belt | | | | | 4 | 6 | 3 | | | | | | | | |
| Cutlery factory | | | | 6 | 2 | 3 | n/a | | | | | | | | |
| Cream Factory | | 2 | | | | | | | | | | | | | |
| Cycle works | | 4 | 4 | 7 | 6 | 5 | 4 | | | | | | | | |

Continued overleaf

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

AVERAGE FACTORY SIZE IN STAFF NUMBERS: 1880-1910 (CONTINUED)

| Manufactories and Works | 1881 | 1886 | 1891 | 1896 | 1901 | 1906 | 1911 | Manufactories and Works | 1881 | 1886 | 1891 | 1896 | 1901 | 1906 | 1911 |
|--|------|------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|
| Dressmaking and millinery | | | | | 10 | 9 | 11 | Sheep dip factories | | | | 5 | 2 | 2 | 2 |
| Electric Lighting works | | | | | | | | Ship and boat building works | 4 | 3 | 4 | 3 | 7 | 8 | 20 |
| Electric tramways | | | | | | | | Shirt-making | | | | | 21 | 18 | n/a |
| Electrical engineering works | | | | | | | | Soap and candle | 7 | 11 | 11 | 9 | 10 | 13 | 13 |
| Electro-plating works | | | | 6 | 6 | 6 | 2 | Spouting and Ridging | 2 | 7 | 8 | 10 | 7 | 10 | 5 |
| Engineering works | | | | | 39 | 31 | 20 | Starch works | 3 | 3 | 13 | 14 | 11 | 13 | 8 |
| Fat refining works | | | | | 14 | n/a | n/a | Stocking Weaving | 1 | 34 | 9 | 19 | | | |
| Fellmongering Tanning and Woolscouring | 7 | 11 | 12 | 14 | 16 | 13 | 17 | Stone Quarries | 14 | 14 | 4 | 5 | 7 | n/a | n/a |
| Fencing standard factory | | | 3 | | | | | Stone sawing works | 8 | | | | | | |
| Fire-kindler factories | | 4 | | 2 | | | | Sugar boiling and confectionary | | 10 | 4 | 4 | 12 | 16 | 22 |
| Fibrous-plaster works | | | | | | | | Sugar refining | | 27 | 110 | 160 | 256 | 228 | 338 |
| Fish curing | 5 | 6 | 5 | 3 | 5 | 5 | 3 | Tailoring Establishments | | | | | 9 | 10 | 9 |
| Flax mills | 7 | 8 | 18 | 12 | 17 | 17 | 15 | Textile-bag and sack | | | 14 | 7 | 6 | 12 | 11 |
| Flock mills | | 3 | 2 | 2 | 2 | 4 | 4 | Tinware factories | | 13 | 8 | 9 | 6 | 9 | 6 |
| Fruit canning works | | | | | 3 | 13 | n/a | Tobacco | | 30 | 53 | 10 | 10 | 7 | 2 |
| Fruit case manufacturer | | 3 | 3 | | | | | Tobacco pipe | | | 2 | 2 | 2 | n/a | n/a |
| Fruit preserving and jam | | 11 | 8 | 9 | 13 | 13 | 13 | Tow hocking | | | 3 | | | | |
| Furniture making manufacturers | 10 | 9 | 6 | 7 | 9 | 9 | 8 | Toy Factories | | | 2 | | | | |
| Gasworks | 11 | 17 | 9 | 11 | 19 | 25 | 16 | Varnish | | | | | 5 | 7 | 4 |
| Glass bevelling works | | | | 1 | 4 | n/a | n/a | Venetian blind | | 6 | 3 | 3 | 4 | 4 | 7 |
| Glass works | 0 | 4 | 4 | 6 | 5 | 4 | 7 | Vinegar works | | 3 | 3 | 3 | 6 | n/a | n/a |
| Glue Manufactories | 2 | 4 | 2 | 2 | 5 | 8 | 6 | Violin string | | 6 | | | | | |
| Gold dredging | | | | 7 | 7 | 8 | 8 | Waterproof factories | | | | 23 | 19 | n/a | n/a |
| Gold quartz mining | 14 | 11 | 15 | 17 | 36 | 44 | 45 | Whiphong | | | 3 | 2 | 3 | 2 | 4 |
| Grain Mills | 3 | 4 | 4 | 5 | 7 | 7 | 6 | Woodenware and wood turning | | | 10 | 4 | 6 | 8 | 3 |
| Grass seed dressing | | | | 2 | 2 | 4 | 3 | Wool rug and mat making | | | | | 9 | 6 | 3 |
| Graving Docks Patent Slips | 8 | 4 | 7 | 5 | 5 | 3 | n/a | Woolen Mills | 104 | 145 | 147 | 157 | 169 | 155 | 128 |

APPENDIX F

AUCKLAND GOLD MINING COMPANIES COMMENCED BETWEEN 1886 -1890

Source: Generated from information contained in *Statistics of New Zealand*, respective years.

| Name | Year | Capital | Name | Year | Capital |
|--|------|---------|---|------|------------|
| 1 Auckland Gold-mining Company | 1886 | £10,000 | 41 Vizard's Gold-mining Company | 1890 | £10,000 |
| 2 Karangahake Quartz Reduction and Mining Company | 1886 | £5,000 | 42 Excelsior Gold-mining Company | 1890 | £12,500 |
| 3 South Kapanga Gold-mining Company | 1887 | £10,000 | 43 Shotover Gold-mining Company | 1890 | £10,125 |
| 4 Vaughan Gold-mining Company | 1887 | £8,100 | 44 Flying Cloud Gold-mining Company | 1890 | £12,500 |
| 5 Paroquet Gold-mining and Quartz-crushing Company | 1887 | £25,000 | 45 Owera Gold-mining Company | 1890 | £12,500 |
| 6 Maratoto Gold and Silver-mining Company | 1887 | £22,500 | 46 Pinfire Gold-mining Company | 1890 | £12,500 |
| 7 Goldwater Gold and Silver-mining Company | 1887 | £6,250 | 47 Calliope Gold-mining Company | 1890 | £12,500 |
| 8 Gem Gold-mining Company | 1888 | £15,000 | 48 Golden Age Gold-mining Company | 1890 | £6,250 |
| 9 Askham-Molloy Gold and Silver-extraction Company | 1888 | £20,000 | 49 Mount Edward Gold-mining Company | 1890 | £11,250 |
| 10 Observer Gold-mining Company | 1888 | £15,000 | 50 Souvenir Gold-mining Company | 1890 | £12,500 |
| 11 Brogan Gold-mining Company | 1888 | £15,000 | 51 Arizona Gold-mining Company | 1890 | £7,500 |
| 12 Mata Gold-mining Company | 1888 | £27,000 | 52 Victory Gold-mining Company | 1890 | £12,500 |
| 13 Adeline Amalgamated Gold-mining Company | 1888 | £25,000 | 53 Perseverance Gold-mining Company | 1890 | £9,000 |
| 14 New Moanatairi Gold-mining Company | 1888 | £25,000 | 54 Keystone Gold-mining Company | 1890 | £12,500 |
| 15 Cambria Amalgamated Gold-mining Company | 1888 | £25,000 | 55 Consols Gold-mining Company | 1890 | £25,000 |
| 16 Caledonian Gold-mining Company | 1889 | £6,000 | 56 Just-in-Time Gold-mining Company | 1890 | £12,000 |
| 17 May Queen Gold-mining Company | 1889 | £25,000 | 57 Kapai Gold-mining Company | 1890 | £12,500 |
| 18 Lone Hand Gold-mining Company | 1889 | £15,000 | 58 Monowai Gold-mining Company | 1890 | £10,500 |
| 19 Norfolk Gold-mining Company | 1889 | £25,000 | 59 Maori Pah Gold-mining Company | 1890 | £10,500 |
| 20 Dives Gold-mining Company | 1889 | £6,000 | 60 Victoria Gold-mining Company | 1890 | £12,500 |
| 21 Try Fluke Gold-mining Company | 1889 | £12,500 | 61 Pride of the Hills Gold-mining Company | 1890 | £12,500 |
| 22 Woodstock United Gold and Silver-mining Company | 1890 | £27,500 | 62 Stanley Gold-mining Company | 1890 | £9,000 |
| 23 Mariposa Gold-mining Company | 1890 | £12,500 | 63 Leopold Gold-mining Company | 1890 | £13,500 |
| 24 Freedom Gold-mining Company | 1890 | £6,000 | 64 Prosperity Gold-mining Company | 1890 | £8,750 |
| 25 Nemesis Gold-mining Company | 1890 | £20,000 | 65 Jubilee Gold-mining Company | 1890 | £10,000 |
| 26 Otama Gold-mining Company | 1890 | £20,000 | 66 Kuaotunu Gold-mining Company | 1890 | £12,500 |
| 27 Orlando Gold-mining Company | 1890 | £10,000 | 67 Oriental Gold-mining Company | 1890 | £10,000 |
| 28 Kuaotunu-Bonanza Gold-mining Company | 1890 | £30,000 | 68 Little Nell Gold-mining Company | 1890 | £10,000 |
| 29 Red Mercury Gold-mining Company | 1890 | £7,500 | 69 Hazelbank Gold-mining Company | 1890 | £10,500 |
| 30 Orient Gold-mining Company | 1890 | £12,500 | 70 Occidental Gold-mining Company | 1890 | £25,000 |
| 31 City of Dunedin Gold-mining Company | 1890 | £25,000 | 71 Alfred Gold-mining Company | 1890 | £13,500 |
| 32 Carbine Gold-mining Company | 1890 | £25,000 | 72 Hongkong Gold-mining Company | 1890 | £7,500 |
| 33 Junction Gold-mining Company | 1890 | £7,500 | 73 Mountain Flower Gold-mining Company | 1890 | £15,000 |
| 34 Lady Carrington Gold-mining Company | 1890 | £12,500 | 74 Hauraki Gold-mining Company | 1890 | £11,250 |
| 35 Waitaia Gold-mining Company | 1890 | £15,000 | 75 Pride of Karaka Gold-mining Company | 1890 | £8,750 |
| 36 Kuaotunu Quartz-Crushing Company | 1890 | £5,000 | 76 Golden Gate Gold-mining Company | 1890 | £12,500 |
| 37 Wairoa Gold-mining Company | 1890 | £10,000 | 77 Success Gold-mining Company | 1890 | £15,000 |
| 38 Midas Gold-mining Company | 1890 | £6,250 | 78 Surplus Gold-mining Company | 1890 | £12,500 |
| 39 Diamond Gold-mining Company | 1890 | £10,000 | 79 Crack-shot Gold-mining Company | 1890 | £12,500 |
| 40 John Bull Gold-mining Company | 1890 | £12,500 | 80 Hilda Gold-mining Company | 1890 | £15,000 |
| | | | TOTAL | | £1,100,475 |

BIBLIOGRAPHY

PRIMARY

OFFICIAL PUBLISHED

Appendices to the Journal of the House of Representatives, 1870-1910.

