

**THE YELLOW DRAGON, THE BLACK BOX AND
THE GOLDEN COIN:
NEW CHINESE IMMIGRANTS AND THEIR
CONTRIBUTIONS TO
NEW ZEALAND'S KNOWLEDGE SOCIETY**

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Abstract

This study explores whether and how skilled Chinese immigrants can contribute to New Zealand's knowledge society and economy with their knowledge and skills. As New Zealand is moving towards a knowledge society and economy, the attraction of skilled migrants is one of the critical strategies in maintaining its competitive advantages. However, the results of the socioeconomic integration of new skilled migrants always lead to debates on the real role of skilled migrants in New Zealand's society and economy. This study uses multiple research strategies combining analyses of historical and statistical materials, and a case study with fourteen interviews conducted with new Chinese immigrants, who came from Mainland China after 1990 and are living and working in Christchurch, to explore the relationships between these 'descendants of the dragon' and New Zealand's knowledge society and economy. Through these strategies, the study shows the role of knowledge in the emergence of New Zealand's knowledge society and economy, the value placed on knowledge and skills in New Zealand immigration policies and the change in the Chinese community with the growing demand for skilled migrants. It argues that tacit knowledge is not separated from but interactive with explicit knowledge through cultural values, social networks and structures, and interpersonal relationships. Therefore, in the process surrounding the entry of new skilled Chinese immigrants into New Zealand society, the knowledge economy is not exclusively economic but socially and culturally conditioned; and the knowledge society is not universal but diversified and interdependent.

Introduction

Knowledge, Economy and Global Migration in Knowledge Societies

As the product of human civilization, knowledge has always played a crucial part in the history of economic development and social progress. Every step of development in human society can be traced to the growth of knowledge and the advancement of technology. In the 18th and 19th centuries, the first industrial revolution was initiated by the invention of the steam engine. This was followed by continued industrial growth with numerous scientific discoveries. The first half of the 20th century saw the rapid expansion of industrialised society with more discoveries and inventions. However, not only do knowledge accumulation and technological innovation bring economic prosperity but they also cause unpredictable social consequences such as conflicts and sufferings. Essentially, knowledge is observed as a black box with both mysterious temptations while it remains closed and uncertain consequences once it is opened.

This contradiction, however, does not frustrate human efforts to exploit knowledge. Since the early twentieth century, the 'knowledge explosion' has constantly brought new themes for economic development and enabled knowledge to reshape social, economic and political conditions both locally and globally. The terms 'knowledge economy' and 'knowledge society' are typical discourses illustrating how the effects of knowledge are observed and explained in the new era. Scientific knowledge is always used as a synonym of knowledge and thus, it implies the exclusive form of knowledge production based on rationality in western culture (Gibbons, 1994). This logic justifies the reliability and privilege of scientific knowledge and makes it exclusive from other forms of knowledge derived from different societies and cultures. Consequently, the relationship between knowledge societies and knowledge economies is always a contentious issue for theories and practices. Despite the

debates, the fact cannot be denied that we are living in knowledge societies and knowledge will determine the fate of each country in the global market. In recent decades, most countries have tried their best to develop a knowledge economy. Some of them invest in developing enterprises based on hi-technology such as biotechnology and information technology, whereas others compete in attracting talented people from the global market to contribute in these countries' economic development.

