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COMMUNITY OWNED TRADING ENTERPRISES: THEIR UNIQUENESS AND PERFORMANCE

A Thesis submitted in partial fulfilment of the requirements for the degree of Master of Business Studies at Massey University

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February 2000

ABSTRACT

Community ownership of trading enterprises has not been so favoured as a concept during the latter part of the 20th century as successive New Zealand Governments pursued market forces policies. The face of the New Zealand public ownership business scene radically changed from the mid 1980's as telecommunications, railways, the ports, Coal Corp, energy ... were all restructured in pursuit of the market model. Why was the public or community ownership model apparently not supported?

The empirical evidence did not unequivocally uphold privatisation and the market model as being inherently more efficient as a structure. Notably also, community ownership was much enjoyed as a concept.

This research, therefore, looks at the concept of community ownership and seeks to define its uniqueness and identify its performance in operating trading enterprises. The electricity companies in New Zealand were the area selected.

The results moderately support the view that social/community goals are of more importance to community owned trading enterprises than their private ownership equivalents. Notably community ownership outperformed private enterprise as measured by ROE and ROA.

Thus the contention that community ownership as a concept had much to offer, and was not inherently less efficient, was not disproved by this research. Further research in other fields is worthy of pursuit.

THANKS!

You cannot complete a project such as this without a great deal of support. This then is my occasion to thank those who made the year of research that much easier, and this document more achievable.

Steven Cahan, Professor of Accountancy at Massey University, supervised and guided, quietly, courteously, and wisely. It was always a pleasure to meet and discuss.

My father Bill Teahan completed another edit for me, 10 years after the first, and continued his practice of giving his family the benefit of his opinions!

My secretaries at Trust House typed, formatted and presented, particularly Kathleen Saxton who, as thoroughly and efficiently as ever, made light of any request.

I am asked sometimes, why undertake such research? The inference seems to be that a senior management job at a reasonable sized organisation, dynamically changing and performing, and all else that life brings, should be enough. There is no simple explanation, but the answer is easy – the challenge, discipline and the project itself is enjoyable. It was never "a chore that had to be done". And the quest for knowledge and growth is irresistible. An answer too, in part, lies in what my friend Jacob the philosopher says – what grows, never grows old.

The encouragement I receive from my wife Lynette is as much a cornerstone in this document as anything and everything achieved. AJ Cronin tells a story in his autobiography. The lesson is that substance is often not in appearance and status, but support.

Bernard Teahan
MASTERTON
February 2001

CONTENTS

INDEX — Page

SECTION 1

INTRODUCTION

This research began with a belief: That community ownership as a concept had much to offer, and that community ownership of trading enterprises was not inherently less efficient. And yet the evidence of events through the latter part of the 20th century pointed to the opposite.

Megginson *et al* in his 1994 research on the financial and operating performance of newly privatised firms, identified that

> *"... more than 80 countries have launched ambitious efforts to privatise their SOE's. Since 1980 more than 2000 SOE's have been privatised in developing countries, 6,800 worldwide."* (p. 404).

The New Zealand experience has not been dissimilar. Since the mid 1980's New Zealand had extensively gone down the privatisation path. The face of the New Zealand public ownership business scene has radically changed during these years; telecommunications, railways, banking, energy, the Ports, Auckland airport, Coal Corp ...the list is extensive.

The market model was dominant in the pursuit of economic efficiency. And yet the changes that occurred in the New Zealand scene from 1984 onwards were based largely on faith. The empirical evidence to support such beliefs as a number of writers identified (Peters and Marshall, 1988; Kelsey, 1995; Hawke, 1988) did not unequivocally uphold privatisation and the market model as being inherently more efficient as a structure.

It was a further belief that those involved in community ownership of trading enterprises had inadequately defined and identified to their communities the points of differences between themselves and private ownership: What was unique? As private enterprise moved (or was forced) to a wider awareness of its impact on society, had the points of difference blurred to such an extent that there was confusion as to whether there were unique features? The concept of community ownership has often been associated with pious ideals and woolly thoughts. Was this apparent lack of definition part of the territory? If the belief was founded in fact, what was necessary to emphasise the need for crisp focus of direction?

Community ownership of trading enterprises has a long history in New Zealand. Banking had been provided by regional Trustee Savings Banks for 150 years, and yet through extensive changes in the 1990's only one, and that successfully, now survives, the Taranaki Savings Bank. Electricity had been generated and supplied by local authorities since the early 1900's. Licensing Trusts were established in the mid 1940's.

The community model was now clearly not in favour. The changes through this period clearly identified that the market model was dominant. Why was this so?

Community ownership as a concept was still well enjoyed. Consider, for example, the support for community ownership of the energy companies when in 1992 the Government was considering privatisation of the local authority based systems. As one official who was involved at that time stated, when the community ownership concept was advanced, there was overwhelming support. It was a concept for that time and circumstance. As the Government moved down a market model path in the delivery of health services, communities rebelled and to save the hospital located in their town or area, a number developed a community trust system of ownership.

Thus the beliefs that started this research was contrary to by far the great majority of the dynamic change that had occurred in recent years so doubt existed. Are community owned trading enterprises less efficient? If so, by how much? Is the market model a more efficient provider of resources? If so, significantly, or moderately? Are there inherent faults in the concept of community ownership, for example, does the slow infiltration of politics (Spicer *et al*, 1996) lead to inefficiency and bureaucracy? Is there a uniqueness about community ownership and if so, are they clearly understood and expressed?

Many writers identified how important it was to balance the market model with its inherent emphasis on the individual, with the wider concept of community, with its emphasis on the 'we', the wider public good. Drucker in recent writings (1998) maintained that 'human beings need communities', and that 'the private sector – that is, business – cannot fill that need …'.

Some researchers (for example, Boardman and Vining, 1989) suggest that where economic goals are mixed with social/community goals, inefficiency results and all objectives are less successfully achieved. The separation out of the business unit from community ownership has been exampled in the establishment of the energy companies in 1992.

But is that necessary? Or does it just duplicate costs and create conflicts between different sets of 'actors' with different agendas? Are 'social and economic goals opposing', or are not 'economic mechanisms at the same time social processes'? (New Zealand Public Service Association, 1989.)

In pursuing the beliefs that was the basis of this research, it was evident that the key empirical research articles over the past 20 years provided a mixed answer. In some cases when comparing equivalent streams of private ownership companies with public ownership, the evidence supported that public ownership had performed better. On balance perhaps the evidence was more to the contrary, particularly in recent research. Kay and Thompson's key conclusion that it is the interaction of competition with ownership that promotes efficiency is particularly compelling (p. 24, 1986). The time spans for much of the research are short and it is reasonable to conclude that the next few years are more likely to deliver a more compelling result.

But there is very limited research that compares the performance of community owned organisations to that of private enterprise. A key question is whether community ownership delivers a closer sense of belonging than that of a more remote public or Government owned organisation. This sense of belonging is more likely to be closer to the sense of ownership that is inherent in private enterprise.

In pursuing research that compares the efficiency of community owned trading enterprises with their private enterprise counterparts, the impact of the nature of community ownership, the wider sense of the well being of the community rather than pursuit of individual objectives, was important. Thus a key aspect of the research was to identify if the concept of community ownership was understood widely so that in debating what is in the best interest of the community in the specific field the community organisation may operate, that the widest possible choices are made, and all the options are understood and not excluded. Thus if a particular industry averages, say a return on equity of 15%, and a community organisation wishes to pursue a wider agenda of creating employment say, or pursuing economic development policies that will encourage firms to set up in their area of operation, and are prepared to accept a return on equity of say 10%, are there robust accounting and reporting mechanisms that quantify the impact and success or otherwise of those employment and economic development goals?

For if there is not a clear definition of the community goal to be pursued, and rigorous accounting and reporting criteria adopted therefore, any goal is going to be more difficult to be achieved, and not degenerate into warm wishes largely incapable of being judged (Negandhi and Ganguly,1986). Alternatively, and perhaps additionally, in the absence of clearly focused social/community goals, do not economic goals take precedence (Kulkarni, 1979).

The concept of community ownership is widely enjoyed (for example, Peters and Marshall, 1988). Drucker (1998) maintains that community involvement can deliver the ideal effective citizenship where people can make a difference. Fukuyama's belief (1995) that there is no necessary trade-off for community and efficiency, and 'those that pay attention to community may indeed become the most efficient of all' are powerful statements that are worthy of research.

Thus in pursuing these lines of research, the stream that was selected of the electricity companies was tested to see what answers could be provided. It is important to recognise the limitations of these conclusions. The energy field selected in New Zealand is but one stream of data. The energy companies themselves were required by the 1992 legislation to be successful businesses. This requirement may have driven economic performance to the extent that social/community goals were not considered in an in depth understanding of the nature of community ownership. The data that was available was largely based upon the energy companies' performance and to a lesser extent, on the deliberations, selection of objectives, priorities, and performance and accountability mechanisms of the community trusts themselves. The community trusts are the end owner and hold in effect the assets of the energy company in trust for the community. Logically the community trusts' deliberations should be reflected in their companies' objectives. These limitations may have had some influence on the resultant selection of social/community objectives.

Some eight social/community objectives were noted as constant themes through the reports and public information generated by the energy companies. The key social/community goal that was pursued by the community trusts, significantly in advance of that of their private enterprise counterparts, was to keep tariffs as low as possible. In 1996 the community companies' tariffs were 5.69% less than that of their counterparts, in 1997 8.70%, and in 1998 6.64%. These lesser tariffs had a significant impact on profits foregone for the community companies and thus provided a 'hidden' dividend back to the community. In ROE terms, the impact in 1996 was 3.61%, in 1997 5.00%, and in 1998 3.54%

Another key objective of the community trusts was to deliver a rebate back to their community, generally through a reduction in their power accounts or tariff holidays. The nature of these community dividends is not dissimilar to the dividend a private enterprise company would provide to its shareholders. In comparing those two streams of dividends the public companies averaged a distribution percentage of tax paid profits to their shareholders of 78.5% over the 3 years 1996 to 1998. The community companies distributed 64.5% of tax paid profits. However, significantly, a number of the community companies pursued a low profit emphasis and when these are excluded the community companies' percentage of distribution increases to 83.2%. Thus a fair conclusion is that the community companies, while pursuing lower tariff regimes than their public company counterparts, also did not disadvantage their shareholders, the community, by lesser distributions of dividends. Further, the lower tariff regime provides a "hidden" dividend of significance.

The other five social/community objectives noted were not robustly pursued. The pursuit of economic growth in their regions, the support of community activities, good neighbour/environmental sensitivity programmes, and energy generation investment goals, identify that the community companies were either not more active in these areas than the public companies or the goals were of peripheral interest. Security of supply through a high level of capital expenditure that would improve the region's well-being and its ability to compete and attract investment, were not notably different between the two streams of data, although the community companies did expend more on capital expenditure. The community companies invested in the years between 1996 and 1998

11.1% of their fixed assets, compared to the public companies of 9.7%. However, a number of qualifications need to be made, and in particular the quality of the systems prior to the establishment of the energy companies in the early 1990's, the impact of density in rural and remote lines, and the impact of climatic conditions.

Thus with the sole exception of the low tariff regime objective, community energy companies have not actively pursued social/community objectives. Because there was a legislative requirement that they operate as successful businesses, interpretations may have been made by the community trusts that this limited the range of choice that was available to them. It may be also that the market philosophy that was, and is dominant, in the New Zealand environment again limited debate on the choices that may have been available. Thus further research into other industry sectors where community ownership is actively involved, would be desirable to strengthen the conclusions above. But the belief that community structured organisations often do not clearly identify their uniqueness is not disproved.

In analysing the economic performance of the community companies as compared to their public company counterparts, a number of conclusions can be made. Firstly the average return on equity for the three years 1996 to 1998 for the pubic companies was 9.29%. The community companies averaged 8.07%. The impact of the low tariff regime, is significant when adjustments are made to place an exactly similar tariff regime on the community companies that the public companies pursued. Return on equity would be improved in 1996 by 3.61%, in 1997 5.00%, and in 1998 3.54%. When the average of these (4.05%) is added to the recorded results in annual accounts and reports as noted above of

8.07%, the community companies achieved returns on equity of 12.12% significantly above those of their public company equivalents. The Return on Assets ratios (ROA) support a similar pattern. Thus it can be concluded that community companies are not less efficient.

CONCLUSION

This study sought to advance knowledge on the performance of community owned trading enterprises. Two hypotheses were proposed. The first of these was that social/community objectives are of significant importance. The research on the energy companies supports this contention moderately. The impact on financial performance of the key social/community goal pursued was very significant.

The second hypothesis related to performance as judged by key financial indicators. In this area, the community owned energy companies achieved higher ROE and ROA than their private ownership counterparts.

Section 2 following reviews the literature pertaining to this study. Section 3 develops the two hypotheses, section 4 the research methods, section 5 analyses the results of the research and section 6 summarises the conclusions. References and Tables complete this document.

SECTION 2

A REVIEW OF LITERATURE

INTRODUCTION

> Through their involvement in welfare–to–work programmes, corporations are reframing the debate about the appropriate roles of non-profits and for-profits. In the process, they are bringing to light some pressing questions about the provision of social services today. Does the presence of for-profit on non-profit turf inevitably threaten the existence of non-profits? If non-profits choose to compete with for-profits as providers of social services, can they develop enough capacity to be effective? Are the traditional non-profit goals of social advocacy and community building compatible with the goal of competing successfully in the market place? And perhaps most problematic, is the common interest best served when non-profits aim to compete on for-profit terms?

William P. Ryan in an article titled "The New Landscape for Non Profits" in the Harvard Business Review of January/February 1999.

These dichotomies are further reflected in another article from the Harvard Business Review (September/October 1996) by James C. Collins and Jerry I. Porras.

Core Purpose Is a Company's Reason for Being	
3M: To solve unsolved problems innovatively	**McKinsey & Company:** To help leading corporations and governments be more successful
Cargill: To improve the standard of living around the world	**Merck:** To preserve and improve human life
Fannie Mae: To strengthen the social fabric by continually democratizing home ownership	**Nike:** To experience the emotion of competition, winning, and crushing competitors
Hewlett-Packard: To make technical contributions for the advancement and welfare of humanity	**Sony:** To experience the joy of advancing and applying technology for the benefit of the public
Lost Arrow Corporation: To be a role model and a tool for social change	**Telecare Corporation:** To help people with mental impairments realize their full potential
Pacific Theatres: To provide a place for people to flourish and to enhance the community	**Wal-Mart:** To give ordinary folk the chance to buy the same things as rich people
Mary Kay Cosmetics: To give unlimited opportunity to women	**Walt Disney:** To make people happy

Because the Core Purpose for a company is intrinsic, it is rarely subject to change. Why then have so many of these large and well known companies selected other than market values, e.g. profit maximisation?

Is it because we recognise the most sustainable businesses are those that have a vision and ideals people can aspire to, and that economic goals can be well or even best achieved in a framework of care and belonging?

Or is the performance of social ideals and economic goals impaired (significantly or slightly?) when they are merged? These questions are tested in this study.

This section reviews a wide range of literature on these, and related issues. The review will be carried out under four major sub sections:

I. Market Model Viewpoint
II. The Social/Community Viewpoint
III. State Owned Enterprises
IV. Empirical Review

2.1 MARKET MODEL VIEWPOINT

To better understand the pressures that give rise to structures and beliefs in society, it is necessary to define key philosophies and to comment thereon. Thus herein will be presented:

2.1.1 The Market Forces philosophy (and the continuing debate)
2.1.2 Key Theories and Definitions
2.1.3 The Economic Gods (and key influences and trends)
2.1.4 Privatisation

2.1.1 MARKET FORCES PHILOSOPY

In its simplest form this view assumes that through individuals pursuing their self-interest, "the public good will tend to emerge spontaneously". (Barry, 1997)

In good part this view dates back to that first expressed by Adam Smith, who is generally regarded to be the founding father of capitalist theory, in his "The Wealth of Nations", (1776). His view was that in an entirely free economy, every citizen, through seeking his own gain, would be "led by an invisible hand to promote an end that is not part of his intention" and that was the prosperity of society.

There are extremes on this view. A laissez-faire attitude would argue that the market alone should decide and there should be minimal interference and regulation. A more balanced approach is where involvement by Government and regulation is seen as necessary to achieve a fair society. The extent of that involvement is where most would agree the current level of debate centres.

The New Zealand view is generally agreed to be based upon the writings of Hayek and Friedman (Kelsey 1995, Peters and Marshall, 1988). The latter record:

> *"The main motivating values emphasise the operation of free market forces, minimal State interference, proprietarian rights and laissez faire attitudes. The so-called 'free' individual is regarded as the basic unit of political order and the safe guarding of the individual's life, liberty and property as the state's fundamental purpose. There is a bias towards minimal state for any extension of the role of state over and above these ends is regarded as both unnecessary and dangerous." (pp. 680-1)*

Hayek (1951) advances the somewhat startling view that even though the *"taunt discipline of the market"* is essential to ensure our survival, *"... the vast majority of people (I do not exaggerate) no longer believes in the market."* (p. 148)

Hayek describes the market as a system of signals that inform us quite imperfectly of the effects of a vast amount of events. We adjust to these signals in a variety of ways but generally through our choices. He suggests that it is the improvement of the framework that will deliver benefits and better ensure that those that are not able to react to the signals of the market are best provided for.

Some would argue that if left to themselves markets are best at satisfying the wants of the rich, rather than those of the poor (Hammond, 1990). Few would argue that the purity of the market will deliver optimal outcomes (Kuttner, 1997). There are many issues like pollution and other abuses of the environment, training and education, the poor, and public health issues, that the market, with its emphasis on the individual, provides limited accountability. But most would accept the view that:

> *"Continuation down the free market track will strengthen the basis for widespread opportunity and a high degree of personal security through growth of the economy. It will also strengthen social cohesion by restoring family responsibilities, respect for the property of others and a return to the tradition of philanthropy." (Bates, 1996, p. ix)*

In his widely quoted book "TRUST, The Social Virtues and the Creation of Prosperity", Fukuyama (1995) advances the views that markets get it right about 80% of the time.

The critical conflict that many see is the underlying belief of the market system that the individual is paramount. To assume that all that is good will naturally follow the advancement of self-interest is clearly not true. But it is just as clearly true that we are heavily reliant on the market system for our prosperity. Hollenbach (1998) records:

> *"Though free markets can be an expression of human freedom, they do not adequately reflect the full scope of what human beings require for their well-being and what they are capable of achieving together. An ideology that treats market freedom as a quasi-absolute gives individual autonomy a one sided importance and effectively denies the social nature of human existence and the communal dimensions of freedom." (p. 68)*

A number of articles in the popular press reflect these views, for example, "The Limits of Markets" (Kuttner, 1997) and "The Capitalist Threat" (Soros, 1997).

Pope John Paul VI pleas for similar balance in his Encyclicals.

CONCLUSION

There is a widespread recognition that market forces properly regulated in the name of the common good are the most effective mechanism for delivering prosperity, growth, and for matching resources to needs. The market system has shown itself to be superior in encouraging wealth creation and relieving poverty and hardship. Centrally controlled systems have proven to be destructive and are in disarray pretty much throughout the world. Thus Smith's (1776) invisible hand and the millions of signals, pricing and otherwise, each of us receive, has proven to be significantly in advance of any other system of economic force. But the advancement of the individual in its purest form sits uncomfortably, and thus we do not fully trust the market system. Yet we need it. Is this why we instinctively turn to community?

2.1.2 KEY THEORIES AND DEFINITIONS

What follows in this subsection is a definition of key concepts that either reflect or mould society, and business norms and structures. A better understanding of those will lead to a recognition of the strengths and weaknesses of various structures and performance pressures.

2.1.2.1 CAPITALISM

Webster's defines capitalism as:

> *"That economic system based on the private ownership of the means of production and distribution ... and their operation for profit under more or less competitive conditions."*

For much of the 20th century capitalism competed with communism and now that the latter is in disarray, some would argue that capitalism's victory has been so complete that alternatives are mere flights of fancy and lack substance.

Why then is capitalism distrusted? (Hayek, 1951; Soros, 1997) Why do we sometimes turn to community and public ownership as a hybrid structure, certainly with capitalistic ideals, but in a form of ownership that at least infers that profits should not be the driving force?

Pope John Paul VI had this to say about whether, with the demise of communism, capitalism should be endorsed as the appropriate economic system for the whole globe:

> *"The answer is obviously complex. If by 'capitalism' is meant an economic system which recognises the fundamental and positive role of business, the market, private property, and the resulting responsibility for the means of production, as well as free human creativity in the economic sector, then the answer is certainly in the affirmative, even though perhaps it would be more appropriate to speak of a 'business economy', 'market economy', or simply 'free economy'. But if by 'capitalism' is meant a system in which freedom in the economic sector is not circumscribed within a strong juridical framework which places it at the service of human freedom in its totality, and which sees it as a particular aspect of that freedom, the core of which is ethical and religious, the answer is certainly negative."*
>
> *(1991 Encyclical, Centesimus Annus)*

This quotation points up both what is good and what is distrusted in the capitalist system.

Undoubtedly it is creative (Kerr, 1995). It provides for free expression of individual choice. It creates jobs and advances standards of living (Deavenport, 1996). It thrives on the quest for knowledge. It rewards those who take risks. It creates value.
But it also creates chaos (Kuttner, 1997). It requires ground rules, that is, some regulation by the State. Because as it creates wealth it also creates poverty, suffering, and inequality, through those that are not able to cope, or are not able to participate. It has been estimated that could be up to one quarter of the world's population, 1 billion people) (Linden, 1996).

Barry records (1997):

> *"... there is considerable hostility to the forces – individualism, self interest and exclusive concern for profit – that are said to drive it (capitalism). A whole academic discipline in the United States is predicated on the assumption that capitalism requires some validation by a morality external to its own rules and practices." (p. 8)*

But while various forms of capitalism may be debated there are characteristics that are inherent.

> *"This characteristic of wanting more is universal. It applies to greedy and rapacious firms and self-interested individuals. Indeed, wanting more is not a characteristic for which we should want to condemn people. The desire for more is one of the few features that is indispensable for human progress and advancements."*
>
> *(Epstein, 1995, p. 75)*

But while by far the great majority accept or tolerate the benefits of capitalism and the need, and indeed right, for entrepreneurship and free economic activity, there is a strong view that the market must be appropriately controlled by society and Governments *"so as to guarantee that the basic needs of the whole of society are satisfied."* (Smithies, 1997)

Fukuyama (1995) in defining the necessity for trust records that:

> *"The increasing complexity and information intensity of modern life at the same time renders centralised economic planning extremely difficult. The enormous prosperity created by technology–driven capitalism, in turn, serves as an incubator for a liberal regime of universal and equal rights, in which the struggle for recognition of human dignity culminates." (p. 4)*

He asserts that all serious commentators and observers recognise that a healthy and dynamic society is critical for the vitality of economic institutions.

For capitalism to succeed effectively a stable liberal democracy is essential. So the linkages between liberal democracy, a healthy capitalist system and a vital civic society based upon the primary unit of civilisation, the family, best provide for that degree of human freedom and balance so that almost all in society can live without poverty and where individual rights are not pressed to the detriment of the wider public good and community. This freedom to exercise the rights of the individual should be used a manner which is sensitive to the well-being of the community.

2.1.2.2 LIBERAL CAPITALISM

Perhaps just as commonly called laissez-faire, liberal capitalism, as the name implies, is a more extreme or freer from constraints version of capitalism. It takes the view that free and unbridled competition and the individual's ability to pursue their self interest can best deliver economic benefits and thereby benefit the common good.

Increasingly though laissez-faire capitalism claims to perfection are not sustainable (Soros, 1997). Most commentators would accept today that liberal capitalism needs to be tempered. The perfect knowledge assumption that is part of its underlying beliefs is unsustainable. As Soros maintains, too much individualism threatens society rather than enhances it.

Markets by themselves will not provide education for all, nor health, a public infrastructure, and clean air and water. Robert Kuttner in an article in the American Prospect in 1997 recorded this view:

> *"History also demonstrates that in much of economic life, pure reliance on markets produces suboptimal outcomes. Market forces, left to their own devices, lead to avoidable financial panics and depressions, which in turn lead to political chaos. Historically, Government has had to intervene, not only to redress the gross inequality of market-determined income and wealth, but to rescue the market from itself when it periodically goes haywire. The ideal of a pure market solution to a public good is a mirage. So the fact remains that the mixed economy – the strong private sector tempered and leavened by a*

democratic polity – is the essential instrument of both a decent society and an efficient economy." (pp. 2 and 9)

In practice, even in America where liberal capitalism has achieved the most support, the theory has borne little relationship to the realities. Even business champions have not been adverse to seeking Government intervention where they believed it necessary to protect themselves against challenges, for example, from their own workers, or international competition, or market conditions (Brinkley, 1995). Iacooca's much publicised request to the U.S. Government to rescue Chrysler is another example.

It is perhaps more recognised now that unbridled competition has a tendency to override justice and charity (Catholic Commission, 1991) and is one reason why liberal capitalism has lost support since the mid 1990's (Brinkley, 1995).

New Zealand's experimentation with the laissez-faire approach has generally been titled 'neo-liberalism'. A number of authors have recorded, sometimes incredulously (Kelsey, 1995), the events of the mid 1980's when a Treasury document, 'Economic Management' (1984) became the basis for extensive changes to New Zealand society.

It is interesting now in retrospect to review the events of the mid 1980's, a time when the Labour Party became Government (Spicer *et al*, 1996; Kelsey, 1995). It is generally accepted now that for the policies reflected in that Treasury's brief of 1984, there was little empirical basis to the extensive changes that were pursued. (Peters and Marshall, 1988.)

The policies adopted were based upon free market assumptions and principles, and advanced the rights of the individuals as "the logical starting point" (Treasury, 1987).

What followed was market liberalisation and free trade, a limitation of Government, narrow monetarist policy, deregulation of the labour market and extensive privatisation. Only through privatisation, the theory was held and the practice followed, was efficiency likely to be achieved. These changes are covered in more depth in para. 2.1.4.

Before addressing the issue of privatisation, however, it would be of advantage to review the key economic theories that influenced the policies that brought about these changes in the 1980's, and established the environment of today; notably:

- Agency costs
- Stakeholder Theory
- Rational economic agent theory
- Property rights hypothesis

2.1.2.3 AGENCY COSTS

When one person owns and operates a simple organisation that only encompasses themselves, they can control and influence all that occurs. But when an organisation becomes larger, ownership often separates from control. This line of reasoning is pivotal when comparing the performance of private enterprise organisations with public (for example, Government or community).

Once an organisation moves beyond one person's control and influence, there arises agency costs. Jensen and Meckling in their definitive article "Theory of the Firm: Managerial Behaviour, Agency Costs and Capital Structure" as recorded in the Journal of Financial Economics in October 1976, define agency costs as

> *"... resulting from a divergence between the interests of principals and agents. They include monitoring costs incurred by the principal to ensure that the agent acts in the principal's interests, bonding costs which result from the agent taking actions to assure the principal that he or she will act in the principal's interests, and the residual loss which results from any behaviour by agents which is not in the principal's interests and is not controlled by monitoring of a bonding cost." (Quoted in Spicer, et al, 1996, p. 14).*

Thus to ensure that the owner(s) wishes are met, controls must be put in place to assure that what they define to be done in terms of performance, is in fact achieved, or if not exactly achieved then acceptably approximating the agreed upon goals.

Equity markets are powerful monitors of performance, provided there is a free flow of information. A good case in recent days would be Brierley Investments. Irrespective of the underlying asset backing, the market perceived that the company was under performing and thus discounted its share price.

The threat of takeover are another private enterprise reaction to under performing organisations. If Directors and management perceive that there is a very real possibility of takeover, their performance may be influenced.

Publicly owned organisations are generally perceived to have greater agency problems. They rarely have any equity markets or takeover mechanisms. Often the reasons for being involved in a community organisation are diverse from economic performance. For example, those elected to a local authority, which may have trading ventures, may neither have the skills to direct those trading organisations to best performance, nor have the interest to do so. Often they may seek election so that they might be better recognised, for example to pursue a political career. Difficult decisions where performance is unsatisfactory, which may require the replacement of a Chief Executive or management team, may generate controversy that is far from what an elected representative may seek.

A number of appointed and elected representatives may also not be sufficiently motivated because of a lack of personal commitment to make the necessary decisions to achieve better performance. Spicer *et al* record that very often shareholding Ministers (of State Owned Trading Organisations) have many responsibilities and thus limited time to spend on any one of their SOEs.

Where a public organisation has both trading (economic) goals and social goals, agency costs are likely to be greater. A lack of precise definition may result in increased agency costs resulting from frustration of performance. Performance may not be possible under the structure chosen.

Yet Fama and Jensen recorded in 1983 that:

> *"The separation of decision and risk-bearing functions observed in large corporations is common to other organisations such as large professional partnerships, financial mutuals, and non-profits." (p. 301)*

Their contention was that separation of decision and risk-bearing functions survived because of the "benefits of specialisation of management."

Wherever there are residual claims (a central theory of agency – that is, shareholders for example, have a keen stake in the residual profit resulting from good performance) agency issues are critical. Agency costs arise in any organisation other than our very simple initial model. Community and public ownership must devise ways in which they can ensure performance is at least satisfactory and ideally compatible with the privately owned organisation, that is, to overcome the lack of personal "stake" or ownership and the motivation that results therefrom. However, what is often ignored is that personal motivation can be a compelling force. The world is full of examples where individuals are committed simply to achieve the very best they can. Performance may also be influenced by incentives.

2.1.2.4 STAKEHOLDER THEORY

The stakeholder movement was perhaps more dominant in the 1970's and 1980's and can be defined as advancing the view that various groups have a 'stake' in the success or otherwise of an organisation. An obvious group is employees, but the list can be extended to customers, suppliers, people affected by the corporation's decisions (for example, environmental issues), and the wider community.

Von Tunzelmann (1996) records that:

> *"The concept of corporate stakeholders has long been entrenched in models of corporate governance found in Europe and Japan, based on acceptance of broader obligations that balance the interests of shareholders against those of other stakeholders, including employees, suppliers, and managers of capital, customers, and the wider community." (p. 23)*

At its strongest some would advocate that since society gives business a mandate and legal privileges such as limited liability, business must accept it has a responsibility to wider society and should account thereto. Some countries, notably Germany, have even gone further and required stakeholder representation on Boards of Directors.

Kerr (1996) records that stakeholder theories suffer from a range of problems, not the least of which are who bears the cost of stakeholders decisions, how are conflicts of interest reconciled, and how do you decide which stakeholder claim has priority. He argues that the logical extension of stakeholder theory is socialism.

Barry (1997) suggests that stakeholder claims are partly an "efficiency argument and partly a moral claim". (p. 16)

The weaknesses of stakeholder theory have seen the arguments shift to those revolving around the social responsibility of the firm. It is notable that in recent times a number of speeches and papers have advanced these views and there is logic to the argument that stakeholder harmony allows greater freedom and therefore greater efficiency. Where significant claims from various groups are placed against a firm then inevitably the firm's resources must be used to manage those claims. At the extreme, confrontational publicity can harm the firm.

Friedman's classic one-liner that the business of business is business summarises the inherent difficulties of any stakeholder argument. Consultation with the relevant stakeholder group before key decisions are made would in most cases incur additional costs and inefficiency, and ultimately an inability to compete.

However, there is significant strength to the argument that business does not operate in a vacuum and that it has a wider responsibility to society. The boundaries of that responsibility will always be tested and logically it would seem that they should flow according to the particular issues. For example, if a major environmental disaster occurs, say a shipwreck of a large oil tanker, then there will be strident claims for greater responsibility. And unless these are addressed then firms will face limitations on their ability to act, perhaps through legislation. Equally so, if employees' claims are ignored and even their rights abused, then history records changes in legislation will inevitably occur to redress the power balance.

It makes sense, therefore, to strategically manage all relationships that a business may have.

2.1.2.5 RATIONAL ECONOMIC AGENT THEORY

John Stuart Mill is regarded as the "conceptual father of homo-economicus", the rational economic agent. (Simons, p. 284)

But the origin of the concept goes back to Adam Smith's "invisible hand". At its fundamental it defines human nature and its driving forces, and in its simplest form asserts that human beings are rational utility – maximising individuals.

As rational agents the theory goes that we seek to acquire in a rational way the greatest amount of goods that we think are beneficial to ourselves. In making these decisions we are essentially selfishly pursuing our own ends, rather than those of a group or wider society. In summary, therefore, we seek to maximise our own well-being rather than others.

Fukuyama (1995) records:

> *"Economists, to a much greater extent than philosophers, poets, clergy, or politicians, preach the virtues of the pursuit of narrow self interest because they believe that the greatest good to society as a whole can be achieved by allowing these individuals to pursue their self interest through the market." (p. 18)*

He relates the social experiment of a large group of people at university. They were given tokens that they could exchange for money to either personally benefit themselves or alternatively for the wider group to share. He records:

> *"It turned out that between 40% and 60% of those in the experiment contributed altruistically to the group's well-being. The only exception was a group of entering graduate students in economics." (p. 18)*

Simons quotes Gossen's "The Laws of Human Relations":

> *"... two fundamentals assumptions about economic behaviour in market societies: the God-given goodness of self interested behaviour; and suspicion of all humanitarian legislation to improve welfare, whether by minimum wage laws, social security, or relief to the poor." (p. 284)*

The power of the theory is that it is right most of the time. Most times we do seek our self interest and most times, unless they are contrary to the laws of the land, the wider community benefits. But it is just as easy to record many occasions when we do not pursue our self interest. People will donate money to charitable causes, make strong stands against the use of natural resources, for example, the changing of a waterway into a dam for energy economic purposes, and, at the extreme, give their life to save another.

As Jensen and Meckling (1997) record in their article "The Nature of Man", people are resourceful, they will evaluate the alternatives available for them, they are interested in money, but not only.

2.1.2.6 PROPERTY RIGHTS HYPOTHESIS

The Property Rights hypothesis is fundamental to the justification for privatisation and nationalisation of industries. Further it is at the core of issues that are the basis of this study.

The property rights hypothesis can be summarised as follows:

1. There is more limited economic motivation to monitor and direct management's performance of a public enterprise.

2. Private enterprise ownership provides each owner the potential to sell his ownership share.

3. This potential to sell produces both specialised ownership and pressure on managers to ensure efficiency.

4. This higher efficiency than can be achieved under a public ownership structure, results in improved value.

Thus, it is hypothesised, managerial efficiency under private ownership will be higher than under public ownership.

Furubotn and Pejovich in an article titled *"Property Rights and Economic Theory: A Survey of Recent Literature"* in the Journal of Economic Literature, December 1972, referred to a system of property rights consisting of three elements:

"1. The right to use an asset and exclude others from its use.

2. The right to appropriate returns from the assets which includes the right to sell or assign the asset, and

3. The right to change the asset's form or substance of the asset."

(Quoted in Spicer et al 1996, *p. 13)*

They identify too that some of these rights and related incentives are lessened "when a productive asset is owned and operated by the State".

It is important to realise that whilst this is a fundamental concept, it is by no means absolute. As will be shown in a later section, the empirical research is not clear cut. There are examples when public enterprises have out performed private enterprise. There are examples where the results are far from clear cut. A good deal of research does support the hypothesis.

An obvious factor in the achievement of outstanding performance under any form of ownership is a clarity of objectives. Where property rights are confused, and where management does not have a clear focused direction, for example, when there are competing goals, then performance is attenuated.