New Zealand Parliamentary Debates, 1870-1910.

New Zealand Yearbook, 1900-1920

Results of a Census of the Colony of New Zealand, 1858-1926.

Statistics of New Zealand, 1853-1930.

NEWSPAPERS

Press, Christchurch, 1880-1890

New Zealand Herald, Auckland, 1878-1910.

Newton King Limited centennial, 1879-1979', *Taranaki Daily News*, 5 October, 1979.

Observer, Auckland, 1880-1881.

Otago Daily Times, Dunedin, 1878-1910.

'Warnock: 100 Years Value and Service, 1886-1986', *Wanganui Newspapers Commemorative Supplement*, Wanganui: The Newspapers, 1986.

BOOKS

Cyclopedia of New Zealand, vols. 1-6, Christchurch: Cyclopedia Company Limited, 1897-1908.

The Dictionary of New Zealand Biography, vol.1, 1769-1869, Wellington: Allen and Unwin/Dept. of Internal Affairs, 1990.

The Dictionary of New Zealand Biography, vol.2, 1870-1900, Wellington: Bridget Williams Books/Dept. of Internal Affairs, 1993.

The Dictionary of New Zealand Biography, vol.3, 1901-1920, Auckland: Auckland University Press/Dept. of Internal Affairs, 1996.

The Dictionary of New Zealand Biography. vol. 4, 1921-1940, Auckland: Auckland University Press/Dept. of Internal Affairs, 1998.

SECONDARY

BOOKS

Aldcroft, Derek H. and Simon P. Ville, (eds.) *The European Economy, 1750-1914: A Thematic Approach*, Manchester: Manchester University Press, 1994.

Aldridge, G.F. and C.W. Burnard, *A History of the National Dairy Association of New Zealand 1894-1984*, Masterton: Printcraft, 1985.

Anderson, Len, *Throughout the East Coast: the Story of Williams and Kettle Ltd.*, Hastings: New Zealand Pictorial Publications, 1974.

Angus, John H., *Papermaking Pioneers: a History of New Zealand Paper Mills Limited and its Predecessors*, Matura: New Zealand Paper Mills, 1976.

Angus, John H., *The Ironmasters: the First One Hundred Years of H.E. Shacklock Limited*, Dunedin: H.E. Shacklock, 1973.

Arnold, R.D., *The Farthest Promised Land*, Wellington: Victoria University Press, 1981.

Barreto, Humberto, *The Entrepreneur in Microeconomic Theory: Disappearance and Explanation*, London: Routledge, 1989.

Bassett, Michael, *The State in New Zealand, 1840-1984: Socialism without Doctrines?*, Auckland: Auckland University Press, 1998.

Baumol, William J., and Alan S. Blinder, *Economics Principles and Policy*, 5th ed., Fort Worth: Harcourt Brace Jovanovich, 1991.

Baumol, William, *Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism*, Princeton: Princeton University Press, 2002.

Beaglehole, Diana, *Learning to Lead – 50 Years on: A History of the New Zealand College of Management, 1952-2002*, Wellington: New Zealand College of Management Inc., 2004.

- Belich, James, *Paradise Reforged: a History of the New Zealanders from the 1880s to the Year 2000*, Auckland: Penguin, 2001.
- Birch, D. L., *Job Creation in America*, New York: Free Press, 1987.
- Blaug, Mark, (ed.), *Richard Cantillon (1680-1734) and Jacques Turgot (1727-1781)*, Aldershot: Edward Elgar Publishing, 1991.
- Borrie, W.D., *Immigration to New Zealand: 1854-1938*, Canberra: Australian National University, 1991.
- Boyce, Gordon, and Simon Ville, *The Development of Modern Business*, New York: Palgrave, 2002.
- Brasch, Charles, and C.R. Nicolson, *Hallenstein : the First Century, 1873-1973*, Dunedin: Hallenstein Bros., 1973.
- Braudel, Fernand, *Civilization and Capitalism 15th-18th Century, Volume II: The Wheels of Commerce*, London: William Collins Sons and Co, 1982.
- Brewer, Anthony, *Richard Cantillon: Pioneer of Economic Theory*, London: Routledge, 1992.
- Brinley Thomas, *Migration and Economic Growth*, 2nd edn., Cambridge: Cambridge University Press, 1973.
- Brown, Jonathan and Mary Rose, (eds.), *Entrepreneurship, Networks and Modern Business*, Manchester: Manchester University Press, 1993.
- Butlin, Noel, *Investment in Australian Economic Development 1861-1900*, Canberra: Australian National University, 1972.
- Cain, P.J. and A.G. Hopkins, *British Imperialism: Innovation and Expansion 1688-1914*, London: Longman, 1993.
- Cameron, Alan and Claire Massey, *Small and Medium-Sized Enterprises: a New Zealand Perspective*, Auckland: Longman, 1999.
- Cameron, Alan, and Claire Massey, *Entrepreneurs at Work: Successful New Zealand Business Ventures*, Auckland: Pearson Education, 2002.
- Campbell-Hunt, Colin, et al., *World Famous in New Zealand: How New Zealand's Leading Firms Became World-Class Competitors*, Auckland: Auckland University Press, 2001.
- Canterbury Progress League, *The Story of the Midland Railway*, Christchurch: Lyttleton Times Co. Ltd., 1923.

- Cantillon, Richard, *Essai sur la Nature du Commerce en Général*, Henry Higgs (ed.), London: Macmillan, 1931.
- Carrothers, W.A., *Emigration from the British Isles: With special Reference to the Development of the Overseas Dominions*, London: P.S. King and Son, 1929.
- Casson, M., *The Entrepreneur: An Economic Theory*. Oxford: Martin Robertson, 1982.
- Casson, M., *Entrepreneurship and Business Culture: Studies in the Economics of Trust*, vol. 1, Aldershot: Edward Elgar, 1995.
- Casson, Mark, *The Entrepreneur: An Economic Theory*, 2nd edn., Cheltenham: Edward Elgar Publishing, 2003.
- Chandler, Alfred D. Jr., *Strategy and Structure*, Cambridge, MA: MIT Press, 1962.
- Chandler, Alfred D. Jr., *Scale and Scope: the Dynamics of Industrial Capitalism*, Cambridge Mass: Harvard University Press, 1990.
- Chappell, Norman, *New Zealand Banker's Hundred: a History of the Bank of New Zealand, 1861-1961*, Wellington: Bank of New Zealand, 1961.
- Collier, James, *Sir George Grey: Governor, High Commissioner, and Premier: an Historical Biography*, Christchurch: Whitcombe and Tombs, 1909.
- Collins, O. F., D.G. Moore and D.B. Unwalla, *The Enterprising Man*, East Lansing: MSU Business Studies, 1964.
- Collins, James C., and Gerry I. Porras, *Built to Last: Successful Habits of Visionary Companies*, New York: HarperBusiness, 1994.
- Condliffe, J.B., *New Zealand in the Making: A Survey of Economic and Social Development*, London: G. Allen and Unwin, 1930.
- Coulter, Mary, *Entrepreneurship in Action*, New Jersey: Prentice Hall, 2001.
- Cuff, Martine E., *Totara Estate: Centenary of the Frozen Meat Industry*, Wellington: New Zealand Historic Places Trust, 1982.
- Dalziel, Raewyn, *Julius Vogel: Business Politician*, Auckland: Auckland University Press, 1986.
- Davidson, Marie, *A History of The Kaikoura Co-operative Dairy Co. Ltd., 1894-1994*, Kaikoura: Kaikoura Co-operative Dairy Company Ltd., 1994.