As a traditional immigrant country, New Zealand has also been involved in this competition. Since the early 1980s, New Zealand immigration policy gradually shifted in a liberalist direction. In the 1986 policy change, the method of an occupational priority list was applied in the selection process of skilled immigrants. Since then, increasingly strict immigration policies have gradually shifted the focus to immigrants' personal qualities, qualifications and potential to contribute to New Zealand's economy and society rather than their country of origin (Department of Labour, 2000). This has led to increasing numbers of people with tertiary qualifications but with different cultural backgrounds arriving in New Zealand. (The 2006 New Zealand Census shows that the Asian population grew the fastest in the past decade and has doubled since 1996 (Statistics New Zealand, 2007)). However, many of these settlers do not appear to meet the expectation of immigration policies immediately on their arrival due to difficulties in adapting to an entirely different labour market. Particularly, when New Zealand is becoming a knowledge society, they seem to be poorly connected to the rising knowledge society as empirical evidence shows that migrants usually experience a downgrading in their occupational mobility and status following arrival in host countries (Winkelmann, Winkelmann, & University of Canterbury Dept. of Economics, 1998). For New Zealand's society, the preference of these new arrivals for settling in the major urban centres "contributed to tensions regarding the allocation of scarce resources ... and triggered an 'Asian invasion' backlash" (Henderson, 2002, p.3). It seems that there is a huge gap between the intention of the immigration policy and the reality of immigrants' adaptation and

integration into the society.

In New Zealand, Chinese migrants and their community appear to be a typical example of the changing relationship of economy-immigration-society. The Chinese started their history of immigration in New Zealand in the mid 1860s when gold was discovered and labour was desperately needed in the gold mines. In the following century, the Chinese community experienced fluctuating changes in its relations with mainstream society due to immigration policies. Nowadays, differing understandings of their relationship to New Zealand's knowledge society and economy can still be observed. These 'yellow-skinned' settlers worship the dragon and self-identify as its descendants. They believe that the dragon is a symbol of bliss and power and can bring fortune to everywhere they arrive. However, when they come to New Zealand, a country with a western cultural perspective, which regards the dragon as a peril, they face people's suspicions on whether they will bring bliss to New Zealand society and extra golden coins to its economy or unexpectedly bring disasters to the society and put burdens on its economy. These suspicions construct a big puzzle for both the public and scholars in New Zealand. Some research has been done to address different concerns on this issue. This study intends to increase knowledge on this issue through exploring whether Chinese immigrants, especially new skilled Chinese immigrants under New Zealand immigration policies who are working as knowledge workers, have fully contributed to New Zealand's knowledge society and economy. If not, what has prevented them from making a full contribution? If so, what and how can they contribute to the society?

While seeking to solve the puzzle, this study combines analyses of historical and statistical materials on Chinese immigrants in New Zealand with a case study drawn from the Chinese community in Christchurch, New Zealand. The statistical and historical analyses show the emergence of New Zealand's knowledge society and economy with the changes in its economic and social structure since 1990. The case study attempts to gain an in-depth insight into how linkages among Chinese

communities, New Zealand's knowledge society and other societies are built by Chinese knowledge workers. It also examines how Chinese knowledge workers enrich the connotation of New Zealand's knowledge economy during the process of knowledge production and diffusion. It argues that tacit knowledge is not separated from but interactive with explicit knowledge through cultural values, social networks and structures, and interpersonal relationships. Therefore, in the process surrounding the entry of new skilled Chinese immigrants into New Zealand society, the knowledge economy is not exclusively economic but socially and culturally conditioned; and the knowledge society is not universal but diversified and interdependent.

This study attempts to identify the position of the Chinese community in New Zealand's knowledge society and explore the successful experiences of new Chinese immigrants in their adaptation to this society. These efforts are expected to contribute to immigration research and practices in three aspects. First, this study provides evidence for theoretical verification, that is, for the examination of the applicability of definitions and theories on the knowledge society and economy in the New Zealand context. Secondly, it provides valuable information for policy-makers and enables them to build a reasonable policy environment for the development of New Zealand's knowledge society. Finally, this study also gives practitioners in different departments and agencies reference information to build an enlightened organisation and to diversify their talent pools in order to meet multiple needs in the knowledge society. Therefore, this study not only stands on its own, but also, to some degree, contributes to both New Zealand society as a whole and its ethnic minority communities.

This thesis is organised with an introduction, six chapters and a conclusion. Chapter One offers a background for understanding the linkage between knowledge societies and global migration. To understand the knowledge society in the global context, this chapter contains a brief overview of ideas on the relationship between knowledge societies and the previous social forms in human history, an introduction of debates and theories on the knowledge society and economy and a discussion of the change in

the economic and social relations of knowledge societies. Chapter Two presents the research design for this study including considerations ranging from general theories to specific strategies and methods for data collection and analysis.