SUMMARY

The theory associated with agency costs, stakeholders and the social responsibility of the firm, rational economic agents and property rights give us a series of insights into key influences on performance, particularly in relation to community ownership. Agency costs are perceived to be greater for public ownership than private while the property rights hypothesis suggests that there is likely to be more limited motivation to direct the performance of a public organisation, largely because the threat of takeover is removed and the absence of equity markets to provide a performance (share price) measurement. Stakeholder theory reminds us that all firms have a wider responsibility to society, and this raises the question that if private enterprise responsibly reflect that, what is the need for community ownership of trading enterprises? Rational economic agent theory reminds us that most often we seek to maximise benefits to ourselves; that individualism has both benefits and disadvantages, for example, consider entrepreneurship versus selfishness.

If community ownership is to succeed and have a future, it must address these issues, and find solutions where weaknesses occur.

2.1.3 THE ECONOMIC GODS: SMITH, KEYNES, FRIEDMAN, *ET AL*

A history of economic thought that has influenced us to the predominant views today would be interesting because perhaps it would better example the competing pressures, not least between business/markets and community/society.

It would be interesting, but it is not critical to the study and rather this section comments on some of the key influences and trends. In this way we may better understand what beliefs are dominant now, and what influences and pressures may change tomorrow.

Samuelson in his introductory analysis of economics first produced in the 1950's (through to the 1970's) records how early economics was influenced by such diverse groups and publications as Aristotle, the Bible, St Thomas Aquinas in the Thirteenth Century, and by practitioners such as businessmen and pamphleteers from the beginning of history. However, modern economics, or the so-called classical school, can be said to start from Adam Smith in 1776 with the *"The Wealth of Nations".*

Smith's most quoted phrase is the analogy of the invisible hand, which he defines as the universal governor of social behavior.

> *"The economic agent intends only his own gain, and .... and in this, ... (is) led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worst for the society that it was no part of it. By pursuing his own interest he frequently promotes that of society more effectually than when he really intends to promote it." (The Wealth of Nations, p. 225)*

Smith's economic theory apparently took values as given but as Soros (1997) records that no longer can be so. It is probably truer to say that the free market is amoral because there always will be winners and losers in an open competitive situation.

Indeed some would go further and say that modern economics sets individual freedoms and rights at odds with the community (Simons, approximately 1994):

> *"State structures are merely to protect the rights of individuals and their contracts and to be kept at a minimum. This almost exclusive emphasis on individual rights, however, has a number of problems: a gradual break down of civic duties and conversation; a progressive loss of participation in the democratic formulation of the common good; and, the neglect of social institutions because of a failure to acknowledge that social life is constitutive of the human person." (p. 290)*

In latter years the neo classical streams of thought have been developed. Kelsey in her, at times almost bitterly critical book, *"The New Zealand Experiment: A World Model for Structural Adjustment?"* provides a useful summary of the environment that New Zealand faced in the mid 1980's.

> *"The demise of the Soviet Union removed the West's main strategic and ideological combatant. Institutions like the OECD, international monetary fund (IMF) World Bank and credit rating agencies, pressed conformity with the "free market" model. Neo liberal economics and philosophy dominated intellectual discourse, radiating out primarily from the United States.*
>
> *Western Governments saw themselves facing a stark choice between the promotion of profit through the free market, and the protection of the welfare state through Government intervention. The neo liberal model implemented through structural adjustment became dominant." (Kelsey, 1995, p. 17)*

Both Kelsey and Peters and Marshall (1988) record how pure neo liberal theory with its emphasis on individualism became the blueprint for Government policy. While the work had begun in the 1970's it was in 1984 that the pivotal Treasury document "Economic Management" set the scene for the rapid changes that occurred throughout the latter part of the 1980's and which is the base for the New Zealand scene today. A further Treasury document *"Brief to the Incoming Government, 1987"* consolidated the neo liberal theories.

Peters and Marshall maintain that the theory was based upon the writings of Hayek and Friedman. Treasury themselves maintained that their position was "part of the new economic orthodoxy, backed by a widely held intellectual consensus." (quoted in Kelsey, 1995).

Brian Easton , the New Zealand Economist, disputed this, believing that the important influences were from a particular section of America: Chicago and its satellites (quoted in Kelsey, 1995, p. 53). But Kelsey records Treasury views that:

> *".... the primary influence came from the US, and particularly the micro-economic theories of Demsetz and Coase on the nature of the firm, Williamson on transaction costs, Baumol et al on contestability theory, Alchian on property rights, Buchanan and Tulloch on political influence and public choice, along with Friedman's monetarism and the rational expectation theories of Kydland and Prescott." (p. 54)*

The 1984 and 1987 documents from Treasury are increasingly recognised as pivotal in New Zealand economic history. Kelsey records:

> *"The 1984 briefing paper was a textbook application of micro-economic theory to the New Zealand economy. By contrast, the two volume, 750 page briefing for 1987, called "Government Management" was an extraordinary ideological tract. "Economic Management" was about restructuring the economy; "Government Management" was about restructuring the state." (p. 57)*

Thus Treasury's view was to limit the size of the state, and for the state to set the scene in such areas as Government expenditure, taxation and money supply. The State should enforce property and personal rights, which, as much as possible should be delegated to local control. Further, social policy should be targeted towards the most disadvantaged in society and should provide "market driven minimal safety nets" and not cradle to the grave welfare support. (Treasury documents 1984 and 1987)

CONCLUSION

Market driven welfare systems reflect the more extreme philosophies of liberal capitalism. The views and the actions of, for example, Treasury in recent years do not seem to reflect an absolute belief in the market place. There seems to be a recognition that Government does have a role in providing and improving the framework in which the market operates and that it should make provision for those people who are not in a position to look after themselves. The devolution of decision making to local communities who may more quickly relate to local needs would seem too to be a recognition that Government should limit itself to those things that it needs to, and quit businesses which are best provided in an open competitive environment. The Energy Industry is a recent example of those views where previously public assets are being sold.

The messages are sometimes mixed, tainted frequently by political pressures, but nonetheless successive New Zealand Governments have consistently pursued neo-liberal economic theories for the last 15 years.

2.1.4 PRIVATISATION

Empirical evidence on the performance of privately owned enterprises compared with those under public (community or Government) ownership will be analysed further on in this review. For completeness, the theory behind privatisation needs to be put into context of the market model.

Kay and Thompson in the Economic Journal of March 1986 provide an analysis and rationale. They make the distinction that

> *"Privatisation is a term which is used to cover several distinct, and possibly alternative, means of changing the relationship between the Government and the private sector". (p. 18)*

They identify that the most important types of privatisation are:

a) Denationalisation – which is the sale of publicly owned assets.

b) Deregulation – which they define as the introduction of competition into statutory monopolies.

c) Contracting out - "the franchising to private firms of the production of state financed goods and services". (p. 18)

Megginson *et al* (1994) highlight what other authors (for example, Kelsey, 1995) have also found surprising, that is, privatisation programmes were largely taken on faith. Empirical evidence and academic research were only in the embryonic stages and largely inconclusive. For example, Bailey (1986), Bishop and Kay (1989), and Pryke (1982), provided arguments and evidence supporting "privatisation's role in promoting economic efficiency". Megginson *et al* (1994), Kay and Thompson (1986), and Wortzel and Wortzel (1989) supported the opposite view. Boardman and Vining (1989) provide an excellent summary of literature to that time. (Refer para 2.4.7). Again a most thorough empirical analysis of privatisation in a world bank study by Galal *et al* (1994) is referred to in para. 2.4.11.

There may be a variety of justifications for privatisation. Economic efficiency is one and this may be linked to the incentives that are provided to managers for better performance. The relationship between Government and nationalised industries often provides sources of conflict and the removal of some of these can be achieved by separating out the commercial, or economic, efficiency ideals from conflicting social goals.

The various Treasurys of countries in which privatisation occur are frequently supportive of privatisation for the revenue it brings to Government. Those arguments have been highlighted in recent days with the sale of Contact Energy in New Zealand. It was notable that the Ministers of the Crown justified the sale significantly on the retirement of debt and the saving of interest costs above the economic benefit to Government if ownership was retained in the public sector.

In 1985 in an Economic Statement announced to Parliament on 12 December the Minister of Finance, Roger Douglas, spelt out 5 principles for the efficient management of public sector trading activities. They reflected much of the then Government's and Treasury's views on privatisation and public section trading activities:

> *"1. Responsibility for non-commercial functions will be kept separate from state owned trading enterprises.*
>
> *2. Managers of state owned enterprises will be given a principle objective of running them as successful business enterprises.*
>
> *3. Managers will be given responsibility for decisions on the use of inputs and on pricing and marketing of their output within the performance objectives agreed with Ministers so that the managers can be held accountable to Ministers in Parliament for their results.*
>
> *4. The advantages and disadvantages which state owned enterprises have, including unnecessary barriers to competition, will be removed so that commercial criteria will provide a fair assessment of managerial performance.*
>
> *5. Individual state owned enterprises will be reconstituted on a case by case basis in a form appropriate for their commercial purposes under the guidance of Boards comprising, generally, members appointed from the private sector."*
>
> *(Quoted in Spicer, et al, 1996, p. 11)*

Yarrow's (1986) view that competition and managerial accountability are more important than privatisation, per se, in promoting economic efficiency is now extensively accepted as a critical factor in improved performance (also Megginson *et al*, 1994, and Kay and Thompson, 1986).

Kay and Thompson best summarise this:

> *" ... if product markets are competitive, lower efficiency is penalised by falling market share and low profits. If capital markets are effective, this in turn leads to withdrawal from the industry by unsuccessful private firms. Thus market disciplines do more to improve the performance of the private sector than the public. It is not ownership as such, but the interaction of ownership and competition that promotes efficiency." (1986, p. 24)*

Megginson *et al* provide a useful history of privatisation programmes. They record that the German Parliament under the leadership of Adenauer in 1957 launched the "first large scale ideologically-motivated denationalisation programmes of the post war era" (p. 406). It is probably, however, the Thatcher Government's policies in the early 1980's that were the basis of the significant move to privatisation that has occurred since then. Price Waterhouse in a publication in 1989 listed six objectives of Thatcher for privatisation:

> *"1. Raise revenue for the State*
> *2. Promote increased efficiency*
> *3. Reduce Government interference in the economy*
> *4. Promote wider share ownership*
> *5. Provide the opportunity to introduce competition*
> *6. Expose SOEs to market discipline."*
> *(p. 10, quoted in Megginson et al, 1994.)*

Privatisation views received strong opposition. Some argued that the mixed economy model was necessary to retain the Government's responsibility to monitor society, particularly for those less advantaged. The New Zealand Public Service Association in March 1989 published a research article that cast significant doubt on the theory. Others identified the political cost (Boycko, *et al*, 1996). Kelsey in 1995 identified that privatisation:

"... ignored the divergence between prevailing social values and those of the market, and the implications for social coherence in the years ahead. They failed to recognise the tensions between limited Government, market power, political stability, and the legitimacy of the state. And they remained oblivious to the impact of an individualised, privatised and internationalised society on human development, cultural identity, and a sense of belonging to a community that cares." (p. 11).

CONCLUSION

Opposition not withstanding, privatisation is here to stay and is increasingly supported as delivering economic efficiency. However, as so often happens, one significant event or change creates a ripple on effect. The increasing stridence of those calling for a more balanced emphasis on social consequences, suggests there are needs to be addressed. That movement is highlighted in the discussion which follows.

2.2 THE SOCIAL/COMMUNITY VIEWPOINT

This section seeks to define the concept of community, why it enjoys widespread support, and has done through time; and key definitions and terms that are important to understanding why "community " has such a significant part in our social framework.

By better defining the terms involved, we may better be able to understand why community owned trading enterprises were established and whether they have a role to play in the future. If the latter is found to be so, then we need also to understand the pressures they face and their strengths and weaknesses. History is often broken down into eras where particular philosophies become dominant. Often one view stands out over another because of one's failure to meet performance standards or expectations. If we better understand that most often, all views have some validity and some strengths, then we may be better able to address their inherent weaknesses.

A fundamental justification for this research is that community owned trading enterprises have both strengths and weaknesses. But where those weaknesses are not addressed, for example an ownership structure that tends to weak economic performance through a proneness to inefficiency and weak accountability, the concept becomes tainted, and at worst, replaced. There is little value in repeating the errors of the past, and there is a human tendency to solve a problem by trying something new.

Many now acknowledge that the neo-liberal principles that were put in place in the mid 1980's by the then Labour Government were largely untested. But we have seen much greater efficiency to the New Zealand economy in the fifteen years since those changes started.

But there is also much unease and as world economies have increasingly moved to more liberal market ideals, so also has there been a surge in interest in the concepts of community. It is interesting to comment that before signs of that surge are discussed, the two (the market and community) are not incompatible. The freedoms of the market can provide fresh ideas and enthusiasm for improvements in communities. The efficiency of markets can be, and is, adopted by many community organisations to their benefit. Communities thrive best in freedom which is a fundamental premise of the market philosophy.

Zobel de Ayala II records in Chapter 24 of the Drucker Foundation publication of 1998, "The Community of the Future", that while:

> *"The tell tale signs are still random and far from settled ... they already remind me that community has not become a thing of the past. Among these signs are:*
>
> - *The surge of voluntarianism that has made non profit institutions and organisations a vital sector in many countries.*
> - *The rise of local communities in the developing world to a new level of empowerment and purpose.*
> - *The resurgence of family values and civility in place of the old fixation on individualism and personal lifestyles.*
> - *The new concern over responsibilities compared to a selfish obsession with individual rights.*
> - *The growing interest of corporate culture in norms , values, and social responsibility.*
> - *The devolution of many tasks from big Government and institutions to the private sector, citizens' groups and even families.*
> - *The growing prominence of issues that have little to do with power or the creation of wealth and everything to do with the quality of life on the planet, such as care of the environment.*

- *The revival of religious feeling amid the secular world of the market place." (p. 263)*

Many would debate whether all or some of the above can be justified on the evidence we have before us. Church numbers fall. Violence increases. Wars and conflict abound. Rage and intolerance seems more commonplace.

And yet Zobel de Ayala II perceptions have a ring of truth.

Drucker (1998, p. 4) maintains that "human beings need community". He records that it was Ferdinand Toennies who first pointed out that concept in 1887.

Drucker goes further. He now believes contrary to what he said in 1943, the "private sector – that is, business – cannot fill that need ..." (p. 5). He justifies that belief from two fundamental principles, that firstly business cannot give security or lifetime employment, and that business is a society rather than a community.

> *"Only the institution of the social sector, that is, the non Government, non business, non profit organisation, can create what we now need, communities for citizens and especially for the highly educated knowledge workers, who, increasingly, dominate developed societies. One reason for this is that only non profit organisations can provide the enormous diversity of communities we now need – from churches to professional associations, and from community organisations taking care of the homeless to health clubs. The nonprofit organisations are also the only ones that can satisfy the second need of the city, the need for effective citizenship for its members, and especially for the educated professional people who, increasingly are becoming the dominant group in the 21st century city. Only the nonprofit social sector institution can provide opportunities to be a volunteer and thus can enable individuals to have both: a sphere in which they are in control and a sphere in which they can make a difference." (p. 6)*

This chapter therefore will discuss these concepts:

2.2.1 The Notion of Community
2.2.2 The Common Good
2.2.3 Social Cohesion
2.2.4 Social Capital
2.2.5 Social Trust
2.2.6 Solidarity
2.2.7 Subsidiarity
2.2.8 Social Responsibility

2.2.1 THE NOTION OF COMMUNITY

Peters and Marshall in 1988 recorded:

> *"The notion of community has exercised an appeal as a social ideal to historians, philosophers, and sociologists since the times of our Greek forebears." (p. 657)*

But they warn also that there is a need to understand community alongside such other notions as "dignity and self determination for individuals", "genuine opportunity for all people", "equality", and "identity and cultural diversity". (p. 658)

Robert Putnam (1993), who has been much quoted for his writing about social capital, draws the distinction that modern economic life with its emphasis on the individual, has been instrumental in lessening the wider involvement of the individual in the community which he asserts is necessary to more fully enhance the life, not just of individuals but also of communities. But as Norman Barry in his Sir Ronald Trotter lecture in 1997 noted

> *"The argument that relentless market relationships destroy communities is little more than an assertion". (p. 22)*

Barry reminds us that "communal relationships prosper best in an atmosphere of freedom", and that "genuine community, like the market, depends on free action …". (p. 22)

Community can mean different things in different circumstances and to different groups of people, but commonly it means family, friends, neighbours, neighbourhood associations, clubs, civic groups, churches, service groups, local Government, and local media. A review of community groups in a particular neighbourhood sees how rich and varied they are. John McKnight in a paper titled "Regenerating community" (1987) stated

> *"You will know that you are in community if you often hear laughter and singing. You will know when you are in an institution, corporation, or bureaucracy, if you hear the silence of long halls and reasoned meetings. Associations in community celebrate because they work by consent and have the luxury of allowing joyfulness to join them in their endeavors." (p. 9)*

Some argue that there is a constant tension between the value of the individual and the nature of the community.

> *"Unfortunately, the philosophy of extreme free – market economics has exalted the individual and diminished the concept of shared community. While correctly recognising that the state can overstep its role and invade the sphere of civic life, economic rationalism responded with a minimalist approach that reduced the state to guardian of the market." (Riddell, 1997, p. 23)*

Randerson (1992) held that in such a climate it is not surprising that civic participation withers.

Perhaps the best summary is provided by Fukuyama (1995):

> *"Economic activity represents a crucial part of social life and is knit together by a wide variety of norms, rules, moral obligations, and other habits that together shape the society. … One of the most important lessons we can learn from an examination of economic life is that a nation's well-being, as well as*

its ability to compete, is conditioned by a single, pervasive cultural characteristic: the level of trust inherent in the society." (p. 7)

There is no necessary trade-off, he maintains, between community and efficiency. "Those who pay attention to community may indeed become the most efficient of all". (p. 32)

2.2.2 THE COMMON GOOD

It is difficult to understand the dynamics of community without recognising that there is more to life than an individual maximising their own benefits. A good part of that recognition is based upon the tenet that the well-being of the community, or the common good, is a higher value than individual freedom, important though that is.

A market based system as originally advanced by Adam Smith has the belief that the individual by maximising their aims, instinctively benefits the wider community.

That statement is largely true but not without some qualifications. It is very much a question of which should take priority, the individual or the wider community. The New Zealand Catholic Bishops in 1980 recorded

"... there is always the tendency to subordinate human needs to financial and economic considerations, which is an inversion of the true moral order. People do not exist for the service of industry; industry exists for the service of people." (As quoted in "Solidarity in the Marketplace", 1991, p. 16)

Pope John Paul II in his encyclical Sollicitudo Rei Socialis supported the "right to entrepreneurial activity and free economic initiative" and that it should be safe guarded and developed because he maintained "it is important not only for the individual but also for the common good." But he qualified that by:

> *"Corresponding to this right is the businessman's responsibility to make their business a community of persons who work with others and for others and together they help one another to mature as human beings, without marginalising anyone. Business should have a respect for the central value of the person and of solidarity." (1987)*

In an earlier encyclical (Gaudium et Spes: The Church in the Modern World, 1965) the common good was defined as:

> *"Everything in society which permits people – as groups or as individuals – to reach their fulfilment more fully and easily." (p. 26)*

In summary, that encyclical defined the common good as being a "shared good", belonging to all where the needs and lawful hopes of every group is respected, and where every person works for the good of the whole human family.

Fundamentally those beliefs have a base in an acknowledgement that each of us has a responsibility for our brother and where we do not act primarily in our own self interest. Thus the well-being of the community (the common good) becomes the highest value. Our freedom is freedom for others, not freedom from others.

The good of the individual can thus be seen to be in conflict from time to time with the common good. Alleviation of that tension is a critical role for Government. An obvious example is where an individual seeks to have his needs met by speeding to a destination to the detriment of all those on the roads at that time. That example is easily recognised, but often the issues are not so clear-cut. For example, an individual may be able to make a significant profit out of advertising a good that could be detrimental to the community at large. Equally so the pursuit of human pleasure can have disastrous effects for some; for example, in the abuse of young people.

Likewise in pursuit of the concept of the common good, there is an argument that wages has priority over capital. A fair wage is surely the prerogative of all and only a few would deny that truth but the issue becomes much more clouded when a fair profit cannot be made and redundancies occur.

Barry (1997) notes that business is coming under increasing moral pressure.

> *"... because of their alleged privileged position, business enterprises are expected to go beyond the constraints of normal morality and to act positively for the public good, even if it should be costly for them to do so. The pursuit of profit has to be legitimated by external moral criteria." (p. 26)*

This privileged position refers to the rights of perpetual life, the collective form and limited liability for companies. To receive those it is argued that there is a wider responsibility to society.

Barry goes on to record that "what we are witnessing is a retreat from the individualistic foundations of the corporation". (p. 28)

Barry gives the example of the tendency now for corporations to be sued, not just under particular legislation but also in common law for such things as exemplary damages. The Health and Safety Act gives some examples where the business unit is held to be responsible, even though the damage may have been caused by its individual employees, sometimes with only limited responsibility by the organisation.

The example of pressure groups to change particular policy reflects the dedication by some community groups to hold the corporation accountable. An example in recent years has been the rain forest issue. The clearing of the forests was in part justified by the opportunities it created, for example, for Brazilian cattle farmers. Pressure was placed on Burger King for one to stop its purchases from such Brazilian cattle farmers and it was successful in highlighting the plight of the rain forest, and indeed to arrest some of the decline.

Some of these issues are highlighted under the heading of social responsibility but Barry sounds a note of warning and suggests that any activity that goes beyond the business role of "maximising returns to owners, providing employment, and producing goods at cheap prices" will be "only feasible in communities characterised by unusual levels of cohesion and common purposes." He concludes:

> *"It would be a serious mistake to translate a business culture into a community which may be sociologically and ethically quite inappropriate for it. The loss of efficiency and freedom that would result would be incalculable." (p. 29)*

2.2.3 SOCIAL COHESION

Where people are alienated by polices, economic or social, conflict arises. That conflict usually brings into question the quality of the policies.

Soros (1997) maintains that "Societies derive their cohesion from shared values" (p. 55). Shared values, cohesion in society and the lessening of conflict are obviously desirable aims. This section, therefore, looks at the concept of social cohesion and how writers both define it and highlight its importance.

Winton Bates in a paper commissioned by the Business Round Table in 1996 discussed the links between economic growth and social cohesion. The paper is centered on the key question of whether New Zealand reforms since the mid 1980's "have weakened social cohesion by placing too much emphasis on economic efficiency at the expense of equity in the distribution of income". (Preface)

As a starting point it is useful to define what is meant by social cohesion. Bates records what he believes to be included in the concept. He advances the view that access to opportunities, high levels of personal security, and a genuinely accepted willingness to commit voluntarily to constitutional processes are important to lessening conflict in communities.

Bates also adds that "a strong economy and Government activities which focus on promoting growth are additional prerequisites". (Summary page).

Gray in his commentary on Bates' paper better enjoys Bates' quotation from Jim Bolger, the then Prime Minister of New Zealand in 1994:

> *"People in general know what economic growth is but are uncertain as to what is social cohesion. To me it means the maintenance of a society where everyone has the opportunity through individual effort, or, if unavoidable circumstances prevent this, the individual still feels a positive sense of belonging and is able to contribute to the best of his or her ability". (As quoted in Bates p. 3 and similarly Gray, p. 233)*

Boston *et al* (1996) maintain that Governments' concentration on economic efficiency over the past 10 years "has not been matched by the same degree of emphasis on improving various social outcomes such as lower levels of relative poverty, less crime, and enhanced health status ... Nor has sufficient attention been given to the inter-relatedness of economic and social policies". (p. 2)

Boston's paper advocates a social responsibility act that would require social impact assessments for every policy proposal thus making more explicit the relationships between economic and social variables (p. 11).

So often it seems to be true that it is much easier to concentrate on economic or financial fundamentals rather than the more blurred and difficult ill-defined field of social issues. Riddell records (1997, p. 18) that an over-emphasis on economic philosophy and strategy leads to a vast simplification of human life "and must inevitably underestimate history".

Fukuyama advances much the same view:

> *"... economic life is deeply inbeded in social life, and it cannot be understood apart from the customs, morals, and habits of the society in which it occurs." (1995, p. 13)*

Riddell takes some hope from the current debates and believes that "the retrieval of concepts like social trust and social cohesion mark a balancing trend in the analysis of public affairs". (p. 18)

Kawachi *et al* in a paper in the American Prospect in 1997 analyse in some depth how public health is influenced by social cohesion (they suggest it is both positively and negatively related) and like Putnam, support the view that "social capital is a major contributing factor in economic growth" (p. 2).

Whatever the strength of these arguments, it is an obvious truth that an undue concentration on any one aspect, economic or social, is a limited view of the human spirit and the need for a balanced life approach. Economic and social goals are inter-related and that inter-relatedness is a constant moving target and a source of tension. While it is easy to state that economic efficiency and wealth should harmonise and follow the wider social goals of life and living, it is a fine judgement to know how they are balanced. There will always be disagreement and issues to solve. Sometimes a lack of growth and economic efficiency will translate into higher unemployment, which will then translate into social difficulties. The debate over social coherence is healthy in that it will better highlight the inequities.

2.2.4 SOCIAL CAPITAL

Concern over many of society's ills – increased crime, conflict, intolerance and anger – have created a search for reasons and answers. The terms social capital, social cohesion, and social trust, have largely arisen out of that search.

It was Robert Putnam who popularised the term "social capital". Portes and Landolt (1996) note that although the origin of the phrase was nineteenth century "classics of sociology", more recently it was resurrected by the work of two sociologists, Pierre Bourdieu and James Coleman (p. 2).

But social capital can be easily said to refer back even further to medieval times when trust between merchants existed to facilitate economic transactions. Coleman cites the example of Jewish diamond merchants in New York who saved lawyers' fees by conducting their transactions informally.

While social cohesion can be said to refer to the way in which people work together towards common goals while recognising individual wishes, social capital is defined by Robert Putnam as the network of repeated social interaction which reinforce social norms, especially trust. In this way it refers to the "intangible capital that emerges from investment in relationship building" (Barker, 1997, p. 141). As relationships are built, so also are a wide range of interactions made easy and strengthened. And this would include relationships in the market, families and communities.

Logically, working together is easier in a community blessed with a substantial element of trust and strong traditions of civic engagement. In those circumstances social capital is said to be high.

Where such high stocks of social capital exist they become a vital catalyst to economic development; lower transaction costs result, information is more readily exchanged, and innovation more likely to result. Putnam argues that if there is too much concentration on the individual, social capital is lessened. This lessening gives rise to greater selfishness and can in good part explain the conflicts in society resulting in higher crime. Where there is a determination to place an individual's rights over the collective good, conflict can be readily seen to result.

O'Brien goes further (1997, p. 126):

> *"If we want to ensure the legitimacy of our policies, we need to consider social as well as economic processes. We cannot afford to side step the community in the policy process, for they will work to regain control and if that means working against us – that is exactly what they will do".*

O'Brien makes the point that because we are part of a wider community, we depend on others and we are motivated by "values, purposes, goals and commitments that transcend self-interest." (p. 129)

Thus social capital can be seen to be a major factor in economic growth, but Portes and Landolt warn there are limitations to the concept. They note, for example, that "the same strong ties that help members of a group often enable it to exclude others" (p. 3). Examples are given of various groups, for example, the Italian, Irish, and Polish immigrants in the United States, and Korean and Chinese groups throughout the world, who form a community, not just to protect their self interest, but also to enhance their transactions. Their actions frequently have led to an exclusion of others, and extreme regulation and restrictions on individual freedom and business initiative have often resulted.

Adam Smith again referred to this theme when he noted that the grouping of merchants and establishment of norms and customs often led to "conspiracies against the public". (As quoted in Portes and Landolt, 1996, p. 3).

CONCLUSION

Thus the term social capital can be seen to be given to those relationships that we build in life, family, community, and in firms. The stronger those relationships the more likely we will succeed in achieving whatever goals we set.

A concept that separates life and activities into various compartments is an unrealistic view. Every day we seek to merge life and economic goals. The crispness of focus we give each will vary at any particular point in time and is a measure of their likely success. Thus a view that can be taken that a community owned enterprise with its focus on a wider balance of goals reflects how we think and act.

2.2.5 SOCIAL TRUST

It is as well to recap at this point. So far we have looked at the notion of community and why people both instinctively and deliberately trust it. Its relationship with capitalism and the economy is considered and where it fits comfortably, and where it conflicts. The concept of the common good enhances our understanding of why the "we" or togetherness that is instinctive in the notion of community is sometimes more important than the individualism of the market economy. Social cohesion and social capital are phrases that, while not new, have become of more interest with more research in recent years as the often extreme individualism of liberal capitalism alienates.

What is left to conclude this section is to discuss how social trust, solidarity and subsidiarity give us a better understanding of the dynamics of the world in which we live. Finally the concept of social responsibility as it relates to corporate organisations is discussed.

Social trust is defined by Fukuyama (1995, p. 26) as the:

> *"expectation that arises within a community of regular, honest, and co-operative behaviour, based on commonly shared norms, on the part of other members of that community".*

While helpful, it is perhaps more illuminating to say that both economic institutions and communities are united by trust. In a business sense the shared level of trust amongst stakeholders is one of the most powerful vehicles for performance. Where, for example, there are strong bonds between those representing the employer, usually managers, and employees, then people give that extra that makes a significant difference. That extra can be, for example, a commitment to providing good service to every customer. It can be in spending that little extra bit of time to develop an employee's skill so that they might better be able to carry out their job. Sometimes the level of trust can be reflected in a minimal amount of staff theft within an organisation. The best controls are often the controls that employees place upon themselves – that they would not consider stealing from their employer. Once those levels of trust are established they are powerful in achieving exceptional performance. Another example can be the relationship between suppliers and the company where suppliers understand that in return for their loyalty and commitment, and their genuine good efforts, they will receive long term supply contracts, then in a similar way to employees they are more dedicated to the good performance of the company, recognising that as it does well, then they as suppliers will do well. If on the other hand suppliers understand that they will regularly have to be part of a tendering process that is largely based upon price, then loyalty and social trust is not likely to be achieved to any significant degree.

A business and its relationships with society is often most complex. Where community pressures are quickly related to by the company and it manages them as part of its overall strategic process, then frequently there becomes a level of trust that does not require the threat or the reality of regulations. On the other hand where a company is distrusted by society there is often public conflict, and indeed in extreme cases regulation of their business.

These themes are extended upon at some length by von Tunzelmann in the 1996 publication "Social Responsibility and the Company: A New Perspective on Governance, Strategy and the Community". The role of trust in the creation of prosperity is emphasised. She draws out the point that "the prosperity of a business turns on two elements in the social environment: the well-being of the communities in which it (the business) operates; and the extent to which the company has a climate of support in the community". (p. 8, internet summary)

Fukuyama (1995) makes the point that a business is dependent on a "healthy and dynamic civil society" (p. 4) and that the economy is not separate from the rest of society.

Riddell (1997) extends upon much the same themes in his paper "Bringing Back Balance: the Role of Social Capital in Public Policy". He re-emphasises Fukuyama's contention that:

> *"Economic prosperity is dependent on more than free markets, competition and hard work. It also requires the ingredient of trust. Such trust is the product of social capital, and is essential for the development of large, well managed, competitive, commercial organisations". (p. 17)*

2.2.6 SOLIDARITY

The Polish workers' uprising against communism is perhaps the most famous example of this word and its underlying concepts. It is perhaps not surprising, therefore, that given the predominant religion of that country being Catholicism that it has its historic roots in the writings of various Popes. The Catholic Church, from as early as the late nineteenth century, has called upon Governments and industry to "abolish economic injustice and to establish working conditions befitting the dignity of persons, as well as sufficiency of income for family life and old age". (Rerum Novarum; the Condition of Workers", 1891)

Smithies in a 1997 address on economic justice and the role of the state quoted from the encyclicals of Pope John Paul II:

> *"Solidarity is not a feeling of vague compassion or shallow distress at the misfortunes of so many people, both near and far. On the contrary it is a firm and persevering determination to commit oneself to the common good; that is to say to the good of all and of each individual, because we are all really responsible for all. The determination is based on the solid conviction that what is hindering full development is the desire for profit and the thirst for power" (p. 4)*

Smithies makes the point that the principle of solidarity requires Governments to act directly and not indirectly to address inequalities in society. Thus leaving it to the market place to adjudicate on who wins and loses, is rejected. Again Smithies quotes from Pope John Paul II:

> *"The more that individuals are defenseless within a given society, the more they require the care and concern of others, and in particular the intervention of governmental authority. In this way the principle of solidarity .... is clearly seen to be one of the fundamental principles of the Christian view of social and political organisation", (p. 8).*

Hollenbach (1998) refers to these themes, noting that the weakest must be defended and there must be limits "on the autonomy of the parties who determine working conditions", (p.74).

But Fukuyama sounds a note of warning that:

> *"... groups exhibiting a high degree of trust and solidarity can be more economically efficient than those lacking either, (but) not all forms of trust and solidarity are necessarily advantageous." (1995, p. 156)*

He makes the point that capitalism is a process of "creative destruction" and has a life cycle. Some businesses must die because there is no longer a need. If the concept of solidarity is taken to an extreme degree, then society may suffer.

That theme too is emphasised by a genuine concern by some economists and public policy makers that as a society becomes more wealthy, often it will spend more time debating what is the common good. Thus an imbalance can start to eventuate where society and communities place significant restrictions on businesses. Inevitably those 'taxes' will flow on into inefficiencies of pricing to its customers. Some businesses will fail and thus the very policies that sought to bring about the common good can have harmful effects.

2.2.7 SUBSIDIARITY

The principle of subsidiarity again gives some definition to the ideal society, and the desirable balance between the individual and community. That balance is important if we are to assume that community owned trading enterprises have a justification both in terms of the concept of community and economic efficiency.

The principle of subsidiarity is complementary to that of solidarity.

Subsidiarity was given some emphasis at the time of the Maastricht Treaty. The concept insists that all social bodies exist for the sake of the person and that society should not assume what individuals and groups are able to do. Thus the resolution of social problems should ideally be at the level closest to those affected by them.

Hollenbach (1998) records that whilst the principle of subsidiarity is anti-totalitarian, it is not anti-State.

> *"Rather Government should, by its very nature, provide help (subsidium) to members of the body social, (and) should never destroy or absorb them. It should intervene to the extent required by the demands of justice and in a way that preserves the vitality of the other communities that make up civil society", (pp. 73 and 74).*

Thus the State's role is to create favourable conditions for the free exercise of economic and social activity.

2.2.8 SOCIAL RESPONSIBILITY

In very recent time there has been vigorous public debate about the responsibility of business to the wider community. Roger Kerr of the Business Round Table and Dick Hubbard of Hubbard Foods have so far as the popular media are concerned debated the opposite ends of the argument. The Business Round Table is widely perceived to be harshly and fiercely selfish. Yet a close read of Roger Kerr's speeches in the last few years records a reasoned and conservative view. Thus it is not surprising that Kerr's and Hubbard's opposing views are in fact not far apart at all. So what is social responsibility and why should it receive such interest in the last few years?