- Deeks, J., *The Small Firm Owner-Manager: Entrepreneurial Behavior and Management Practice*, New York: Praeger, 1976.
- Downey, J.F., *Goldmines of the Hauraki District*, Wellington: Government Print, 1935.
- Drucker, Peter, *Innovation and Entrepreneurship*, London: William Heinemann Ltd, 1985.
- Eldred-Grigg, Stevan, *A Southern Gentry, New Zealanders who inherited the Earth*, Auckland: Heinemann Reed, 1980.
- Eldred-Grigg, Stevan, *The Rich: A New Zealand History*, Auckland: Penguin Books, 1996.
- Enderwick, Peter, and Michele Akoorie, *Fast Forward: New Zealand Business in World Markets*, Auckland: Longman Paul, 1996.
- Franklin, E.C., *A Century of Auckland Commerce 1856-1956: A History of the Auckland Chamber of Commerce*, Auckland: Auckland Chamber of Commerce, 1956.
- Gibson, Anne, *How to Start a Business in New Zealand*, Auckland: Hodder Moa Beckett, 1997.
- Gifford, John, *100 Years of Timber: A History of Henry Brown and the Company He Established*, New Plymouth: Taranaki Newspapers Ltd., 1963.
- Godley, Andrew, *Jewish Immigrant Entrepreneurship in New York and London 1880-1914*, New York: Palgrave, 2001.
- Gordon McLauchlan, *The Line that Dared: a History of the Union Steam Ship Company, 1875-1975*, Auckland: Four Star Books, 1987.
- Gordon, Donald, *Speight's: The Story of Dunedin's Historic Brewery*, Dunedin: Avon Publishers, 1993.
- Gordon, Moana, *Golden Age of Josiah Clifton Firth*, Christchurch: Pegasus Press, 1963.
- Gore, Ross, *Levins 1841-1941: The History of the First Hundred Years of Levin and Company Limited*, Wellington: Levin and Company, 1956.
- Habakkuk, H.J., *American and British Technology in the Nineteenth Century: The Search for Labour Saving Inventions*, Cambridge: Cambridge University Press, 1962.
- Hartwell, Max, and Jaqui Lane, *Champions of Enterprise: Australian Entrepreneurship 1788-1990*, Double Bay, N.S.W.: Focus Books, 1991.
- Hawke, G.R., *The Making of New Zealand: An Economic History*, Cambridge: Cambridge University Press, 1985.

- Haws, Duncan, *Union Steamship Company of New Zealand*, Pembroke: TCL Publications, 1997.
- Hay, Geraldine, *Bay of Plenty Co-operative Dairy Association Ltd., 80th Jubilee, 1902-1892*, Mt Maunganui: Wm. Hill Printing Ltd., 1982.
- Healy, Brian, *A Hundred Million Trees: the Story of New Zealand Forest Products Ltd.*, Auckland: Hodder and Stoughton, 1982.
- Hébert, Robert F., and Albert N. Link, *The Entrepreneur: Mainstream Views and Radical Critiques*, 2nd ed., New York: Praeger, 1988.
- Highway, Arthur, *Sir William Goodfellow: His Life and Work*, London: Whitefriars Press, 1972.
- Higham, Richard, and Sara Williams, *The New Zealand Small Business Guide*, 3rd ed., Auckland: Penguin Books, 1999.
- Hilsgen, Laurie, and Helen Vause, *Working from Home in New Zealand*, Auckland: Viking, 1993.
- Honeyman, Katrina, *Origins of Enterprise: Business Leadership in the Industrial Revolution*, Manchester: Manchester University Press, 1982.
- Hubbard, Elbert, *Little Journeys To The Homes Of The Great*, 13 vols., Cleveland: World Publishing Co., 1928.
- Hunt, Graeme, *Hustlers, Rogues and Bubble Boys: White-Collar Mischief in New Zealand*, Auckland: Reed, 2001.
- Hunt, Graeme, *The Rich List: Wealth and Enterprise in New Zealand 1820-2000*, Auckland: Reed, 2000.
- Hunter, Ian, *Robert Laidlaw: Man for our Time*, Auckland: Castle Publishing, 1999.
- Hunter, Ian, *David Levene: A Man and His Business*, Auckland: Castle Publishing, 1999.
- Inden, Ronald, *Imagining India*, London: Basil Blackwell, 1990.
- Inkson, Kerr, et al., *Theory K: the Key to Excellence in New Zealand Management*, Auckland: David Bateman, 1986.
- Irving, J.C., *A Century's Challenge*, Wellington: Wright Stephenson and Co., Ltd., 1961.
- Jacques Turgot, *Reflections on the Formation and the Distribution of Wealth*. Meek, Ronald (transl.), Cambridge: Cambridge University Press, 1973.

- Kelly, Maurice, *Mill in the Valley: A Centennial History of Arthur Ellis and Co Limited*, Dunedin: Arthur Ellis and Co. Ltd., 1977.
- Kirby, M.W., *The Decline of British Economic Power Since 1870*, London: George Allen and Unwin, 1981.
- Kirk, Allan, *Anchor Ships and Anchor Men: the History of the Anchor Shipping and Foundry Company Ltd.*, Wellington: Reed, 1967.
- Kirzner, Israel, *Competition and Entrepreneurship*, Chicago: University of Chicago, 1973.
- Kirzner, Israel, *Discovery and the Capitalist Process*, Chicago: The University of Chicago Press, 1985.
- Knight, Frank, H., *Risk, Uncertainty and Profit*, Boston: Houghton Mifflin Company, 1921.
- Lam, Syrine Kit Sum, *Portraits of Successful Entrepreneurs and High-Flyers: A Psychological Perspective*, Aldershot: Ashgate, 1999.
- Laslett, Peter, *Household and Family in Past Time*, London: Cambridge University Press, 1972.
- Lawrence, P., and J. Lorsch, *Organization and Environment*, Boston: Graduate School of Business, Harvard University, 1967.
- Legge, John and Kevin Hindle, *Entrepreneurship, How Innovators Create the Future*, Melbourne: Macmillan, 1997.
- Lenman, Bruce, *An Economic History of Modern Scotland 1660-1976*, London: B.T. Batsford, 1977.
- Lind, Clive A., *The Keys to Prosperity: Centennial History of Southland Frozen Meat Ltd.*, Invercargill: Southland Frozen Meat Ltd, 1981.
- Lucas, Kathryn, *A New Twist: a Centennial history of Donaghys Industries Limited*, Dunedin: Donaghys Industries, 1979.
- Marriott, John, *Empire Settlement*, London: Oxford University Press, 1927.
- Mathias, P., *The First Industrial Nation: An Economic History of Britain 1700-1914*, 2nd ed. New York: Methuen, 1983.
- McAloon, Jim, *Nelson: A Regional History*, Whatamango Bay: Cape Catley in association with the Nelson City Council, 1997.

- McAloon, Jim, *No Idle Rich: the Wealthy in Canterbury and Otago, 1840-1914*, Dunedin: University of Otago Press, 2002.
- McAra, J.B., *Gold Mining at Waibi: 1878-1952*, Waihi: Waihi Historical Society, 1978.
- McClelland, David, *The Achieving Society*, New Jersey: D. Van Nostrand Company, 1961.
- McLean, Gavin, *A Century of Shipping in New Zealand: the Twentieth Century*, Wellington: Grantham House, 2000.
- McLean, Gavin, *Richardson's of Napier*, Wellington: New Zealand Ship and Marine Society, 1989.
- McLean, Gavin, *Spinning Yarns: a Centennial History of Alliance Textiles Ltd and it's Predecessors, 1881-1981*, Dunedin: Alliance Textiles, 1981.
- McLean, Gavin, *The Southern Octopus: the Rise of a Shipping Empire*, Wellington: New Zealand Ship and Marine Society and the Wellington Harbour Board Maritime Museum, 1990.
- Marshall, Alfred, *Principles of Economics*, London: Macmillan, 1910.
- Menger, Carl, *Principles of Economics*, Dingwall, James and Bert F. Hoselitz (transl.), New York: New York University Press, 1981.
- Miles, M. and A.M. Huberman, *Qualitative Data Analysis*, Beverly Hills, CA: Sage Publications, 1984.
- Mill, John Stuart, *Principles of Political Economy with Some of their Applications to Social Philosophy*, London: Longmans, Green and Co., 1900.
- Millar, J. Halket, *The Merchants Paved the Way: The First Hundred Years of the Wellington Chamber of Commerce*, Wellington: A.H. & A.W. Reed, 1956.
- Halket J. and Graham Spencer, *High Noon for Coaches 1879-1979*, 2nd ed., Wellington: A.H. Reed, 1979.
- Millen, Julia, *Kirkcaldie and Stains: a Wellington Story*, Wellington: Bridget Williams Books, 2000.
- Millen, Julia, *Glaxo: from Joseph Nathan to Glaxo Wellcome: the History of Glaxo in New Zealand*, 2nd ed., Auckland: Glaxo Wellcome New Zealand, 1997.
- Miner, John *4 Routes to Entrepreneurial Success*, San Francisco: Berrett-Koehler Publishers, 1996.

- Mundy, Chris, *The New Zealand Guide to Home-Made Money*, Wellington: National Pacific Publications, 1997.
- Murphy, Antoin, E., *Richard Cantillon, Entrepreneur and Economist*, Oxford: Oxford University Press, 1986.
- Naumes, William, *The Entrepreneurial Manager in the Small Business*, Massachusetts: Addison-Wesley Publishing, 1978.
- Newport, J.N.W., *Sovereign Butter: Seventy-Five Years of Production*, Nelson: Golden Bay Dairy Factory Company, 1977.
- Oliver, Leith and John English, *The Small Business Book: a New Zealand Guide for the 21st Century*, 4th ed., Wellington: Bridget Williams Books, 2002.
- Oliver, W.H., (ed) *The Oxford History of New Zealand*, Wellington: Oxford University Press, 1981.
- Oxford English Dictionary* 2nd ed. Simpson, J.A. and E.S.C. Weiner (eds.), vol V, dvandva-follis, Oxford: Clarendon Press, 1989, P.307.
- Parry, Gordon, *Engineering Hundred*, Christchurch: Montgomery Watson New Zealand, 1998.
- Parry, Gordon, *N.M.A.: the Story of the First 100 years: the National Mortgage and Agency Company of New Zealand Ltd., 1864-1964*, Dunedin: National Mortgage and Agency Co., 1964.
- Parry, Gordon, *Underwriting Adventure: a Centennial History of the National Insurance Company of New Zealand Limited*, Dunedin: National Insurance Co. of New Zealand, 1973.
- Philpott, H.G., *A History of the New Zealand Dairy Industry, 1840-1935*, Wellington: Government Print, 1937.
- Plant, G.F., *Oversea Settlement: Migration from the United Kingdom to the Dominions*, London: Oxford University Press, 1951.
- Pool, Ian, *The Maori Population of New Zealand 1769-1971*, Oxford University Press, 1977.
- Pool, Ian, *Te Iwi Maori: A New Zealand Population Past Present and Projected*, Auckland: Auckland University Press, 1991.
- Prichard, M., *An Economic History of New Zealand to 1939*, Auckland: Collins, 1970.