In the light of the background information and theoretical and methodological considerations, the following chapters elaborate the issues around the research topic. Chapter Three examines New Zealand's knowledge society and economy in a global context. It looks at New Zealand's economic performance in the global knowledge wave and the emergence of New Zealand's knowledge society and economy from regional and historical perspectives. Following this chapter, Chapter Four focuses on exploring the relationship between immigrants (particularly skilled immigrants) and New Zealand's knowledge society and economy. In Chapter Five, the results of a case study including fourteen in-depth interviews with Chinese knowledge workers who are living and working in Christchurch are presented to explore how these 'descendants of the dragon' can bring benefits to the new land. Chapter Six discusses these findings against the relevant theories and literature and elaborates the implications of the study. Finally, the Conclusion serves as a summary to review the ideas presented and discussed in the previous chapters. Based on this, suggestions on further research aspects are given.

Chapter One Knowledge Societies in the Global Context

It was said of the mythological Greek king Cecrops that he founded a new city on the Acropolis in Attica and that he promised to name it after the god who would give the young town the most attractive gift. Poseidon, the god of the oceans, struck a rock, and out came a stream of clear water. Upon tasting it, however, Cecrops found the water to be brackish. The goddess of knowledge and wisdom, Athena, then approached him with more valuable gift: the olive tree. The rest, maybe, is history.

(Mokyr, 2002, p.xi)

It is widely accepted that knowledge is one of the crucial forces impelling human history. The products of knowledge are always used as indicators to identify different historical ages in relation to specific economic and social features. The ‘knowledge explosion’ in our age encourages both the public and scholars, including sociologists, to rely on analysing the growth of knowledge and associated changes to understand societies. The term ‘knowledge societies’ is a typical discourse for sociologists to explain the role of knowledge in the new age and to justify the exclusive significance of knowledge, especially theoretical knowledge for economic and social progress. When most countries attempt to catch the knowledge wave, they differ significantly in their strategies to fit into specific social, economic and political conditions at the local level. Globalisation as a driving force has brought more opportunities and challenges for countries to survive under a broader context. The constant flow of people and the instant sharing of knowledge in the globalisation process add new contents to knowledge societies. Therefore, societies have changed not only through time sequences but also across spatial boundaries in the past decades.

To understand the knowledge society under such a circumstance, this chapter will

begin with a brief review of ideas on the relationships between knowledge societies and the previous social forms in human history. Following this, it will introduce debates and theories on the knowledge society and economy to understand how the knowledge-economy-society relationship has been interpreted in knowledge societies. Thirdly, it will examine how these debates and theories have affected countries' strategies for moving towards knowledge societies. Finally, to identify the change of the economic and social relations of knowledge societies in the global context, this chapter will explore how globalisation, knowledge, the information and communication technologies (ICTs) and immigration have been linked with knowledge societies.

1.1 The Knowledge Society in Human History: Continuity or Breaks

According to Adhikari and Sales (2001), sociological perspectives on social formation and transformation have significantly shaped one of the tasks for scholars: differentiating societies and determining whether a society is the continuity of or a break with the past, and thus, developing appropriate theories to analyse its structures. This means that it is essential for sociologists to understand a society through identifying its historical position and spatial boundaries. For example, pre-industrial society, industrial society and post-industrial society are used as time-sequence concepts to identify different periods in human history, whereas Ferdinand Tonnies's *Gemeinschaft* and *Gesellschaft* are a pair of dichotomous concepts showing the understanding on the distinctive social relations and spatial boundaries in different societies.