In the late 1970's and early 1980's there was much debate about the wider responsibility of business to various groups in society, whether they be employees, the environment, or society in general. Much of those debates disappeared in the mid to late 1980's and the greater part of the 1990's. That publications are now starting to surface, and debate occur in public of the concept of social responsibility is a reflection of the reaction to the extremes of the market economy, and that greater wealth is available. People perceive profit as being selfish. There is a perception that business is cut throat and uncaring. Thus in this context the shedding of jobs and closures of businesses often receives instant publicity, whilst the creation of jobs and the opening of new businesses rarely is news. Let us look, therefore, at some of the historic and recent views on the concept of corporate social responsibility.

Kerr in 1996 recorded a view that is not new. Indeed it dates from Adam Smith. Kerr states that commerce is a civilising force (p. 2). He records both Montesquieu and Hume's work that showed:

> *"... how sustained interaction between strangers eventually produced the conventions of morality, like stability of possession, and the obligation to keep promises, from which we are all the beneficiaries". (p. 3)*

Further Kerr states:

> *"Adam Smith's exploration of what he called "the system of natural liberty" showed that free trade would promote world harmony by engaging everyone in a system of peaceful exchange and division of labour", (p. 3).*

Both Kerr and von Tunzelmann (1996, p. 6) quote from Milton Friedman whose now classic statement on social responsibility and the proper role of business is worth repeating:

> *"There is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profit so long as it stays within the rules of the game which is to say, engages in open and free competition, without deception or fraud." (Friedman, 1970, p. 124)*

Kerr advances a view that if a business decides to support community activity, it must be careful not to do so at the expense of shareholders. Their first and, indeed Kerr would say, only responsibility – all other responsibilities are subsidiary to this one main aim – is to generate the most efficient return for its shareholders. Where managers and directors do support community activities they should do so in the context of identifying their reasons for so doing which should only be in support of a harmony with the community that will best deliver efficiency (Kerr, 1996, p. 12).

That view is largely supported by von Tunzelmann (1996). In the research she carried out on social responsibility and the company, she recorded that in recent years annual reports have reported a wider range of activities by companies under the general heading of social responsibility.

Companies in New Zealand adopt a school. The Grand Met community relations vision includes "programmes for homelessness, children excluded by truancy, inner city rejuvenation and youth at risk" (von Tunzelmann: Address to AIC conference 1997)

She quotes from Drucker:

> *"Organisations have to take social responsibility. There is no one else around in the society of organisations to take care of society itself. Yet they must do so responsibly, within the limits of their competence, and without endangering their performance capacity" (Drucker, 1993, p. 97)*

von Tunzelmann refers to a number of compelling sources to support the view that social responsibility is an important contributor to business performance, and that outstanding companies have built into their corporate strategies a strong social orientation (p. 45). Like the quote in the introduction of this section from the Harvard Business Review, she supports the contention that companies "built to last have a dual nature" (p. 51).

von Tunzelmann records a definition of corporate responsibility and then goes further and attempts to provide a definition of what can be included, and what should be excluded. That definition is reasonably neutral:

> *"The distinctive contribution a company makes actively and voluntarily to the advancement of society or alleviation of social concerns, usually through some form of investment in partnership with the community which may include Government". (pp. 107-109)*

But the examples given could be subject to some debate.

She quotes from the Economist of 10 May, which is worthy of reflection in that it records the much changed environment that has occurred during the mid to late 1990's. The article referred to the way Shell was responding to two major environmental and human rights controversies in 1995.

> *"Its decision, later reversed, to dump its Brent Spar oil platform in the Atlantic; and its activities in Nigeria where the Government executed a political activist who had been campaigning against Shell's oil pollution. It quoted the Chairman of Royal Dutch of saying "... the pressure is on to persuade companies such as Shell to act when Governments cannot or will not". (von Tunzelmann, 1997, Newsletter of the Institute of Policy Studies)*

Zenisek recorded a view in 1986 that is more evident today. He maintained that there is a pattern of "ever increasing cumulative set of demands and expectations placed upon the private economic sector by society as a whole", (p. 60). In his view, therefore, social responsiveness "is conceptualised as the degree of "fit" between society's expectations of the business community and the ethics of business", (p. 62)

Boston *et al* in a 1996 article in the Social Policy Journal of New Zealand advocated a Social Responsibility Act much like the Fiscal Responsibility Act. The authors maintained that there was a need for more emphasis on social policy and lamented the lack of good research data and poor monitoring and reporting requirements (p. 5).

These then are some of the issues and a record of thoughts on some of the changes that have occurred over the last two decades. As has been recorded elsewhere, business does not act in a vacuum. It must recognise its impact on the wider community and manage accordingly. Yet its prime responsibility is to be efficient and to generate acceptable returns on shareholders' money. But if it focuses too narrowly on profit then it runs the very real risk of conflict with society. The pressures a business face are not unique. They are much the same pressures as life. An efficient business is responsive to the changing trends of society and will manage those well.

The lesson is no different here for community owned trading enterprises. Whilst they are accountable to the community, they must be careful to relate to that community and to define that community's needs. They must be careful also to ensure that in reacting to the wider concept of the "we" of community, they survive in a competitive world by being efficient in a comparative way to private enterprise competitors.

2.3 STATE OWNED ENTERPRISES

Since the mid 1980's State Owned Enterprises have had an important role in New Zealand. They have a number of common characteristics to community owned trading enterprises. In recent years there has been much change with a number of SOEs privatised. In recent months Auckland Airport and Contact Energy public floats have been outstanding successes, delivering significant premiums above asset backing for the Government and local authorities. These successes would suggest that community owned trading enterprises have a short life. That seems to be supported too by the contracting out of so many local authority activities, e.g. parks, roading. In recent months there has been agitation for the funds held by communities that were generated by the sale of energy businesses owned by local authorities, and the sale of Trustee Savings Banks, to be returned to the public. Kerr (1998) maintains, for example, that there is a lack of true accountability in administering these funds because their owners are poorly defined and the funds that are distributed in grants to the community are largely influenced by the often personal preferences of either elected or appointed representatives who have little responsibility back to the wider community. Kerr maintains that it is the individual who should decide how these funds should be used.

SOEs are an important group within New Zealand society. What is their history, what are the issues, and what are the successes and failures?

State Owned Enterprises are a twentieth century invention with their beginnings in Continental Europe before World War II (Negandhi *et al*, 1986). In effect they represented a type of state capitalism and were a reaction to perceived flaws in pure capitalism, primarily the 'boom and bust syndrome' and the "resultant deterioration of confidence and investment" (Negandhi *et al*, p. 3).

Further justifications for SOEs were the perceived necessity of "the strong and steady hand of Government" (Negandhi *et al*, p. 3) and a socialist influence that was popular through Europe at that time. Generally they had mixed agendas and suffered from a mixture of goals, political pressures, an inability to be flexible, and a close relation to the inefficiencies of Government Departments.

Zenisek (1986, p. 59) records seven explanations for SOEs:

- *"A political rationale ...*
- *A desire to preserve an industry deemed vital to national security;*
- *A desire to redistribute income;*
- *A desire to rescue troubled industry because of anticipated negative social costs;*
- *A desire to increase exports;*
- *A desire to promote industrialisation; and*
- *An ideological commitment to socialism as a means of human organisation."*

Before looking at the New Zealand experience there is value in considering a fundamental question that Negandhi *et al* raised in 1986 (p. 304). They question:

> *"Why must we assume that the framework developed for the private enterprise will apply also to public enterprises? A "pseudo-economic" approach has permeated prior research, but the attributes of this radically new and different phenomenon, the SOE, surely deserve better".*

Raised in this question is an issue that is tested in section 5 of this research more thoroughly. In looking at the empirical research comparisons between public and private enterprise there is often a fundamental weakness. The comparisons made are not like to like. There is surely no reason why SOEs cannot have wider agendas than just efficient use of resources. There is a view frequently expressed that "mixed – motive actors" find it difficult to be efficient in all their goals because the goals themselves conflict. There is a view here that economic efficiency stands apart from social and community goals. Yet as has been expressed elsewhere there is much philosophical opposition to this approach.

Private enterprise firms have a range of goals, some of which revolve around economic efficiency and profit generation, that is, return on funds employed. But just as Disney identify their core purpose is "To make people happy" and Merck "To preserve and improve human life", businesses often have goals that on the face of it have limited relationship to return on equity. Sony in the early 1950's listed their key goal as "Become the company most known for changing the world wide poor – quality of Japanese products". And Ford's vision in the early 1900s was to "democratize the automobile" (HBR September/October 1996).

The New Zealand experience began in the mid 1980s. The July 1984 briefing to the new Labour Government from Treasury was pivotal to the establishment of the State Owned Enterprises Act 1986. Spicer, *et al* (1996) record the previous experience. It set the scene for the radical changes that swept New Zealand during the mid to late 1980's.

> *"Over the past 20 years to 1985/86, the Government invested \$5,000 million (in 1986 dollars) of taxpayers' money in the departmental trading activities of the Airways system, the Land and Survey Department and Forest Service, the Post Office, the State Coal Mines and Electricity Division of the Ministry of Energy. In 1985/86 these organisations managed assets valued at over \$20 billion but returned no net after tax return to shareholders". (Cited from Stephen Jennings and Rod Cameron, and Roger Douglas and Louise Callen, both in 1987)*

The State Owned Enterprises Act required SOEs to be successful businesses first and foremost and everything else was secondary. Section 4 of the Act stated:

"1. The principal objective of every State enterprise shall be to operate as a successful business and, to this end, to be

a) As profitable and efficient as comparable businesses not owned by the Crown; and

b) A good employer; and

c) An organisation that exhibits a sense of social responsibility by having regard to the interests of the community in which it operates and by endeavouring to accommodate or encourage these when able to do so."

The competitive environment was to be rearranged as necessary to ensure a so-called level playing field and thus Kay and Thompson (1986) and others' key finding that it is competition interacting with ownership that promotes efficiency was attempted to be complied with.

As Spicer *et al* (1996) and Kelsey (1995) record, the key employer and social responsibility requirements from the beginning became largely ignored. Each SOE Board set about running efficient commercial businesses. The Minister may place before a Board some social goals but it was notable that very rarely happened. Section 7 of the Act provides for this ability and for the Crown to compensate the SOE for the commercial cost of these social goals once agreement has been reached between the Crown and State Enterprise. Spicer *et al* records that the only use of Section 7 that the writers were aware of was in the early days of NZ Post and Postbank where a payment to NZ Post to retain postal branches which would have otherwise been closed was considered. Spicer records:

"Once the cost became transparent and the Government discovered how expensive it was to keep these branches open the Government did not renew the contract. Many postal branches were subsequently closed with most of their services transferred to other commercial outlets." (p. 17)

It is worth noting that the Crown through its shareholding Minister cannot require a SOE to take on non-commercial objectives. It can, of course, apply significant leverage.

Whilst it was Government's intention to set the SOE in a competitively neutral situation, a good number of those established did continue to have historic advantages whether by size (for example, Telecom), or the environment in which they traded, for example, energy transmission.

Shareholding Ministers were required to be at arms length from the SOE Boards. The prime justification here was to overcome, as much as possible, political influences. In the early stages particularly, this was taken to an almost rigorous extent with Ministers refusing to answer questions in Parliament on the grounds of commercial sensitivity. Kelsey (1995) records (p. 124):

> *"In their quest for efficiency and profit, the attitude of some SOEs verged on contempt for their statutory social responsibility and public image. Their agents seemed unwilling to be held to account."*

The SOE Act provided accountability through annual statements of corporate intent which were signed off by the shareholding Ministers, and half-yearly and annual reports tabled in Parliament. SOEs also came under the Official Information and Ombudsman's Acts and the auspices of the Auditor-General. There was constant conflict with both the Chief Ombudsman and the Auditor-General expressing concerns on accountability issues. Several cases went to both the High Court and Court of Appeal, particularly on the good employer and social responsibility requirements in Section 4. Eventually the Privy Council provided some balance and suggested a less rigid interpretation. The Privy Council held that "in assessing what amounted to a successful business, they implied that equal weighting could be given to the profitability and efficiency, good employer and social responsibility objectives." (Kelsey, 1995, p. 126)

As a reaction to these concerns, and increasing public criticism, a Crown Company monitoring advisory unit was established in 1993. Kelsey records that its brief was to offer complementary and contestable advice to that from Treasury and eventually this requirement was subsequently extended to provide additional analysis of Treasury's primary advice on financial issues. (p. 126) A Parliamentary Select Committee was also given power to question Directors, Ministers, and Management of the SOEs subject to the constraint of commercial sensitivity.

Whilst Spicer *et al* records a view that social objectives are likely to reduce the clarity of all objectives and "make it difficult to measure performance against objectives and to hold SOEs clearly accountable" (p. 184), Kelsey and others, for example the Public Service Association, reject that argument. Notably the SOEs concentrated on commercial performance and thus there are simply no cases to be able to review how social objectives may have been able to be merged with commercial performance.

Spicer *et al* goes further and records a view that while SOEs remain under Government ownership they will always be subject to "the slow infiltration of politics" (p. 187). Privatisation is the logical answer, they suggest. The SOE model is "inherently less efficient than privatisation" and they have "serious reservations about the longer term efficiency and stability of the SOE model (pp. 189 to 202).

Much the same themes follow in a series of papers presented at a Institute of Policy Studies seminar in September 1988. The speakers at the seminar were Roger Douglas, Richard Prebble, and Ron Trotter, all strong advocates of the SOE model. Douglas records that Governments are not good business managers and notes the conflicting agendas. He believed that the model he had been instrumental in establishing was a vast improvement on what had previously existed (pp. 5 to 6). Prebble went further, stating that the SOE law was a world leader, and he recorded the remarkable turnaround in economic performance. Prebble also sets down some conditions for the sale of Government businesses:

> *"Firstly the sale of the business must earn the taxpayer more money than retained ownership and future dividends, taking into account the risk of ownership. Secondly the sale of the business must not impede the Government's social objectives, and thirdly the sale of the business must not impede the Government's economic objectives" (p. 9).*

Professor Gary Hawke's editing summary was more qualified. He recorded the factual position that the International literature on the performance of SOEs was much more mixed than speakers claimed (p. 60). He noted that there were efficiency advantages for both privatisation and public enterprises, and in supporting the case for more New Zealand research he recorded that the "clearest conclusion being that generalisation is difficult" (p. 60).

The New Zealand Public Service Association's paper on 'SOE Privatisation: The Next Logical Step' (1989) is interesting in that it provided an early case for disagreement with the New Zealand SOE model. The paper noted that while Treasury claimed support for the view that ownership was central to efficiency, that had been rejected by the evidence of Kay and Thompson. The separation of social from economic goals which were the fundamental premise of the establishment of SOEs, was "anti-democratic" (p. 6). Such a separation, the paper stated, enabled "private enterprise to abdicate social responsibility".

> *"It is misleading to argue that social and economic goals are opposing. Economic mechanisms are at the same time social processes. Economic mechanisms directly involve the way in which people interact, the way in which wealth and power are distributed, the life chances of the individual people who comprise society. Such factors are essential aspects which define social goals and the means by which they can be obtained. The central problem is that there is no necessary coincidence between the pursuit of profit and the best interests of the people or their environment. An uninhibited profit logic implies ecological irresponsibility, social inequity, and economic anarchy." (p. 6)*

The paper recorded counter arguments also on the share market monitoring mechanisms. It noted that the share market reacted to factors other than efficiencies (for example, the political environment) but it would appear that the strength of that argument is weakened with a greater sophistication of share markets today.

The SOEs provided startling improvements in efficiencies and profitability. Kelsey records that seven of the original corporations more than tripled their profits in the first four years of operation. The most profitable were the monopolies Electricorp and Telecom. It was quite likely that the Government was naïve in letting loose such monopoly suppliers and in moving away from their so-called level playing field open competition model. Both organisations could be accused of maximising their profits in a largely unconstrained environment.

There was no objective research on the social costs that arose from the changes. For example, the closing down of services were never costed out in a way similar to that undertaken by Galal *et al* in 1994. (See para 2.4.11) Productivity gains were achieved primarily through major reductions in staff numbers. Duncan and Bollard's research in 1992 record that Telecom reduced its staffing numbers from 24,500 in 1987 to 14,900 in 1991 and to half that today. New Zealand Railways in 1987 employed 14,900 people and in 1991 5,900. Similar reductions occurred in New Zealand Post, Forest Corp, Electricorp, and Coal Corp.

It would be interesting to measure the social cost to communities, the increased benefit cost largely resulting from unemployment and to read an objective social impact study. In the absence of that we are left wondering how do the benefits from greater efficiency that undoubtedly occurred measure against, at one extreme a do nothing scenario, or more realistically, where some social goals were accepted?

2.4 EMPIRICAL RESEARCH

This Section reviews a wide cross section of empirical research. In all some 17 articles are critiqued dating from 1986 to 1998. The articles are arranged in date order and each are summarised for their key conclusions.

These papers predominantly compare the efficiency of Public Enterprises with Private. Some set the theory scene by analysing out the key determinants of performance. Not all of the papers break new ground through their research. Some review the history of research and point to grounds for fruitful research in the future. The articles are selected because of their commonality of reference, that is, that they were the articles most consistently referred to.

The first batch of articles, six in all, were written in 1986, soon after the major changes that occurred in public trading enterprises in New Zealand, and a few years after similarly important changes in the United Kingdom.

2.4.1 THE NATURE OF PUBLIC ENTERPRISES: A STAKEHOLDER INTERPRETATION (THOMAS J ZENISEK, 1986)

This article provides a definition and history of management types and draws some compelling points on the influences of society on management styles and ownership types. It then takes those descriptions and extend them into a case analysis of a number of Canadian Public Enterprises.

Zenisek records that:

> *"To be acceptable to society a business ethic must be compatible with prevailing social ideology." (p. 62)*

In other words where the business model moves either behind or ahead of society expectations, pressures are created and actions occur to counter-balance.

A useful summary of the styles and types of management and the historical period associated with these is provided. Thus Zenisek records that the owner/manager model that existed between 1850 to 1900 was based upon a pursuit of wealth or resources for the owner/manager group who was the prime beneficiary. The second phase was the organisation participant model which existed between 1900 to 1945. He states that the business unit was largely internal in nature but had the important distinction that "human resources are a firm's most precious asset" and thus along with the owner/manager, employees become one of the primary beneficiaries.

Phase three occurred between 1945 to 1965 and Zenisek entitles this the task environmental model. During this period there was a greater concern with the relationship of the enterprise with its consumers, creditors, suppliers, and distributors; that is, "the firm's task environment" (p. 67).

The societal model followed as the fourth phase and continues to the present. Here expectations of society in general becomes a significant pressure point seeking a greater share of the firm's resources.

Zenisek provides a useful chart of the supporting legislation that occurred during these periods. For example, during the second phase where employees achieved a greater share of the resources, such legislation as workers compensation, wage/hour laws, social security, and price administration, was enacted. By comparison to the societal phase, legislation such as water pollution, clean air, civil rights, air quality, occupational safety and health, environmental quality, equal pay, and no discrimination in age became law.

In the current phase Zenisek records that as society expects greater benefits, economic surpluses shrink and they become the first to exit as a prime beneficiary group. Employees also receive a "smaller piece of a shrinking pie" (p. 71) and thus what follows is a disenchantment with private enterprise. Public Ownership thus results.

The distortions that can occur when public enterprises begin to set their own agenda, and when political influences distort, are well drawn out in case examples from Ontario hydro (A Swollen Empire Out of Control, p. 73) and Canadian National Railways. The distortions here are an all too common picture of conflicting and vacillating goals that provide lessons in the performance of public enterprises. Zenisek records:

> *"Private Enterprises, because of their dominant Phase one ideology, have a clear profit criteria against which to measure both efficiency and effectiveness. However, public enterprises because of their normally vacillating, multiple, and ill-defined goals do not possess a single, clear-cut performance evaluation criterion. Any criteria that do exist are multiple, vague, and subject to continual changes as a result of such factors as political pressure or expedience, changes of Government, general economic conditions, or any of the other seven factors pointed out in the first paragraph to this paper." (p. 83. These seven factors recorded in para 2.3 of this Study)*

Zenisek concludes by somewhat despairing of an ability to compare the performance of Public Enterprises; noting that if some model, typology or theory is not developed to guide research, "our efforts will be condemned to dust bowl empiricism at its worst" (p. 85).

This article is an early one that sets the scene of the difficulties that were envisaged and researched at that time. It is particularly useful in its definition of how public enterprises can result from society's reasonable or unreasonable expectations on business.

2.4.2 COMPARING PUBLIC AND PRIVATE ENTERPRISES IN AN INTERNATIONAL CONTEXT: SOME HYPOTHESES (NEGANDHI AND GANGULY, 1986)

The authors had three aims. The first of these is the most important for this study. It examines the rationale, structure, and functioning of public enterprises in the domestic sectors of three Nations – Italy, India, and the United Kingdom and, in doing so, it provides a similar rationale for Government involvement in economic activity as Zenisek (para. 2.4.1).

In comparing the goals of public and private enterprises the authors draw the important but obvious conclusion that unless goals are explicitly defined, attempts at comparison "will not be particularly fruitful" (p. 15). Again as other writers have done, Negandhi and Ganguly note that profit cannot be the sole criteria by which performance is compared. They record a quotation from a 1978 edition of the Economist:

> *"The profitable enterprise may be covering gross inefficiency with even grosser monopoly profits while the loss maker has pared costs to the bones." (The Economist article, "The State of the Market" pp. 37 to 58, 30 December 1978)*

A definition of technical and allocative efficiency follows, as does an analysis of a number of British industries. They quote from Pryke's study of 1971 wherein his research recorded that these industries "performed remarkably well under nationalisation" and that "the public enterprises have been more efficacious in seizing opportunities than have those in the private sector" (pp. 16 and 17).

An example is given of the British coal industry where unprofitable pits were kept open predominantly for social reasons, but interestingly Negandhi and Ganguly support a view that this made some economic sense also in that the loss of young miners to the industry would have created adverse economic consequences. It would be difficult to sustain that argument in today's economic environment. The mobility of the workforce and alternative efficient use arguments would be quickly brought into play.

Contrary to the view that a lack of ownership or personal stake impairs management performance, the authors conclude that "the validity of such claims is rather limited" (p. 26). But the evidence provided appears to be largely opinion based.

In related research in India they quote from Kulkarni:

> *"Where different policies of Government have contradictory objectives, for example, commercial efficiency, performance of developmental tasks, service orientation, etc., it may be unwise to use the same corporation as the combined instrument for all the policies. For, in the long run, the economic objective will tend to gain preference over all other objectives which are socially important and desirable" (Economic and Political weekly, March 1979)*

The Study then moves on to review the contributions of the public enterprises against their stated goals. The authors review performance in three countries, the United Kingdom, Italy, and India. In the United Kingdom they state the primary purpose of public enterprises was to "provide certain public services cheaply and to maintain employment". In Italy it was economic development and in India a similar goal through the protection of domestic industries, import substitution, export promotion, and the "development of key service and manufacturing sectors" (p. 28). They conclude from the performance review:

> *"What emerges from this analysis is that to some degree Governmental involvement has had positive results, quite contrary to innumerable claims that suggest that any form of regulation or tinkering with the free market mechanism inevitably spells economic disaster. At the same time it should be noted that in certain cases the goals of public enterprises were not clearly spelt out, nor were the implementation of those goals efficacious" (pp. 31 and 35).*

This study ranges extremely widely and indeed perhaps attempts too much. A conclusion is left to the reader that much is still uncertain and more in depth research is needed in all the key areas. Nonetheless it sets the scene for much of what did follow along those lines.

2.4.3 THE COMPARATIVE EFFICIENCY OF STATE OWNED ENTERPRISES: COLIN W. BOYD (1986)

Like Negandhi and Ganguly, Boyd provides a summary and commentary on research undertaken up to 1986. Again he notes many limitations and records that much pertaining to be empirical research is based on conjecture and opinion.

Boyd provides an excellent summary in Table 1 on the differences between public and private organisations and thus suggests a range of profitable positions for research. Boyd's thoroughness points up the shortcomings of research at that time and even today.

There follows a good summary of empirical studies of the property rights hypothesis. A conclusion is reached that there is:

> *"... no broad pattern to the results that indicate superior performance for either the public or private sector." (p. 188)*

The study includes an excellent summary of empirical studies in Table 2 in industries as diverse as electricity generation, sales and distribution, airlines, liquor stores, railways, water utilities, and garbage collection. In comparing the relative efficiency of the public and private enterprises, Boyd records that in 12 of these studies public enterprises were found to be more relatively efficient. The private sector was more efficient in 4 cases and in 8 cases there was no significant difference. However, there is an important qualification. All of the studies (dated from 1970 to 1980) referred to in their table are of regulated industries and that could impact upon performance.

Boyd concludes:

> *"The unbiased observer may well agree with Millward, who concludes from his review of empirical studies of the property rights hypothesis, that these studies do not provide general grounds for believing managerial efficiency to be less in public firms" and*
>
> *"The evidence is presently insufficient to support a sharp choice between the alternatives on straight forward economic grounds, and so the decision may perforce continue to be made solely on the basis of ideology" (p. 192).*

2.4.4 PERFORMANCE DETERMINANTS OF PUBLIC ENTERPRISES: SIGNIFICANCE AND IMPLICATIONS FOR MULTINATIONALISATION (KHANDWALLA, 1986)

This article is of limited benefit for this study and whilst it provides a useful summary of hypotheses concerning public enterprises' performance and some analysis of the performance of such enterprises in India, it draws no comparison between private and public.

It does provide some useful paragraphs on ways in which public enterprises can be studied.

2.4.5 PRIVATISATION: A POLICY IN SEARCH OF A RATIONALE (KAY AND THOMPSON, 1986)

Kay and Thompson's pivotal article published in 1986 is particularly important in that it draws out some key theories with perhaps the most important being that it is the interaction of ownership and competition which is most likely to produce optimal efficiency.

The authors note that often a change of performance results from the removal of constraints and the opening up of opportunities for management. Little's research in 1952 is even now accepted as fundamental to good performance – managers must be given specific objectives and their performance should be regularly and consistently monitored against those objectives.

The authors provide a good history of research into the performance of public and private enterprises. They record Pryke's 1982 comparisons in the United Kingdom where Pryke concluded that generally private enterprises were shown "in favourable light" (p. 22). Pryke's implication was that "private firms are not necessarily intrinsically more efficient, but that market pressures are more effective at weeding out poorly performing firms in the private sector than in the public" (p. 23). This led to a key finding:

> *"Thus market disciplines do more to improve performance of the private sector than the public. It is not ownership as such, but the interaction of ownership and competition that promotes efficiency" (p. 24).*

The authors warn, however, that it is unwise to make a simple generalisation and that both public and private firms improve with a competitive environment. Again the authors warn that the general view that:

> *"the virtue of denationalisation, over and even at the expense of, the promotion of competition is ... not supported by empirical evidence, on the relative performance of public and private enterprise. This stresses the role of competition and supports skepticism about the value of privatisation outside a competitive environment". (p. 31)*

2.4.6 THE RELATIVE EFFICIENCY OF PUBLIC AND PRIVATE FIRMS IN A REGULATED ENVIRONMENT: THE CASE OF U.S. ELECTRIC UTILITIES (ATKINSON AND HALVORSEN, 1986)

Once again a summary is provided of previous theoretical studies and a useful table is presented recording previous (that is, prior to 1986) empirical studies on public and private utilities. One of those (Moore 1970) concluded that private firms are more efficient but the five others dated from 1975 to 1980 recorded that publicly owned electric utilities were substantially more efficient. However, the authors note that there were significant limitations in an inability to control for "the effect of differences in input prices, technology, regulation, and economies of scale and do not allow for all of the possible influence on relative shadow prices for inputs." (p. 287)

The authors develop an econometric model and some quite limited empirical studies. (p. 293). Their conclusion is that both public and privately owned electric utilities in the US are "equally cost inefficient" (p. 293).

2.4.7 OWNERSHIP AND PERFORMANCE IN COMPETITIVE ENVIRONMENTS: A COMPARISON OF THE PERFORMANCE OF PRIVATE, MIXED AND STATE OWNED ENTERPRISES (BOARDMAN AND VINING, 1989)

This frequently quoted study bases its research on the property rights theory of the firm. The authors record that at the date of writing there was almost no empirical research on the impact of ownership in the competitive environment whilst controlling for relevant factors (p. 1). Thus this study compares SOEs, mixed enterprises and private corporations in a competitive environment.

Table 1 provides a summary of empirical results on the relative efficiency of SOEs and PCs from 1966 to 1986, 54 in all. On this occasion comparing the electric utilities, refuse, water, health related services, airlines, railroads, financial institutions, fire services, and non rail transit industry sectors, there is a heavy weighting towards the private company being more efficient. Some 32 research studies indicate that the private company is more efficient compared to six for the public corporation, and 16 that provided either no difference or ambiguous results. Once again a number of qualifications have to be made. For example, the authors note that sometimes limited competition or the heavy regulation of private firms impacted upon results.

One section of the paper comments on the socio-political objectives of SOEs and MEs without reaching any significant conclusions other than to record that:

> *"It is clearly unreasonable to use profitability measures as evidence of allocative efficiency or inefficiency in contexts where there are natural monopoly characteristics or other serious market failures" (p. 9)*

and that no study to date had attempted "to measure, or control for, external benefits of SOEs". (p. 9)

The authors' model is based upon the standard measures of performance: return on equity, return on assets, return on sales, and net income. In addition, sales per employees and sales per assets are measured. Dummy variables were allowed for each industrial sector in each country and concentration was included so as to control for the competitive/regulatory environment of the industry. Concentration was measured by a four-firm concentration ratio, and where for some firms it was "impossible to construct a concentration measure and a dummy variable (No concentration) is included ..." (p. 10).

After controlling for these wide variety of factors, the authors find that large industrial MEs and SOEs "perform substantially worse than similar PC's. In terms of all profitability indicators, mixed enterprises performed no better and often worse than State Owned Enterprises." (p. 26)

Thus Boardman and Vining conclude that "these results indicate that there are performance differences between public and private companies in competitive environments".

This study appeared to be the first to use data from Fortune International 500.

2.4.8 THE CAUSES AND CONSEQUENCES OF MIXED ENTERPRISE (ECKEL, 1988)

Eckel provides a commentary on the various ownership types in this unambitious study. Whilst there is some quotation of other research, no new ground is broken. The author suggests that goal compatibility is important in mixed enterprises and records views on what may be the best ownership type across the range of goal compatibility to incompatibility.

There is some limited research on the movement in share prices on change of ownership and a view is recorded that the public discount public enterprise share prices thus evidencing they believe they do not perform as well as private enterprises.

2.4.9 THE BEHAVIOUR OF MIXED ENTERPRISES (BOARDMAN AND VINING, 1990)

The authors conclude that mixed enterprises are "unlikely to embody the best of both worlds, that is, efficient pursuit of profitability and socio political goals". Further they believe that difficulties were likely to arise with conflicts of interest given that Governments would be tempted to use the organisation for socio political objectives. Thus the authors conclude these factors "go a long way to explaining the inferior economic performance of MEs" (p. 24).

One of the potential benefits of mixed enterprises are the disciplines the private owner may bring to the organisation but their analysis suggest that "this will rarely work" (p. 24).

2.4.10 THE FINANCIAL AND OPERATING PERFORMANCE OF NEWLY PRIVATISED FIRMS: AN INTERNATIONAL EMPIRICAL ANALYIS (MEGGINSON, NASH, AND VAN RANDENBORGH, 1994)

This quite detailed and thorough study was recorded in the June 1994 edition of the Journal of Finance and compares pre and post privatisation financial and operating performance of 61 companies from 18 countries and 32 industries that experienced full or partial privatisation through public share offerings during the period 1961 to 1990.

In the opening chapters of the study they provide the interesting information from a World Bank study that "more than 80 countries have launched ambitious efforts to privatise their SOEs. Since 1980 more than 2,000 SOEs have been privatised in developing countries, 6,800 world wide " (p. 404).

By 1990 the value of these sales of SOEs had exceeded $185 billion and yet the authors record that "privatisation's greatest impact on world economic history will occur in the years immediately ahead, as the newly – non communist nations of Eastern Europe and the Commonwealth of Independent States make their painful transition from centrally planned to market-orientated economies" (Note 1 p. 404).

What Megginson *et al* find most surprising though was that these changes were based largely on faith rather than hard core empirical research. As has been noted in the previous studies summarised in this section, the results of the few studies that were available were indeed mixed.

Like the Kay and Thompson study (para. 2.4.5) Yarrow (1986), Caves (1990), Goodman and Loveman (1992), and Shirley and Nellis (1991), agreed that it was "competition and managerial accountability (that were) more important than privatisation, per se, in promoting economic efficiency" (p. 405).

Table 1 records an extensive list of SOE privatisations covering some 20 countries and many industries.

In a very detailed analysis of results of firms after privatisation the authors record strong performance improvements. "Firms increase real sales, become more profitable, increase their capital investment spending, improve their operating efficiency, and increase their work forces" (p. 403).

Notably much the same results are achieved when the data is divided into sub samples. Interestingly one of those sub samples recorded "greater performance improvement for the group of firms that experienced 50% or greater turnover in directors than for the group of companies experiencing less dramatic change in directors after privatisation" (p. 448).

The authors were not able to identify if changes in executive and employee compensation policies (thus providing greater incentives to be more productive) impacted on the improvements in efficiencies that occurred. However, notably, total employment was maintained (p. 448).

This study is perhaps the most detailed and thorough to date with the results most clear-cut.

2.4.11 WELFARE CONSEQUENCES OF SELLING PUBLIC ENTERPRISES: AN EMPIRICAL ANALYSIS (GALAL, JONES, TANDON, AND VOGELSANG, 1994)

Importantly the authors take a different perspective on privatisation. This study seeks to provide an answer to the question of whether a country is better off after a public enterprise is sold. Thus the welfare consequences, those social and community goals, are taken into account in this very extensive publication.

After hypothesising that newly privatised firms will generate "a dramatic increase in profits" (p. 5) they seek to know:

- *"to what extent was the increase in profits due to exploitation of market power, and to what extent to improved efficiency?*

- *Was (the increase) primarily due to a more generous regulatory pricing regime (which) may have occurred even without divestiture?*

- *To what extent (were) the gains offset by losses to consumers?*

- *To what extent will the changes observed persist into the future?"*

The analysis data were selected from the United Kingdom, Chile, Malaysia and Mexico. Twelve firms were selected ranging from British Telecom with a market share of 97% and 235,000 employees which was divested in 1984, to Sports Toto a Malaysian lottery firm with a market share of 5% and 400 employees divested in 1985.

The authors have tackled the question of ownership quite extensively with similar conclusions to previous studies.

The methodology was complex and the research extensive. The authors sought to compare the performance of the enterprise after divestiture "with what the performance would have been had the enterprise not been divested" (p. 19). Thus they reconstruct for each enterprise a counter factual scenario that served as the control. "The welfare or gain (or loss) from divestiture that we will report is then the difference between the level of welfare under divestiture and the level of welfare in our counterfactual scenario." (p. 19)

Welfare was measured in the following categories:

- Were workers better or worse off?
- How did consumers fare?
- Did Governments gain or lose?
- How did buyers fare?
- Were foreigners better or worse off?
- What was the impact on competitors?

The results in the 12 cases provided a clear-cut result. Eleven of the 12 divestitures provided quite significant net welfare gains. Interestingly, however, the authors also suggested "that many of the gains commonly associated with divestiture could also be achieved in theory through the effective implementation of public sector reforms, with an emphasis on the application of market principles to the public enterprises" (p. 542). However, the authors also asked the question whether Governments would have been capable of "introducing and implementing such reforms". (p. 542)

2.4.12 PRIVATISATION AND ECONOMIC PERFORMANCE THROUGHOUT THE UK BUSINESS CYCLE (MARTIN AND PARKER, 1995)

Martin and Parker record the importance of competition in any privatisation that occurs and in reviewing the literature reach the conclusion that the results are mixed.