- Primatt, Stephen, *The City and Country Purchaser and Builder*, 2nd ed., London: William Leybourne, 1680.
- Reed, A.H., *The House of Reed: 50 Years of Publishing in New Zealand*, Wellington: Reed, 1957.
- Ricardo, David, *On the Principles of Political Economy, and Taxation*, Harmondsworth: Penguin Books, 1971.
- Ries, A., *Focus: the Future of Your Company Depends on It*, New York: Harper Business, 1996.
- Robson, Peter E.W., *The Aerated Water and Soft Drink Industry in New Zealand, 1845-1986*, Auckland: New Zealand Soft Drink Manufacturers Association, 1995.
- Roche, M.M., *A History of New Zealand Forestry*, Wellington: NZFC, 1990.
- Ronstadt, Robert C., *Entrepreneurship*, Dover, MA: Lord Publishing Co., 1984.
- Rostow, W.W., *Theorists of Economic Growth from David Hume to the Present: With a Perspective on the Next Century*, Oxford: Oxford University Press, 1990.
- Rothbard, Murray N., *Man, Economy, and State: a Treatise on Economic Principles*, Princeton: Van Nostrand, 1962.
- Say, Jean-Baptiste, *A Treatise on Political Economy or The Production, Distribution and Consumption of Wealth*, Prinsep, C.R. (transl.), Philadelphia: Claxton, Remser and Haffelfinger, 1821.
- Scholefield, Guy, *Newspapers in New Zealand*, Wellington: Reed, 1958.
- Scholefield, Guy, *New Zealand in Evolution, Industrial, Economic and Political*, London: Leipsic, T.F. Unwin, 1909.
- Scholefield, Guy, H., *Dictionary of New Zealand Biography*, vols. 1-2, Wellington: Department of Internal Affairs, 1940.
- Schöllhammer, Hans and Arthur Kuriloff, *Entrepreneurship and Small Business Management*, New York: John Wiley and Sons, 1979.
- Schumpeter, Joseph, *Business Cycles: A theoretical, Historical and Statistical Analysis of the Capitalist Process*, London: McGraw-Hill, 1964.
- Schumpeter, Joseph A., *Capitalism, Socialism and Democracy*, London: George Allen Unwin, 1976.

- Scott, Dick, *Stock in Trade: Hellaby's First Hundred Years, 1873-1973*, Auckland: Southern Cross Books, 1973.
- Shapero, Albert, *Entrepreneurship and Economic Development*, Project ISEED, Ltd. Milwaukee, WI: Center for Venture Management, 1975.
- Simkin, C.G.F., *The Instability of a Dependent Economy: Economic Fluctuations in New Zealand 1840-1914*, Oxford: Oxford University Press, 1951.
- Simon, Julian, *The Economic Consequences of Immigration*, Oxford: Basil Blackwell, 1989.
- Simpson, Frank, *The First Century: A Centenary Review of Winstone Ltd.*, Auckland: Winstone Ltd., 1965.
- Simpson, Thomas, *Kauri to Radiata: Origin and Expansion of the Timber Industry in New Zealand*, Auckland: Hodder and Stoughton, 1973.
- Simpson, Tony, *The Immigrants*, Auckland: Godwit Publishing, 1997.
- Sinclair, K., *A History of New Zealand*, 4th edn., Auckland: Penguin Books, 1991.
- Sinclair, K., *A History of New Zealand*, London: Oxford University Press, 1961.
- Singleton, John and Paul L. Robertson, *Economic Relations between Britain and Australasia 1945-1970*, New York: Palgrave, 2002.
- Singleton, John, *The World Textile Industry*, New York: Routledge, 1997.
- Smith, Adam, *Inquiry into the Nature and Causes of the Wealth of Nations*, New York: Random House, 1937.
- Smith, Nigel, *Heritage of Industry: Discovering New Zealand's Industrial History*, Auckland: Reed, 2001.
- Smith, Paul, *Success in New Zealand Business 2*, Auckland: Hodder Moa Beckett, 1997.
- Smith, Paul, *Success in New Zealand Business*, Auckland: Hodder Moa Beckett, 1996.
- Stead, Ken, *One Hundred I'm Bid: A Centennial History of Turners and Growers*, Auckland: Kestrel Publishing, 1997.
- Stegall, Donald, Lawrence Steinmetz and John Kilne, *Managing the Small Business*, Homewood, Illinois: Irwin, 1976.
- Stewart, Peter, *Patterns on the Plain: a Centennial History of Mosgiel Woollens Limited*, Dunedin: Mosgiel, 1975

- Stone, R.C.J., *Economic Development, 1870-1890 and the Social Consequences*, Heinemann Educational Books, Auckland, 1967.
- Stone, R.C.J., *Makers of Fortune; a Colonial Business Community and its Fall*, Auckland: Auckland University Press, 1973.
- Stone, R.C.J., *The Making of Russell McVeagh: the First 125 years of the Practice of Russell McVeagh McKenzie Bartleet and Co., 1863-1988*, Auckland: Auckland University Press, 1991.
- Stone, R.C.J., *An Anatomy of the Practice of Law in Nineteenth Century Auckland*, Auckland: University of Auckland, 1988.
- Stone's Wellington, Hawke's Bay and Taranaki Directory: 1894-5*, Stone Son and Co., Dunedin, 1894.
- Stone's Otago and Southland Directory*, 1887, Stone Son and Co., Dunedin 1887.
- Storey, David, *The Performance of Small Firms: Profits, Jobs, and Failures*, London: Croom Helm, 1987.
- Sutch, W.B., *Poverty and Progress in New Zealand*, Wellington: Modern Books, 1941.
- Sutch, W.B., *Industrial Development in New Zealand*, Wellington: Dept. of Industries and Commerce, 1964.
- Sutch, W.B. *Poverty and Progress in New Zealand: A Re-Assessment*, Wellington: Reed, 1969.
- Swedberg, Richard, (ed.), *The Economics and Sociology of Capitalism*, Princeton: Princeton University Press, 1991.
- Tipples, Rupert, *Colonial Landscape Gardener: Alfred Buxton of Christchurch, New Zealand 1872-1950*, Lincoln: Lincoln College, 1989.
- Vennell, C.W., *Men of Metal: The Story of A. and G. Price Ltd. 1868-1968*, Auckland: Wilson and Horton Ltd, 1968.
- Vesper, Karl, *New Venture Strategies*, Englewood Cliffs, NJ: Prentice-Hall, 1980.
- Ville, Simon, and Merrett, D., 'The Development of Large Scale Enterprise in Australia, 1910-64' in Merrett, D., (ed.), *Business Institutions and Business Behaviour in Australia*, London: Frank Cass, 2000.
- Ville, Simon, *The Rural Entrepreneurs: a History of the Stock and Station Agent Industry in Australia and New Zealand*, Cambridge: Cambridge University Press, 2000.

- Wachter, Kenneth, Eugene Hammel and Peter Laslett, *Statistical Studies of Historical Social Structure*, London: Academic Press, 1978.
- Wakefield, Edward Gibbon, *A Letter from Sydney and Other Writings*, London: Dent, 1929.
- Wakefield, Edward Gibbon, *A View of the Art of Colonization in letters between a Statesman and a Colonist*, Oxford: Clarendon Press, 1914.
- Ward, Arthur, *A Command of Cooperatives: The Development of Leadership, Marketing, and Price Control in the Cooperative Dairy Industry of New Zealand*, Wellington: The New Zealand Dairy Board, 1975.
- Warr, Eric, *From Bush-Burn to Butter: a Journey in Words and Pictures*, Wellington: Butterworths, 1988.
- Weber, Max, *The Protestant Ethic and the Spirit of Capitalism*, Parsons, Talcott (transl.), London: Unwin University Books, 1930.
- Williamson, O.E., *The Economic Institutions of Capitalism: Firms, Markets. Relational Contracting*, New York: Free Press, 1985.
- Wilson, John, *British Business History: 1720-1994*, Manchester: Manchester University Press, 1995.
- Wilson, Rebecca and Bronwyn Evans, *A Passion for Life: Young New Zealander's Doing Business*, Shoal Bay Press: Wellington, 1999.
- Winstone Ltd., *The Winstone Group of Companies*, Auckland: Winstone Group, 1974.
- Yerex, David, *Empire of the Dairy Farmers*, Petone: NZ Dairy Exporter Books in association with Ampersand Publishing Associates, 1989.
- Yin, R., *Case Study Research*, Beverly Hills, CA: Sage Publications, 1984.

ARTICLES

- Abramovitz, Moses, 'The Search for the Sources of Growth: Areas of Ignorance , Old and New', *Journal of Economic History*, 53:2 (1993), pp.217-243.