During the 1960s and 1970s, the term 'knowledge society' was introduced to interpret the changes in social life and economic process caused by the growth of knowledge (Adhikari & Sales, 2001). However, there are still divergent opinions among

sociologists on its continuity. Some theorists insist that knowledge societies are continuous in history as all societies, to some degree, could be called knowledge societies in terms of the pervasiveness of knowledge. For example, Joel Mokyr, an economic historian, reviews the history of the First and Second Industrial Revolutions and the so-called 'Information Revolution' in the western world to justify his idea on continuity. He defines 'useful knowledge' as "a kind of knowledge accumulated when people observe natural phenomena in their environment and try to establish regularities and patterns in them" (Mokyr, 2002, p.3). In addition, he uses the conceptual framework of useful knowledge to explain his idea that economic development in the past two centuries has benefited not only from the emergence of new technologies but also from improved access to them. Thus, he concludes that the knowledge economy is the result of the evolutionary process in which the growth of technological and scientific knowledge has constantly shaped economic and social progress. For him, the rationality of technological advancement is naturally the logic of social transformations. However, the conception of 'useful knowledge' he proposed is based on western culture and seems to indicate that the knowledge society would define a universal route for all societies to achieve their goal for development.

However, theorists from another domain, such as Daniel Bell, Manuel Castells and Frank Webster, argue that the knowledge society and economy should be observed as a break with the past. For example, the term 'knowledgeable society' used by Robert E. Lane reflects this decisive break and the novelty of the knowledge society in human history. He defines a knowledgeable society as one in which its members:

(a) inquire into the basis of their beliefs about man, nature, and society; (b) are guided (perhaps unconsciously) by objective standards of veridical truth, and, at the upper levels of education, follow scientific rules of evidence and inference in inquiry; (c) devote considerable resources to this inquiry and thus have a large store of knowledge; (d) collect, organize, and interpret their knowledge in a constant effort to extract further meaning from it for the

purpose at hand; (e) employ this knowledge to illuminate (and perhaps modify) their values and goals as well as to advance them. Just as the 'democratic' society has a foundation in governmental and interpersonal relations, and the 'affluent society' a foundation in economics, so the knowledgeable society had its roots in epistemology and the logic of inquiry. (Lane in Stehr, 1994, p.5)

This conception emphasises the role of knowledge, especially scientific knowledge in supporting human societies to achieve their goals and guiding their members' conduct. In this conception, Lane regards knowledge as a cognitive process including known and knowing, and emphasises self-consciousness based on veridical truth. Although it still emphasises the rationale of scientific knowledge in social life, the conception indicates that the knowledge society should be distinguished from the previous social forms due to the change of the epistemological basis.

Peter Drucker is another theorist who popularised the concept of the knowledge society and the idea of discontinuity based on the central role of theoretical knowledge in the new age. In his 1969 book entitled *The Age of Discontinuity*, he states that discontinuity shapes the future of human societies. He identifies discontinuities that have been happening in new technology, the world's economy, and the political matrix of social and economic life and knowledge since 1913. According to him, new technologies and industries emerge with the fact that technologies are not based merely on science but knowledge and thus, make themselves an integral part of culture. Economic history is a history from agriculture-based economy to knowledge-based economy. The world demonstrates an increasing disparity between race based on culture rather than a cleavage between classes based on capitalist production relations. He claims, "[these] discontinuities are ... our 'recent future' – both already accomplished fact and challenge to come" (Drucker, 1969, p.5). In this book, he explains the central role of knowledge in generating the discontinuity and uses the concept of 'knowledge societies' to refer to the new age. For him, the distinction between science and knowledge allows culture, as an integral

part of knowledge, to play its role in economic and social dynamics. Meanwhile, his idea on the distinction between theoretical knowledge and craftsman skills suggests that theoretical knowledge, that is, ‘systematic, purposeful, organized information’ is the key to distinguish the knowledge society from those that preceded it.