> *"... different studies have often reached conflicting conclusions, and even surveys of the evidence as a whole have failed to reach agreement about the relative merits of public and private ownership." (p. 227)*

The authors use two measures of performance for the eleven U.K. firms surveyed over a 5 year period, the rate of return on capital employed, and the annual growth in value added per employee hour. The conclusion they reach was

"... it is difficult to sustain unequivocally the hypothesis that private ownership is preferable to nationalisation on efficiency grounds." (p. 235)

They noted that in six of the 10 firms for which data was available there was an improvement in the value added ratio but in five of the 10 firms there was a decline in that ratio in the four years immediately after privatisation, when compared to the last four years of public ownership. In two cases there were little discernible differences.

Productivity did improve in six of the 10 firms but was less than the rest of the economy. Interestingly, six of the 10 firms had higher relative productivity growth rates when nationalised than after privatisation.

Thus the authors conclude that they support the conclusions of other research that "the effect of privatisation on efficiency has been mixed" (p. 236).

2.4.13 A THEORY OF PRIVATISATION (BOYCKO, SHLEIFER, AND VISHNY, 1996)

This brief study was recorded in the March 1996 edition of the Economic Journal. Their at times exaggerated language and selected quotations do not provide empirical research as such but, the authors state, "develop a model of privatisation that explains the relative inefficiency of public firms and the improvement of efficiency after privatisation, as well as several other empirical findings concerning privatisation". (p. 309)

The authors start with an "observation" that inefficiency in public enterprises is caused by politicians seeking their agendas to be completed rather than the pursuit of efficiency.

Their conclusions are largely conjecture and the article advances the issues little, if any.

2.4.14 TRANSFORMING GOVERNMENT ENTERPRISES: MANAGING RADICAL ORGANISATIONAL CHANGE IN DEREGULATED ENVIRONMENTS (SPICER, EMANUEL AND POWELL, 1996)

This 1996 book contains one of the very few New Zealand analysis of the performance of five New Zealand SOEs: ECNZ, Coal Corp, Works, GCS, and TVNZ.

In chapter 9 the authors give quite some emphasis to the separation of economic from social and political goals. They record a view that the most significant factor in improvement in performance was the limitation placed under the SOE Act that their prime responsibility was economic performance. As history has proven, a change to SOE status was not to be the last step in their transformation.

The analysis covers the period immediately preceding and three years following the date of establishment of the SOE. Return on assets, profit margin, and measures of input per unit of output comprise the basis of comparison.

The authors are careful to note that the comparison of the pre and post results are not comparing like to like in that prior to becoming an SOE the five organisations were required to carry out a number of political and social goals alongside the economic objectives.

Generally there was significant improvement in economic performance over the period of this study. ECNZ, for example, improved their Ebit/assets performance indicator from 14.0% in 1986 to 19.0% in 1990 while reducing employees from 6,076 to 3,913. Coal Corp had an even more radical reduction in the number of employees over the same comparative years from 1,767 to 715 with Ebit to assets improving from 3.96% to 14.37%. GCS actually increased their number of employees from 435 to 560 while increasing their Ebit to assets ratio from 15% to 17.5%. TVNZ decreased their number of employees from 3,554 to 2,035, but the Ebit to assets ratio fell from 10.1% to 7.9%.

This study also compared the performance of the SOEs with 82 listed companies over the same period. The comparison was quite limited with a simple table showing in what quartile the SOEs' return on investment performance indicator sat over a period of five years. Notably there is a heavy dominance in the medium and upper quartile, and the above upper quartile sectors, indicating that their performance was better than listed public companies. But once again, however, qualifications need to be made in that monopoly and other circumstances applied to make comparisons not necessarily like to like.

Comparisons were also provided for other companies in equivalent industries overseas and whilst again the performance indicators were positive, there are significant limitations in the fairness of the comparisons. Nonetheless the authors conclude that the financial performance of the SOEs studied had improved since corporatisation, and "the post corporatisation performance of the SOEs had been 'high' when measured against the performance of listed public companies or companies in the same industry" (p. 171).

The research undertaken is limited and reservations need to be noted about the conclusions. For example, there is limited (mainly hearsay) evidence to support the contention on the impact of mixed (economic and social) objectives. But nonetheless the improvement in financial performance is notable even allowing for reservations on equivalent comparisons.

2.4.15 PRIVATISATION AND EFFICIENCY: INDUSTRY EFFECTS OF THE SALE OF BRITISH AIRLINES (ECKEL, ECKEL, AND SINGAL, 1996)

The authors analyse the performance of British Airways after privatisation giving emphasis to privatisation's impact on airfares and competitors' stock prices.

One of the early findings of this study was that "the stock prices of (British Airway's US competitors) fell significantly around announcements that signaled the likelihood of privatisation" (p. 276). And that further the fall were proportional to the extent of their rivalry with British Airlines thus indicating the sensitivities of the capital markets to a likely more efficient and competitive British Airways after privatisation.

Airfares also fell a significant 14.3% around the time of privatisation and brought about a fall in cost structures. Notably there were no significant changes to Board structures or to shareholding. But again notably "important changes occurred in the compensation structure of the top management. Executive stock option plans were introduced soon after privatisation, and the chairman's compensation two years after privatisation grew to seven times the pre privatisation salary" (pp. 276-277).

The research indicates that in the three years after privatisation British Airways was more productive and efficient than in the three years before.

The studies are particularly notable in that the authors "attempted to isolate the effect of change in ownership on firm efficiency" (p. 297). All their results were based upon market data, share prices, and airfares, and thus would have been less influenced by accounting changes.

The authors conclude that "privatisation leads to an increase in efficiency (and erodes) the profitability of rival firms". Airfares decreased significantly, thus benefiting customers in a "consistent and sustained manner"" (p. 297).

2.4.16 STATE-OWNED AND PRIVATELY-OWNED FIRMS: AN EMPIRICAL ANALYSIS OF PROFITABILITY, LEVERAGE, AND LABOUR INTENSITY (DEWENTER AND MALATESTA, 1998)

This study provides in depth research and empirical evidence on the relative profitability, leverage, and labour intensity of Government-owned and privately-owned firms. It provides a more in depth analysis than the majority of the research papers that have been reviewed prior to this.

The authors start, as do many of the articles reviewed here, with the hypothesis that Government owned firms will be less efficient and perform less well, particularly in profit ratios, than private firms. The general explanation given for that follows that oft expressed blurring of goals, that is, in addition to economic efficiency, public enterprises have political and social objectives, such as wealth distribution. Again they review the literature and again point out that the evidence is mixed. They quote Vickers and Yarrow (1991), who, amongst others, asserted that "agency problems arise in private firms as well as public ones" (p. 1). The rationale here is that in large private organisations, ownership is much diverse and the managers and directors frequently own only a small percentage of the shares. They raised the interesting point that because a Government is the majority or the sole owner of an SOE, they may more closely monitor the performance of the Directors and management than a diversely owned private firm. The following quote is interesting:

> *"It is implausible, though, to suppose that politicians are indifferent to the profits of state owned firms" (p. 2)*

In reviewing past research the authors draw out a number of limitations. For example, they identify that Boardman and Vinings' study was only for a single year in 1982. They note too the limitation in the Megginson *et al* study in that "performance changes over the business cycle ... would be more pronounced for more highly leverage firms and these firms would exhibit a especially poor relative performance during recessions" (p. 4)

They note how Government firms would generally be more highly leveraged and this alone could explain some of the variability in performance in the Boardman and Vining study, and also Megginson *et al.*

The authors record that their study is three times the size of Boardman and Vining and includes three different years spanning a 20 year period. They also control for business cycle fluctuations and provide a time series analysis.

Interestingly they note that a good deal of the improvement in performance of firms undergoing privatisation occurs in the three years prior to the event. Thus the process of 'getting ready' was a powerful incentive for improvement. This again supports the logical and commonsense view that an intense focus on particular performance area(s) will invariably bring about an improvement in those area(s).

The authors found that there was strong evidence to support the proposition that "government firms display inferior profitability" (p. 5). Notably also in reviewing employment issues, they find "strong evidence that labour intensity decreases after firms privatise" (p. 6).

Because Government owned firms cannot raise equity through share issues, it is not unexpected that research by the authors shows publicly owned organisations to be more highly leveraged.

A further key finding is recorded on p. 21:

> *"Even though Government firms are less profitable than private firms we do not find much evidence that privatisation itself increases firm profitability. In our sample, privatisation is associated with improved profitability. The improvement, however, largely occurs during the three years just before privatisation. The evidence of further improvement after privatisation is not very robust".*

This supports the view that the incentive to privatise for Government is to generate the highest return from the sale possible and thus the authors conclude that the improvements cannot be attributed to the change of ownership. Their conclusion, therefore, that "the true rationale for privatisation may not be to achieve efficiency gain, but to perpetuate them in the face of changing political circumstances" (p. 22) is a fruitful challenge for researchers in the future.

2.4.17 PRIVATE OWNERSHIP AND CORPORATE PERFORMANCE: EVIDENCE FROM THE TRANSITION ECONOMIES (FRYDMAN, GRAY, HESSEL, RAPACZYNSKI, 1998)

Five hundred mid sized firms from Czechoslovakia, Hungary, and Poland were chosen for this research. The firms selected employed between 100 and 1500 persons, with median 1993 sales of US $6 million. The authors compared the relative performance of privatised and State firms in the period before privatisation and also analysed the effects of privatisation on different firms and different ownership structures.

The results indicate that privatisation brought about improvements in revenue, generally through greater entrepreneurial culture, and whilst improvements in productivity were less marked, privatised firms with outsider, that is, non manager and non worker owners, performed better. Such outside owners also significantly out performed inside owners on most performance measures and the authors noted that "employees are particularly ineffective as owners (indeed less effective than the state)" (p. 4).

A good deal of analysis was provided on the effect of privatisation on employment. The results showed that employment declines in both state and privatised firms during the early transition period but that nearly half of the privatised firms after that in fact increased their employment levels.

Thus the authors conclude that "private ownership (does) improve the most essential aspects of corporate performance during the postcommunist transition" (p. 38). Their further comment that there is no evidence that privatisation adds to the social dislocations of the transition process is of more doubtful validity given that the only social impact researched in depth was employment.

An interesting paragraph records that the authors carried out interviews with Chief Executive Officers, Chief Financial Officers, and Chief Production Officers, using different close ended questionnaires. The results of these interviews are not covered in their research and it would have been interesting to know the subject range covered. From the analysis they do provide, it largely concentrates around accounting and employment data. It is perhaps most likely that the interviews were not qualitative, thus we are left with the analysis of more global data rather than some discussion on key issues and events. Notably none of the 17 research articles that are summarised in this research have taken this approach. Such opinions and comments can often provide more in depth and "heart" to changes and their analysis, for example, the reasons for changes and why the particular processes were chosen, and the underlying pressures at the time.

CONCLUSION

This then concludes the review of literature appropriate to the research topic. What follows is the development of the research hypotheses (section 3), the methodologies adopted (section 4), the analysis and results (section 5), and the conclusions, limitations and suggestions for further research in section 6.

References and tables conclude this research.

SECTION 3

RESEARCH HYPOTHESES

3.1 INTRODUCTION

This section recaps the themes of the literature research and develops them into two hypotheses that are the basis of Section 4, the Research Methodologies, and the analysis and results that are contained in Section 5.

There is discussion also in this section on the limitations of the existing research and literature and how this study attempts to advance knowledge available in the selected fields.

3.2 THEMES

Fukuyama (1995) maintains there is no necessary trade off between community and efficiency. But is this so?

In the opening section of the Literature Research the question was asked whether the performance of social ideals and economic goals are impaired, either significantly or slightly, when they are merged. Further, why do so many major organisations seek visions and ideals to drive their companies, formed primarily for the purpose of delivering economic objectives, that on the face of it, are far removed from the generation of profits and return on investment.

Fanny Mae the huge American housing company records their core purpose as

> *"To strengthen the social fabric by continually democratizing home ownership."*

Hewlett-Packard set the ideal of:

> *"To make technical contributions for the advancement and welfare of humanity."*

Mary Kay Cosmetics state their core purpose is to:

> *"Give unlimited opportunity to women."*

The two pivotal questions that were asked in the research introduction are fundamental to the development of the research that follows. Are the most sustainable businesses those that have a vision and ideals people can aspire to? And are economic goals best achieved in a framework of care and belonging?

3.2.1 MARKET MODEL VIEWPOINT

Economic life is deeply imbedded in social life (Fukuyama, 1995). It flows therefore from that statement can there be a realistic separation?

The market forces philosophy advances the view that the public good will emerge spontaneously from people individually pursuing their rights to wealth and the standard of living they seek. (Barry, 1997)

This view was first advanced in the writings of Adam Smith in 1776. The New Zealand view, based upon the writings of Hayek (1951) and Friedman (1970) strongly follows the market philosophy, with minimal Government interference and where the individual is "regarded as the basic unit of political order" (Peters and Marshall, 1988) and the Government's primary role is safeguarding and protecting life, property, and freedom. But Hayek (1951) also advances the opinion that while the disciplines of the market are essential to our survival, they are not trusted.

Hammond (1990) suggests that the rich more than the poor benefit from the freedom of the market and Kuttner (1997) supports the generally held view that the markets cannot deliver optimal outcomes. Fukuyama (1995) suggests markets get it right 80% of the time but judicious Government involvement is necessary, particularly on such issues as the poor, environment, justice, education and health. Where the individual's rights are advanced to an extreme extent, then selfishness and the advancement of self-interest can dominate.

Hollenbach (1998), Kuttner (1997), Soros (1997), and Encyclicals of John Paul VI all support the view that the rights of the individual must be balanced with the common good. Key theories extend our understanding of this balance between the rights of the individual and the common good. A better understanding is pivotal to the development of the hypotheses that follow.

The concept of capitalism has become dominate in our world today. Kerr (1995) identifies that it is creative and provides for freedom of individual choice. Deavenport (1996) asserts that it creates jobs, and advances standards of living because it thrives on knowledge, rewards those who take risks, and creates value. But Kuttner (1997) suggests it also creates chaos because as it creates wealth it creates poverty, suffering and inequality. Thus ground rules or some regulation by the State is necessary.

Barry (1997) records that there is considerable hostility to the forces of capitalism, just as there is considerable recognition of its necessity. A stable liberal democracy and a dynamic civic society are necessary brakes for the extremes of capitalism.

The concept of liberal capitalism is recognised as not sustainable. The theory of agency provides some important insights into the structures and counter balances that drive optimal performance. Once an organisation moves beyond one person's control and influence, there arise agency costs. Jensen and Meckling (1976) define agency costs as including the expenses of monitoring the performance of the agent by the principal, bonding costs, and the residual losses which flow from the agent departing from the interests of the principals.

Equity markets provide a strong influence on performance, as does the threat of takeover. These influences are not so available to publicly or community owned organisations, and thus there is a likelihood of greater agency problems. Yet Fama and Jensen (1983) suggest that there are many examples where the separation of decision and risk has not resulted in impairment of performance: for example in large professional partnerships, financial mutuals, and non-profits. They suggest that benefits can flow in such circumstances through the specialisation of management.

Stakeholder theory which was perhaps at its populous height in the 1970's and 1980's, advances a view that a variety of groups in a community have a 'stake' in the success of an organisation. But there are weaknesses in these views, particularly in performance and accountability. (Kerr, 1996; von Tunzelmann, 1996). In recent times this theory has advanced to the concept of social responsibility of the firm where a business should recognise their impact on the wider society, communities, and the environment. Where they do so and manage them to lessen any conflicts, they are best supporting Fukuyama's view that the market philosophy must be balanced with the wider public good.

Rational economic agency theory advances the view that human beings are rational utility-maximising individuals (Mill, 1844). The power of this theory is that it is right most of the time but as Jensen and Meckling (1994) record, people are interested in money but not only.

The property rights hypothesis advances the view there is more limited motivation for the Government to monitor and direct management performance of a public enterprise, thus suggesting that greater efficiency is more likely to be achieved under private ownership than public ownership. But empirical research has identified circumstances where this is not so. Clarity of objectives is a most important starting point.

Nonetheless privatisation theory has been a dominant philosophy in the latter part of the 21st century. Many Governments throughout the world seem to have accepted the view that nationalisation of industries is synonymous with political influence, lack of accountability, and blurring of goals, thus providing sources of conflict. The removal of these, most often, results in significant improvement in performance, both of social goals and economic goals (Spicer, *et al*, 1996).

Kay and Thompson (1986) and Yarrow (1986) identify compelling research that supports the view that competition and managerial accountability are more important per se than privatisation in promoting economic efficiency.

These then are the views that literature research identifies as fundamental to understanding what drives performance. But increasingly, particularly in wealthy societies, other views on social coherence and the public good are being advanced to deliver a more balanced society.

3.2.2 SOCIAL/COMMUNITY VIEWPOINT

A fair summation of the market viewpoint is that we need it to deliver the standard of living that many in the world expect, and yet we do not fully trust it. As the market philosophy and capitalism in its various forms have swept aside communism and socialism, perhaps this is why Zobel de Ayata II's (1998) perception that there is a rise in interest in concepts of community have a ring of truth. Perhaps we see that capitalism, which is based upon the individual and a degree of selfishness, needs to be balanced by the concept of community and the wider public good.

It is these phrases, along with an understanding of social cohesion, social capital, social trust, solidarity, subsidiarity, and social responsibility that attempt to explain why the concepts of community ownership, and community involvement are still enjoyed.

We are reminded that Drucker (1998) and Toennies (1887) maintain that "human beings need community". Drucker asserts that individuals need to have an association where they can make a difference, which has meaning beyond that of business. Community involvement can deliver the ideal of effective citizenship where people can make a difference.

There are different views on this line of thought. Putnam (1993) asserts that modern economic life with its emphasis on the individual has weakened community involvement. But Barry (1997) largely rejects that. While Randerson (1992) supports Putnam's view, Fukuyama (1995) maintains there is no necessary trade-off between community and efficiency and indeed goes further and says "those that pay attention to community may indeed become the most efficient of all".

Whether the common good and the well-being of the community is a higher value than individual freedom is often not as contentious as judgements on when one should take precedent over the other. Conflict will arise from time to time. Governments can adjudicate in matters of public interest, for example, in justice and in safety, and they will always react to public pressure. It is that public pressure in the past that has delivered the form of community ownership of trading enterprises.

Barry (1997) notes that business is coming under increasing moral pressure and that we are witnessing a retreat from the individualistic foundation of the corporation but he also sounds a warning that where the role of business is required to go beyond the maximising of returns to owners, providing employment, and producing goods at competitive prices, communities will require a high degree of commonality of purpose and cohesion.

Social cohesion, social capital, and social trust, are not new phrases but they have been given a prominence in recent years through a wide variety of authors. Soros (1997) notes that "societies derive their cohesion from shared values". Bates (1996) records that social cohesion can be said to occur when access to opportunities, high levels of personal security, and a generally accepted willingness to commit voluntarily to constitutional processes are prevalent. But Boston for one (1993) would argue that the drive for economic freedom has taken significant and substantial prominence over social responsibility. Riddell records (1997) that an over emphasis on economic philosophy and strategy "... must inevitably underestimate history".

Social capital was popularised by Putnam as an extension of the social cohesion concept, in that it can be seen to be the network of repeated social interaction which reinforce social norms and especially trust. But Portes and Landolt (1996) warn there are limitations to the concept: just as strong ties can bind a group or community together, they can also exclude others. A good example of this is the often extreme views that are taken on race relations and migrants.

The level of trust within a community is a factor in forms of ownership. Where business corporations are not trusted, history records that people seek alternatives. Nationalisation and public ownership have gone through these stages. If business is largely trusted, and if the checks and counter balances are largely in place to ensure that the extremes of human behaviour and selfishness are not prevalent, then there will be a lesser call for other forms of ownership. von Tunzelmann (1996), Fukuyama (1995) and Riddell (1997) all highlight the importance of social trust.

Solidarity gives us insights into the concept of the common good. The principle of solidarity requires Governments to act directly to address inequalities in society (Smithies, 1997). The concept of subsidiarity while complementary to that of solidarity warns in Hollenbach's words (1998) that Governments, while providing help "to members of the body social, (but) should never destroy or absorb them".

The interesting debate that has occurred in recent times on the wider role of business to a community, has highlighted again the concept of social responsibility. This debate is not new and its importance ebbs and flows during times of economic hardship and well-being. It is relevant to this research in that if business can service the legitimate concerns of a community which may go beyond the delivering of goods and services, then it could be argued that there is a less of a need for community ownership.

There is no doubt that there are many examples where business is being required to so act. These example the view that business does not act in vacuum and that it should recognise its impact on the wider community and manage accordingly.

SUMMATION

If private enterprise reasonably accept these tenets of a wider responsibility to society and recognises that economic life is interwoven with social ideals and goals, what is the need for community owned trading enterprises?

The efficiency argument would maintain that the taunt disciplines of the market place, including the sharemarket, are necessary to ensure that limited resources are most efficiently used. Society in this way benefits from the market whose fundamental concern is to deliver wealth so that there is an ability to deliver the ideals of the wider public good. It is notable that the debate over social capital and businesses' responsibility to society become more vigorous when times are better rather than in survival mode. When wealth is more available there is a pursuit of other goals. Inefficiency can often result. The market then reacts in its inexorable way.

Thus if community owned trading enterprises are to pursue a mixture of community goals, they have to be efficient and survive in a market (competitive) driven world.

But the more fundamental question still remains. If the market can provide in a reasonable way for society's needs and adopt a socially responsible attitude, what is the need for community ownership of trading enterprises?

There is of course a simple answer that in itself does provide a degree of satisfaction. If people enjoy the concept of community ownership, then why not community ownership of trading enterprises?

But this line of argument, that community owned trading enterprises should be allowed to survive basically because either they are there or people like the concept, is unsatisfactory and unfulfilling. There needs to be a more coherent and substantial justification to ensure the concept survives.

Part of this justification can be supplied by the concepts of caring and belonging. Community ownership can taker a "wider agenda" and look at issues other than efficiency. But once again this is somewhat of an unsatisfactory answer because private enterprise can do that too. Perhaps the more crucial question is does community ownership pursue a wider agenda of care and belonging? And does private enterprise do that less than the community ownership structure?

Another justification may be efficiency. Are community owned trading enterprises inherently less efficient than private enterprise? And if so, to what degree? Is the efficiency so great that the "wider agenda" is negated?

Therefore, the study advances two hypotheses. The first of these relates to the degree of importance given by community owned enterprise to social and community objectives.

3.3 THE HYPOTHESES

FIRST HYPOTHESIS

Social/Community Objectives are of significant importance for community owned trading enterprises and impact on their financial performance.

Concepts of belonging, community, compassion and caring, are inherently difficult to define. It is much easier to allocate dollar values to sales and assets and to have common financial measurement criteria. It would appear reasonable to assume, however, that the greater the intensity of debate on community and social objectives and definition thereof, the better would be the likelihood of acceptance in a community, and successful implementation. Thus, this research seeks to define the extent of that definition, and compare to an equivalent stream of market data.

What, too, is the efficiency impact of these social/community goals? Can the question be answered whether the impact on economic performance is so great (or not) that it negates the value ascribed to these goals.

SECOND HYPOTHESIS

Because the pursuit of social objectives can consume resources and divert managers' efforts away from maximising financial performance, it is likely that community owned enterprises may underperform privately owned entities. Thus it is hypothesised:

Judged on traditional key financial indicators, the trading performance of community owned trading enterprises is statistically different over the long term when compared to equivalent private ownership structures.

3.4 SUMMARY OF EMPIRICAL RESEARCH

In reviewing the research articles in the context of these two hypotheses, there are a series of insights. This paragraph therefore reviews these themes and conclusions.

The "common" perception that privatisation is inherently more efficient is generally represented by the changes that occurred not only in New Zealand but in many countries. The 17 research articles reviewed on balance provided more evidence, particularly in recent times, that private enterprise is more efficient. But that evidence is far from conclusive. There were a number of studies that identified that the publicly owned business was more efficient, and a good number concluded that no broad pattern emerged from the research.

History records that management styles have changed over time through the pressure of society's norms. The present phase of the societal model highlights the greater expectations of society in seeking a share of the firm's resources (Zenisek, 1986).

Political influences are more likely to influence the publicly owned organisation than private enterprise. These political distortions can materially affect the sustainability of commercial performance over a longer period of time (Spicer *et al*, 1996; Dewenter *et al*, 1998).

The more that goals are explicitly defined the more likely they are to be achieved. Thus the greater focus of intensity overcomes the difficulties of conflicting and vacillating goals (Zenisek, 1986; Negandhi *et al*, 1986; Dewenter *et al*, 1998). There is a belief that where goals are other than efficiency or profit, they are more likely to be achieved when they are separated out from economic goals (Kulkarni, 1979). This is a belief that seems to have gained support, particularly in New Zealand where either social/non economic goals are either not pursued, or separate Boards are formed. An example is the structure of the electricity authorities where commercial Boards were given the mandate to run successful businesses and community Boards were elected by the community to pursue ownership objectives, that is, to inter-relate with the community.

Perhaps one of the most important findings of the research is that it is the interaction of ownership and competition that is most likely to produce the optimal efficiency, not ownership per se (Kay and Thompson, 1986). Thus competition will materially influence the performance of publicly owned businesses as well as those privately owned. The absence of competition for even a privately owned organisation, particularly in a monopoly situation, can hide gross inefficiencies (Boyd, 1986; Kay and Thompson, 1986; Galal *et al*, 1994). But market disciplines do more to improve the performance of the private sector than the public (Kay and Thompson, 1986).

While strong performance improvements were evidenced when firms privatised, it was notable that the process of getting ready for privatisation drove significant improvements also (Dewenter *et al*, 1998).

The years ahead will be most crucial in identifying whether the benefits privatisation has been able to achieve to date, are able to be sustained (Megginson *et al*, 1994).

It is Galal *et al* (1994) that comes closest to the hypotheses being advanced in this research. Their very detailed research looks at the net welfare gains in a study of divestiture of public enterprises. Thus the welfare consequences, in effect the social/community impacts are taken into account. The welfare gains were measured for workers, consumers, Governments, buyers as trading partners, the impact on foreigners and on competitors. Notably 11 of the 12 divestitures provided significant net welfare gains. But interestingly the authors also suggested that many of the gains could have been achieved in theory through public sector reforms if market principles had been applied. However, the authors also question whether Governments would have been capable of implementing such reform, thus highlighting the political climate that is associated with public ownership.

The performance of SOE's in New Zealand records some spectacular improvements in efficiency. It is notable, however, that the SOE's were not allowed to pursue anything other than business objectives even though the legislation did provide for social goals to be established. The comparison of performance, therefore, is not necessarily like to like and importantly highlights that where organisations are allowed to drift over time, they tend towards bureaucracy and inefficiency. The infiltration of politics is inevitable Spicer *et al* record (1996).

These articles provide us some stars to steer by but notably, as occurred in New Zealand and elsewhere in the world, privatisation is significantly supported and as a number of researchers have identified, in the beginning had been largely taken on faith. The latter research articles suggest that on balance privatisation is more efficient, while the early research articles suggest the opposite.

What we have seen for the last 50 plus years is a significant swing to the market model. It will be interesting to see in the next 20 year if privatisation delivers on a broader range of fronts than just efficiency. Whether some of the ideals associated with the notion of community and the wider public good regain or achieve greater emphasis will be for future researchers to pursue.

3.5 BEYOND THE EXISTING LITERATURE ...

This research covers a variety of new ground.

Firstly community ownership is the cornerstone. None of the previous research reviewed is localised to particular communities. When performance of public ownership has been researched previously, it has been on a much more global basis, generally as it relates to a particular country. That statement is not always exclusive in that some research articles review, for example, electric utilities that would have a geographic location. But ownership has been governmental rather than community.

This is an important difference. Public ownership through a nationalised or government agency is more likely to be remote and thus a sense of ownership or belonging less likely to be achieved, if at all. On the other hand where a community seeks to own a Licensing Trust, Energy Authority, or Hospital, then a crucial starting point is a desire of that community to do so. Private ownership has as its core of fundamental beliefs that drive efficient performance, that sense of ownership generally through the sharemarket, or for small organisations, individual ownership. Thus community ownership comes closer to individual ownership than a government agency or SOE. Does that translate into greater efficiency?

A second significant difference from previous research is that social/community objectives are identified and reviewed for performance, both in terms of key desire of the community owned organisation, and by comparison to private enterprise.

The starting point for these objectives is how thoroughly have they been established. Is the concept of community widely understood, or is it a warm desire but vague in its reasoning?

The Galal *et al* study (1994) comes closest to looking at the impact of privatisation on a wider basis than economic achievement. There the authors sought to compare the performance of the enterprise after divestiture with what may have happened had the enterprise not been divested.

This research, however, attempts to identify the impact of social and community goals firstly in the context of the concept of community ownership, that is, that goals other than economic are important to community owned organisations, and then identifying their degree of specificity and achievement. Lastly their impact on economic goals is attempted to be identified where possible.

This research also seeks to advance knowledge in the economic performance of community owned trading enterprises. The question is asked whether they are more or less efficient than their private ownership equivalents. While there is a good deal of research into the impact of ownership per se, and public ownership in particular, this research attempts to identify if community ownership, more localised as it is and with, possibly, a greater sense of ownership and belonging, is able to impact more positively on trading results.

Some of the literature and empirical research suggests that where social ideals and economic goals are merged, both are impaired. There is much vigorous debate whether that statement is true or not and the literature research identifies that there are strongly held opposing views. Therefore, that question is again pursued, this time in the concept of community ownership.

By identifying what social ideals are pursued for community owned trading enterprises, we may best be able to identify the degree of success and implementation.

The market model has achieved significant prominence in recent years. The question can be asked in this context, is there a place for community ownership of trading enterprises? Is there a role for them to play in the future in New Zealand and in other parts of the world? What pressures do they face, and what are their inherent weaknesses? This research attempts to advance knowledge in this area by identifying community owned trading enterprises' successes and failures, and their performance. Community owned trading enterprises must survive in a competitive world so as to not give rise to allegations of waste, incompetence and inefficiency, as some Licensing Trusts have through the popular media in recent years.

SECTION 4

RESEARCH METHODOLOGIES

4.1 INTRODUCTION

In seeking to test the hypotheses, it was critical to obtain streams of comparative information that were robustly equivalent. Community ownership of trading enterprises was an obvious requirement, as was the need for private enterprise equivalents. While hospitality (Licensing Trust), banking (Trustee Savings Banks) and health offered choices, the energy field was selected as the most robust for this study.

4.2 ENERGY AUTHORITIES

Energy companies have gone through extensive change during the 1990's. Up to 1992 when the Energy Companies Act was passed, throughout New Zealand there existed electric power boards democratically elected and responsible for entirely community owned electricity trading organisations. Some were attached to municipal authorities, for example, New Plymouth City Council, like the Wellington City, Council had a municipal electric supply department where they combined the monopoly distribution activity with power supply. Most Power Boards also operated a service and retailing function for electrical goods.

In 1992 all were required to corporatise with the key mandate to operate as a successful business. Thus some took the opportunity to privatise, but the majority retained their community ownership status.

The Ernst and Young electric power company analysis of 1997 records that contrary to an expectation of significant rationalisation, little eventuated. New Zealand energy power companies on average supplied around 43,000 customers whereas

> *"... many utilities in Australia, the United Kingdom, and United States supply hundreds of thousands, if not over a million distribution customers. Significant economies of scale exist in the spreading of relatively fixed operating costs for EPCs over a larger customer base, particularly in the retail and corporate areas of such companies. Further rationalisation is clearly still required in New Zealand ..." (p. 6)*

However, some rationalisation did occur with numbers of such companies reducing down from 43 in 1995 to 35 in 1997. Some companies took the opportunity, but they were limited, to separate out the line and supply of power arms of their business.

In 1994 the Electricity (Information Disclosure) Regulations 1994 were passed so as to provide more openness to the industry, thus seeking to drive further changes and efficiencies. Ernst & Young note that a degree of cross subsidisation continued to occur between commercial and domestic tariffs and that a number of authorities were able to hide their inefficiencies through the monopoly arm of their lines business. The ANZ Securities research publication of February 1998 noted that:

> *"While there are clearly economies of scale in energy retailing, especially in regard to technology implementation, the largest inefficiencies in the industry are still to be found in the monopoly business." (p. 3)*

However, it also noted that changes were settling in and whereas in 1993 newly corporatised companies lacked commercial management structures, most had made good progress in their establishment, and in reducing costs and improving efficiencies (p. 6).

Nonetheless returns for the industry were low and further efficiencies and restructuring was necessary.

4.2.1 COMMUNITY TRUSTS

The Energy Companies Act 1992 required the Power Authorities which were in existence at that time to operate as successful businesses (section 36). Each Board was required to go through a consultation process with their community (section 24) and decide upon an ownership structure for the future (an establishment plan, section 18). By 1997 there remained 26 that had selected the community form of ownership and nine that elected to become, in effect, privately owned, either listed or unlisted.

Community ownership could take a number of forms. In some cases (for example, Buller, Central Electric, Central Hawkes Bay, Counties) elected that the Trust formed under Deed, would be the total owner of the shares in the new company.

In other cases there could be combination of a Trust and local authority ownership (for example, Alpine and Wairoa). Another form was in total local authority ownership (for example, Southpower, Dunedin and Invercargill). The local authority ownership was generally through a holding company, which could be either one local authority or a combination. Still another form of community ownership was where there was a combination of community trust, local authority and private investor (for example, Powerco, Power New Zealand, and Trustpower). The most common form of ownership was full ownership by a community Trust.

In the establishment of the energy companies under the Energy Companies Act 1992, the assets were valued and shares allocated according to the agreed upon consultation formulas. If the community trust was the sole owner then they were allocated shares to the value of the equity.

The Trust Deeds set out the powers of the Trust including how Trustees were to be elected, accountability processes, the responsibility of Trustees, and their objectives. The Trust Deeds reflected the consultation process and the peculiarity of each particular area. Statements of Corporate Intent were required to be prepared and publicised. These listed down the objectives of the company, the nature and scope of activities to be undertaken, accounting policies, financial performance targets, operating performance targets, dividend distribution policy, and information to be provided to shareholders.

No particular pattern emerges on the form of ownership selected; for example, some cities selected Trust ownership (for example, Dunedin, Invercargill and Mercury (Central Auckland)). Others selected a combination of private and community ownership, with the former being prominent (for example, CentralPower (Palmerston North), Transalta (Wellington City and Hutt Valley)). Some rural areas selected public ownership (for example, Bay of Plenty, Otago and Wairarapa). Others, and these were the bulk of the companies, selected community ownership (for example, WestPower, Waitomo, Eastland, and Wairoa).

The ultimate monitors, of the community Trusts' performance were the electors, as they were designated in the Trust Deed. Generally these were the consumers of the area of the company and elections were held periodically, again according to the specifics of the Trust Deeds, to elect Trustees to represent the community.