- Baldwin, J.R., and P.K. Gorecki, 'Firm Entry and Exit in the Canadian Manufacturing Sector, 1970-1982,' *Canadian Journal of Economics*, 24, (1991), pp.300-323.
- Berghoff, H., and R. Möller, 'Tired Pioneers and Dynamic Newcomers? A Comparative Essay on English and German Entrepreneurial History, 1870-1914', *Economic History Review*, 47 (1994), pp.262-87.
- Birch, David, 'Down but not Out', *INC*, May 1988, vol. 10, 5, pp.20-21.
- Boje, P., 'A Career Approach to Entrepreneurship: The Case of Thomas B. Thrige', *Business History*, 35 (1993), pp.33-44.
- Brockhaus, R. H., 'The Psychology of the Entrepreneur,' in Kent, C., D. Sexton and K. Vesper (eds.), *Encyclopedia of Entrepreneurship*, Englewood Cliffs, NJ: Prentice Hall, 1982, pp.39-57.
- Brooking, Tom, 'Tam McCanny and Kitty Clydeside – the Scots in New Zealand', in *The Scots Abroad: Capital Labour and Enterprise, 1750-1914*, R.A. Cane (ed.), London: Croom Helm, 1985, pp.172-173.
- Brown, Kenneth D., 'Models in History: a Micro-Study of Late Nineteenth-Century British Entrepreneurship', *Economic History Review*, 2nd ser., XLII, 4 (1989), pp.528-537.
- Campbell, R.J., 'The Black Eighties—Unemployment in New Zealand in the 1880s', *Australian Economic History Review*, 16:1 (1976), pp.67-82.
- Casson, Mark, 'Entrepreneurship and the Business Culture,' in Brown, Jonathan and Mary Rose (eds.), *Entrepreneurship, Networks and Modern Business*, Manchester: Manchester University Press, 1993, pp.30-54.
- Casson, Mark, 'Entrepreneurial Networks in International Business', *Business and Economic History*, 26:2 (1997), pp.811-823.
- Chandler, Alfred D. Jr., 'The Beginnings of Big Business in American Industry', *Business History Review*, 33:1 (1959), pp.1-31.
- Chandler, Alfred D. Jr., 'The Structure of American Industry in the Twentieth Century: A Historical Overview', *Business History Review*, 43:3 (1969), pp.255-298.
- Churchill, B.C., 'Survival Patterns of the Postwar Business Population', *Survey of Current Business*, (1952), pp.12-19.

- Coase, R.H., 'The Nature of the Firm', *Economica*, IV, 13-16 (1937), pp.386-405.
- Cooper, A.C. and W.C. Dunkelberg 'Entrepreneurial Research: Old Questions, New Answers, and Methodological Issues,' *American Journal of Small Business*, 11:3 (1987), pp.11-23.
- Crouzet, F., 'Capital Formation in Great Britain during the Industrial Revolution', in Crouzet, F., (ed.), *Capital Formation in the Industrial Revolution*, London, 1972.
- Davidson, Graeme, 'Public Utilities and the Expansion of Melbourne in the 1880s', *Australian Economic History Review*, 10:1 (1970), pp.169-189.
- Eisenhardt, K.M., 'Better Stories and Better Constructs: The Case for Rigor and Comparative Logic', *Academy of Management Review*, 16:3 (1991), p.620-627.
- Eisenhardt, K.M., 'Building Theories from Case Study Research', *Academy of Management Review*, 14 (1989) p.532-550.
- Eldred-Grigg, Steven, 'Whatever Happened to the Gentry? The Large Landowners of Ashburton County, 1890-1896', *New Zealand Journal of History*, 11:1 (1977), pp.3-27.
- Endres, Tony, 'Designing Unemployment Statistics in New Zealand: A Case History of Political Arithmetic, c. 1860-1960', *Australian Economic History Review*, 22:2 (1982), pp.151-171.
- Frost, Lionel, 'The Contribution of the Urban Sector to Australian Economic Development before 1914', *Australian Economic History Review*, 38:1 (1998), pp.42-73.
- Frost, Lionel, 'Government and the Colonial Economies: An Alternative View', *Australian Economic History Review*, 40:1 (2000), pp.71-85.
- Gardner, W.J., 'A Colonial Economy', in *The Oxford History of New Zealand*, 2nd ed., Geoffrey W. Rice (ed.), Auckland: Oxford University Press, 1992.
- Gartner, William, 'Who is the Entrepreneur? Is the Wrong Question,' *American Journal of Small Business*, 12:4 (1988), pp.11-32.
- Gartner, William and Terence R. Mitchell and Karl H. Vesper, 'A Taxonomy of New Business Ventures', *Journal of Business Venturing*, 4:3 (1989), pp.169-186.
- Gershenkron, A., 'Social Attitudes, Entrepreneurship, and Economic development', *Explorations in Entrepreneurial History*, 6 (1953), pp.1-19.

- Godley, Andrew, 'Jewish Soft Loan Societies in New York and London and Immigrant Entrepreneurship', *Business History*, 38 (1996), pp.101-116.
- Greasley, David, and Les Oxley, 'A Tale of Two Dominions: Comparing the Macroeconomic Records of Australian and Canada since 1870', *Economic History Review*, 51:2 (1998), pp.294-318.
- Greiner, Larry E., 'Evolution and Revolution as Organizations Grow', *Harvard Business Review*, 50:4 (1972), pp.37-47.
- Hamer, D.A., 'Towns in Nineteenth-Century New Zealand', *New Zealand Journal of History*, 13:1 (1979), pp.5-24.
- Hawley, Frederick B., 'The Risk Theory of Profit', *Quarterly Journal of Economics*, 7:4 (1893), pp.495-516.
- Hawley, Frederick B., 'Enterprise and Profit', *Quarterly Journal of Economics*, 5:1 (1900), pp.75-105.
- Hawley, Frederick B., 'A Positive Theory of Economics', *Quarterly Journal of Economics*, 16:2 (1902), pp.233-264.
- Hoselitz, B.F., 'A Sociological Approach to Economic Development', *Development and Society*, Novack, D., and R. Lekachman (eds.), New York: St. Martins Press, 1964.
- Hoselitz, Bert F., 'The Early History of Entrepreneurial Theory,' *Explorations in Entrepreneurial History*, 3, (1951), pp. 193-220.
- Hoselitz, Bert F., 'The Early History of Entrepreneurial Theory', in *Essays in Economic Thought: Aristotle to Marshall*, Spengler, J.J., and W.R. Allen (eds.), Chicago: Rand McNally, 1960.
- Hunter, Ian and Wilson, Marie, 'Tapping our Entrepreneurial Heritage', *University of Auckland Business Review*, 5:1 (2003), pp.19-28.
- Jackson, Kenneth E., 'Electricity Provision and the Concept of Service in New Zealand: an Historical Example of Pricing Policies,' Auckland: Dept. of Economics, University of Auckland, 1990.
- Jackson, Kenneth E., 'Natural Resource Markets and Population Growth: the Case of Forest Usage, Markets and Technological Change', Auckland: Dept. of Economics, University of Auckland, 1995.

- Jackson, R.V., 'The Colonial Economies: An introduction', *Australian Economic History Review*, 38:1 (1998), pp.7-8.
- Jones, Geoffrey, 'Company History and Business History in the 1990s', *Business Records and Business History: Essays in celebration of the 50th Anniversary of the Danish National Business Archives*, Denmark: Erhvervsarkivet, 1998.
- Jones, S.R.H. and D.R. Paul, 'Concentration and Regulation in the New Zealand Brewing Industry, 1850-1970,' *Australian Economic History Review*, 31:2 (1991), pp.66-93.
- Jones, S.R.H., 'Brand Building and Structural Change in the Scotch Whisky Industry since 1975', *Business History*, 45:3 (2003), pp. 72-89.
- Jones, S.R.H., 'Government Policy and Industry Structure in New Zealand, 1900-1970' *Australian Economic History Review*, 39, No. 3, (1999), pp. 191-212.
- Jones, S.R.H., 'The New Zealand Brewing Industry, 1840-1995' in Wilson, R. G., and T. Gourvish (eds.), *The Dynamics of the International Brewing Industry since 1800*, London: Routledge, 1998.
- Jones, S.R.H., 'The Origins of the Factory System in Great Britain: Technology, Transaction Costs or Exploitation?', in Kirby, Maurice, and Mary Rose (eds.), *Business Enterprise in Modern Britain*, London: Routledge, 1994, pp.31-60.
- Kim, Dong-Woon, 'The British Multinational Enterprise in the United States before 1914: The Case of J. & P. Coats', *Business History Review*, 72:4 (1998), pp.523-542.
- Levenstein, M. 'African American Entrepreneurship: The View from the 1910 Census', *Business and Economic History* 24, (1995), pp.106-134.
- Liles, P. 'Who are the entrepreneurs?' *Small Business Perspectives*, Gorb, P., P. Dowell and P. Wilson (eds.), London: Armstrong, 1981, pp. 33-50.
- Linge, G.J.R. 'Manufacturing in Auckland: its Origins and Growth 1840-1936', *New Zealand Geographer*, 14:1 (1958) pp.47-64.
- Livesay, Harold 'Entrepreneurial Persistence through the Bureaucratic Age', *Business History Review*, 51 (1977), pp.415-443.
- Livesay, Harold, 'Entrepreneurial Dominance in Business Large and Small, Past and Present,' *Business History Review*, 63 (1989), pp.1-21.