These ideas show that, based on pre-existing perspectives on the formation and transformation of society, theorists from both domains attempt to identify changes in social, economic, political and knowledge conditions. For them, knowledge and its growth are a key to interpret these changes. Advocates of the continuity hold that knowledge societies are the result of knowledge accumulation and thus, they put more emphasis on the quantitative change of knowledge. Contrary to this view, the sceptic’s argument shows that knowledge societies differ from the previous forms of society not only because of the increase of knowledge but also due to the shifting connotation of knowledge and its effects on social, economic and political processes. Thus, the attributes of knowledge and the values, which people put on them, are important factors to be examined while exploring knowledge societies. This, in turn, leads to different understandings on knowledge societies based on disciplinary perspectives.

1.2 Debates and Theories on the Knowledge Society and Economy

In the field of economics, the term ‘knowledge economy’ is used by the Austrian-American economist Fritz Machlup with reference to one of the sectors of economy. Together with the term ‘knowledge-based economy’, these are used to refer to a type of economy in which knowledge plays an increasingly significant role in economic growth and the creation of wealth (Makarov, 2004). Since then, the knowledge economy and the knowledge-based economy have become prominent discourses. With a wealth of literature, theorists attempt to give an appropriate definition on this type of economy. Some scholars regard it as a ‘symbolic economy’ or ‘information

economy' whereas others define it as a 'weightless economy' or 'new economy'. These definitions reflect different understandings on knowledge and its influences in the economic process. Munro (2000) summarises these definitions and suggests that the knowledge economy is a combination of five components: information and communication technologies (ICTs), information networks, new industry processes (including innovation, research and development, and technological diffusion), human capital approach and a new approach of capital accumulation through the privatisation and commercialisation of knowledge. These economic features are used by some sociologists to offer different explanations on social change and thus, are linked to different sociological understandings on social formation and transformation.

However, no matter what diversity of labels are attached to the knowledge economy, it is universally agreed that knowledge has eventually become the most essential factor for production and that "economic wealth is created through the creation, production, distribution and consumption of knowledge and knowledge-based products" (Harris, 2001, p.22). This statement suggests that knowledge is treated as an economic good in the knowledge economy. According to Foray (2004), once knowledge is used as an economic good, some of its properties will magnify the social benefits. For example, the non-excludability and non-rivalry of knowledge, theoretically, allow sharing and using knowledge at no additional cost. The attribute of cumulativeness of knowledge makes knowledge consumption capital for people to undertake actions and intellectual capital for people to create knowledge for further actions. In particular, the development of the information technology infrastructure challenges economic ideas about the necessity of the protection of intellectual property for innovation. In addition, knowledge will not be depleted with intensive use but will be enriched. Therefore, these positive properties have initially made the knowledge economy as a prosperous destiny for the contemporary world.

When these social benefits are enthusiastically exaggerated, there appears a discussion on the relationship between the knowledge economy and society. Ungar

notes that the great pitfall for the knowledge society is that the knowledge economy is used as its metaphor. “Whereas the latter continues to attract interest, commentary and linguistic innovation, the former remains sterile. And to speak of a knowledge-based economy and society is to conflate the two” (Ungar, 2003, p.345). This leads to a questioning of the assumption that a knowledge economy will automatically lead to a knowledge society. Theorists from different disciplines and international organisations constantly comment on the relationship between the knowledge society and economy. For example, Rooney notes that “a knowledge society is a broader term than ‘knowledge economy’ or ‘knowledge-based economy’ in that it encompasses more intellectual activity than narrow economic, commercial and industrial concern” (Rooney, 2003, p.16). The Asian-Pacific Economic Cooperation (APEC) (Australian Bureau of Statistics, 2002) states that a knowledge society not only needs technological knowledge but also requires knowledge in other forms such as cultural, social and managerial knowledge. Leadbeater (2004) claims that we are living on thin air in which financial, knowledge and social capital have become driving forces in the new economy. In particular, he emphasises the role of social capital created by social networks in this new economy. In his view, the term ‘knowledge society’ reflects a more comprehensive understanding on knowledge and its effects on economic and social progress.