4.2.2 COMMUNITY RETENTION

Community companies were required by their establishment plans to go back to their communities periodically (generally each three years) and poll with them whether that community wished to retain a community form of ownership. (Government sources involved at the time stated that the reasons for the polling review were entirely ideological. They were not based on empirical research. The belief was that the community trusts structure was not as efficient as private ownership and therefore should be seen as an interim step, forced by overwhelming community desire.) Without exception those polled were supportive of that form of ownership, most often overwhelmingly so (for example, Waitomo's 1997 poll was 96.5% in favour of retention of community ownership). It is interesting to reflect on that statistic, particularly in the light of what happened in 1999 when the Minister of Energy forced through a substantial break up of these community trusts. Yet the public group of companies were not required to consider whether their communities wished to retain their form of ownership.

There is an inference here that private ownership is the ultimate end run. Logically it acknowledged that it would be more difficult to change from a public ownership structure to community ownership, particularly where there are a significant number of shareholders. But if establishment plans can require the community trusts to exit their trading companies, then a change of ownership from public to community is not impossible. It would be doubtful indeed if that was ever contemplated. But it would be interesting to poll those regions where the public form was adopted.

4.2.3 1999 CHANGES

The years that are the basis of research for this study are 1996, 1997 and 1998, a period of stability when compared to the extensive legislative restructuring that occurred in 1999, but nonetheless a period of rapid change for the energy companies. Because these years will be discussed in some depth in this research, it is as well to complete the picture of these changes by jumping through to 1999.

In that year the Minister of Energy, against Treasury and the Ministry of Commerce advice, and in the face of vehement and sometimes bitter opposition from the energy companies themselves and their owners, drove through far reaching changes, the impact of which will be a fruitful period of research once those changes can be better understood through the elapse of some little time.

The 1999 legislation required all 35 companies at that time to separate out their monopoly lines business from energy generation and retailing. Each company may elect to continue to trade in one field, but not the other. It is not surprising that the majority of these companies elected to retain their lines business. That then created a significant opportunity for those interested in retailing and generation to accumulate large groups of customers. Thus throughout 1999 extensive tendering both of the lines and blocks of retailing occurred. There are now a small number of companies operating in the energy generation and supply sector, and a greater number still retaining the monopoly lines business. A number of the smaller authorities took the opportunity to quit trading completely.

At the same time, the monopoly Government owned energy generation operations were split into four, one of which was privatised through a successful share flotation.

Whilst it is of only periphery interest to this research, there is some fascination in speculating why these 1999 changes were considered necessary.

In 1993 each of the communities with a power board had the opportunity to select community ownership or private enterprise. Only a small number did the latter, Bay of Plenty, Power New Zealand, Wairarapa, Transalta, and TrustPower, listed on the stock exchange and in addition Central Power, Otago, and the WEL Energy group, along with Ashburton, adopted a structure more equivalent to a private enterprise company than community ownership. A read of the annual reports for all 35 companies between the years 1996 to 1999 provide clear evidence of dynamic change. The community owned companies, in particular, were often pursuing a wide range of generation and efficiency improvements to benefit their region. Their perspective was significantly, and from the evidence available, beneficially supportive of their region.

Apart from a few of the smaller community owned companies, which were clearly too tiny in the long term to survive, the great majority of these companies had made significant changes during these years in maintaining tariffs and in a number of cases reducing them, improving supply and distribution quality, achieving cost efficiencies and significant improvements in profitability. (All companies during these years significantly increased the value of their assets through the ODV revaluation process. Thus while return on investment and return on assets ratios may not have improved, the investment base has.)

From a nationwide viewpoint, it is problematical that further efficiencies of some significance were available. It is notable that the cost of power in New Zealand is one of the lowest throughout the world and thus in a global sense, there are no immediate efficiency disadvantages in the industry competing worldwide. (Ernst & Young, 1998)

Nonetheless the Minister of Energy drove through the restructuring referred to above. Many community organisations pointed out that it was an infringement of their property rights. A number identified that their communities would be disadvantaged through a lack of regional focus, less employment, and an uncertain future. It is hard not to escape the feeling that a philosophical opposition to the community ownership structure, and a belief in the market best providing, were at least factors, if not the dominant factors behind the changes that occurred. Again like 1984 with the Treasury's changes to the New Zealand economy, it would appear that these changes were driven largely on belief and not research. Certainly no research could be found into the comparative performance of the two streams of ownership that would take into account the full range of benefits each form of ownership structure may provide.

4.3 METHOD OF RESEARCH

The years 1996 to 1998 were taken as the appropriate period for comparison. While in almost all cases the 1999 annual accounts and reports were available and reviewed, the changes during that year are too close to review and do not at this stage provide an equivalent base for comparison.

All 35 energy companies were written to seeking the following information:

1. Annual reports and accounts for the three years 1996, 1997 and 1998.
2. Copies of their statements of corporate intent.
3. Copies of mission statements, statements of core purpose, objectives, or statements of values, or their equivalents.
4. Any newsletters or reports to customers, shareholders, or the community during the three years selected.
5. Annual reports and accounts of community trusts that owned the energy companies, again for the three years.
6. Any statements of corporate intent and mission statements, statements of core purpose, objectives, statements of values, newsletters, reports to customers or shareholders, for those community trusts.

Nine of these companies were privately owned and 26 community owned. Research results are titled to avoid confusion under the heading "Community", and the private enterprise and their private enterprise equivalents under the heading of "Public".

The criteria that was adopted for public ownership was that the shares had to be better than 50% owned by a non-community organisation. If one community organisation or a grouping of community owners owned more than 50%, then they were classed under community ownership. The reasoning for this approach was that if the community owned more than 50% of the shares in a company, the influence would be significantly community orientated, even if there was more than one community organisation involved in that shareholding.

One company, Ashburton, adopted a form of consumer co-operative. Since in effect the ownership was diverse and the benefit direct to the consumer, and because one community organisation did not own better than 50% of the shares, it was treated as a public company. It is acknowledged that the structure of a co-operative is distant from that of a publicly listed company. (Note that listing on the stock exchange occurred for only five of the nine companies.) But the critical influence is individual rather than community. The nature of community ownership is a commonality of purpose, the wider "we" of public good, rather than individual benefit.

Inevitably the supply of all the information requested required a good deal of follow up, but eventually the annual accounts and annual reports for all 35 authorities were received, along with the equivalent information for the majority of community trusts. In all some 199 annual reports and annual accounts form the base of the research along with many statements of corporate intent, newsletters and periodic reports to shareholders and the community.

FIRST HYPOTHESIS

Social/Community objectives are of significant importance for community owned trading enterprises and impact on their financial performance.

The starting point for research was to define what are the social/community objectives of significance. From a read of the annual reports and supporting information, for example, the statements of corporate intent, eight key aspects were defined. These were identified to be:

1. To keep tariffs as low as possible (while ensuring survival).
2. Payment of a rebate distribution back to consumers, or (through a LATE) to rate payers was of significant importance.
3. Only sufficient profits to ensure survival are pursued.
4. Economic growth – the well-being of the region is encouraged.
5. Donations/sponsorship/involvement in the community is pursued.
6. There is a pursuit of good neighbour and environmentally sensitive policies and practices.
7. A high level of capital expenditure was entered into to secure supply and to improve the region's well-being.
8. Generation ventures are pursued to ensure less dependency on the national grid, and a greater regional self-sufficiency.

A simple scoring scale was then used to define the importance given both for the community group of companies and the public group of companies. While there was a degree of subjectivity in selecting that score, it was entirely based upon the factual information that was contained within the reports. Given the range of information available through:

a) The annual reports and statements of accounts for the energy companies for at least the three years, 1996, 1997, and 1998;
b) For the community owned companies, the reports and annual accounts for the same years of the community shareholders involved in the energy companies;
c) The statements of corporate intent;
d) A good number of newsletters, periodic reports and community notices,

score selection was generally self evident, and factually based.

A scale of 3 was given if the particular key aspect was the subject of a specific objective. In defining what was a specific objective it had to either be clearly spelt out in the statement of corporate intent, or clearly obvious from the annual reports. An example would be if the energy company had adopted a low tariff regime, then that had to be clearly obvious from the written information.

A scale of 2 was given if it was a key desire. Here the differentiation was that unlike a specific objective being noted, the reports and other information identified that the energy company wished to pursue as low a pricing regime as possible.

A scale of 1 was given if there was a passing reference.

Zero was allocated if there was no comment in the annual reports and supporting information.

The majority of the eight aspects were able to be supported by back up financial information. For example, a comparison of tariffs provided support for a low pricing regime. Likewise the desire to provide significant rebates or distribution back to consumers could be identified through the actual distribution. Equally so the aspect of wishing to provide a high level of capital expenditure to ensure security of supply and the region's future well-being could be supported by the degree of capital expenditure incurred.

Statistical testing was applied to test the validity of the two groups. The t-test was used to see if the importance of each social/community objective was, on average, different among public companies than among community-owned companies. (Wairarapa was excluded because their reports and results could not be separated out from their investment company.) The t-test assumes that the measure being compared between the two groups is continuous and normally distributed. Since the scale scores are not continuous, nor normally distributed, and the public groups consists of eight companies, two other tests which do not make assumptions about the distribution of the data (the chi-squared test and the Mann-Whitney test) were also performed. Generally these tests confirmed the t-test results.

In summary (the results are analysed in more depth in section 5), Table 29 identifies that community companies placed significantly higher importance on social/community objectives than public companies ($p = 0.01$). There were similar differences for the low tariffs ($p = 0.05$), rebates ($p = 0.01$), economic growth ($p = 0.04$) and the low profit objectives ($p = 0.00$). The energy generation/self sufficiency objective was more marginal ($p = 0.08$) while the community support ($p = 0.41$), good neighbour ($p = 0.47$) and security of supply ($p = 0.80$) objectives were not significant.

SECOND HYPOTHESIS

Judged on traditional key financial indicators, the trading performance of community owned trading enterprises is statistically different over the long term when compared to equivalent private ownership structures.

Even apart from the annual reports collected, there is a wide range of statistical information available for the energy companies.

Each year the Ministry of Commerce prepares electricity information disclosure statistics. This booklet, usually some 130 pages, provides a wide range of information, particularly on the line business. This is required under the Disclosure Regulations 1994 as amended in 1999, to ensure that there is adequate disclosure to discourage abuse of the monopoly position.

Thus the accounting return on total investment, accounting return on equity and the accounting rate of profit, information on the optimised deprival valuation, cost efficiency performance measures, energy delivery efficiency, reliability performance measures, and a variety of systems statistics are listed. Extensive information, indeed the bulk of the booklet, provided a history on tariffs for each company.

Each year Ernst & Young provide quite extensive analysis of a range of data, in particular, an overview of industry performance, detailed tables on financial efficiency and price performance, net profit margins, current ratios, debtors turnover ratios, a range of industry statistics, cost efficiency and pricing, operational performance measures for generation, and direct line costs per customer, and per kilowatt. A variety of energy delivery performance ratios, for example, load factor, loss ratio, capacity utilisation, network reliability, including total number of interruptions and faults, is also summarised.

Once again, however, this information relates predominantly to the line business and therefore the financial ratios are not suitable for the purposes of this study, given that they relate to just one aspect of the energy companies' business.

Lastly, ANZ Securities produced an informative analysis of each company giving an overview of key characteristics, a SWOT analysis, a regulatory matrix, a summary of financial information under profitability, profitability ratios, cashflows, balance sheet ratios, and valuation criteria. They conclude by providing a range of statistical information on the networks, including information on distribution area, population, the number of retail customers, circuit kilometres both underground and overhead, generation capacity and the performance of the network. Finally the structures of Boards and management including names of key personnel are recorded.

However, for the purpose of this study the key document is the annual report and statement of accounts. It is as well to remember that the research is not per se about energy companies but rather the performance of community owned trading enterprises when compared to their private enterprise counterparts.

Thus the following analysis was undertaken.

1. Return on equity ratios

Commentary:

It was important to apply the calculation consistently. The return on equity was defined as:

$$\frac{\text{NPAT}}{\text{Average shareholder's funds}}$$

The net profit after tax was as recorded in the accounts (consolidated where applicable). Shareholders funds were averaged between the opening and closing equity.

2. Asset Ratios

Return on Asset ratios was the second key financial indicator. The source of data was the annual accounts for each entity over the three years and again the calculation was consistently applied.

The calculation for this ratio was:

$$\frac{\text{EBIT}}{\text{Average funds employed}}$$

Most entities recorded in their annual accounts the net profit before tax, but an adjustment usually had to be made for the interest factor. If rebates or distributions had been made to consumers above the line of EBIT then the rebates were added back. The same approach was taken for the previous financial indicator, return on equity. But with return on equity an adjustment was made for the taxation on the rebates distributed. In some cases there were payments to owners through subvention payments. Once again, to ensure fairness of comparison, any payments to owners as recorded either in the notes to the accounts or in the main body of the report were added back and if necessary adjustments made for taxation.

3. Equity/Ownership Ratios

Total equity at the end of the particular financial year and total assets, again for the same time, were the basis of this ratio. The annual reports were the source. The calculation was:

$$\frac{\text{Equity}}{\text{Total Assets}}$$

4. Network Reliability Performance Ratios

The system average interruption frequency index (SAIFI), the system average interruption duration index (SAIDI), and the customer average interruption duration index (CAIDI) are required to be disclosed by the Electricity (Information Disclosure) Regulations 1994. Likewise their method of calculation is prescribed in those Regulations. The Ministry of Commerce schedule these disclosures for each Company in their annual publication as do Ernst & Young. It was the latter that was used as the basis for these tables.

5. Tariffs

Because a good number of the community companies pursued either a low tariff regime or sought to keep tariffs as low as possible, it was necessary to analyse out the impact of tariffs on profitable performance. Thus the tariffs as recorded by the Ministry of Commerce Electricity Information Disclosure Statistics were the source.

This publication provides a history of tariffs in each company area from 1984 to the present day. The tariff rates as defined are listed under small domestic, medium domestic, and large domestic (customer). The same grouping is provided for commercial. Because there is harmony of movement within these groupings for a company, medium domestic and medium commercial trends were tabled over the 3 year period of this research, that is, from April 1996 to April 1998.

6. Capex Ratios

Because the annual reports consistently identified that security of supply and the region's future well-being for economic growth as a key factor, the capital expenditure over the 3 years of the research was identified from the annual accounts and tabled as a percentage of fixed assets employed. Almost all annual accounts recorded the capital expenditure as a single item, although occasionally acquisition expenditure, for example, new generation equipment through the purchase of, for example, one of the Government's minor hydro schemes, was not separated. If that expenditure was major, it was usually available through notation in the annual report, and specifically detailed in the notes to the accounts. However, if the item of acquisition was minor there is the possibility that it would not be so identified.

7. Distribution to Consumers

A key aspect of the research is to compare what the beneficiaries of the community companies receive as compared to the shareholders of the public companies.

Rebates to consumers through a variety of schemes were identified either in the body of the annual report or the accounts themselves. As noted before, adjustments were made to return net profit to the amount prior to any such distribution. In a good number of cases, as the tables identify, both rebates and dividends were provided. The community companies were particularly prevalent in providing a dividend to their community trust. These dividends most often were to pay the expenses of the trust but sometimes major distributions occurred where the community trust wished to pursue a different community support regime, for example, to invest the monies and support a distribution policy back to the community.

There were other forms of distribution also, for example, subvention payments were used in a small number of cases, and once again these were added back to ensure that they were treated as a distribution of profits, rather than as an expense.

Finally, where expert clarification was necessary, this was sought. For example, Ministry of Commerce officials who specialise in the energy industry provided advice and information. But it is important to note that the annual reports and accounts were treated as complete in themselves. Often dividends and rebates could be tracked through to the community trust accounts, and thus cross referenced. Individual energy companies were not pursued for additional explanations over and above what they had written in the annual reports and accounts. However, universally these were well prepared and where some were of a lesser quality, consistently they were at least of a standard comparable to publicly listed companies. The quality of presentation in some cases was quite outstanding.

SECTION 5

ANALYSIS AND RESULTS

5.1 THE FIRST HYPOTHESIS

INTRODUCTION

The previous section identifies that the annual reports, statements of corporate intents and associated material were instrumental in determining what social/community objectives were important for community owned trading enterprises.

Eight in all were identified. Their frequency of notation and the extent of the comment gave an indication as to the degree of importance. In the final selection of the eight, some were thought to be somewhat marginal, but nonetheless, were included because there was a logic to their selection in that they were compatible with the ideals of a community organisation. This section, therefore, firstly takes the first hypothesis:

> **Social/Community objectives are of significant importance for community owned trading enterprises and impact on their financial performance.**

It defines 8 objectives and compares the degree of importance between the public companies and the community owned companies. When additional information is available either from the annual reports, the Ernst & Young tables, or the Ministry of Commerce documentation, the rhetoric of the reports is compared with the reality of results. So firstly,

5.1.1 LOW TARIFFS

A consistent theme of the community reports was to keep prices charged to consumers, through the tariff schedules, as low as possible.

Thus the definition of this objective in the measurement criteria was:

> **To keep tariffs as low as possible (while ensuring survival).**

This would be judged by a specific record in the annual report or the statement of corporate intent, as follows:

A score of 3 – a specific objective clearly defined of major importance

A score of 2 – a key desire of moderate importance

A score of 1 – a passing reference, indicating low importance

A score of 0 – no reference

Table 29 in the Appendix records all the scores for the 8 social/community objectives, and in summary:

Table 1 - Low Tariffs Means	
Public	1.38
Community	2.31

There is thus a significant difference and this is reflected in the following analysis:

Table 2 – Low Tariff Scores				
Score	**Public**		**Community**	
3	1	12%	14	54%
2	3	38%	6	23%
1	2	25%	6	23%
0	2	25%	0	0%
Total	8	100%	26	100%

There is a good deal of definitive information on the tariffs. The Ministry of Commerce document movements in tariffs from 1984 through the present day. As the research methodology identifies, whilst comparisons could be made in each of the six sectors in which tariffs are recorded, because there is a consistency in the tariff regimes, table 30 in the Appendix takes the mid point, medium domestic tariffs and medium commercial tariffs.

Table 3 which follows summarises those results.

Table 3 – Summary of Tariffs				
Group	**Year**	**Public**	**Community**	**Percentage Difference**
Medium Domestic	1996	12.30	11.57	5.93%
	1997	13.09	11.91	9.01%
	1998	13.24	12.29	7.18%
Medium Commercial	1996	12.12	11.46	5.45%
	1997	12.76	11.69	8.39%
	1998	12.62	11.85	6.10%

Cents per kilowatt-hour.

Table 4 further reflects the comparison of tariffs between public and community companies for the year 1998.

Table 4 –Tariff Rankings				
Medium Domestic	**Public**		**Community**	
Sub 10 cents	0	0%	1	4%
10 – 11 cents	0	0%	3	11%
11 – 12 cents	2	22%	5	19%
12 – 13 cents	1	11%	12	46%
13 – 14 cents	3	34%	2	8%
14 – 15 cents	2	22%	2	8%
Over 15 cents	1	11%	1	4%
Total	**9**	**100%**	**26**	**100%**
Medium Commercial	**Public**		**Community**	
Sub 10 cents	0	0%	4	15%
10 – 11 cents	1	11%	4	15%
11 – 12 cents	3	34%	4	15%
12 – 13 cents	1	11%	6	23%
13 – 14 cents	2	22%	6	23%
14 – 15 cents	1	11%	1	4%
Over 15 cents	1	11%	1	4%
Total	**9**	**100%**	**26**	**100%**

The lowest tariffs were 9.35c/kwh (medium domestic) and 9.18c/kwh (medium commercial), the highest 15.98c/kwh (medium domestic) and 15.32c/kwh (medium commercial), and the median 12.54c/kwh (medium domestic) and 12.01c/kwh (medium commercial).

CONCLUSION

The community companies record a specific objective to keep tariffs as low as possible for their consumers. The weighting they give that is considerably greater than public companies. That weighting is reflected in a comparison of tariff rates over a three year period.

Thus it can be concluded that one of the prime ways that community owned energy companies benefit their communities is to lessen their charges to consumers through the prices they charge. Rather than generate higher profits, which may be subject to taxation, and to distribute the profits to consumers through a dividend, a distribution was made at the front end of the relationship.

We can identify through the percentage difference of tariffs the impact on profitability. These reductions have a direct influence on profit. No additional charges, other than perhaps a very minor increase in bad debts would be incurred in increasing tariffs. Thus to fairly compare performance of public companies to community companies, this pricing difference needs to be added back to the community owned companies.

That impact on profit performance is identified in paragraph 5.1.10 of this section.

5.1.1.1 OTHER FACTORS

A range of factors can influence the price setting process for tariffs. While the energy companies are required by legislation to operate a successful business, and logically will be driven by the factors that relate to their district, including market conditions, other factors that influence the process can be:

a) The cost of electricity purchase.

b) Self generation of electricity.

c) Climatic conditions.

d) The number of customers supplied and the density of those customers per km of line.

5.1.1.1 (a) ELECTRICITY COST

Prior to 1996, ECNZ, the Government owned electricity corporation of New Zealand, was the only supplier apart from relatively small amounts generated by the energy companies. On 1 February 1996 Contact Energy was formed but the limited competition environment continued. Until May 1999, outside this period of review, Contact was wholly owned by the Government.

In October 1996 a wholesale market for energy was established and thus a market environment for wholesale purchase price of energy began. An open competitive environment in generation is likely to exist from April 1999 when the balance of ECNZ is split into three competing State Owned Enterprises. During the research period Transpower was the national grid operator for all companies.

The line cost generally made up somewhere between 26% to 38% of the weighted average total cost. The Ministry of Commerce provide a breakdown of the tariff components and the line charge, which has consistently increased for the four year period from 1994 to 1998 in the order of 4% to 6%, makes up approximately a third of the total tariff charge. Transpower charges, the national distributor of electricity, makes up approximately 15% of the total tariff. Over a 4 year period that percentage has reduced by 3%. The cost of the energy component is the greater part of the tariff charge and has consistently comprised some 50% to 58% of the total cost of electricity.

Both the transmission and energy costs are set by complex formulas that varies according to the distance of substations from Haywards (Lower Hutt) and Benmore (Central Otago). Thus, those closest to these bench points enjoyed lower charges. Those furthest away (e.g. Top Energy) could incur loadings of 20-25%. The same formula applied irrespective of form of ownership. The map of New Zealand in the Appendix identifies the location of each company. The spread of ownership pattern favours the public in their proximity to the bench points. 56% of the public companies were within 200km of those points (35% community), 33% within a radius of 400km (50% community), and 11% within 600km (community 15%). Thus, while the cost of energy and transpower charges vary, and should have an influence on tariffs, because the pricing formula is not influenced by form of ownership, and the community companies are generally more adversely affected geographically, the premise that the tariff variation between the two groups of companies should be equated in comparing key efficiency ratios, is not negated.

The energy component is also influenced by the ability of the energy company to manage the spot market. The better they are able to do that, the less is the cost to the company. Thus it is a matter of efficiency and good management.

5.1.1.1 (b) SELF GENERATION

Some energy companies (for example, Central Electricity in the Queenstown area who generated around 40% to 45% of their energy requirements through their own power stations) were by their own comment in their annual reports able to "keep the peak cost of electricity down".

Self generation of electricity provides an advantage in cost structures. The greater amount of generation, the greater can be the influence on the peaks of demand. Pricing structures are generally heavily influenced by the extremes of demand. Thus if a particular company is not able to dampen down these peaks, they pay at the top end of the demand, even though outside of the peaks they do not require the level of electricity demanded at peak level. Thus by way of example, if an energy company in the middle of winter requires a level of electricity on a wet cold evening some 25% above normal demand, and they can use their own generation capacity to dampen that down to say some 10% above normal demand, then their cost of power is significantly lessened.

There is, however, no immediately available information on the impact of this self generation. The annual reports give some general information on the extent of this self-generation. The Ernst & Young reports again give some limited information, but it is not provided for all generators of electricity. However, the view is taken that this is a management issue. If a particular company is able through good management practice to enter into contracts or invest in generation assets, and they benefit the company through a lesser cost of supply, then that is not a factor that needs to be adjusted to equate fairness of comparative performance. Like the companies that best manages the competitive wholesale market, those companies that are able to enter into generation capacity investment, should be allowed to reap the benefits of better performance in profit generation, return on investment and equivalent key indicators.

It could be argued that some companies' supply areas naturally provide a better environment for generation. That is undoubtedly so but that does not necessarily stop other companies that do not have that geographic environment from contracting or investing in facilities outside their district. One such company that did so was Mercury who invested, for example, in the Stratford power generation facility.

5.1.1.1 (c) CLIMATIC CONDITIONS

Climate and geographic location influence the cost of electricity. For example, extremes of weather had a material influence on such areas as Northland and Eastland with major storms disrupting electricity. The cost of repairs and lines down time were a significant influence on their cost of operating. However "acts of God" are somewhat difficult to control. Systems can be engineered for greater robustness and this would add to the cost of operating. Impact on tariffs and profits could (and is likely) to occur.

Where some rural energy companies have to provide large areas of reticulation with a limited number of customers, the costs of operating may be significantly greater.

5.1.1.1 (d) DENSITY AND NUMBER

Table 33 identifies the density of customers per kilometre line between the public group of companies and the community group. It is notable that the density is significantly less for the community companies (10.22 versus 14.06 customers per kilometre line for public companies). Likewise Community Companies averaged 38,801 customers compared to 72,329 for Public Companies.

Logically both factors must have some influence on efficiency, and thereby on profit/indicators. However, their influence has a degree of uncertainty. Industry sources advised that lines are frequently over engineered to allow for further growth. Further investigation would be necessary to ascertain if any adjustment could fairly be made for these two factors. In the absence of that investigation and any additional definitive information, this research notes the differences and applied regression analysis that is commented upon in para. 5.2.4.

In conclusion, therefore, the formulas applying to the cost of power, the most significant cost of operating, are similar across the companies and (apart from climatic conditions) may be influenced by the energy company's management capability. Those that have managed that cost well, either through a better understanding of the wholesale market, energy self generation, or quality design and engineering of the distribution system, should fairly be able to reap those benefits in their balance sheets without adjustment in comparing the performance of public companies versus community companies.

5.1.2 REBATES/DISTRIBUTIONS TO CONSUMERS

While there are a variety of methods by which the profits of a business can be distributed to their owners, by the far the most traditional would be an annual dividend payment.

Community ownership implies a defined community. In energy companies circumstances, a community trust is the legal owner but the implied owners are those that make up the community of interest. In effect that community is the beneficiary of the assets of the community trust who own either in part or in whole the energy company.

This aspect, therefore, looks at how important is the rebate or distribution method for community trusts. It is they who in effect make the decision as owners, and after negotiation with the directors of the energy company, arrive at an appropriate amount for distribution.

Quantum of distribution ranged from zero to greater than the annual profits in a particular year. Where the beneficial owner of the energy company was a local authority as in the case of Invercargill and Dunedin, the dividend distribution was treated as a rebate to the consumers, even though more correctly (indirectly) it was to the ratepayers. It may be argued that, for example, in the case of a tenancy arrangement, that the ratepayer is not the consumer. However, this point of difference is not seen to be significant. The critical factor is that the distribution that occurred benefited the community rather than a shareholder who may or may not be resident in the area.

The ranking criteria that applied to this factor was:

Paying a rebate or distribution back to consumers, or (through a LATE) to ratepayers was of:

A score of 3 – significant importance (as measured by quantum of distribution and comment in annual reports).

A score of 2 – moderate importance

A score of 1 – low importance

A score of 0 – no importance

There were a variety of methods adopted. Some companies directly credited a rebate to consumers. Often this was by crediting their power account, or in a number of cases, a lines charge holiday for a number of months. Others indirectly distributed a rebate through their community trust. In these cases a lump sum was paid to the community trust and they applied various forms of distribution. It was quickly realised that this was an expensive way of distribution and where a community trust may have used that mechanism in say 1996, it changed for efficiency and cost effectiveness purposes.

Ashburton was in the nature of a co-operative company and their rebate was again back to the community, but others provided a rating subsidy direct to their owning local authority, for example, Dunedin, Invercargill, and Mainpower.

Yet still others, for example, Eastland, provided a dividend to their community trust, who then adopted a grants method to distribute back to the community. In Eastland's case the grants distribution were based on economic growth criteria. In a limited number of cases there were interest free subordinated loans that were to be applied for the benefit of particular groups, for example, in Eastland, the rural community.

A good number of companies paid the operating expenses of their community trusts through a dividend equating to the totality of those expenses. Whilst there were no doubt efficiency justifications for this approach, a good number of questions arise. Firstly what is the degree of independence between the Trust and the company? While the Trusts were responsible for periodic reviews of the form of ownership, receiving and reviewing statements of corporate intent, appointing directors, and monitoring performance, it is clear from reading the reports that a number of different work ethic/cultures arose. Some community trusts were quite separate and quite demanding on their energy company in terms of their separate responsibility as defined above. Others appeared less so.

For the community trust ownership structure to work it is important that there be a clear understanding of the role of the trustee, and the separate and different role of the director of the business unit. The community trustee is accountable back to the community to ensure that the Trust Deed is complied with and that the community is not disadvantaged in the economic performance of the business unit. It should monitor that role and should regularly (say at least three times a year) review that company's performance. Further those trustees should decide the most preferable method by which the benefits can be delivered back to the community.

In setting the scene through the statement of corporate intent, the Trust should identify those directions which are crucial to the community. If that means a concentration on generation resources within the area, or service delivery, and/or the method by which the rebate or dividend is best delivered back to the community, whether it be through a subsidy to ratepayers, a reduction of the energy cost to consumers, or any other method, for example, grants distribution back to the community, that clearly is the decision for community trustees.

The company directors must deliver the economic performance that is at least comparable, after adjustments for non economic objectives, to competitors. Where, for example, trustees require there be a greater sensitivity to particular groups within their community, whether it be the poor and disadvantaged, the environment, or general consumers through a lowering of prices, then it is fair to bring these adjustments into account in the comparison of performance.

Certainly some trusts have been most active in setting the scene for the company, monitoring performance, and deciding on what benefits shall be delivered back to the community. But there was no evidence in the reports of an in depth understanding of the philosophy behind a community trust. This is important because an understanding would widen the choices available. As is reflected herein, the majority of community trusts have selected lower prices as the best way to benefit their communities. It is difficult to escape the feeling that this decision, while it may be the correct one, has been decided in some ignorance of the other choices that were available. For example, if a community was generally depressed economically, as for example, in Northpower, why was there not greater emphasis on mechanisms that could generate economic growth and employment? Notably Eastland did follow this approach.

Most often the community trusts' annual reports and accounts provided limited information. Often (for example, Horowhenua, Central Hawkes Bay) the reports covered one page. In some cases (for example, Scanpower) no report was available. (Was one prepared? The annual accounts were available.) Did the quality of monitoring, and accountability back to the community, reflect this briefness? These and other questions on the effectiveness of the community trusts, would be fruitful grounds for further research.

It is hard too to escape the conclusion that the previous local authority owners of the energy assets saw the energy companies as a cash cow to subsidise rates. The annual reports leave a number of questions as to the quality of the debate as to whether this was the best approach.

The analysis which follows is based on the comparison between the public companies and the community companies on the rebates/distributions, to consumers. But it is relevant to also compare the amount of such distributions against the dividend distribution of the public companies.

Table 5 - Rebates/Distributions Means	
Public	0.50
Community	1.77

This result is not surprising. Community companies logically will pursue a rebate/distribution regime to consumers. Whereupon the dividend path is the preference for public companies. The two public companies that did give importance to rebates back to their consumers were in the nature of co-operatives.

Notably the means score for community companies at 1.77 was significantly less than that given for the first factor of low tariffs (2.31). There would be some trade-offs between the two. Some community companies concentrated on the first and that left little or no avenue for the second (for example, Buller). Others strived for both (for example, Electra).

Table 6 reflects the comparative "dividend" performance of public companies versus the community companies. In this table no consequence is taken of the method of distribution. The comparison is between the amount distributed as a percentage of tax paid profits back to the beneficiaries, whether they be shareholders, consumers or ratepayers.

The following summarised table highlights the comparisons:

Table 6 - Distributions/Dividends 1996-1998 (% of Tax Paid Profits)				
	1996	1997	1998	Average
Public Companies	62.5%	103.0%	70.0%	78.5%
Community Companies	64.6%	63.8%	65.1%	64.5%

The results are fairly comparative other than for 1997 when the public companies distribution heavily influences the average. For Bay of Plenty, whose dividend payout for 1997 was 141.3%, it appears a special dividend was paid. The annual report records a payout of 70.0% (at 24.5 cents per share) and yet the Statement of Movements in Equity and the notes to the accounts show a 47 cents per share dividend. No explanation is available from the accounts.

Central Power, the other Company in 1997 with a dividend payout of greater than 100% (182.3%) had previously made significant profits from the sale of shares in Energy Direct Corporation Limited, and Wairarapa Electricity ($14.95 million).

The Community companies percentages are also influenced at the other end of the scale of low payouts. Four such companies payout were 1.7% (Central), 1.2% (Central Hawkes Bay), 1.8% (The Power Company) and 1.5% (Top Energy). One Company (Hawkes Bay) made no payout.

Because at least six companies (refer Table 29, column low profit emphasis) pursued a limited profit regime through low tariffs, there is undue impact in comparisons. If the top eight distributing community companies are compared to the eight public companies the following table results:

Table 7 - Distributions to Consumers 1996-1998 (8 Highest Companies)				
	1996	1997	1998	Average
Public Companies	62.5%	103.0%	70.0%	78.5%
Community Companies	126.4%	120.2%	127.0%	124.5%

% of Tax Paid Profits

The eight public companies represent 89% of the population, whereas for the community companies only 31%.

If the bottom six distributing community companies are excluded, the following comparisons result:

Table 8 - Distributions to Consumers 1996-1998 (excluding 6 lowest community companies)				
	1996	1997	1998	Average
Public Companies	62.5%	103.0%	70.0%	78.5%
Community Companies	82.6%	82.8%	84.3%	83.2%

% of Tax Paid Profits

The community companies' distributions have the benefit of being tax deductible, whereas the public companies' dividends are not, thus allowing for potentially greater community payouts.

Associated with the first two factors is the low profit factor that was given emphasis in the annual reports. In good part it does not add to points of difference between public companies and community companies, but it does highlight the importance that the latter give to delivering benefits back to their consumers.

5.1.3 LOW EMPHASIS ON PROFITS

Only sufficient profits to ensure survival are pursued.

A score of 3 – given where such a pursuit was a specific objective as noted in the annual reports or statement of corporate intent

A score of 2 - a low profits regime is moderately important

A score of 1 – there is only passing reference that a low profits regime is being pursued.

A score of 0 – there is a normal commercial pursuit of profits.

Table 29 lists the results. In summary, the community companies scaled a mean of 1.42 compared to the public companies of 0.00. Thus, this was clearly of more importance for the community driven companies.

The 1992 legislation requires all companies to operate as successful businesses. Thus a company cannot ignore the need to generate a reasonable return. Some companies interpret this to mean that they should achieve at least the average return of all companies. Still others have pursued a vigorous profit regime so that distribution of profits may occur through the generally more acceptable commercial vehicles of dividends or rebates.