- Magee, G. B., 'Competence or Omniscience? Assessing Entrepreneurship in the Victorian and Edwardian British Paper Industry', *Business History Review* 71 (1977), pp.230-59.
- Martin, Peter, 'Unemployment, Government and the Labour Market in New Zealand, 1860-1890', *New Zealand Journal of History*, 29:2 (1995), pp.170-196.
- Mathias, Peter, 'Entrepreneurs, Managers and Business Men in Eighteenth-century Britain', *Nature of Industrialisation*, 3 (1996), pp.12-32.
- Merrett, D.T., 'Business Institutions and Behaviour in Australia: A New Perspective', *Business History*, 42:3 (2000), pp.1-12.
- Miller, W., 'American Historians and the Business Elite', *Journal of Economic History*, 9 (1949), p.184-208.
- Mills, C. W., 'The American Business Elite: A Collective Portrait', *The Journal of Economic History*, 5 (1945), p.20-44.
- Monin, Paul, 'The Maori Economy of Hauraki', *New Zealand Journal of History*, 29:2 (1995), pp.197-210.
- Naffziger, Douglas W., Jeffrey Hornsby and Donald Kuratko 'A proposed research model of entrepreneurial motivation', *Entrepreneurship Theory and Practice*, Waco, 18:3 (1994), pp.29-42.
- Nenadic, Stana, 'Businessmen, the Urban Middle Classes, and the 'Dominance' of Manufacturers in Nineteenth-Century Britain', *Economic History Review*, 44:1 (1991), pp.68-85.
- Owens, Alastair, 'Inheritance and the Life-Cycle of Family Firms in the Early Industrial Revolution', *Business History*, 44:1 (2002), pp.21-46.
- Pearson, D.G., 'Small Town Capitalism and Stratification', *New Zealand Journal of History*, 14:2 (1980), pp.107-108.
- Pollard, S. 'Entrepreneurship, 1870—1914.' in Floud, R., and D. McCloskey (eds.), *The Economic History of Britain Since 1700, vol. 2, 1860-1939*, 2nd ed., Cambridge: Cambridge University Press, 1994.
- Pool, Ian and Richard Bedford, 'Macro Social Change in New Zealand: Historical and International Contexts,' Discussion Paper, University of Waikato, Population Studies Centre, 1996.

- Pool, Ian, 'New Zealanders: a Nation of 'Boat People'', Hamilton: Population Studies Centre, University of Waikato, 1996.
- Rankin, K., 'Manufacturing Output in New Zealand: 1870-1940', Nedlands, W.A.: Dept. of Economics, University of Western Australia, 1992.
- Raucher, Alan R., 'Dime Store Chains: The Making of Organization Men, 1880-1940', *Business History Review*, 65:1 (1991), pp.130-163.
- Redlich, Fritz, 'Toward the understanding of an unfortunate legacy', *Kyklos*, 19 (1966), pp.709-16.
- Reynolds, Paul, 'Predicting New Firm Births: Interactions of Organizational and Human Populations,' in Sexton D.L. and J.D. Kasarda (eds.), *The State of the Art of Entrepreneurship*, Boston: PWS-Kent Publishing, 1992, pp.268-297.
- Rose, Mary, 'The Family Firm in British Business, 1780-1914', in *Business Enterprise in Modern Britain: From the Eighteen to the Twentieth Century*, Kirby, Maurice, and Mary Rose (eds.), 1994, London: Routledge, pp.61-87.
- Sarachek, B., 'American Entrepreneurs and the Horatio Alger Myth', *Journal of Economic History*, 38 (1978), pp.439-56.
- Sarachek, B., 'Jewish American Entrepreneurs', *The Journal of Economic History* 2 (1980), pp.359-72.
- Scranton, Philip, 'Diversity in Diversity: Flexible Production and American Industrialization, 1880-1930', *Business History Review*, 65:1 (1991), pp.27-90.
- Sidney Pollard, 'Capital Exports, 1870-1914: Harmful or Beneficial?', *The Economic History Review*, 38:4 (1985), pp.489-514.
- Simon, Julian L., 'Some Theory of Population Growth's Effect on Technical Change in an Industrial Context', *Australian Economic History Review*, 26:2 (1986), pp.148-158.
- Smith, Bernard, 'Market Development, Industrial Development: The Case of the American Corset Trade, 1860-1920', *Business History Review*, 65:1 (1991), pp.91-129.
- Stone. R.C.J., 'The Maori Lands Question and the Fall of the Grey Government, 1879', *New Zealand Journal of History*, 1:1 (1967), pp.51-74.
- Supple, B.E., 'American Business History - A Survey', *Business History*, 1 (1959), pp.63-76.

- Supple, Barry E., 'A Business Elite: German-Jewish Financiers in Nineteenth-Century New York', *Business History Review*, 31:2 (1957), pp.143-177.
- Tipple, John, 'The Anatomy of Prejudice: Origins of the Robber Baron Legend', *Business History Review*, 33:4 (1959), pp.510-523.
- Toms, Steven, 'Windows of Opportunity in the Textile Industry: The Business Strategies of Lancashire Entrepreneurs, 1880-1914', *Business History*, 40:1 (1998), pp.1-25.
- Toms, Steve and Mike Wright, 'Corporate Governance, Strategy and Structure in British Business History, 1950-2000', *Business History*, 44:3 (2002), pp.91-124.
- Tucker, K.A., 'Business History: Some Proposals for Aims and Methodology', *Business History*, 14:1 (1972), pp.1-16.
- Tuttle, Charles, A. 'The Entrepreneur Function in Economic Literature', *Journal of Political Economy*, 35, (1927), pp501-521.
- Ville, Simon, 'The Coastal Trade of New Zealand Prior to World War One', *New Zealand Journal of History*, 27:1 (1993), pp.75-89.
- Ville, Simon, 'The Growth of Specialization in English Shipowning, 1750-1850', *Economic History Review*, 46:4 (1993), pp.702-722.
- Ville, Simon, 'Business Development in Colonial Australia', *Australian Economic History Review*, 38:1 (1998), pp.16-41.
- Ville, Simon and Grant Fleming, 'The Nature and Structure of Trade-Financial Networks: Evidence from the New Zealand Pastoral Sector', *Business History*, 42:1 (2000), pp.41-58.
- Watson, J., and J.E. Everett, 'Do Small Businesses have High Failure Rates? Evidence from Australian Retailers', *Journal of Small Business Management*, 34 (1996), pp.45-63.
- Westhead, Paul and Mike Wright, 'Novice, Portfolio and Serial Founders: are they Different?', *Journal of Business Venturing*, 13:3 (1998), pp.173-205.

THESES

- Arnold, M.N., 'The Market for Finance in Late Nineteenth Century New Zealand with special reference to Rural Mortgages', M.A. thesis, Victoria University of Wellington, 1981.

- Dowie, J.A., 'Studies in New Zealand Investment 1871-1900', Ph.D. thesis, Australian National University, Canberra, 1965.
- Frankham, Charles, 'The Founding Years: Being the Financial History of the Northern Steamship Co. Ltd. from its Inception to Capital Reorganization in 1890', M.Com. thesis, University of Auckland, 1977.
- Gibson, C. J., 'Demographic History of New Zealand', Ph.D. thesis, University of California, Berkley, 1971.
- Henare, Manuka Arnold, 'The Changing Images of Nineteenth Century Māori Society— from Tribes to Nation', Ph.D. thesis, Victoria University, Wellington, 2001.

INDEX

A

Adventurer, 25, 83, 261
 Aerated water, 12, 195, 207, 248, 282
 Agriculture, 67
 Aitken, John, 195, 281
 Alderton, George, 167
 Alexander, Donald, 112, 113, 207, 223, 231, 244, 282, 283
 Aligned activities, 170
 Anchor brand, 142, 206, 207, 233
 Anchor Steam Shipping Company, 207
 Angus, John, 52
 Anstice, Sophia, 181, 283
 Ashburton, 244, 278
 Auckland, 78, 175, 204, 223, 252; port of, 69
 Australia, 50, 62, 66, 70, 71, 76, 77, 84, 92, 124, 125, 138, 142, 143, 151, 190, 191, 198, 203, 221, 270, 291, 302, 304, 351; as export market, 70

B

Bain, James Walker, 95, 96, 273, 276
 Balance of payments, 119
 Ballance, John, 90
 Bank of New Zealand, 70, 74, 221, 250, 273
 Banking: New Zealand, 71
 Barr, Peter, 283
 Bassett, Michael, 58
 Baumol, William, 49, 117
 Belich, James, 58, 130, 139
 Bell, George, 132, 215
 Binns, Ernest, 244, 265
 Biographical information, 173
 Biographical studies: New Zealand, 54
 Birth order, 177

Blair, John, 214, 244
 Bonus schemes, 94, 98, 150
 Booster, 56
 Boot and shoe factories, 12, 81, 238, 245, 246, 247, 248, 250
 Borrowing, 92
 Bradney, James, 244, 265, 269
 Branch expansion, 171
 Braudel, Fernand, 81
 Brett, Henry, 231
 Brewing, 12, 81, 206, 248, 268, 303
 Brickworks, 81, 113, 248
 Briscoe, Arthur and Co., 69
 Britain brothers, 259
 British imperialism, 57
 Brown, Henry, 153, 214, 253
 Brunskill, William, 246
 Brydone, Thomas, 132, 133, 150
 Buckland, Alfred, 285
 Burns, A.J., 94, 96, 216
 Business activity measure, 167
 Business Elite, 47, 163
 Business History: gaps in New Zealand, 60
 Butchers, 20, 136, 249
 Butler, William, 283
 Butlin, Noel, 125, 304
 Butterfield, Francis, 268, 286
 Bycroft, John, 84, 168

C

Caesar, Roose, 268
 Canada, 50, 62, 71, 72, 142, 150, 191, 291, 302
 Cantillon, Richard, 19, 20, 21, 24, 49
 Capital, 295; for expansion, 234; in New Zealand, 71; where limited, 239

- Capital entry costs, 235, 241, 245
 Capital markets, 220
 Capitalism, 43
 Capitalist, 84, 261; as parasite, 23
 Carter, Francis, 231, 253, 283, 285
 Case analysis: capital entry costs, 236; document, 168; finance, 229; first venture, 267; immigration, 202; industry groupings, 182; limitations, 184; question set, 169; research, 161; statistics, 172; strategy, 282; summary findings, 173
 Caselberg, Myer, 201, 207, 281
 Cassel process, 147
 Cassidy, Hugh, 207
 Casson, Mark, 46, 47, 215, 257, 264, 283, 297; defines entrepreneur, 46; on judgemental decision-making, 47
 Chamber of Commerce, 99
 Chambers, John, 215, 231, 269, 282, 286
 Chandler, Alfred, 60, 162, 227, 294, 305
 Cheese exports: see dairy products, 150
 Cherrie, David, 214, 244, 268
 Chew Chong, 152, 153, 155
 Christchurch, 78, 175, 204, 243, 270
 City of Glasgow Bank, 73, 74, 91, 221, 291, 298
 Clark, James, 233
 Class, 84
 Coal, 93
 Coal industry, 149
 Cock, Joseph, 207, 233
 Collins and Moore, 48, 49, 179
 Collinson, Leopold, 267
 Colonial Industries Commission, 83, 94, 96
 Company history, 51
 Company tax, 103
 Complementary goods, 34, 126, 139, 149
 Condliffe, J.B., 59, 74, 118, 199, 299, 300; on long depression, 74
 Consequences of decisions, 40
 Cooke, Howlison and Co., 243
 Cooperatives, 155
 Coory, Shirefie, 181
 Corban, Assid, 231
 Coromandel, 144
 Corpe, William, 153
 Coulls brothers, 95, 230, 244, 273, 276
 Coulls, Culling and Co., 95
 Court, John, 195, 214, 215, 281, 283
 Crawford, William, 206, 214
 Cream separators, 152
 Crown Dairy Company, 153
 Customs tax, 93, 97, 102
 Cyanide process, 146
 Cycle factories, 226, 242, 243, 244, 247
- D**
- Dahl, Carl, 152, 195
 Dairy factories, 156
 Dairy farming, 67
 Dairy industry: capital attraction, 156
 Dairy Industry Act, 156
 Dairy products: early failures, 150; entrepreneurs, 152; history, 149; processing of, 151; Waikato, 151
 Davidson, William, 132, 133, 150
 Dawson, William, 211, 212, 239, 286
 Deeks, John, 48, 60
 Diversification, 283
 Donaghy, 52
 Donald, Alexander, 207
 Dowie, J., 13
 Drapery, 11, 12, 69, 70, 102, 195, 244, 249, 265, 267, 283
 Dressmaking, 12, 225, 227, 283
 Drucker, Peter, 44; on entrepreneurship, 44
 Dunedin, 78, 112, 132, 175, 204, 278; merchants, 69; port, 69; ship, 132
- E**
- Economic statistics: limitations, 123
 Edendale, 150
 Edgumbe, George, 214
 Edmonds, Thomas, 231

Eldred-Grigg, Stevan, 57
 Ellis, Arthur, 232, 279, 285
 Eltham, 152
 Engineering, 87, 97, 107, 126, 132, 134, 147, 149, 181, 206, 212, 228, 265, 268, 281, 294, 295
 Enterprise: stimulus to, 104
 Entrepreneur: as economic class, 34; as economic-dynamo, 22; defined for research, 61; defining qualities, 40; early meaning, 19; economic class, 39, 44; idea of in New Zealand, 83; in Middle Ages, 18; limits for case analysis, 164; other terms, 24; place in economy, 82; reinvesting profits, 22
 Entrepreneurs: age started, 179; fathers of, 164; Lifespan, 174; retirement, 167; settlement, 174
 Entrepreneurship: and management, 280; capital sources, 223; contemporary definitions, 44; experience, 214; failure, 172; in contemporary French life, 18; in economic progress, 49; incentive, 104; job creation, 275; model of behaviour, 262; opportunity in economic change, 47; origins, 18; preparation for, 265; values, 294
 Essai, 20
 Exhibition, 84, 212
 Exports, 121, 122; character of ports, 69; classes of, 126; dairy products, 157; emerging, 131; explanations for, 123; growth, 129; rank order, 127; staples, 127

F

Factory and Industrial Statistics, 11, 226, 235
 Factory system, 151, 157
 Failure, 261, 269, 273, 278; and persistence, 269
 Failure rates, 172
 Family firm, 60, 177, 206, 209, 211, 227, 233, 254, 257, 258, 259, 285
 Farmers, 178; as entrepreneurs, 14, 20
 Father occupations, 179

Father-son relationships, 177
 Fellmongering, 195, 206
 Fenwick, George, 207
 First-born son, 178
 First-mover, 242, 244, 282
 Firth, J.C., 55, 99, 167, 171, 201, 272, 273, 280
 Fiscal policy, 99
 Flax milling, 148, 154, 232, 283
 Fleming, Thomas, 214
 Fletcher, Sir James, 55, 231
 Foreign investment, 71
 Fraser, George, 206, 281
 Free trade, 99
 Friedlander, Hugo, 201

G

Gear Meat Preserving and Freezing Company, 134
 Gear, James, 122, 133, 134
 Gentry, 57
 Gibbons, Hopeful, 206, 276, 277
 Glaxo, 52, 154
 Godley, Andrew, 201; on Jewish entrepreneurs, 51
 Gold, 143, 149; Auckland firms, 145; capital attraction, 145; in Otago, 143; industry, 123
 Gold dredging, 149
 Gold mining, 56, 115, 144, 146, 147, 148, 149, 211, 272, 294, 300, 332
 Goodfellow, Sir William, 55, 154, 155, 231, 276
 Government borrowing, 220, 291
 Government expenditure, 105, 108, 110
 Government loans, 108
 Government revenue, 102, 105
 Grain industry, 12, 269, 270
 Greenslade, Charles, 211, 212, 239, 286
 Greiner, Larry, 255, 256, 257, 260, 261, 267, 287, 296
 Grey, Sir George, 90, 92, 107

H

Habakkuk, H.J., 49, 50

Habakkuk, H.J., 50
 Hallenstein, 70
 Hallenstein, Bendix, 52, 201, 216, 250, 262, 276,
 277, 278, 279, 280, 281
 Hannah, Robert, 55, 168, 246, 250
 Hastings, 249
 Hatrick, Alexander, 207
 Hawke, Gary, 59, 118, 192, 300; on long
 depression, 74
 Hawley, Frederick, 40; on proprietorship, 40
 Hayes, Eben, 202, 206, 213
 Hay's wharf, 151
 Hayward, Henry, 202
 Hellaby, Richard, 133, 134, 213
 Holt, Robert, 253, 282
 Horatio Alger myth, 162
 Horizontal integration, 170, 284
 Horton, Alfred, 202, 207, 231, 234
 Hoselitz, Bert, 50
 Hubbard, Elbert, 47
 Hudson, Richard, 213, 281, 285
 Hunt, Graeme, 60
 Husheer, Johann, 214

I

Immigrants: age of, 203, 208; new ventures, 209;
 occupation, 197; skill, 210
 Immigration, 50, 76, 77; agricultural labour, 195;
 aid to colony, 199; assisted, 192; colonial
 patterns, 191; economic benefits, 192;
 economic demand, 199; Jewish, 201;
 nominated scheme, 197; pull factors, 193;
 settlement patterns, 204
 Imports, 118, 122; main classes, 69
 Inheritance, 285
 Innovation: defined, 43; economic benefits, 117
 Investment, 71
 Invisible hand, 23
 Ironware, 102, 213
 Isolation of markets, 248, 293
 Ivess, Joseph, 207, 275

J

Jackson, Ken, 56
 James Speight and Co, 211
 Jewish entrepreneurs, 162, 177, 179, 201, 214,
 277
 Jewish entrepreneurs, 201
 Jewish-American entrepreneurs, 177
 John Brogden and Sons, 96
 Joint-stock companies, 145, 223, 224, 254
 Jones, Geoffrey, 162
 Jones, Steve, 56, 248
 Journeyman, 210
 Judgemental decisions, 46, 47, 276, 284

K

Kaiapoi Woollen Factory, 97
 Karangahake, 147
 Kennedy, Martin, 207
 Kincaid McQueen and Co., 97
 Kincaid, McQueen and Co., 112
 King, Michael, 57
 King, Newton, 153, 155, 232, 281
 Kirkcaldie and Stains, 70
 Kirkcaldie, John, 70, 216, 244, 265
 Kirkpatrick, Samuel, 195
 Kirzner, Israel, 45
 Knight, Frank, 39, 40, 41, 61, 164, 297; defining
 quality of entrepreneurs, 40; theory of profit,
 39

L

Labour relations, 226
 Laidlaw, Robert, 166, 216, 223, 234, 235, 262,
 280
 Laslett, Peter, 185
 Law, John, 19
 Levene, David, 166
 Levin and Company, 142
 Levin, William, 133, 134, 142, 233, 282, 285
 Lifecycle, 255, 256, 257, 260, 261, 262, 265, 267,
 274, 279, 287, 288, 296, 302