Only 6 companies were judged to actively pursue a low profits regime. Buller, for example, had this to say in their annual reports:

> "In respect of our company the Trust has set low rates of return which enable our customers to share the benefit of lower prices." (1996 report)

> "The company has no intention of increasing its prices just to earn increased profits. It will increase its prices to cover only the increased cost and to earn a rate of return required by the Trust." (1997 report)

In cross referencing the 6 judged to pursue a low profit regime, it was notable that 4 of them, Central Hawkes Bay, Hawkes Bay, Waipa, and Buller achieved 4 of the lowest 5 returns on equity amongst all the energy companies. King Country, with an average return on equity over the 3 years of 3.35% was the lone exception and that was judged to have a scale of 2. There were perhaps two special factors that influenced their results and neither can be equivocally stated. The first of these is that there may be performance issues. The owner's (King Country Electric Power Trust) annual report and financial statements for the year ended 31 March 1996 record the statement:

> "Trustees have requested a report from the company which gives more detail than previous reports and which enables better monitoring of the company's performance."
> "And Trustees consider the financial result for the 1995/96 is good but is significantly helped by increased prices and above average low generation output."

The latter sentence in particular is not glowing in its endorsement.

A second factor may be that there is in the nature of a rebate or dividend back to consumers in the prompt payment discount. In addition to the prompt payment discount there was a special discount each year and this was added back to apply a consistent formula for all the companies for comparison. However, the prompt payment discount, which normally would be in the nature of an operating discount and therefore not added back, was 8% of sales revenue. A 5% prompt payment discount would appear to be more normal.

Two companies achieved a scale of 3 but did not feature amongst the ten lowest return on equities. They were Invercargill and Scanpower.

Invercargill's return on equity ratio is significantly improved by not bringing in the ODV valuation until 1998. The 1997 company report evidenced the low profit regime wish of the owners:

> "Return on assets and return on equity were the areas where the company performed at the lower level, although the report (Ernst & Young) correctly states that this is a reflection of "the owners' decision to accept a low return on Electricity Invercargill's asset value"."

Scanpower was the other company to feature outside of the lowest 10 return on equities. Its statement of corporate intent identified that it aims to operate profitably in each of its business units and in a prudent manner. It will, however:

> "... set its prices at the lowest level consistent with meeting these objectives."

This company operates a heavy rebate regime, although to fairly compare return on equity these are added back. Their reports consistently noted they are not "profit driven". Their 1996 report records:

> "Our business orientation is towards the customer (price) rather than an investor (dividends)."

5.1.4 ECONOMIC GROWTH

The initial read of the annual reports and statements of corporate intent highlighted consistent reference to this aspect. Logically also it is a factor of interest for the community trusts. To be community orientated, the well being of the region should logically be of significant interest.

Thus this factor has been scaled as follows:

> **Economic growth – the well-being of the region is encouraged.**

A score of 3 was given if there were specific measures pursued

A score of 2 if it was noted as a key desire

A score of 1 if there was a passing reference

A score of 0 if there was no comment

Results were as follows:

Table 9 - Economic Growth Means	
Public	0.13
Community	0.54

Somewhat surprisingly, it was clear that this aspect is not a key concern of the energy companies. Only one company, Eastland scored a scale of 3 and no company a scale of 2. Eastland pursued a donations and community support regime that distributed money back to programmes that generated economic growth for the area. Further they provided a subordinated loan to the rural area. But again notably no other company was active in this area.

It may be that the lower tariff/lower profit objectives vicariously achieve this objective. By pursuing a low tariff, as many community companies do, these companies may believe that they best support economic growth in the area by encouraging and setting the scene for business to operate more profitably.

5.1.5 COMMUNITY INVOLVEMENT/SUPPORT

A policy of close involvement in the community through support of community activities is logical and highlighted in the literature researched.

This factor, therefore, was scaled as follows:

Donations/sponsorship/involvement in the community is pursued.

A score of 3 – activity is high

A score of 2 – there is moderate activity

A score of 1 – there is low activity

A score of 0 – there is no apparent activity

Again the judgement of these scales was measured by comment in annual reports and statements of corporate intent. The results:

Table 10 - Community Involvement Means	
Public	1.75
Community	1.50

are somewhat of a surprise. It would have been expected that the community companies would have been more active in this area. A breakdown of the scaling was as follows:

Table 11 - Community Involvement Rankings				
Score	**Public**		**Community**	
3	0	0%	1	4%
2	7	88%	15	58%
1	0	0%	6	23%
0	1	12%	4	15%
Total	8	100%	26	100%

The overall mean of the score suggests this is not a prime area of interest for the companies. Rather they (both public and community) recognise in general that they are part of the community and that there is at times commercial benefit in sponsoring community activities. Some companies were more active than others and it would appear from the information available, that activity depended upon the individuals, either directors and/or management, that were involved in the company.

The overall rankings are relatively close and thus it would be reasonable to conclude in summary that:

a) Community support and involvement regimes are of moderate interest.

b) Community trusts are not more active in this area.

c) The level of activity varies according to local players and local activity.

5.1.6 ENVIRONMENTAL SENSITIVITY/GOOD NEIGHBOUR

There was frequent comment in the annual reports and the statements of corporate intent about the wish of the company to be environmentally sensitive and to pursue what is frequently called a good neighbour policy. Again there is a logic to such a factor being more important for community companies.

Thus this factor was scaled as follows:

There is a pursuit of good neighbour and environmentally sensitive policies and practices

A score of 3 was given to specific measures noted in the annual report and statement of corporate intent
A score of 2 if it was noted as a key desire
A score of 1 if there was a passing reference
A score of 0 if there was no reference

Included in this area would be the pursuit of practices such as undergrounding lines.

The results:

Table 12 – Environmental/Good Neighbour Means	
Public	1.50
Community	1.15

The results thus indicate this was not a high priority for the companies. Most were aware but rarely driven to be overly active.

The following table gives a break down of the rankings:

Table 13 - Environmental/Good Neighbour Rankings				
Scale	**Public**		**Community**	
3	2	25%	2	8%
2	2	25%	7	27%
1	2	25%	10	38%
0	2	25%	7	27%
Total	8	100%	26	100%

Notably only four companies, Central Power, Transalta, Central Electric and Westpower, had sufficient comment to generate a score of 3.

Notably, however, the community companies scaled less.

5.1.7 SECURITY OF SUPPLY/REGION'S FUTURE WELL-BEING

A number of companies placed emphasis on the quality of their distribution system. In this way, the reasoning goes, they would best be able to benefit the region by minimalising disruption of power to industry and domestic customers. It is acknowledged that this aspect makes commercial sense in the context of their reason for being. But the annual reports repeatedly gave reference to this aspect. Thus it could be said there is an element of public good or common good.

In addition to the scaling for emphasis there are tests that can be carried out to compare the performance of the public companies versus the community companies.

This factor, therefore, was:

> **A high level of capital expenditure was entered into to secure supply and to improve the region's well-being**

A score of 3 was given to specific measures

A score of 2 was given to a key desire

A score of 1 was given to a passing reference

A score of 0 - no reference

The results were:

Table 14 - Security of Supply Means	
Public	2.13
Community	2.04

This can be further broken down as follows:

Table 15 - Security of Supply Rankings				
Scale	**Public**	**Percent**	**Community**	**Percent**
3	3	37%	7	27%
2	3	37%	13	50%
1	2	25%	6	23%
0	0	0%	0	0%
Total	8	100%	26	100%

It can be seen, therefore, from this analysis that on the face of it both public and community companies, after allowing for a reasonable degree of subjectivity in allocating the scales, give similar emphasis to this aspect, public companies slightly more than community.

Some qualifications need to be made. It was not always apparent from the annual reports whether the capital expenditure included new, for example, generation assets, that may be classed more as an investment than security of supply.

Further, and logically, each company would be in varying states as to the quality of their assets. Some distribution systems may be of a very high quality, where extensive investment had been carried out prior. Other companies may be at the other end of the scale where the quality of the systems is suspect, and where, some considerable catch up in investment was necessary. It was notable too that some companies had a strong engineering focus where others concentrated on financial performance and service. Others too were in high population growth areas, for example, West Auckland.

Still others, again because of their smallness, may have only limited resources and therefore pursue a substantially maintenance only regime.

Table 32 provides the detailed workings highlighting the amount of capital expenditure for each of the companies over a three year range.

The results can be summarised as follows:

Table 16 - Capex Ratios to Fixed Assets		
Year	**Public**	**Community**
1996	12.2%	11.1%
1997	9.0%	11.4%
1998	9.0%	10.7%
Average	9.7%	11.1%

These figures, therefore suggest that community trusts are more diligent in securing supply to their region through a greater amount of capital expenditure. But there needs to be a considerable amount of caution in arriving at the robustness of that conclusion.

A number of other factors could influence. One of these may be the density of customers per kilometre of line and it is notable from Table 33 that the community companies average 10.22 customers per kilometre of line of distribution compared to 14.06 for public companies. But the influence of density is a little uncertain. Industry sources generally stated that a good number of lines can be over engineered to ensure that there is considerable potential for additional customers to come onto a line, for example, where a sub division occurs. The age of a system, and its state of maintenance can be another factor. It can be suggested that the public companies have a greater incentive to drive profits, particularly where bonuses are linked to performance (which may also occur for community companies). Capital expenditure of course does not directly impact upon a company's profit as would maintenance where this argument would be more robust, but indirectly it does through the use of capital.

Perhaps of greater influence on capital expenditure can be the location of the company. Some areas are more prone to storms, for example, the Northpower in the top of the North Island, the West Coast, Eastland, and Central Otago.

This is borne out by reference to the system reliability indices that the industry prepares and which are shown in Tables 34-36. The system average interruption frequency index, the customer average interruption duration index, and the system average interruption duration index are all an attempt to publicly disclose the degree of reliability of the distribution systems. Each company is required to compile these statistics. The calculation methods are prescribed by Regulation. (Refer Electricity (Information Disclosure) Regulations 1994 and 1999).

The tables indicate that the community trusts do not perform as well as the public companies in these areas. A summary of tables show:

Table 17 – System Average Interruption Frequency Index	
Public	3.0
Community	4.3

(Number of customers, refer formula)

Table 18 – Customer Average Interruption Duration Index	
Public	72.1
Community	82.7

(Minutes, refer formula)

Table 19 - System Average Interruption Duration Index	
Public	218.4
Community	328.8

(Minutes, refer formula)

The source of these tables is the Ernst & Young New Zealand Electric Power Company Information Disclosure analysis. They source the information from the returns of the companies to the Ministry of Commerce. However, unlike financial information, these indices are not audited. There was occasional comment in the company reports critical of the amount of disclosure that is required, for limited benefit, and with little effect (for example, Central Electric).

Industry sources confirmed skepticism of these indices. For them to be meaningful, the contributing factors would have to be capable of analysis. Accuracy is obviously a key question as noted above. Other factors would be the influence of storms. Some areas are obviously more prone to storm damage.

Still other influences would be the percentage of rural and remote line distribution.

Most of this information is not available. Thus rather than confirming as the three indices on the face of it do, an inherent inefficiency of community ownership, we are left noting questions and identifying that further research would be necessary before a robust conclusion can be made.

5.1.8 ENERGY GENERATION/SELF SUFFICIENCY

Here the factor tested was:

Generation ventures are pursued to ensure less dependency on the national grid, and a greater regional self-sufficiency

A score of 3 if there were any specific measures pursued

A score of 2 if it was a key desire or moderate pursuit

A score of 1 if there is passing reference and low activity

A score of 0 if no activity

The results were:

Table 20 - Energy Generation Means	
Public	2.38
Community	1.65

A breakdown of the results is:

Table 21 - Energy Generation Rankings				
Scale	**Public**		**Community**	
3	5	63%	6	23%
2	1	12%	10	38%
1	2	25%	5	19%
0	0	0%	5	19%
Total	8	100%	26	100%

The public companies, therefore, are more active in this area, perhaps reflecting that this aspect is more driven by investment capabilities. The ability to invest in generation would be dependent upon the region and the resources available. Some areas, for example Central Otago already have a number of hydro schemes in place. Some geographic areas of New Zealand more lend themselves to generation. However, some companies, like Mercury, invested substantial resources in generation outside of their areas so as to better ensure supply. Others were active in different ways, for example, Wairarapa and Central Power who pursued wind turbines. Another factor influencing the ability to invest is that the community companies are smaller in size and thus would have limited resources for the often very substantial investment that is needed in generation.

It was clear too from the reports that generation interest ebbed over time as the market became more competitive. This led to schemes that might have been marginally profitable becoming not feasible. The Government's desire to split up the old ECNZ would have created uncertainty in the market and a recognition that greater competition was necessarily going to result.

Thus some reservations need to be made and it is doubtful that any conclusion of substance can be drawn.

5.1.9 SUMMARY

Table 29 provides an overall average for the 8 social/community objectives and it can be seen that the community companies ranked higher in their emphasis in pursuing the objectives noted. The community companies scaled at 1.55 compared to the public at 1.22.

The key findings can be summarised to be:

a) Pursuit of a low tariff regime was important to community companies and this was reflected in prices to consumers that averaged 7.01% lower than the public companies for the review period of three years.

b) Rebates/distributions to consumers, generally through reductions in their power accounts, were actively used by community companies.

Public companies distributed a greater percentage (78.5%) of their tax paid profits to their shareholders (community companies 64.5%) Notably, however, if the top eight distributing community companies are compared to the eight public companies, the comparisons significantly reverse – public 78.5%, community 124.5%. This is in large part because a number of the community companies pursued a low profit regime as a method of benefiting their consumers/community. However, such a comparison represents 89% of the public companies population, and only 31% for the community companies.

But because at least six companies pursued a low profit regime it is fairer for comparison purposes to exclude these. When they are, the community companies distributed 83.2% of tax paid profits over the 3 years 1996-1998, compared to 78.5% for the public companies.

c) The economic growth, community support, and good neighbour objectives are not of significance for either group.

d) Security of supply was of importance for both groups (public 2.13, community 2.04), with the community companies investing a greater percentage in fixed assets (public companies invest 9.7% of fixed assets each year, compared to 11.1% for community companies.)

e) Pursuit of energy generation investment was of greater importance for public companies (a mean of 2.38), compared to 1.65 for the community group, but a number of qualifications need to be made, and more research carried out before this finding could be said to be robust.

5.1.10 IMPACT ON PROFITS

The second part of the hypothesis refers to the likely impact of these objectives on profit. A low tariff regime, low profit emphasis and a greater investment in capital expenditure would all reduce reported profits.

Low Tariff Impact

Community tariffs are on average, over the three years of comparisons and the two tariff groups, 7.01% less for the community group than for the public. Thus if the community companies had pursued exactly similar pricing as the public group, revenue (apart from very minor bad debts additional expense) would be 7.01% higher, and the effect of that increased revenue would flow directly through to profit, less 33% taxation.

It is reasonable to pursue this line of adjustment because community companies gave significant emphasis to a low tariff regime. The social/community objectives as reflected in Table 29 identified that low tariffs were given a mean weighting of 2.31 compared to 1.38 for the public companies. Para. 5.1.1.2 lists the factors that may influence the tariff setting process. There is no factor therein that negates the premise that tariffs should not be added back to fairly compare performance between the two groups of companies. The cost of power can vary according to geographic location but the same formulas apply for everyone. Community companies are more likely to be adversely affected for remoteness from the bench points of Haywards and Benmore. Self generation could impact but is seen to be within a company's management capabilities. Climatic conditions can not be controlled for. Number of customers and density adversely affect the community companies more than the public and thus again do not detract from the premise advanced.

If tariffs were increased by the percentage difference over each of the 3 years under review for the community companies, there would have been generated additional revenue in 1996 of 5.69%, in 1997 8.70%, and 1998 6.64%.

Thus the electricity revenue from the annual accounts were scheduled as per Table 40 in the Appendix. That table makes a qualification that is important to reemphasise. Electricity revenue should be those sales for which tariffs are set and should exclude contracting, appliance retailing, interest, generation revenue, and miscellaneous. Regrettably not all annual accounts provided that breakdown. Where, for example, only one figure was provided for total revenue that was taken to be the electricity tariff revenue. Thus the total revenue as listed in the table would be inflated to a minor degree. The extent of that degree is not known but it would not be great given that the majority of companies did provide a reasonable breakdown. The three items likely to have the most impact, contracting, generation revenue and shop retailing revenue would be further reduced in their impact by those that exited contracting and shop retailing. The majority of the companies were not involved in generation.

Table 22 calculates the adjustments of these tariffs on community profits. Logically the increased tariff revenue should automatically flow through to profit apart from some minor collection expenses. Those collection expenses are not likely to be great, and could reasonably be said to be offset by the notional interest that could be generated on increased cashflows.

Table 22 - Adjusted Tariff Impact on Community Profits			
	Percentage Difference (1)	Electricity Revenue (2)	Tax Profit Foregone
		$000	$000
1996	5.69%	1,517,749	57,861
1997	8.70%	1,695,580	98,835
1998	6.64%	1,774,700	78,953

Note (1) – average of medium domestic and medium commercial tariffs – refer table 3.

Note (2) – refer table 40. Calculated by mean sales multiplied by 26.

The impact of this tax profit foregone on the return on equity indicators for the community companies is reflected in the following table.

Table 23 - Adjusted Tariff Impact on Community ROE			
	Pre-adjustment (1)	Adjustment (2)	Adjusted ROE
1996	8.24%	3.61%	11.85%
1997	8.56%	5.00%	13.56%
1998	7.40%	3.54%	10.94%

Note 1- refer table 37.

Note 2 – refer tables 40 and 22. Calculated by tax profit forgone divided by total equity (achieved by multiplying mean equity by 26).

Low Profit Emphasis Impact

While the impact of those companies that selected a low profit emphasis (refer Table 29) can be calculated by taking the average return on equity by the community companies and applying that percentage as a measurement of the loss/reduction in profits, it would be unfair to do so because the impact of those profits are largely already reflected in the low tariff calculation section which precedes this. In addition, making an assumption that those companies that selected the low tariff emphasis would have generated such a return, is largely conjecture. For example, market conditions may not have allowed for an increase in tariffs. In these circumstances it is not reasonable to quantify the impact of a low profit emphasis.

Capital Expenditure Impact

Security of supply was a slightly greater priority for the public companies compared to the community companies (a mean of 2.13 compared to 2.04).

Table 32, however, indicates that the community companies invested a greater amount in capital expenditure. The community companies provided 11.1% of fixed assets as their annual expenditure on capital expenditure compared to the public companies at 9.7%. The impact of this is uncertain. Again a large number of assumptions would have to be made before it would be reasonable to conclude that the extra amount of capital expenditure reflected in a trade-off on reduction on profits and thereby return on equity. It may be that community companies were required to spend a greater amount on capital expenditure because distribution systems were not as well maintained. It may be that the lesser density of customers per km of line, and longer rural lines required a greater amount of capital expenditure. It may be that climatic conditions and the more remote areas required higher capital expenditure.

In these circumstances, no adjustment to the profit indicators should be made.

5.2 SECOND HYPOTHESIS

The theme of this hypothesis relates to financial performance:

> **"Judged on traditional key financial indicators, the trading performance of community owned trading enterprises is statistically different over the long term when compared to equivalent private ownership structures."**

This section, therefore, reviews the performance of the community energy companies compared to the public energy companies in the following areas.

5.2.1 Return on Equity
5.2.2 Return on assets
5.2.3 Equity Ownership Ratios

The key ratio is return on equity and a variety of tests were carried out to ascertain the influences on profit results. These are commented upon in para. 5.2.4.

5.2.1 RETURN ON EQUITY

Table 37 records the detailed results. Of the 9 companies categorised as public, results were not available for Wairarapa. This was because their owner, South Eastern Utilities Limited did not provide sufficient detail in their annual reports to be able to analyse the performance of one of their investments Wairarapa Electricity Limited. Transalta, in the public sector, did not begin operations until October 1996. Thus results were available for 2 of the 3 years.

In the community sector the 26 companies' results were available for all 3 years. Apart from the particular profit objectives of the owners, Mercury's abnormal loss in 1998 which resulted in a negative return on investment of 6.81% was an abnormal event. If Mercury had achieved the average of the 2 previous year's results (20.64% return on equity) rather than the loss of 6.81%, the community companies' results for the 1998 year would improve to 8.46% compared to the 7.40% recorded in the table. This result would have been very close to the public companies' result of 8.58%. However, while the disruption in the Auckland area was an abnormal event, nonetheless it was within the influence of good planning and good management, and on this basis for the analysis that follows it was treated as such. It may be that other abnormal events that occurred in other companies (for example the Opuha dam breach at Alpine) could also have been treated as abnormal influences on profit results. Thus results as recorded in the annual accounts were the basis of compilation. Again it is important to emphasise that all owners payments, for example, rebates to consumers, were added back to ensure fairness of comparison.

Table 24 records the mean averages of results for the 3 years under review.

Table 24 -Comparisons of Mean ROE 1996-1998			
Year	Public %	Community % (1)	 % (2)
1996	12.09	8.24	11.85
1997	7.19	8.56	13.56
1998	8.58	7.40	10.94
Average	9.29	8.07	12.12

Note 1: These results are prior to adjustments for lower tariffs.

Note 2: These results are post adjustment for lower tariffs.

These results indicate that prior to any adjustments for factors that unduly influence one group over another, the public energy companies outperformed the community companies over the 3 years of comparison by a return on equity of 9.29% to 8.07%. However, once the adjustment is made for the social/community objective of lower tariffs, the result is reversed, and the community companies outperformed their public counterparts by an average return of 12.12% to 9.29%.

5.2.2 RETURN ON ASSETS

These calculations are based upon earnings before interest and taxation divided by the average funds employed. Table 38 in the Appendix records the detailed calculations. Table 25 records the mean averages of results for the three years under review.

Table 25 Comparisons of Mean ROA 1996-1998		
Year	Public %	Community %
1996	14.12	9.87
1997	9.34	9.91
1998	9.73	9.21
Average	11.06	9.66

However, like the return on equity adjustment, these results are influenced by the lower tariff regimes pursued by the community companies. Again an adjustment should be made, without reduction for taxation for the impact of these lower tariffs. The calculation of those impacts is reflected in the following tables:

Table 26 - Impact of Lower Tariffs on Mean ROA 1996 - 1998

	Pre-tax Profit Foregone	Average Funds Employed	Increased ROA
	$(000)	$(000)	%
1996	86,360	2,493,928	3.46
1997	147,514	2,954,564	4.99
1998	117,840	3,458,613	3.41

Note 1: The profit foregone calculation is shown in Table 22

Table 27 - Comparisons of Mean ROA 1996-1998

Year	Public	Community	
	%	% (1)	% (2)
1996	14.12	9.87	13.33
1997	9.34	9.91	14.90
1998	9.73	9.21	12.62
Average	11.06	9.66	13.62

Note 1: These results are prior to adjustments for lower tariffs.

Note 2: These results are post adjustment for lower tariffs.

Thus, in harmony with the ROE comparisons, the community companies have out performed the public companies.

5.2.3 EQUITY OWNERSHIP RATIOS

These ratios reflect the impact of gearing policies, that is, the relationship between borrowings and equity capital. This gearing mix can give us a number of insights into an organisation. Where indebtedness is higher in comparison to equity capital, there is often a greater degree of risk accepted. Preparedness to invest in significant capital expenditure can often be reflected in gearing ratios and thus can reflect the degree of conservatism, or not, of the company. Dewenter and Malatesta's research (1997) identified that government-owned firms are more likely to be highly leveraged than privately-owned firms.

Also reflected in the equity ownership ratios is the optimised deprival valuations. This ODV valuation methodology was chosen "after an extensive and rigorous debate concerning appropriate valuation methodologies" (ANZ Securities Ltd, p. 7). As the Electricity Information Disclosures statistics from the Minister of Commerce identify, initially there was a greater conservatism in annual revaluation. For example, in 1996 there were 11 companies who had not revalued within 12 months of balance date. By 1998 that had dropped to four, all of whom were community owned. These revaluations frequently brought about increases in the value of assets in the balance sheet and thus improved book equity.

The detailed ratios are reflected in Table 39 and are summarised in the following table:

Table 28 - Equity Ownership Ratios 1996-1998

Year	Public %	Community %
1996	80.36	78.47
1997	73.57	77.95
1998	71.47	76.10
Average	75.13	77.51

It is noticeable that the public ratios fell more rapidly during the three years than did the community but both sets of ratios are quite conservative. The difference in the two sets of ratios is not significant, even allowing for the slowness of some companies to revalue.

5.2.4 REGRESSION ANALYSIS

Multivariate statistical methods allow the effects of more than one variable to be considered at one time. Multiple regression is one such method and it allows for simultaneous investigation of the effect of two or more independent variables on a single interval-scale dependent variable.

In our multiple regression model as depicted by the results in Table 41 (and repeated in sections below), the three year average ROE for each company was selected as the dependent variable against a selection of independent variables:

- Tariffs (that is, the three year average of medium domestic and medium commercial rates for each company)
- assets employed per customer
- number of customers
- density of customers per kilometre of line
- social/community objectives.

Atkinson and Halvorsen (1986, p. 287) identified input prices, technology, regulation and economies of scale as key issues to control in empirical studies on public and private U.S. electric utilities. In New Zealand, as previously identified, input price formulas are the same for all companies, (see para. 5.1.1.2). Regulation and technology should be similar for both community and public companies. Economies of scale are reflected in the independent variables of assets employed, number of customers and density.

In selecting what factors impact on ROE, it was reasoned:

(a) Social/community objectives, as reflected in the first hypothesis, are of key importance. This impact on ROE, after controlling for other factors, is a major objective of this study.

(b) Tariffs have been identified as a key difference between the two groups of data. In selecting a low tariff regime, the community companies chose lesser profits, and lower ROE.

(c) Assets employed and number of customers relate to Atkinson and Halvorsen's (1986) economies of scale.

(d) Density of customers are different between the two groups. Table 33 notes that the public companies enjoyed 14.06 customers per km of line distribution compared to 10.22 for the community customers. Thus it is likely that there will be an influence on ROE.

Two other factors were considered. Load factor (refer table 33) measures the constancy of load throughout the year. Both groups returned a mean of 61.1 and thus there was no purpose in further analysis. Loss ratios (which measure the energy losses due to distribution of energy or energy misappropriated) were different between the two groups (5.71% for public, 6.77% for community) but the view was taken that such losses were normal costs of operating.

Statistical Results

SUMMARY OUTPUT (Except from Table 41)

Regression Statistics	
Multiple R	0.549
R Square	0.302
Adjusted R Square	0.177
Standard Error	2.848
Observations	34

The multiple coefficient of determination (R squared) is the measure of the overall explanatory power and represents the portion of the variance in the dependant variable – ROE – accounted for by the model. An F-test is used to determine the statistical significance.

Thus, in this particular case 30.2% (R squared = 0.302) of the variation in ROE is explained by the regression as a whole (that is by the joint variation in the five independent variables). The adjusted R squared value equals 17.7%.

However, the F-test shows that this model is only marginally significant, with a probability value of 0.061 obtained. In addition, within the Analysis of Variance section (ANOVA), it can be seen that only the 'mean' tariff' and 'density' independent variables showed any significant results; returning probability values of 0.076 and 0.087 respectively.

Excerpt from Table 41

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	98.117	19.623	2.419	0.061
Residual	28	227.123	8.112		
Total	33	325.240			

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-2.325	5.233	-0.444	0.660
Mean Tariff	**0.719**	**0.389**	**1.846**	**0.076**
Assets employed per customer	-0.313	0.301	-1.040	0.307
Customers	0.000	0.000	0.310	0.759
Density	**0.150**	**0.085**	**1.775**	**0.087**
Mean values Social Community Objectives	0.813	1.261	0.644	0.525

Thus a second multiple regression model was applied, including only the two marginally significant variables of the first model –tariff and density. In effect, this was to eliminate any possibility of multicollinearity (that is, when the independent variables such as customer base and customer density are highly correlated) which can be inherent in the actual regression model. Table 42 shows the summary of these results.

SUMMARY OUTPUT (Excerpt from Table 42)

Regression Statistics	
Multiple R	0.517
R Square	0.267
Adjusted R Square	0.220
Standard Error	2.773
Observations	34

The R squared of this second model indicates that 26.7% of the variation in ROE is explained by the regression, that is, the joint variation in 'tariff' and 'density'. The adjusted R-value is 22.0%, a much closer result than was obtained with the first model.

Excerpt From Table 42

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	86.877	43.438	5.649	0.008
Residual	31	238.363	7.689		
Total	33	325.240			

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-1.598	4.251	-0.376	0.710
Mean Tariff	0.679	0.352	1.931	0.063
Density	0.159	0.062	2.552	0.016

The F statistic (5.649) has a probability value of 0.008, indicating that the regression as a whole is highly significant.

Size and Significance of Coefficients

A priori there would be an expectation that ROE be positively related to tariff (ROE increasing slightly as tariff is increased). Density should also be positively related, that is, as density increases, so too should profitability.

Table 42 indicates that this is the case. Interpretation of the size of the coefficients, bearing in mind the original data, is that ROE will rise by 0.679 for every unit increase (c/kW) in tariff, and a rise of 0.159 for every unit of increase (per km) in density.

It can be seen that the t-statistic for tariff is 1.93 with a probability value 'p' of 0.063, indicating a 6.3% level of significance or a marginally significant result. With the coefficient of density, the result is more conclusive with the t-stat being 2.55 and a corresponding probability value of 1.6, a statistically significant result. In effect, this indicates that the probability of this result being obtained by chance is very small.

5.2.5 SUMMARY

The second hypothesis suggests that there are performance differences over the long term between the community companies and the public companies (that is, private ownership structures).

The return on equity and the return on assets ratios, after adjustments for the key social/community objective pursued of lower tariffs, identify that the community companies have out performed their private ownership equivalent.

Equity ownership ratios are only slightly different between the two groups and while both groups over the three years of the research period pursued less conservative ownership regimes, the public companies more so, nonetheless the equity ratios were quite conservative.

SECTION 6

CONCLUSIONS LIMITATIONS AREAS FOR FURTHER RESEARCH

INTRODUCTION

A summary of conclusions under the headings of:

6.1 Literature Research
6.2 Empirical Research
6.3 Research Analysis and Results

is provided in this section followed by a notation of:

6.4 Limitations

and some

6.5 Areas for Further Research

6.1 LITERATURE RESEARCH

Community ownership implies shared values and a commonality of direction. Further it generally relates to a common "body of people living in one place or country when considered as a whole" (New Zealand Oxford Dictionary).

What themes, therefore, arise from the literary research that helps us to identify what is unique about community ownership, particularly as it compares to private ownership?

There is a rise in interest in the concept (Drucker, 1998; Zobel de Ayala II, 1998). There is a body of opinion that suggests that interest in matters other than generating profit and economic efficiency tends to rise when times are better, that is, when survival of business and individuals is not so pressing. There are suggestions too that capitalism, particularly liberal capitalism, rewards the individual over the wider public good, and therefore, interest in other structures, and particularly community ownership, is more likely to arise as a reaction to the extremes of capitalism.

There is a natural inherent tension between the rights and demands of an individual and the wider public good (Ridell, 1997; Randerson, 1992). The level of trust in society is a significant influence on how damaging these conflicts may be and how readily and effectively they may be addressed (Fukuyama, 1995).

But social and economic goals do not have to be opposing. It is a valid view shared by many (e.g., Riddell, 1997; NZPSA, 1989; Fukuyama, 1995) that neither economic goals nor social/community goals can be advanced in isolation. Both are intertwined and Friedman's view that the business of business is business is viewed with suspicion. Barry's view (1997) that there is a retreat from the individualistic foundation of a business enterprise reflects increasing demands on a business to be aware of its impact on society and a community. A wider responsibility to society than maximising profits is advanced by a number of writers (for example, von Tunzelmann, 1996).

Societies benefit from shared value and social cohesion. Economic life is deeply imbedded in social life and high levels of social capital are a major factor in economic growth (Putnam, 1993).

Capitalism is said to be creative destruction (Fukuyama, 1995), that is, as new businesses grow, others die. The marketplace is remarkably efficient in sorting out those services that are no longer needed. The question arises is whether other forms of ownership are so efficient.

If community ownership is seen to be a form of structure that is able to take a wider vision than economic efficiency and profit, is its structure and accountability process able to react to the messages that it receives? For example, if community ownership is used to provide a particular service or meet a particular need, and that service is no longer required, is it able to react to the changes in the environment in which it operates? The taut, efficient disciplines of equity markets are not so available for a community ownership structure.

Some would argue that the market economy is not unselfish and uncaring. And that there are enough counterbalances to ensure that is so (Roger Kerr, 1996; von Tunzelmann, 1996). Some would argue that it is easier to concentrate on economic goals rather than more vague or ill-defined social and community goals (Kulkarni, 1979). But is this so? Do social/community goals have to be ill-defined? Or is it a reflection that a significant portion of a person's energies are spent on generating profit or a wage, and that economic matters, therefore, tend to take priority. Indeed if a business is threatened then attention must concentrate on survival, the ability to meet expenses. But the generation of an income is in itself a social need. As a business operates efficiently, it also generates jobs and provides for a wide variety of social needs. Therefore, there is a logic to the argument that economic goals are intertwined with social goals. The crispness of focus given to any goal is inherent in its successful achievement.

Some researchers advance the argument that where social/community goals are pursued, a body separate from the business unit will best ensure that they may be achieved (Kulkarni, 1979). But again is this so? In any business unit of a reasonable size a range of disciplines is employed. A marketing manager may have the responsibility of understanding the markets in which the company operates so well that profitable sales are generated. A financial accountant has the responsibility to manage cashflows to best effect, indeed to limit waste expenditure. One may wish to spend even on schemes that have no guarantee of success; the other not to spend. In most successful businesses these disciplines are not mutually exclusive, but intertwined for the wider good of the company.

The intensity of focus that is given to social and community goals will better ensure that they do not conflict with economic goals (Negandhi and Ganguly, 1986). There will always be trade-offs, and it is difficult to substantiate that one should always have priority over the other. With good judgement and management, a range of gaols can be achieved even though that may mean some compromises. Some (for example, Kerr, 1995) argue that social and welfare benefits flow from the market's pursuit of individual benefits. But unconstrained pursuit of individual desires bring obvious distortions and excesses. Fukuyama (1995) suggests that markets get it right 80% of the time.

There has been a view in recent years that privatisation is the logical end run (Spicer *et al*, 1996). One of the reasons advanced to substantiate this view is the inevitable, in some people's views, infiltration of politics into public and community ownership. But politics (but less so) and personal agendas also infiltrate business units. There is a good deal of truth to the view that all businesses tend towards complacency and bureaucracy and that all businesses must constantly change, indeed be in a perpetual state of change to address these twin destroying evils. Cannot politics be managed?

This view that privatisation is the logical end run is apparent in the establishment of the energy companies. When community ownership received overwhelming support, the Government of New Zealand, committed as it was to the selling off of State businesses and the market philosophy, required the community trusts to go to their public periodically, generally every 3 years, and poll with them whether community ownership was still the preferred option. Notably private ownership was not so required.

There is limited research on many aspects of privatisation and this is not surprising in that it is a recent phenomenon; within New Zealand, there is less than 20 years' experience. The wider welfare impacts of privatising, for example, New Zealand Railways, Telecom, the Post Office, and the energy sector, have not been researched in any depth. It is as if the economic benefits that in most cases have flowed, are justification in themselves. And yet where significant disruption, upheaval, and unemployment results, the cost of those consequences are not known.

These, then, are some of the views and themes that arise from the review of literature. There remain a number of questions to answer, areas worthy of further research. Community ownership is enjoyed popularly as a concept. Yet Government policies in New Zealand suggest that there is suspicion it can effectively and efficiently manage trading enterprises. The evidence to support or deny that view is not available. This research seeks to extend knowledge in this area.