- Lifestyle: of entrepreneurs, 171
 Lifetime Venture Activity, 185, 187, 188
 Lifetime Venture Involvement, 185, 186, 188
 Lifetime Ventures Founded, 185, 188
 Liles, Patrick, 215
 Livesay, Harold, 260
 Long Depression, 73, 74, 75, 106, 125, 195, 290, 299, 300; entrepreneurial activity, 195; traditional view, 73
 Luttrell, Alfred, 202, 284
 Lyon, William, 214, 244
 Lyttelton: port of, 69
- M**
- Maine brothers, 245
 Makino Butter and Cheese factory, 154
 Management, 280
 Management structures, 216
 manufacturing, 225
 Marshall, Alfred, 34, 35, 36, 37, 38, 39, 44, 49, 61, 62, 224, 264, 290; man of limited capital, 37; on capital, 38; on economics, 34; on entrepreneurs, 36; on new economic order, 35
 Marx, Karl, 22, 23, 44
 Matamata, 272
 Mataura, 95, 141, 273, 276
 Mataura Paper Mill, 95
 McAloon, Jim, 14, 54, 56
 McClelland, David, 48
 McGlashan, Edward, 95
 McGregor, Alexander, 223
 McIndoe, John, 214, 244, 268
 McKee, Arthur, 214, 268
 McKenzie, John, 55, 112, 113, 268
 McLean, Gavin, 53
 McSkimming, Peter, 207
 Meat, 130, 132; distribution, 137; explanations for development, 139; first mover advantage, 138; objections, 136
 Meat exporting firms, 134
 Menger, Carl, 33, 34, 117, 126, 139, 152; Austrian school of economics, 33; entrepreneur as decision maker, 34; on complementary goods, 34
 Menzies, Robert, 195
 Merchants, 26, 69, 122, 123, 125, 139, 153, 154, 155, 183, 184, 195, 201, 207, 211, 215, 221, 222, 233, 238, 249, 268, 270, 273, 277, 295, 301, 304
 Midland railway, 73
 Mill, John Stuart, 92, 198, 210; on capital, 30; on economic systems, 30; on entrepreneurs, 32; on Wakefield, 33
 Millar, Annie, 231
 Mills, James, 142
 Milne, Mary, 207
 Morrin, Samuel, 122
 Mosgiel, 94, 97, 216, 343
 Mosgiel Woollen Mills, 94, 97
 Multiple ventures, 274, 302
 Municipal buildings, 108
 Myers, Arthur, 201, 206, 216, 231
- N**
- Napier, 78, 113, 141, 204, 244, 249, 278
 Nathan, Joseph, 52, 154, 155, 201, 216, 280, 282
 Nelson, 78, 142, 149, 195, 198, 204, 278, 283
 Neoclassical economics, 35
 Networks, 37, 49, 79, 82, 123, 152, 186, 190, 202, 210, 215, 216, 221, 250, 258, 263, 265, 266, 267, 274, 276, 277, 281, 287, 288, 293, 294, 296
 New Plymouth, 78, 113, 153, 198, 204, 244, 249, 278
 New Zealand: economic history, 51; emigration, 194; history of entrepreneurship, 86; immigration, 192; layers in economy, 81
 New Zealand Clothing Company, 250
 New Zealand Cooperative Dairy Company, 154
 New Zealand economy: in colonial era, 66; total trade, 118

New Zealand Insurance Company, 221
 New Zealand Loan and Mercantile Agency
 Company, 139, 215, 273
 New Zealand Shipping Company, 141
 Newman, Thomas, 231, 283
 Northern Steam Ship Company, 223

O

Occupation, 180
 Orion, 213
 Otago Paper Mills, 95
 Owner-entrepreneurs, 164

P

Parry, Gordon, 52
 Partnership, 171, 231, 232, 244, 258
 Pascoe, James, 168
 Pastoralism, 66, 67, 127, 221
 Personal capitalism, 228, 254, 259, 294
 Pharazyn, Charles, 136
 Phoenix Iron Foundry, 206
 Planned settlements, 192
 Pool, Ian, 56
 Population: changes in, 124; changes to, 77;
 drift, 80; exodus, 76, 194; Foreign-born, 203;
 growth rates, 125; in cities, 78; Lifespan, 174;
 migration, 193; New Zealand figures, 76
 Postal services, 71
 Price brothers, 97, 147, 148, 206, 281
 Prichard, Muriel, 59, 227, 292; on long
 depression, 75
 Printing, 79, 230, 248
 Profit motive, 23
 Projectors, 22, 25, 26, 73, 84, 95, 133, 139, 142,
 222, 252, 261, 290
 Promoter, 83, 261
 Protectionism, 99, 100
 Provinces, 68, 85
 Public debt, 109
 Public works, 71, 104, 107, 110, 199, 293;
 economic benefit, 113; expenditure, 109;
 spending, 107

R

Railway, 112; construction, 71; income, 72
 Railways, 98
 Rankin, Keith, 225
 Readiness, 215
 Recolonisation, 130
 Reed, Alfred, 207, 229, 230, 231
 Regional history, 54
 Reid, Donald, 207
 Research questions, 165
 Retailing, 53, 303
 Reynolds, Henry, 46, 151, 206, 243, 244
 Ricardo, David, 23, 29, 30, 197, 290; on
 entrepreneurship, 29
 Richmond, William, 231, 282
 Risk, 266; defined, 20
 Ross and Glendining, 13, 56, 97
 Russell, George, 207, 268

S

Sample size, 165
 Sanford, Albert, 84, 206, 269, 284
 Sarachek, Bernard, 47, 162, 164, 168, 177, 178,
 179, 214
 Sargood, Percy, 84, 232
 Saw milling, 103, 248, 250, 253, 283
 Say, Jean-Baptiste, 28, 290; entrepreneurship, 29;
 on managerial functions, 28
 Scholefield, Guy, 166, 228
 School construction, 111
 Schumpeter, Joseph, 38, 41, 42, 43, 44, 45, 49,
 164, 302; creative destruction, 42; defining
 quality of entrepreneurs, 43; on innovation,
 41
 Scientific management, 60
 Scientific Management, 60
 Scottish enterprise, 84, 200
 Segar, Charles, 142
 Settlement, 174
 Sew Hoy, Charles, 207, 215, 268

Shacklock, Henry, 87, 202, 212, 213, 280, 281, 285

Shipping, 140

Simkin, C., 59, 226, 227, 299, 300

Simon, Julian, 50, 303

Sinclair, Keith, 60, 74, 97, 118, 221, 299; on long depression, 74

Singer Sewing Machine Company, 249

Skellerup, George, 207, 276, 281

Skill, 210, 211, 213, 266, 295

Skimming stations, 152

Small-scale capitalism, 149

Smiles, Samuel, 47

Smith, Adam, 22, 23, 24, 28, 29, 30, 31, 32, 35, 83, 100, 290; employment of capital, 26; entrepreneur and new opportunity, 26; entrepreneurship and wealth, 28; manufacturers, 27; merchants and country gentlemen, 26; on adventurers, 25; on agriculture and wealth, 23; on dealers, 26; on merchants, 27; on new ventures, 24; on optimism, 27; on projectors, 26; on speculators, 25; on undertakers, 25, 27

Smith, Marianne, 207

Smithfield, 136

Sources: industrial statistics, 12; Statistics of New Zealand, 11

Southland Frozen Meat and Produce Export Co., 133

Speculator, 261

Speight, James, 52, 151, 211, 212, 239, 281, 286

Spragg, Wesley, 150

Stains, Robert, 216, 244, 265

Stamper batteries, 144, 147, 148

Statistical techniques, 162

Stead, George, 202, 207, 269, 270, 271, 272

Stock and station, 79, 153, 183, 206, 207, 221, 303

Stone, Russell, 55, 75, 200, 222, 300, 303; on long depression, 75

Strategy, 170, 280

Structural characteristics: New Zealand economy, 62

Sutch, W.B., 59, 74, 118, 298; on long depression, 74

T

Tailoring, 225

Technological innovation, 126

Technology adoption, 234

Tender process, 111, 112

Thames, 78, 87, 148, 175, 231, 248, 249, 269, 278, 284

Theomin, David, 201

Thesis: main argument, 62

Thomson, Alexander, 69, 207, 282

Timber industry, 113, 128

Todd, Charles, 195, 206, 233

Town life, 78

Trade, 68, 69; balance, 120; deficit, 119; New Zealand economy, 118

Transition point, 261, 262, 263, 265, 266, 268, 274, 277, 279, 285, 287, 288

Turgot, Jacques, 21, 22, 49, 61, 104, 289

Turnbull Martin and Co., 141

Tyree, Alfred, 245, 246

Tyser Line, 141

U

Undertaker, 24, 261

Union Steam Ship Company, 142, 221

United Kingdom, 70, 103, 122, 139, 141, 150, 151, 196, 215, 216, 221, 270, 302

Urbanisation, 79, 125, 297, 304

V

Venice merchants, 27

Venture activity, 169

Vertical integration, 133, 170, 171, 207, 235, 284

Vesper, Karl, 44, 45

Ville, Simon, 52, 55, 303

Vogel, Sir Julius, 71, 73, 75, 91, 96, 100, 102, 106, 107, 110, 119, 193, 202, 298, 299

W

- Waihi Gold-mining Co., 147
Waikato Cooperative Cheese Company, 154
Wakefield, 192, 197, 291; relation to Mill, 33
Walsh, Leo, 181, 244, 268, 269
Wanganui, 78, 207, 249, 250, 276, 278
Warnock, Thomas, 55, 122, 195, 216
Wealth of Nations, 23
Weber, Max, 48
Wellington, 78, 175, 204, 252; port of, 69
Whitney, John, 207, 283
Wigley, Rudolph, 55, 268
Wilkinson, Charles, 153
Wilson & Kettle, 52
Wilson's Well Park Brewery, 211
Winemaking, 206
Winstone, William, 53, 55, 112, 197, 201, 207,
216, 234, 235, 280, 285, 286
Wise, Henry, 55, 231
Women entrepreneurs, 180
Wool, 68, 126, 128, 129, 130, 292
Working class, 85
Wright, John Inglis, 207