6.2 EMPIRICAL RESEARCH

The 17 research articles reviewed provided mixed support for the contention that private enterprise is more efficient than public ownership. On balance, more particularly in recent articles, private ownership outperformed public ownership (for example, Galal *et al*, 1994; Spicer *et al*, 1996; Eckel *et al*, 1996). But a number of articles (Martin and Palmer, 1995; Boyd, 1986) highlighted that either the results were mixed or publicly owned organisations outperformed their private enterprise counterparts.

Political influences are more likely to occur with publicly owned organisations than with private enterprise, and these political distortions can influence the sustainability of commercial performance over a period of time (Spicer *et al*, 1996; Dewenter *et al*, 1998). Galal *et al* (1994) suggested that public ownership with the appropriate reform could often have delivered equivalent performance to privatisation, but also questioned whether there would have been a political will to implement the reforms.

Other researchers identify that the more that goals are explicitly defined, the more likely they are to be achieved (Zenisek, 1986; Negandhi *et al*, 1986; Dewenter *et al*, 1998). This is particularly critical when economic goals are merged with social/community goals. Some authors questioned whether such a mixture can be achieved under one structure (Kulkarni, 1979). But this was an opinion rather than expressly researched and proven. Thus it is open to question whether it is a valid belief, even though it has received some significant support in New Zealand, for example, when the New Zealand SOE's were restructured even though their legislation provided for social goals to be pursued, there was no evidence that occurred (Spicer *et al*, 1996). Another example would be in the structure of the electricity authorities that are the basis of this research where commercial boards were given a mandate to run successful businesses, and community boards elected by the community to pursue ownership objectives and to inter-relate with the community.

One of the most important findings of the research articles is that it is the interaction of ownership and competition that is most likely to produce the optimal efficiency, not ownership per se (Kay and Thompson, 1986). It is important to recognise that competition as much influences the performance of publicly owned businesses as privately owned (Boyd, 1986; Kay and Thompson, 1986; Galal *et al*, 1994). But market disciplines do more to improve the performance of the private sector than the public (Kay and Thompson, 1986).

It was Dewenter *et al* (1998) that identified that the years prior to privatisation preparing for that event, were when the most significant improvements in performance occurred. This validates to a significant degree the belief that focus on specifically detailed goals, is more likely to bring about their achievement, and that all organisations drift over time unless there is a constant refocus on performance objectives.

While these research articles provide some important directions and conclusions for the body of this research, none pursued the uniqueness of community ownership per se. Where public ownership is researched, it is on a much more global or nationalised scale and thus is less likely to achieve a sense of ownership that belonging to a community may. By its very nature community ownership is less remote and logically is more likely to be "owned" by the community.

The research hypotheses sought to identify the impact of social and community goals, firstly whether they have been actively pursued, and secondly their impact on economic performance. It is only Galal *et al* (1994) that comes close to taking this approach but there is a difference in that Galal *et al* researches the welfare impact of divesting public ownership. Further this research herein attempts to identify the impact of the social and community goals on efficiency, which none of the research articles reviewed pursued.

6.3 RESEARCH ANALYSIS AND RESULTS

The first hypothesis nominates that social/community objectives are of significant importance for community owned trading enterprises. This is particularly (and obviously) important in that if they do not, what is the need for community ownership?

The area selected for testing the hypothesis was the energy/electricity field in New Zealand. When the Energy Companies Act was passed in 1992, the majority elected to become community owned. In that environment, how many of the community companies that were established debated what was different about their structure of ownership, what were the shared values of their community, what made up their community of interest, and what objectives should they pursue? Or did they see themselves as not fundamentally different from the private ownership energy companies? Both were required to operate successful businesses, both had shareholders. If the shareholder was the community, what did that shareholder seek to be achieved? Was it just a return on its investment, or were there other needs?

The research indicates that there is no evidence that these questions were directly answered. No report or document was able to establish answers to these questions. However, the documents do suggest that a number of decisions were made. The statement of corporate intents required to be established by every company lists down a range of goals and objectives, and even if the majority of these are business related, nonetheless they establish priorities. Accountability back to the community was served in a number of ways by the community trusts through newsletters, annual meetings, and annual reports and statement of accounts, and periodically through polls, either regular elections of trustees, or the periodic poll on retention of the community ownership structure. The outcomes of these decisions give indications as to what practices they pursued.

Eight social/community objectives were noted and the research indicates that the community companies gave a greater emphasis to these objectives. A mean of 1.55 compared to the public (private) companies of 1.22 supports the hypothesis that social/community objectives are of importance for community owned trading enterprises.

In analysing out these impacts it was notable that the pursuit of a low tariff regime was the dominant objective pursued. Community companies gave a weighting of 2.31 (mean) to the public companies' 1.38. This weighting was reinforced by the tariff structures. The community companies were for the 3 years between 1996 and 1998 7.01% cheaper than the public companies. It is fair to conclude, therefore, that community owned energy companies pursued a low tariff regime as the primary way in which they may most benefit their community.

Community companies through the decision of their owners, the community trust, predominantly pursued a distribution policy of rebates off power accounts. The public companies pursued a dividend policy to shareholders. In comparing distributions under the two structures, the public companies over the three years of research distributed more of tax paid profits than did the community companies. The average of the three years for the public companies was 78.5% of tax paid profit compared to 64.5% for the community companies. However, at least six community companies pursued a low profit emphasis regime, that is, they limited profit through lower tariffs. If the impact of these nil or minimal distributions are put aside, the community companies distributed 83.2% of tax paid profits compared to the 78.5% for the public companies. Thus even with lower tariffs, the community companies did not disadvantage their shareholders, the community, in terms of pay out of 'dividends'. Further, the lower tariffs are an additional "dividend" to the community.

The economic growth, community support, and good neighbour objectives were all given limited or low weighting by both the community and public companies. Economic growth of their region with a 0.54 mean for the community companies and 0.13 for the public companies, was not a key concern. Community support was given a higher weighting at 1.50 for the community companies and 1.75 for the public companies, but once again the overall mean suggests this is not a prime interest of concern for the companies. Rather they recognised that in harmony with the social responsibility philosophy discussed under section 2, they are part of the community and that there is at times commercial benefit in sponsoring community activities.

The environmental sensitivity and good neighbour objective scaled even lower than the community support objective. The community companies gave this a weighting of 1.15 and the public companies a higher weighting at 1.50. While there was a logic for this factor to being more important for community companies, there is no evidence that issues like the undergrounding of lines and the environmental impact of generation activities received any greater prominence for these companies. That is not to say that there was not pursuit of such practice, for example, Central Electric was particularly active in both areas. It may be that the community companies with their lesser density of customers per kilometre of line, and their more rural distribution systems had a lesser ability to be involved in the undergrounding of lines in particular.

Security of supply was ranked high by both groupings of companies: a mean of 2.04 for the community companies compared to a mean of 2.13 for the public companies. The community companies expended a greater percentage on capital expenditure than the public companies, 11.1% of fixed assets compared to the public companies at 9.7%. A number of factors could influence the difference in these ratios. One of these may be the density of customers per kilometre of line where the community companies averaged 10.22 customers compared to 14.06 for the public company. The quality of previous years maintenance, the extent of (over) engineering to allow for future growth, climatic conditions and management emphasis are other factors. More research would be needed to test the validity of any assumptions in this area.

The industry is required by the Electricity (Information Disclosure) Regulations 1994 and 1999 to compile system reliability statistics. Thus the system average interruption frequency index, the customer average interruption duration index, and the system average interruption duration index are all an attempt to publicly disclose the degree of reliability of the distribution systems. These statistics are disclosed annually and compiled by Ernst & Young.

All three indices on the face of it indicated that the public companies were more efficient than the community companies. With the system average interruption frequency index the public companies achieved a weighting of 3.0 compared to the community companies of 4.3. The customer average interruption duration index for the public companies were 72.1 compared to the community companies of 82.7. The system average interruption duration index for the public companies was 218.4 compared to the community companies of 328.8. However, industry and ministry sources express some skepticism of the accuracy of these figures. Unlike annual accounts, they are not audited. Given the industry's skepticism of their impact, additional research would be needed to identify if the indices fairly reflect practices. Other factors can be the influence of adverse climatic conditions and a number of the community company areas are more prone to that eventuality, for example, Central Otago and the top of the North Island. Other influences would be the percentage of rural and remote lines.

The energy generation/self sufficiency objective was to test whether generation ventures were pursued to ensure less dependency on the national grid, and a greater regional self-sufficiency. There are a number of factors that should be recognised in this objective. Firstly there is clearly a business emphasis where some companies would have a greater ability because of their geographic location to invest in generation facilities. Secondly during the research period a good deal of dynamic change was occurring in the distribution systems owned by Government who sought to generate a greater competitive environment. Eventually the old ECNZ was split into four with Contact Energy being successfully floated as a public company. Thus interest in generation investments, as the Government indicated it would dispose of both smaller and larger generation facilities, was high.

Public companies gave this factor a higher weighting than the community companies, 2.38 to 1.65. While a number of factors can influence this result, and in addition to the above, the size of the company and the resources it has available to invest in what are very significant investments, the significantly greater emphasis that public companies gave perhaps reflects that this aspect is more driven by investment capabilities.

The eight objectives listed above are not extensive in their range. Other factors that could have been considered would be:

- There was no direct evidence that employment issues beyond the traditional good employer statements in annual reports and statement of corporate intents were given any particular emphasis. Was there benefit, for example, in employment generation and retention schemes?

- Eastland was the only energy company to give particular emphasis to economic activities to benefit their area.

- The pursuit of culturally diverse policies (for example, support of the arts) as a particular practice to benefit their region again was not evident above the level that would normally be expected in an annual report.

- Activities to benefit certain sectors of the community, for example, lower socio economic income groups, the disadvantaged or handicapped.

- Education was given no particular emphasis, although some companies supported electricity education schemes.

- While sponsorship and support of particular events in a community were noted in some annual reports it was at the level of good corporate citizen.

These examples are broad based and are highlighted so as to give emphasis to other choices that may have been available for the community companies/trusts. There was no evidence that the needs of the area were rigorously researched. The community representation on the trust should of course give a particular knowledge base of the needs of the area and it may be that was deemed to be sufficient.

In summary the conclusion can be made that social/community objectives are more important for the community owned energy enterprises than their privately owned equivalents.

The second hypothesis was to review the economic performance of the two groups of companies, firstly prior to any adjustment for the impacts of social/community objectives, and secondly after.

Return on equity was the first ratio compared. The annual reports of the public companies identified an average return on equity for the three years 1996 to 1998 of 9.29%. The equivalent figure for the community group of companies was 8.07%. However, the lower tariff regime that was actively pursued by the community companies has a significant impact on profitability. Once an adjustment is made to place tariffs on an equal footing, the average return on equity for the three years increases for the community companies to 12.12%, significantly in advance of that achieved by the public companies.

Much the same pattern emerges when return on asset ratios are compared. Prior to any adjustment for the lower tariffs, the public companies achieved an average return for the three years of 11.06% return on assets. The community companies achieved 9.66%. Once the adjustment is made for the lower tariffs the return on asset ratio for the community companies increases to 13.62%, again significantly in advance of that achieved by the public companies. Thus we can conclude that the community companies outperformed their public (private) enterprise counterparts.

Equity ownership ratios were not significantly different for either group with the community companies slightly more conservatively geared than the public companies (77.51% to 75.13%). Notably both groups used loan finance a little more each year but the ownership ratios were quite conservative.

In applying multiple regression analysis with the dependent variable being ROE and the independent variables selected to be:

- Tariffs
- Assets employed per customer
- Number of customers
- Density of customers per kilometre of line
- Social/community objectives,

only the tariff and density variables showed any significant results returning coefficient values of 0.719 and 0.15 respectively. These two factors accounted for some 30% of the variation between the two groups of data. When tariff and density alone were the independent variables, the coefficients values became 0.679 and 0.159, with R square of 26.7%.

6.4 LIMITATIONS

This research seeks to advance knowledge on the performance of community owned trading enterprises. Thus the social/community objectives were attempted to be identified and in that identification process, their degree of importance. The impact of those objectives on economic performance was researched along with the economic performance as compared to the equivalent stream of private enterprise data.

The most important limitation is that the electricity companies make up but one field of data. While the number of community trusts (26) made the comparison robust, the number of private enterprise companies (9) available were more limited. It would be of advantage to test the conclusions reached in this study with another stream of data from another industry.

The judgements that were made on what were the social/community goals had a degree of subjectivity, even though a considerable amount of information was reviewed. All the annual reports of the energy companies along with their statement of corporate intents for the years 1996 to 1998 provided an extensive amount of information. The degree of importance scores allocated to each company was based upon that data and whilst a degree of subjectivity must occur, most selections were relatively clear cut.

However, information on the community trusts was not so readily available partly because most frequently the annual reports were brief documents, and in some cases either not prepared or not available. Thus the information that was available may not have done justice to the intentions of the community trust. However, that is a remote possibility.

The information that was the basis for this research was that available from the annual reports and thus interviews, questionnaires, or other similar techniques were not used to extend upon that information. Again this may have weakened the conclusions reached, but this limitation was deliberately chosen. The information that is publicly available should be the basis of accountability. Performance should be judged on this information and not so much on good intentions.

Another limitation may have been the requirement of the Energy Companies Act 1992 for the company, whether community or publicly owned, to operate as a successful business. This may have suggested to trustees elected by the community to represent them as owners, that their choice of objectives were more limited. There is no evidence to suggest this was so other than the frequently quoted section of the Act noted above.

6.5 AREAS FOR FURTHER RESEARCH

An analysis of a stream of data from another industry where community ownership of trading enterprises is active alongside of equivalent private ownership is worthy of pursuit. One such field may be the hospitality industry where licensing trusts have been active for over 50 years. Like the energy companies, trusts have seen dynamic change over the past 10 years, and suffered quite some controversy as they have attempted to adjust to those changes. There is clear evidence in the recent closure of some trusts in the Wellington area that there are political and performance issues.

There would be advantage too in researching the performance of community owned trading enterprises in overseas countries and in that way the New Zealand experience can be compared to a different culture.

The literature conclusions leave unanswered some questions. Is it best, as has happened in the energy industry, where community ownership is involved, that economic performance be separated out from ownership? Or are there examples where social/community goals have been successfully linked with economic performance under one structure? How would community ownership perform in an open competitive environment? (The Power Companies had natural monopolies in their distribution function.)

A trading enterprise is usually created to provide a service. That service is most likely to have an element of public need or concern. Health is an obvious example, so also maybe the provision of alcohol and gaming services; essential services can be other examples. The New Zealand experience suggests that community ownership has been used as a structure in these circumstances so that the wider public good is not ignored or replaced by individual selfishness. The market most reacts to the highest bidder and a maximisation of financial returns. Further research into whether community ownership has delivered a better service is well worthy of pursuit so that the current suspicions are either allayed or proven. If, as it is likely that, community ownership has inherent weaknesses, the identification of those weaknesses through empirical research will best ensure they are addressed. It does not seem desirable to have what happened to the energy companies in New Zealand in 1999 repeated: where against vehement opposition, the Minister of Energy drove through legislative changes that saw community companies' demise as the provider of the complete range of energy services from energy generation to energy retailing, and in some cases their complete demise, other than the retention of investment assets.

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Annual Reports and Accounts, Newsletters, Statements of Corporate Intents of the following Energy Companies:

Alpine Energy Limited

Annual Reports and Accounts of its shareholders, South Canterbury Power Trust and Timaru District Holdings Limited

Bay of Plenty Electricity Limited

Buller Electricity Limited

Central Electric Limited

Annual Reports and Accounts of its shareholder, Otago Central Electric Power Trust

CentralPower Limited

CHB Power Holdings Limited

Annual Reports and Accounts of its shareholder, Central Hawkes Bay Consumer Power Trust

Counties Power Limited

Annual Reports and Accounts of its shareholder, Counties Consumer Power Trust

Dunedin Electricity Limited

Annual Reports and Accounts of its shareholder, Dunedin City Holdings Limited

Eastland Energy Limited

Annual Reports and Accounts of its shareholder, Eastland Energy Community Trust

Electricity Ashburton Limited

Electricity Invercargill Limited

Annual Reports and Accounts of its shareholder, Invercargill City Holdings Limited

Hawkes Bay Power Distribution Limited

Annual Reports and Accounts of its shareholder, Hawkes Bay Power Consumers' Trust

Horowhenua Energy Limited

Annual Reports and Accounts of its shareholder, Horowhenua Energy Trust

King Country Energy Limited

Annual Reports and Accounts of its shareholder, King Country Electric Power Trust

Mainpower New Zealand Limited

Marlborough Electric Limited

Annual Reports and Accounts of its shareholder, Marlborough Electric Power Trust

Mercury Energy Limited

Annual Accounts of its shareholder, Auckland Energy Consumer Trust

Northpower Limited

Otago Power Limited

Powerco Limited

Annual Reports and Accounts of its majority shareholders, Pukeariki Holdings Limited, Taranaki Electricity Trust, and Powerco Community Trust Incorporated

Power New Zealand Limited

Scanpower Limited

Annual Reports and Accounts of its shareholder, Scanpower Customer Trust

Southpower Limited

Annual Reports and Accounts of its shareholder, Christchurch City Holdings Limited

Tasman Energy Limited

Annual Reports and Accounts of its shareholder, Tasman Electric Power Trust

The Power Company Limited

Annual Reports and Accounts of its shareholder, Southland Electric Power Supply Consumer Trust

Top Energy Limited

Annual Reports and Accounts of its shareholder, Bay of Islands Electric Power Trust

TransAlta New Zealand Limited

TrustPower Limited

Waipa Power Limited

Annual Reports and Accounts of its shareholder, Waipa Power Trust

Wairoa Power Limited

Waitaki Power Limited

Annual Reports and Accounts of its shareholder, Waitaki Power Trust

Waitomo Energy Services Limited

Annual Reports and Accounts of its shareholder, Waitomo Energy Services Customer Trust

WEL Energy Group Limited

Westpower Limited

TABLES 29-42

Table 29 - Social/Community Objectives 1996-1998

PUBLIC

Company	Low Tariffs	Rebates/ Distributions	Economic Growth	Community Support	Good Neighbour/ Environmental Sensitivity	Security of Supply/ Future Well-being	Energy Generation/Self Sufficiency	Low Profit Emphasis	Average
Bay of Plenty	0	0	1	2	2	2	3	0	1.25
CentralPower	1	0	0	2	3	1	3	0	1.25
Electricity Ashburton	2	2	0	2	0	2	1	0	1.13
Otago	1	2	0	0	1	2	2	0	1.00
Power NZ	2	0	0	2	2	3	3	0	1.50
Transalta	2	0	0	2	3	3	3	0	1.63
Trust Power	0	0	0	2	1	1	3	0	0.88
Wairarapa	-	-	-	-	-	-	-	-	-
WEL Energy Group	3	0	0	2	0	3	1	0	1.13
MEAN	**1.38**	**0.50**	**0.13**	**1.75**	**1.50**	**2.13**	**2.38**	**0.00**	**1.22**

COMMUNITY

Company	Low Tariffs	Rebates/ Distributions	Economic Growth	Community Support	Good Neighbour/ Environmental Sensitivity	Security of Supply/ Future Well-being	Energy Generation/Self Sufficiency	Low Profit Emphasis	Average
Alpine Energy	1	2	1	2	1	2	3	2	1.75
Buller Electricity	3	0	0	2	1	1	1	3	1.38
Central Electric	2	0	0	0	3	3	3	0	1.38
Central Hawkes Bay Power	3	0	0	2	0	1	1	3	1.25
Counties Power	3	3	0	2	0	3	2	2	1.88
Dunedin Electricity	2	3	0	2	2	1	1	0	1.38
Eastland Energy	2	1	3	2	1	2	2	0	1.63
Electra	3	3	1	2	0	1	2	0	1.50
Electricity Invercargill	3	2	0	0	0	2	0	3	1.25
Hawkes Pay Power	3	0	0	1	1	2	1	3	1.38
King Country Energy	3	3	0	1	1	2	2	2	1.75
MainPower	1	2	0	1	1	2	0	0	0.88
Marlborough Electric	3	2	1	3	2	2	3	0	2.00
Mercury Energy	1	3	0	0	2	2	3	0	1.38
NorthPower	3	3	1	2	2	2	2	2	2.13
Powerco	1	0	0	2	1	2	2	0	1.00
ScanPower	3	3	1	2	1	2	2	3	2.13
SouthPower	3	3	1	1	2	2	0	1	1.63
Tasman Energy	3	3	1	2	1	3	1	2	2.00
The Power Company	1	0	0	0	0	2	2	1	0.75
Top Energy	3	0	0	1	0	1	2	2	1.13
Waipa Power	3	3	1	2	2	3	0	3	2.13
Wairoa Power	2	0	1	1	0	1	3	1	1.13
Waitaki Power	1	2	1	2	1	3	0	2	1.50
Waitomo Energy Services	2	3	0	2	2	3	2	1	1.88
WestPower	2	2	1	2	3	3	3	1	2.13
MEAN	**2.31**	**1.77**	**0.54**	**1.50**	**1.15**	**2.04**	**1.65**	**1.42**	**1.55**
TTEST	**0.05**	**0.01**	**0.04**	**0.41**	**0.47**	**0.80**	**0.08**	**0.00**	**0.01**
MANN WHITNEY TEST	**0.03**	**0.02**	**0.09**	**0.33**	**0.45**	**0.76**	**0.08**	**0.00**	
CHI SQUARED TEST	**0.03**	**0.09**	**0.23**	**0.39**	**0.60**	**0.80**	**0.12**	**0.01**	

Sources: Annual Reports, Statements of Corporate Intent, Newsletters of the above companies

Table 30 - Comparison of Tariffs

PUBLIC

Company	Medium Domestic (c/kWh) 1996	1997	1998	Ranking 1998	Medium Commercial (c/kWh) 1996	1997	1998	Ranking 1998
Bay of Plenty	13.43	13.82	14.11	30	12.31	12.85	13.25	27
CentralPower (Note 1)	13.00	14.43	14.28	32	11.68	11.87	11.95	16
Electricity Ashburton	10.79	11.12	11.88	11	9.88	10.16	10.64	8
Otago Power	11.95	11.95	11.80	10	12.83	12.83	11.20	11
Power NZ (Note 1)	12.07	13.07	13.07	26	15.32	15.32	15.32	35
TransAlta NZ (Note 1)	11.52	12.41	12.41	15	13.75	15.14	14.17	32
Trust Power (Note 1)	12.03	12.49	13.10	27	11.59	12.37	12.77	23
Wairarapa	13.29	15.42	15.42	34	10.94	13.10	13.10	25
WEL Energy Group	12.65	13.13	13.10	27	10.79	11.21	11.20	11
MEAN	12.30	13.09	13.24		12.12	12.76	12.62	

COMMUNITY

Company	Medium Domestic (c/kWh) 1996	1997	1998	Ranking 1998	Medium Commercial (c/kWh) 1996	1997	1998	Ranking 1998
Alpine Energy	10.67	10.80	11.22	7	8.81	9.05	9.37	3
Buller Electricity	10.85	10.85	12.13	13	11.68	11.68	13.01	24
Central Electric	10.04	10.04	10.97	4	8.87	8.87	9.30	2
Central Hawkes Bay Power	12.99	12.99	14.69	33	11.19	11.19	12.06	19
Counties Power	11.61	12.44	12.44	16	12.53	13.39	13.39	29
Dunedin Electricity	10.07	10.26	10.80	3	9.52	10.06	9.18	1
Eastland Energy	12.45	13.36	12.94	22	14.39	14.14	13.61	30
Electra	12.71	12.56	12.54	18	10.80	10.72	10.72	9
Electricity Invercargill	10.89	10.66	11.29	8	9.08	8.87	9.37	3
Hawkes Bay Power	11.83	11.83	11.50	9	12.00	12.00	11.72	14
King Country Energy	8.79	9.14	9.35	1	9.62	9.94	10.05	5
MainPower (Note 1)	11.08	10.63	11.20	6	11.20	11.20	11.28	13
Marlborough Electric	10.65	11.01	12.12	12	10.76	11.10	12.11	20
Mercury Energy	11.75	12.66	12.62	20	15.15	15.15	15.15	34
NorthPower	11.27	12.13	12.13	14	11.32	11.82	11.82	15
Powerco (Note 1)	12.91	13.63	14.24	31	12.87	13.40	13.77	31
ScanPower	13.18	13.18	13.17	29	13.46	13.46	13.32	28
SouthPower	11.48	12.01	12.61	19	11.33	11.83	12.39	21
Tasman Energy	12.17	12.70	12.70	21	11.50	12.01	12.01	18
The Power Company	11.70	11.56	12.48	17	9.56	9.74	10.50	6
Top Energy	12.71	12.95	12.95	23	12.66	12.67	12.67	22
Waipa Power	9.81	10.39	10.39	2	10.08	10.57	10.57	7
Wairoa Power	15.26	16.05	15.98	35	14.43	15.14	14.39	33
Waitaki Power	9.95	10.68	11.10	5	10.83	11.00	11.14	10
Waitomo Energy Services	11.95	12.70	13.02	25	11.67	11.72	12.00	17
WestPower	12.13	12.57	12.98	24	12.65	13.13	13.22	26
MEAN	11.57	11.91	12.29		11.46	11.69	11.85	

Note 1: Separate Pricing Tariffs in 2 or more zones averaged

Source: Ministry of Commerce Electricity Information Disclosure Statistics

Table 31 - Distributions to Consumers 1996-1998

PUBLIC

Company	1996 Rebate $,000	1996 Other Dividends $,000	1996 Total $,000	1996 % of Tax Paid Profits	1997 Rebate $,000	1997 Other Dividends $,000	1997 Total $,000	1997 % of Tax Paid Profits	1998 Rebate $,000	1998 Other Dividends $,000	1998 Total $,000	1998 % of Tax Paid Profits	Average % of Tax Paid Profits
Bay of Plenty	$ -	$ 4,598	$ 4,598	69.1%	$ -	$ 9,892	$ 9,892	141.3%	$ -	$ 4,960	$ 4,960	68.9%	93.1%
CentralPower	$ -	$ 7,221	$ 7,221	37.5%	$ -	$ 5,058	$ 5,058	182.3%	$ -	$ 9,865	$ 9,865	100.8%	106.9%
Electricity Ashburton	$ 1,589	$ -	$ 1,589	75.9%	$ 1,478	$ -	$ 1,478	82.8%	$ 959		$ 959	71.2%	76.6%
Otago	$ 732	$ 477	$ 1,209	40.8%	$ 505	$ 477	$ 982	60.0%	$ 930	$ 477	$ 1,407	80.3%	60.4%
Power NZ	$ -	$ 53,166	$ 53,166	81.9%	$ -	$ 37,867	$ 37,867	74.1%	$ -	$ 49,985	$ 49,985	75.9%	77.3%
Transalta	$ -	$ -	$ -	N/A	$ -	$ -	NIL	0.0%	$ -	$ 9,631	$ 9,631	30.1%	30.1%
Trust Power	$ -	$ 7,798	$ 7,798	70.6%	$ -	$ 15,050	$ 15,050	92.0%	$ -	$ 19,035	$ 19,035	90.0%	84.2%
Wairarapa	$ -	$ -	$ -	N/A	$ -	$ -	$ -	N/A	$ -	$ -	$ -	N/A	N/A
WEL Energy Group	$ -	$ 9,900	$ 9,900	61.9%	$ -	$ 14,660	$ 14,660	88.7%	$ -	$ 7,900	$ 7,900	42.8%	64.5%
MEAN			**$ 12,212**	**62.5%**			**$ 12,141**	**103.0%**			**$ 12,968**	**70.0%**	**78.5%**

COMMUNITY

Company	1996 Rebate $,000	1996 Other Dividends $,000	1996 Total $,000	1996 % of Tax Paid Profits	1997 Rebate $,000	1997 Other Dividends $,000	1997 Total $,000	1997 % of Tax Paid Profits	1998 Rebate $,000	1998 Other Dividends $,000	1998 Total $,000	1998 % of Tax Paid Profits	Average % of Tax Paid Profits
Alpine Energy	$ 2,595	$ -	$ 2,595	64.2%	$ 3,040	$ -	$ 3,040	76.2%	$ 3,183	$ -	$ 3,183	65.9%	68.8%
Buller Electricity	$ -	$ 87	$ 87	34.8%	$ -	$ 110	$ 110	27.8%	$ -	$ 219	$ 219	47.9%	36.8%
Central Electric	$ -	$ 65	$ 65	1.8%	$ -	$ 52	$ 52	2.1%	$ -	$ 56	$ 56	1.3%	1.7%
Central Hawkes Bay Power	$ -	$ 10	$ 10	2.5%	$ -	$ 50	$ 50	-18.9%	$ -	$ 50	$ 50	19.9%	1.2%
Counties Power	$ 2,907	$ 3,600	$ 6,507	188.1%	$ 2,500	$ -	$ 2,500	80.8%	$ 2,490	$ 2,241	$ 4,731	117.7%	128.9%
Dunedin Electricity	$ -	$ 8,968	$ 8,968	97.5%	$ -	$ 14,999	$ 14,999	159.4%	$ -	$ 12,435	$ 12,435	186.7%	147.9%
Eastland Energy	$ -	$ 300	$ 300	20.9%	$ -	$ 300	$ 300	18.9%	$ 1,064	$ 500	$ 1,564	49.0%	29.6%
Electra	$ 3,242	$ 93	$ 3,335	116.6%	$ 6,924	$ 216	$ 7,140	148.9%	$ 7,163	$ 110	$ 7,273	162.9%	142.8%
Electricity Invercargill	$ -	$ 1,000	$ 1,000	70.0%	$ -	$ 1,350	$ 1,350	53.5%	$ -	$ 1,600	$ 1,600	53.7%	59.1%
Hawkes Pay Power	$ -	$ -	NIL	0.0%	$ -	$ -	NIL	0.0%	$ -	$ -	NIL	0.0%	N/A
King Country Energy	$ 599	$ 100	$ 699	63.5%	$ 450	$ 80	$ 530	123.0%	$ 300	$ 50	$ 350	74.0%	86.8%
MainPower	$ -	$ 4,150	$ 4,150	95.0%	$ 4,508	$ -	$ 4,508	67.3%	$ 5,434	$ -	$ 5,434	91.9%	84.7%
Marlborough Electric	$ -	$ 1,425	$ 1,425	40.0%	$ -	$ 1,570	$ 1,570	42.4%	$ -	$ 100	$ 100	2.7%	28.4%
Mercury Energy	$ 40,000	$ -	$ 40,000	60.9%	$ 50,500	$ -	$ 50,500	61.5%	$ -	$ -	$ -	N/A	61.2%
NorthPower	$ -	$ 3,268	$ 3,268	66.4%	$ -	$ 5,000	$ 5,000	83.9%	$ 8,863	$ -	$ 8,863	121.3%	90.5%
Powerco	$ -	$ 9,822	$ 9,822	120.5%	$ -	$ 14,593	$ 14,593	81.2%	$ -	$ 18,242	$ 18,242	86.7%	96.1%
ScanPower	$ 1,346	$ 20	$ 1,366	137.8%	$ 1,521	$ 30	$ 1,551	127.4%	$ 1,599	$ 30	$ 1,629	148.1%	137.8%
SouthPower	$ 552	$ 11,060	$ 11,612	61.1%	$ 531	$ 17,845	$ 18,376	73.0%	$ 1,380	$ 33,562	$ 34,942	83.7%	72.6%
Tasman Energy	$ 2,070	$ 200	$ 2,270	35.9%	$ 2,680	$ 200	$ 2,880	61.7%	$ 3,823	$ 200	$ 4,023	67.0%	54.9%
The Power Company	-	-	NIL	0.0%	-	-	NIL	0.0%	$ -	$ 46	$ 46	1.8%	1.8%
Top Energy	$ -	$ 60	$ 60	2.0%	$ -	$ 45	$ 45	1.2%	$ -	$ 45	$ 45	1.2%	1.5%
Waipa Power	$ -	$ 1,650	$ 1,650	107.4%	$ -	$ 2,490	$ 2,490	125.4%	$ -	$ 2,559	$ 2,559	100.0%	110.9%
Wairoa Power	$ -	$ 373	$ 373	67.9%	$ -	$ 373	$ 373	73.4%	$ -	$ 373	$ 373	50.9%	64.1%
Waitaki Power	$ 1,163	$ -	$ 1,163	148.3%	$ 997	$ -	$ 997	112.4%	$ 495	$ -	$ 495	69.2%	110.0%
Waitomo Energy Services	$ 1,186	$ -	$ 1,186	50.0%	$ 1,501	$ -	$ 1,501	47.4%	$ 1,877	$ -	$ 1,877	58.8%	52.1%
WestPower	$ 741	$ 97	$ 838	27.0%	$ 1,000	$ 97	$ 1,097	29.4%	$ 1,000	$ 97	$ 1,097	30.8%	29.1%
MEAN			**$ 4,173**	**64.6%**			**$ 5,521**	**63.8%**			**$ 4,696**	**65.1%**	**64.5%**

Source: Annual Reports of the above companies

Table 32 - Capex Ratios to Fixed Assets

PUBLIC

	1996			1997			1998			
Company	**Capex $,000**	**Fixed Assets $,000**	**%**	**Capex $,000**	**Fixed Assets $,000**	**%**	**Capex $,000**	**Fixed Assets $,000**	**%**	**Average %**
Bay of Plenty	$ 14,089	$ 43,043	32.7%	$ 7,981	$ 149,316	5.3%	$ 23,005	$ 164,764	14.0%	17.3%
CentralPower	$ 3,615	$ 36,922	9.8%	$ 13,360	$ 87,672	15.2%	$ 7,582	$ 138,560	5.5%	10.2%
Electricity Ashburton	$ 4,208	$ 30,100	14.0%	$ 4,528	$ 32,592	13.9%	$ 5,521	$ 35,199	15.7%	14.5%
Otago	$ 1,114	$ 35,274	3.2%	$ 1,445	$ 34,856	4.1%	$ 2,061	$ 34,288	6.0%	4.4%
Power NZ	$ 24,948	$ 316,643	7.9%	$ 57,756	$ 322,021	17.9%	$ 79,418	$ 746,948	10.6%	12.1%
Transalta	$ -	$ -	N/A	$ 10,410	$ 428,717	2.4%	$ 20,015	$ 428,487	4.7%	3.5%
Trust Power	$ 12,332	$ 136,400	9.0%	$ 12,510	$ 191,659	6.5%	$ 15,322	$ 289,048	5.3%	7.0%
Wairarapa	$ -	$ -	N/A	$ -	$ -	N/A	$ -	$ -	N/A	N/A
WEL Energy Group	$ 7,723	$ 89,057	8.7%	$ 7,687	$ 124,187	6.2%	$ 12,538	$ 125,083	10.0%	8.3%
MEAN	$ 9,718	$ 98,206	12.2%	$ 14,460	$ 171,378	9.0%	$ 20,683	$ 245,297	9.0%	9.7%

COMMUNITY

	1996			1997			1998			
Company	**Capex $,000**	**Fixed Assets $,000**	**%**	**Capex $,000**	**Fixed Assets $,000**	**%**	**Capex $,000**	**Fixed Assets $,000**	**%**	**Average %**
Alpine Energy	$ 2,916	$ 70,479	4.1%	$ 4,864	$ 70,347	6.9%	$ 6,669	$ 72,297	9.2%	6.8%
Buller Electricity	$ 495	$ 5,974	8.3%	$ 968	$ 5,896	16.4%	$ 902	$ 6,188	14.6%	13.1%
Central Electric	$ 6,906	$ 34,989	19.7%	$ 5,812	$ 39,616	14.7%	$ 9,118	$ 42,362	21.5%	18.6%
Central Hawkes Bay Power	$ 1,040	$ 7,140	14.6%	$ 1,036	$ 7,150	14.5%	$ 584	$ 7,466	7.8%	12.3%
Counties Power	$ 6,537	$ 27,021	24.2%	$ 9,405	$ 30,121	31.2%	$ 7,710	$ 36,532	21.1%	25.5%
Dunedin Electricity	$ 2,307	$ 58,752	3.9%	$ 2,283	$ 84,612	2.7%	$ 2,537	$ 86,332	2.9%	3.2%
Eastland Energy	$ 1,653	$ 19,851	8.3%	$ 1,440	$ 20,530	7.0%	$ 1,718	$ 20,642	8.3%	7.9%
Electra	$ 5,538	$ 32,797	16.9%	$ 7,343	$ 56,181	13.1%	$ 5,417	$ 62,476	8.7%	12.9%
Electricity Invercargill	$ 1,289	$ 17,434	7.4%	$ 1,517	$ 17,063	8.9%	$ 1,531	$ 17,073	9.0%	8.4%
Hawkes Pay Power	$ 3,763	$ 62,456	6.0%	$ 4,412	$ 62,718	7.0%	$ 7,086	$ 63,048	11.2%	8.1%
King Country Energy	$ 1,878	$ 11,198	16.8%	$ 1,693	$ 12,144	13.9%	$ 2,608	$ 12,723	20.5%	17.1%
MainPower	$ 3,719	$ 30,470	12.2%	$ 4,143	$ 32,051	12.9%	$ 4,331	$ 33,402	13.0%	12.7%
Marlborough Electric	$ 1,946	$ 36,849	5.3%	$ 3,629	$ 36,582	9.9%	$ 2,644	$ 38,068	6.9%	7.4%
Mercury Energy	$ 49,383	$ 451,861	10.9%	$ 32,600	$ 451,861	7.2%	$ 103,730	$ 569,059	18.2%	12.1%
NorthPower	$ 6,484	$ 49,987	13.0%	$ 5,144	$ 53,371	9.6%	$ 4,608	$ 56,048	8.2%	10.3%
Powerco	$ 4,778	$ 24,278	19.7%	$ 8,371	$ 113,891	7.4%	$ 15,069	$ 202,109	7.5%	11.5%
ScanPower	$ 383	$ 5,844	6.6%	$ 632	$ 6,372	9.9%	$ 611	$ 6,522	9.4%	8.6%
SouthPower	$ 39,704	$ 531,690	7.5%	$ 56,996	$ 546,885	10.4%	$ 55,791	$ 811,667	6.9%	8.3%
Tasman Energy	$ 1,842	$ 31,008	5.9%	$ 1,893	$ 32,711	5.8%	$ 2,630	$ 82,934	3.2%	5.0%
The Power Company	$ 8,292	$ 32,320	25.7%	$ 11,002	$ 33,393	32.9%	$ 10,421	$ 38,084	27.4%	28.7%
Top Energy	$ 2,929	$ 37,756	7.8%	$ 3,154	$ 51,718	6.1%	$ 2,637	$ 54,115	4.9%	6.2%
Waipa Power	$ 1,612	$ 13,036	12.4%	$ 9,092	$ 46,061	19.7%	$ 3,228	$ 45,943	7.0%	13.0%
Wairoa Power	$ 222	$ 5,965	3.7%	$ 428	$ 5,965	7.2%	$ 449	$ 5,905	7.6%	6.2%
Waitaki Power	$ 1,085	$ 10,830	10.0%	$ 945	$ 10,964	8.6%	$ 1,893	$ 10,962	17.3%	12.0%
Waitomo Energy Services	$ 411	$ 16,386	2.5%	$ 1,321	$ 15,947	8.3%	$ 1,394	$ 41,548	3.4%	4.7%
WestPower	$ 10,444	$ 65,345	16.0%	$ 2,736	$ 78,104	3.5%	$ 2,786	$ 78,954	3.5%	7.7%
MEAN	$ 6,444	$ 65,066	11.1%	$ 7,033	$ 73,933	11.4%	$ 9,927	$ 96,248	10.7%	11.1%

Source: Annual Reports of the above Companies

Table 33 - Energy Companies Statistics for 1998

	Customers	Assets $,000 Employed	Assets per Customer $,000	Electricity Distributed GWh	Density Cust/km Line	Load Factor %	Loss Ratio %
PUBLIC							
Bay of Plenty	22,636	193,463	$ 8.55	512	10.61	71.0%	4.5%
CentralPower	49,717	166,954	$ 3.36	669	11.53	62.4%	5.4%
Electricity Ashburton	13,365	75,722	$ 5.67	294	5.71	56.8%	7.3%
Otago	14,480	40,648	$ 2.81	263	3.58	67.7%	4.9%
Power NZ	223,765	922,801	$ 4.12	3,384	16.84	55.7%	6.2%
Transalta	142,736	699,457	$ 4.90	2,110	36.34	52.8%	5.1%
Trust Power	96,513	417,814	$ 4.33	1,237	14.94	58.8%	5.9%
Wairarapa	20,486	N/A	N/A	220	8.40	63.0%	6.6%
WEL Energy Group	67,265	221,845	$ 3.30	845	18.62	62.0%	5.5%
Mean	**72,329**	**342,338**	**$ 4.63**	**1,059**	**14.06**	**61.13%**	**5.71%**
COMMUNITY							
Alpine Energy	27,317	90,771	$ 3.32	472	7.49	69.0%	6.1%
Buller Electricity	4,250	8,862	$ 2.09	88	7.40	64.7%	4.3%
Central Electric	18,923	58,413	$ 3.09	289	8.69	53.1%	8.4%
Central Hawkes Bay Power	7,769	10,838	$ 1.40	89	5.05	65.0%	9.7%
Counties Power	30,478	46,593	$ 1.53	358	9.46	56.8%	7.7%
Dunedin Electricity	49,864	114,635	$ 2.30	838	25.80	57.0%	5.9%
Eastland Energy	19,797	33,686	$ 1.70	225	7.00	59.2%	7.3%
Electra	35,713	72,537	$ 2.03	331	18.38	55.6%	6.8%
Electricity Invercargill	16,852	42,771	$ 2.54	264	24.30	53.8%	5.4%
Hawkes Pay Power	56,000	84,065	$ 1.50	752	15.30	58.2%	5.8%
King Country Energy	12,090	41,239	$ 3.41	121	5.15	53.0%	9.0%
MainPower	24,786	53,372	$ 2.15	358	6.22	63.5%	5.3%
Marlborough Electric	19,804	61,885	$ 3.12	277	6.92	61.7%	6.9%
Mercury Energy	251,155	995,895	$ 3.97	4,432	28.50	56.7%	4.5%
NorthPower	43,371	76,589	$ 1.77	793	8.50	73.2%	3.6%
Powerco	84,373	378,866	$ 4.49	1,019	9.75	67.7%	6.2%
ScanPower	6,700	10,198	$ 1.52	75	6.72	62.0%	7.3%
SouthPower	156,878	983,171	$ 6.27	2,582	13.92	58.4%	4.7%
Tasman Energy	29,272	107,443	$ 3.67	581	9.51	63.3%	6.1%
The Power Company	30,212	55,677	$ 1.84	512	3.65	64.0%	9.4%
Top Energy	24,980	53,880	$ 2.16	230	5.35	63.0%	10.3%
Waipa Power	19,872	59,083	$ 2.97	272	10.71	61.5%	6.3%
Wairoa Power	5,403	10,609	$ 1.96	52	5.67	57.0%	7.0%
Waitaki Power	11,881	23,340	$ 1.96	169	6.31	66.9%	6.1%
Waitomo Energy Services	9,726	46,484	$ 4.78	143	3.79	57.7%	8.8%
WestPower	11,358	84,236	$ 7.42	189	6.30	66.0%	7.0%
Mean	**38,801**	**138,659**	**$ 2.88**	**597**	**10.22**	**61.1%**	**6.77%**

Source: Ernst & Young NZ Electric Power Company Information Disclosure Analysis

Table 34 - System Average Interruption Frequency Index

SAIFI - PUBLIC				
Company	1996	1997	1998	Average
Bay of Plenty	5.6	5.2	4.8	5.2
CentralPower	5.4	3.5	2.6	3.8
Electricity Ashburton	1.8	3.1	1.7	2.2
Otago	2.2	1.7	3.4	2.4
Power NZ	3.4	4.6	2.9	3.6
Transalta	1.6	1.3	0.6	1.2
Trust Power	3.0	4.9	2.6	3.5
Wairarapa	3.0	2.5	2.3	2.6
WEL Energy Group	3.0	3.2	2.3	2.8
MEAN	**3.2**	**3.3**	**2.6**	**3.0**

SAIFI - COMMUNITY				
Company	1996	1997	1998	Average
Alpine Energy	2.7	2.6	2.7	2.7
Buller Electricity	3.8	7.4	4.9	5.4
Central Electric	5.9	4.2	3.9	4.7
Central Hawkes Bay Power	3.8	2.5	1.9	2.7
Counties Power	5.6	7.4	4.3	5.8
Dunedin Electricity	0.6	1.0	1.0	0.9
Eastland Energy	5.0	5.6	8.7	6.4
Electra	5.1	3.5	2.7	3.8
Electricity Invercargill	1.0	2.2	1.3	1.5
Hawkes Pay Power	2.0	3.1	3.1	2.7
King Country Energy	3.7	3.8	4.0	3.8
MainPower	2.9	4.4	3.7	3.7
Marlborough Electric	4.9	2.3	5.7	4.3
Mercury Energy	2.0	2.2	1.7	2.0
NorthPower	5.2	7.7	4.0	5.6
Powerco	2.8	2.4	2.5	2.6
ScanPower	1.1	1.7	1.9	1.6
SouthPower	1.2	1.7	1.0	1.3
Tasman Energy	3.1	2.7	4.3	3.4
The Power Company	4.0	6.6	7.5	6.0
Top Energy	13.8	15.3	5.8	11.6
Waipa Power	5.1	5.8	3.4	4.8
Wairoa Power	8.6	8.3	12.3	9.7
Waitaki Power	1.2	0.9	1.5	1.2
Waitomo Energy Services	11.0	11.0	9.3	10.4
WestPower	5.6	3.4	4.1	4.4
MEAN	**4.3**	**4.6**	**4.1**	**4.3**

Source: Ernst & Young NZ Electric Power Company Information Disclosure Analysis

Table 35 - Customer Average Interruption Duration Index

CAIDI - PUBLIC

Company	1996	1997	1998	Average
Bay of Plenty	94.0	76.0	86.0	85.3
CentralPower	49.0	52.1	53.5	51.5
Electricity Ashburton	118.4	114.5	109.0	114.0
Otago	89.0	114.0	134.0	112.3
Power NZ	66.9	44.9	59.0	56.9
Transalta	31.7	28.6	49.0	36.4
Trust Power	64.0	52.0	44.0	53.3
Wairarapa	63.9	74.5	74.9	71.1
WEL Energy Group	66.0	55.2	82.6	67.9
MEAN	**71.4**	**68.0**	**76.9**	**72.1**

CAIDI - COMMUNITY

Company	1996	1997	1998	Average
Alpine Energy	69.0	33.0	56.0	52.7
Buller Electricity	170.4	80.6	76.0	109.0
Central Electric	73.9	51.2	53.9	59.7
Central Hawkes Bay Power	140.0	158.0	71.6	123.2
Counties Power	83.7	56.0	55.4	65.0
Dunedin Electricity	30.9	58.1	36.1	41.7
Eastland Energy	114.4	127.5	59.5	100.5
Electra	35.9	33.3	36.4	35.2
Electricity Invercargill	58.0	35.2	79.4	57.5
Hawkes Pay Power	56.8	52.5	53.8	54.4
King Country Energy	85.0	98.0	410.0	197.7
MainPower	143.1	64.4	61.1	89.5
Marlborough Electric	46.0	31.0	231.7	102.9
Mercury Energy	61.9	56.4	89.4	69.2
NorthPower	48.3	49.6	59.7	52.5
Powerco	67.3	82.1	70.5	73.3
ScanPower	109.0	101.0	121.6	110.5
SouthPower	68.2	76.9	81.1	75.4
Tasman Energy	103.7	85.7	67.8	85.7
The Power Company	92.0	74.4	98.7	88.4
Top Energy	46.0	46.0	74.0	55.3
Waipa Power	77.0	61.0	75.0	71.0
Wairoa Power	85.0	105.7	115.7	102.1
Waitaki Power	76.1	110.9	60.3	82.4
Waitomo Energy Services	64.8	78.8	71.2	71.6
WestPower	149.3	129.1	94.9	124.4
MEAN	**82.9**	**74.5**	**90.8**	**82.7**

Source: Ernst & Young NZ Electric Power Company Information Disclosure Analysis

Table 36 - System Average Interruption Duration Index

SAIDI - PUBLIC				
Company	**1996**	**1997**	**1998**	**Average**
Bay of Plenty	530.0	390.0	414.0	444.7
CentralPower	227.0	177.0	140.0	181.3
Electricity Ashburton	215.9	355.6	180.5	250.7
Otago	200.0	196.0	453.0	283.0
Power NZ	233.0	219.4	171.2	207.9
Transalta	50.1	37.2	28.5	38.6
Trust Power	192.9	253.0	113.0	186.3
Wairarapa	193.9	189.1	170.7	184.6
WEL Energy Group	199.0	175.8	191.9	188.9
MEAN	**226.9**	**221.5**	**207.0**	**218.4**

SAIDI - COMMUNITY				
Company	**1996**	**1997**	**1998**	**Average**
Alpine Energy	182.0	86.0	150.0	139.3
Buller Electricity	649.9	597.1	370.0	539.0
Central Electric	431.7	216.4	212.0	286.7
Central Hawkes Bay Power	524.0	400.0	176.0	366.7
Counties Power	468.6	414.0	238.7	373.8
Dunedin Electricity	19.4	58.3	37.2	38.3
Eastland Energy	569.5	714.8	518.8	601.0
Electra	183.0	115.5	98.2	132.2
Electricity Invercargill	57.0	78.1	105.6	80.2
Hawkes Pay Power	111.8	164.4	167.2	147.8
King Country Energy	313.0	367.0	271.0	317.0
MainPower	415.6	281.9	225.1	307.5
Marlborough Electric	226.0	190.0	160.0	192.0
Mercury Energy	120.8	123.8	153.3	132.6
NorthPower	248.6	379.4	240.5	289.5
Powerco	189.1	197.4	177.9	188.1
ScanPower	123.4	171.8	236.2	177.1
SouthPower	83.7	130.5	82.3	98.8
Tasman Energy	319.4	231.5	292.2	281.0
The Power Company	366.2	492.3	744.4	534.3
Top Energy	633.0	711.0	432.0	592.0
Waipa Power	388.3	353.1	255.2	332.2
Wairoa Power	729.0	873.0	1,424.0	1,008.7
Waitaki Power	90.7	103.6	87.4	93.9
Waitomo Energy Services	714.9	866.3	662.2	747.8
WestPower	835.4	435.9	384.2	551.8
MEAN	**345.9**	**336.7**	**303.9**	**328.8**

Source: Ernst & Young NZ Electric Power Company Information Disclosure Analysis

Table 37 - Return On Equity

ROE - PUBLIC

Company	1996	1997	1998	Average
Bay of Plenty	8.31%	5.32%	5.28%	6.30%
CentralPower	22.48%	2.45%	8.80%	11.24%
Electricity Ashburton	6.01%	4.99%	2.72%	4.57%
Otago	10.00%	5.86%	6.02%	7.29%
Power NZ	16.00%	9.11%	9.63%	11.58%
Transalta	N/A	10.16%	16.77%	13.47%
Trust Power	11.05%	9.86%	9.39%	10.10%
Wairarapa	N/A	N/A	N/A	N/A
WEL Energy Group	10.79%	9.77%	10.01%	10.19%
MEAN	**12.09%**	**7.19%**	**8.58%**	**9.29%**

ROE - COMMUNITY

Company	1996	1997	1998	Average
Alpine Energy	6.40%	4.74%	5.64%	5.59%
Buller Electricity	3.61%	5.45%	6.07%	5.04%
Central Electric	8.18%	5.34%	8.57%	7.36%
Central Hawkes Bay Power	4.33%	-2.84%	2.70%	1.40%
Counties Power	10.50%	9.48%	11.65%	10.54%
Dunedin Electricity	12.51%	10.80%	7.87%	10.39%
Eastland Energy	8.75%	8.84%	16.31%	11.30%
Electra	6.65%	9.21%	8.37%	8.08%
Electricity Invercargill	8.39%	14.14%	10.40%	10.98%
Hawkes Pay Power	1.39%	7.59%	2.14%	3.71%
King Country Energy	6.29%	1.00%	2.76%	3.35%
MainPower	11.31%	15.75%	12.90%	13.32%
Marlborough Electric	10.93%	10.41%	9.47%	10.27%
Mercury Energy	19.30%	21.98%	-6.81%	11.49%
NorthPower	8.53%	9.98%	11.86%	10.12%
Powerco	9.32%	10.92%	9.81%	10.02%
ScanPower	11.87%	14.13%	12.76%	12.92%
SouthPower	6.40%	5.91%	6.47%	6.26%
Tasman Energy	15.33%	7.71%	6.89%	9.98%
The Power Company	2.02%	11.60%	7.44%	7.02%
Top Energy	7.80%	7.47%	7.20%	7.49%
Waipa Power	4.02%	3.65%	4.73%	4.13%
Wairoa Power	6.80%	6.14%	8.59%	7.18%
Waitaki Power	5.27%	5.91%	4.67%	5.28%
Waitomo Energy Services	12.80%	11.10%	8.28%	10.73%
WestPower	5.63%	6.23%	5.67%	5.84%
MEAN	**8.24%**	**8.56%**	**7.40%**	**8.07%**

Source: Annual Reports of the above companies

Table 38 - Return On Assets

ROA - PUBLIC				
Company	**1996**	**1997**	**1998**	**Average**
Bay of Plenty	10.59%	7.45%	7.28%	8.44%
CentralPower	22.92%	2.61%	10.33%	11.95%
Electricity Ashburton	8.87%	8.03%	4.17%	7.02%
Otago	12.79%	8.87%	8.28%	9.98%
Power NZ	17.81%	12.76%	10.32%	13.63%
Transalta	N/A	10.81%	13.71%	12.26%
Trust Power	11.99%	11.48%	10.56%	11.34%
Wairarapa	N/A	N/A	N/A	N/A
WEL Energy Group	13.86%	12.67%	13.21%	13.25%
MEAN	**14.12%**	**9.34%**	**9.73%**	**11.06%**

ROA - COMMUNITY				
Company	**1996**	**1997**	**1998**	**Average**
Alpine Energy	6.16%	6.30%	8.47%	6.98%
Buller Electricity	5.08%	7.17%	8.13%	6.79%
Central Electric	9.29%	7.16%	11.80%	9.42%
Central Hawkes Bay Power	5.25%	-2.90%	2.26%	1.54%
Counties Power	13.37%	11.26%	14.21%	12.95%
Dunedin Electricity	16.53%	11.57%	11.35%	13.15%
Eastland Energy	7.85%	7.74%	14.14%	9.91%
Electra	7.57%	7.64%	7.25%	7.49%
Electricity Invercargill	9.74%	12.19%	10.54%	10.82%
Hawkes Pay Power	2.55%	10.22%	2.80%	5.19%
King Country Energy	10.95%	3.56%	3.63%	6.05%
MainPower	15.93%	20.45%	18.22%	18.20%
Marlborough Electric	13.45%	14.60%	11.94%	13.33%
Mercury Energy	15.45%	17.46%	-2.48%	10.14%
NorthPower	10.15%	11.53%	14.16%	11.95%
Powerco	10.96%	13.46%	12.11%	12.18%
ScanPower	15.53%	18.32%	16.34%	16.73%
SouthPower	9.47%	8.48%	9.14%	9.03%
Tasman Energy	15.73%	10.82%	7.21%	11.25%
The Power Company	5.54%	12.56%	10.06%	9.39%
Top Energy	6.85%	7.93%	5.75%	6.84%
Waipa Power	5.79%	5.23%	6.52%	5.85%
Wairoa Power	9.73%	8.74%	12.28%	10.25%
Waitaki Power	7.41%	7.83%	7.51%	7.58%
Waitomo Energy Services	15.31%	13.25%	10.41%	12.99%
WestPower	5.04%	4.97%	5.72%	5.24%
MEAN	**9.87%**	**9.91%**	**9.21%**	**9.66%**

Source: Annual Reports of the above companies

Table 39 - Equity/Ownership Ratio

PUBLIC

Company	1996	1997	1998	Average
Bay of Plenty	81.74%	77.62%	71.15%	76.84%
CentralPower	93.18%	68.75%	68.46%	76.80%
Electricity Ashburton	86.30%	86.97%	82.81%	85.36%
Otago	87.83%	92.52%	91.98%	90.78%
Power NZ	85.29%	81.82%	78.77%	81.96%
Transalta	N/A	27.63%	33.77%	30.70%
Trust Power	42.96%	66.66%	55.16%	54.93%
Wairarapa	N/A	N/A	N/A	N/A
WEL Energy Group	85.19%	86.55%	89.63%	87.12%
MEAN	**80.36%**	**73.57%**	**71.47%**	**75.13%**

COMMUNITY

Company	1996	1997	1998	Average
Alpine Energy	95.87%	94.50%	95.11%	95.16%
Buller Electricity	84.31%	87.09%	86.30%	85.90%
Central Electric	85.90%	89.30%	89.90%	88.37%
Central Hawkes Bay Power	86.91%	85.07%	86.62%	86.20%
Counties Power	83.25%	77.94%	76.56%	79.25%
Dunedin Electricity	89.76%	69.37%	72.12%	77.08%
Eastland Energy	55.73%	57.65%	60.80%	58.06%
Electra	81.32%	72.78%	73.31%	75.80%
Electricity Invercargill	68.98%	74.38%	90.73%	78.03%
Hawkes Pay Power	85.57%	87.28%	86.89%	86.58%
King Country Energy	89.45%	89.59%	41.82%	73.62%
MainPower	88.93%	88.66%	88.45%	88.68%
Marlborough Electric	72.99%	61.78%	64.89%	66.55%
Mercury Energy	47.65%	43.43%	35.56%	42.21%
NorthPower	78.75%	74.83%	81.36%	78.31%
Powerco	80.23%	83.87%	60.29%	74.80%
ScanPower	86.92%	85.38%	85.27%	85.86%
SouthPower	63.18%	69.99%	68.14%	67.10%
Tasman Energy	67.41%	85.44%	89.04%	80.63%
The Power Company	62.86%	62.65%	64.67%	63.39%
Top Energy	79.49%	74.35%	62.73%	72.19%
Waipa Power	92.96%	90.79%	91.57%	91.77%
Wairoa Power	81.74%	82.45%	82.09%	82.09%
Waitaki Power	86.27%	82.27%	83.60%	84.05%
Waitomo Energy Services	74.19%	83.55%	84.38%	80.71%
WestPower	69.53%	72.42%	76.28%	72.74%
MEAN	**78.47%**	**77.95%**	**76.10%**	**77.51%**

Source: Annual Reports of the above companies

Table 40 - Community Companies

Company	ELECTRICITY SALES				TAX PAID PROFIT				EQUITY			
	1996 $,000	1997 $,000	1998 $,000	MEAN	1996 $,000	1997 $,000	1998 $,000	MEAN	1996 $,000	1997 $,000	1998 $,000	MEAN
Alpine Energy	$ 14,992	$ 16,036	$ 18,408	$ 16,479	$ 4,039	$ 3,990	$ 4,827	$ 4,285	$ 63,070	$ 84,212	$ 85,509	$ 77,597
Buller Electricity	$ 6,984	$ 7,337	$ 7,948	$ 7,423	$ 251	$ 396	$ 457	$ 368	$ 6,955	$ 7,246	$ 7,528	$ 7,243
Central Electric	$ 20,837	$ 23,128	$ 24,243	$ 22,736	$ 3,598	$ 2,511	$ 4,316	$ 3,475	$ 44,002	$ 46,999	$ 50,358	$ 47,120
Central Hawkes Bay Power	$ 8,893	$ 9,185	$ 10,100	$ 9,393	$ 403	-$ 265	$ 251	$ 130	$ 9,304	$ 9,343	$ 9,287	$ 9,311
Counties Power	$ 36,810	$ 38,187	$ 41,262	$ 38,753	$ 3,459	$ 3,093	$ 4,019	$ 3,524	$ 32,947	$ 32,612	$ 34,496	$ 33,352
Dunedin Electricity	$ 36,486	$ 36,953	$ 37,518	$ 36,986	$ 9,199	$ 9,408	$ 6,661	$ 8,423	$ 73,547	$ 87,118	$ 84,664	$ 81,776
Eastland Energy	$ 26,984	$ 27,017	$ 26,334	$ 26,778	$ 1,432	$ 1,585	$ 3,191	$ 2,069	$ 16,368	$ 17,912	$ 19,564	$ 17,948
Electra	$ 39,165	$ 41,245	$ 44,131	$ 41,514	$ 2,861	$ 4,794	$ 4,465	$ 4,040	$ 43,007	$ 52,042	$ 53,352	$ 49,467
Electricity Invercargill	$ 24,318	$ 24,751	$ 11,362	$ 20,144	$ 1,428	$ 2,523	$ 2,977	$ 2,309	$ 17,027	$ 17,842	$ 28,618	$ 21,162
Hawkes Pay Power	$ 65,909	$ 72,000	$ 66,000	$ 67,970	$ 918	$ 5,230	$ 1,549	$ 2,566	$ 65,810	$ 68,884	$ 72,273	$ 68,989
King Country Energy	$ 13,125	$ 13,357	$ 14,289	$ 13,590	$ 1,060	$ 171	$ 473	$ 568	$ 16,861	$ 17,094	$ 17,136	$ 17,030
MainPower	$ 37,244	$ 41,998	$ 44,396	$ 41,213	$ 4,547	$ 6,699	$ 5,912	$ 5,719	$ 40,205	$ 42,540	$ 45,840	$ 42,862
Marlborough Electric	$ 24,510	$ 26,722	$ 29,491	$ 26,908	$ 3,562	$ 3,702	$ 3,641	$ 3,635	$ 33,418	$ 35,552	$ 38,438	$ 35,803
Mercury Energy	$ 461,633	$ 528,925	$ 573,348	$ 521,302	$ 65,664	$ 82,110	-$ 25,313	$ 40,820	$ 340,183	$ 373,606	$ 371,515	$ 361,768
NorthPower	$ 63,361	$ 67,916	$ 63,893	$ 65,057	$ 4,920	$ 5,958	$ 7,309	$ 6,062	$ 57,701	$ 59,724	$ 61,618	$ 59,681
Powerco	$ 78,184	$ 125,316	$ 154,169	$ 119,223	$ 8,154	$ 17,963	$ 21,031	$ 15,716	$ 87,501	$ 164,377	$ 214,349	$ 155,409
ScanPower	$ 8,666	$ 9,680	$ 10,108	$ 9,485	$ 977	$ 1,217	$ 1,100	$ 1,098	$ 8,229	$ 8,612	$ 8,696	$ 8,512
SouthPower	$ 371,398	$ 393,889	$ 427,838	$ 397,708	$ 26,053	$ 31,828	$ 43,103	$ 33,661	$ 407,387	$ 538,127	$ 666,090	$ 537,201
Tasman Energy	$ 24,327	$ 26,188	$ 26,433	$ 25,649	$ 5,696	$ 5,055	$ 6,466	$ 5,739	$ 37,168	$ 65,581	$ 93,817	$ 65,522
The Power Company	$ 40,876	$ 47,577	$ 24,029	$ 37,494	$ 606	$ 3,704	$ 2,586	$ 2,299	$ 30,067	$ 31,919	$ 34,739	$ 32,242
Top Energy	$ 27,794	$ 29,473	$ 29,747	$ 29,005	$ 3,031	$ 3,619	$ 3,744	$ 3,465	$ 38,871	$ 48,395	$ 52,030	$ 46,432
Waipa Power	$ 26,059	$ 25,037	$ 25,632	$ 25,576	$ 1,536	$ 1,986	$ 2,559	$ 2,027	$ 38,238	$ 54,352	$ 54,100	$ 48,897
Wairoa Power	$ 6,758	$ 6,678	$ 6,902	$ 6,779	$ 549	$ 508	$ 733	$ 597	$ 8,072	$ 8,279	$ 8,529	$ 8,293
Waitaki Power	$ 13,918	$ 14,803	$ 15,375	$ 14,699	$ 784	$ 889	$ 715	$ 796	$ 14,887	$ 14,999	$ 15,300	$ 15,062
Waitomo Energy Services	$ 20,307	$ 22,178	$ 21,410	$ 21,298	$ 2,373	$ 3,168	$ 3,192	$ 2,911	$ 18,535	$ 28,546	$ 38,565	$ 28,549
WestPower	$ 18,211	$ 20,004	$ 20,334	$ 19,516	$ 3,109	$ 3,736	$ 3,561	$ 3,469	$ 55,249	$ 59,976	$ 62,858	$ 59,361
MEAN	**$ 58,375**	**$ 65,215**	**$ 68,258**	**$ 63,949**	**$ 6,162**	**$ 7,907**	**$ 4,366**	**$ 6,145**	**$ 61,716**	**$ 75,996**	**$ 85,741**	**$ 74,484**

Notes: (1) Electricity revenue was treated as those sales for which tariffs were set and excluded contracting, miscellaneous, interest, generation.

Not all annual accounts provided a split and thus in some cases, total revenue was taken to be electricity sales.

Table 41 - Regression Analysis

5 INDEPENDENT VARIABLES

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.549
R Square	0.302
Adjusted R Square	0.177
Standard Error	2.848
Observations	34

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	98.117	19.623	2.419	0.061
Residual	28	227.123	8.112		
Total	33	325.240			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	-2.325	5.233	-0.444	0.660	-13.044	8.394
Mean Tariff	**0.719**	**0.389**	**1.846**	**0.076**	**-0.079**	**1.517**
Assets employed per customer	-0.313	0.301	-1.040	0.307	-0.928	0.303
Customers	0.000	0.000	0.310	0.759	0.000	0.000
Density	**0.150**	**0.085**	**1.775**	**0.087**	**-0.023**	**0.324**
Mean values Social Community Objectives	0.813	1.261	0.644	0.525	-1.771	3.396

Table 42 - Regression Analysis

2 INDEPENDENT VARIABLES

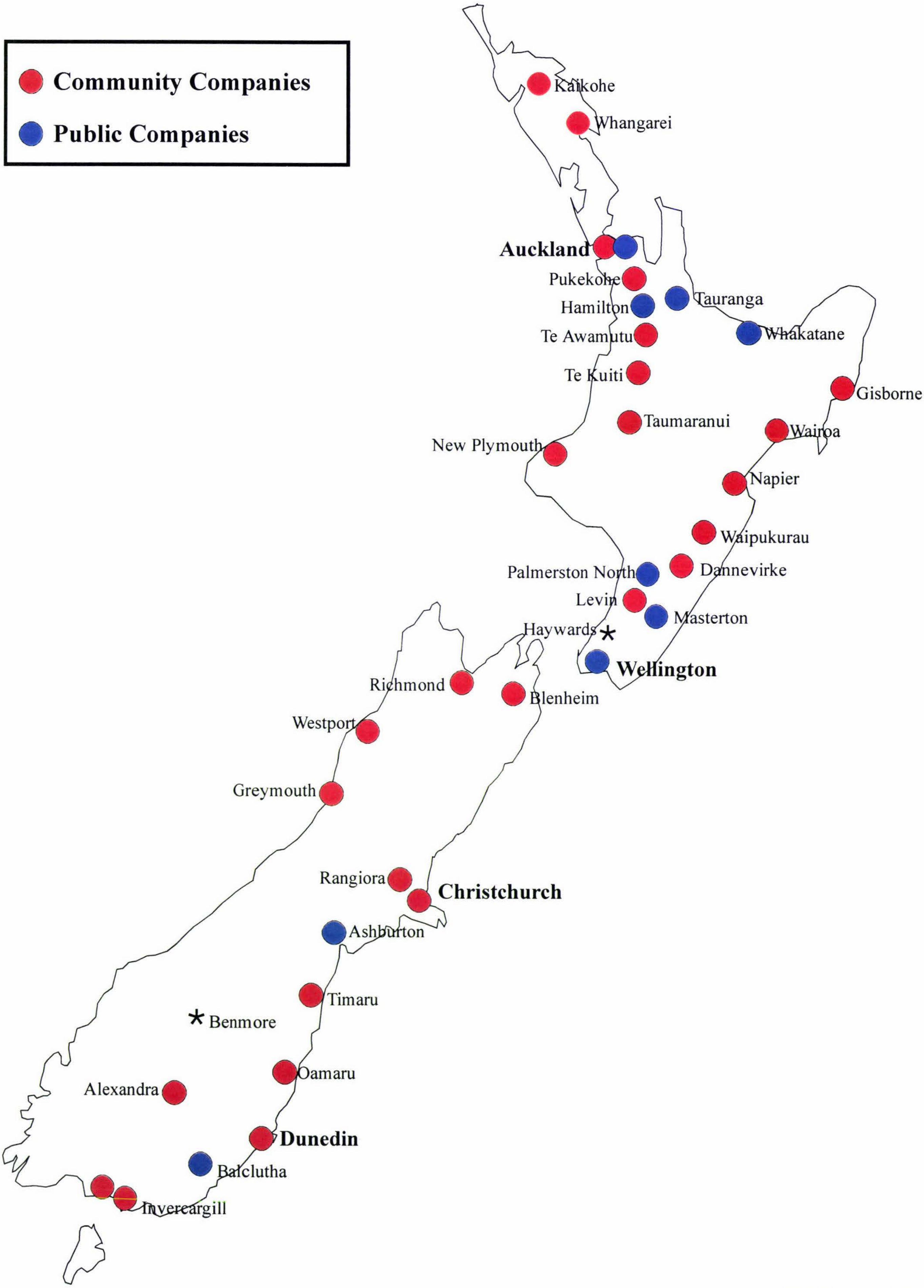
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.517
R Square	0.267
Adjusted R Square	0.220
Standard Error	2.773
Observations	34

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	86.877	43.438	5.649	0.008
Residual	31	238.363	7.689		
Total	33	325.240			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-1.598	4.251	-0.376	0.710	-10.269	7.073	-10.269	7.073
Mean Tariff	0.679	0.352	1.931	0.063	-0.038	1.397	-0.038	1.397
Density	0.159	0.062	2.552	0.016	0.032	0.285	0.032	0.285


Community Companies
Public Companies
Kaikohe
Whangarei
Auckland
Pukekohe
Hamilton
Tauranga
Whakatane
Te Awamutu
Te Kuiti
Gisborne
Taumaranui
Wairoa
New Plymouth
Napier
Waipukurau
Palmerston North
Dannevirke
Levin
Masterton
Haywards
Wellington
Richmond
Blenheim
Westport
Greymouth
Rangiora
Christchurch
Ashburton
Timaru
Benmore
Oamaru
Alexandra
Dunedin
Balclutha
Invercargill