When the negative effects of knowledge are emphasised, the concept of ‘risk society’ is introduced as the synonym of the knowledge society (Fuller, 1997). This concept, according to Beck, shows “how a society based on knowledge, information and risk opens up a threatening sphere of possibilities” (Beck, 1999, p.141). In a risk society, the growth of knowledge not only brings economic prospects but also puts a heavy burden on individuals to deal with uncertainty and take responsibility for their own well-being. A poll conducted in the US shows that most Americans tend to be pessimistic about their future although they should have enjoyed the advantages brought by the knowledge economy. It concludes that this pessimistic mood is attributed to the fact that the knowledge explosion has dramatically accelerated the

process of self-analysis and self-correction necessary to survive in a knowledge society (Mazarr, 1998). Therefore, it appears that the majority of people in the knowledge society still struggle to possess knowledge capital as knowledge or non-knowing will bring completely different effects on their daily life.

Giddens, Lash and Beck (in Beck, 1999) develop the theory of 'reflexive' modernization to understand the reflection of knowledge on foundations, consequences and problems of modernization processes. According to them, knowledge forces decisions and encourages actions. Consequently, individuals are released from Max Weber's 'iron cage' and have to redefine the context for action to deal with uncertainty. However, individuals do not passively react to systematic processes but constantly adjust their social practices to adapt to changed circumstances. This idea on reflexivity leads them to notice not only the challenges of the 'risk regime' to individuals but the emerging opportunities for economic activities. They view reflexivity as a source of productivity and state that the outstanding characteristic of the new knowledge work is "the self-application of knowledge to knowledge as the central source of productivity" (Beck, 1999, p.113). They note that reflexive modernisation is a crucial force in changing economic structure as the increasing share of knowledge in productivity has changed all sectors in economies rather than just throwing a light on some of them. These ideas seem to indicate that knowledge work would emerge, or in fact, has emerged as an inevitable result under the discourse of 'risk society'.

Beck (1992) also notes the linkage between the discourse of the risk society and issues surrounding trust and credibility caused by a declining faith in 'science'. Similarly, Füredi justifies the discourse of risk society as our culture of fear. He states that "one of the ironies of our times is that while society is more dependent on science and technology than ever before, it is also more suspicious of their consequences" (Füredi, 2002, p.131). They believe that the growth of expert systems would show the lack of confidence about the future direction for a society and of clarity in social

relations for individuals. Thus, individuals have to take responsibilities to minimise their risks. Indeed, under such a circumstance, individuals inevitably face the question: “who can I trust?” while knowledge is becoming fragmented and competitive. However, to cope with the uncertainties of life, people at all levels of society still have to rely on ‘professional advisors’ in order to have access to reliable knowledge. Therefore, the shifting relationship between scientific knowledge and the public will cause the growth of complexity in society and suggest the significance of accessing information and acquiring knowledge.

For some theorists, the information society is an appropriate replacement of the knowledge society because “the character of information is such as to have transformed how [individuals] live ... [and] theoretical knowledge/information is at the core of how [individuals] conduct [themselves] these days” (Webster, 2002, p.9). According to Webster, Castells’s three-volume study, *The Information Age: the Rise of the Network Society*, (1996 to 1998) is regarded as having a significant influence on the thinking of social scientists on the information society. For Castells (1996), the most basic change in the mode of production in the information age is the transformation from industrial to informational capitalism. The latter is driven by information and communication technologies (ICTs), which become the new source of productivity growth. Thus, the change in the mode of production causes changes in the organisation of production and the structure of the market at the global level. This leads to emphasising the increasingly significant role of theoretical knowledge, which enables ‘knowledge working on knowledge’ and the rise of the mass media culture and interactive networks in social life. His analysis enables him to conclude that the network society is now emerging and defines it as “a society that is structured in its dominant functions and processes around networks” (Castells, 1996, p.148). He emphasises that information technologies do not produce the network society but without it, “it could not be such a comprehensive, persuasive social form, able to link up, or de-link, the entire realm of human activity” (Castells, 2004b, p.148). In the complex, dynamic networking society, Castells adds, the communication between

networks and individuals depends on the shared cultural codes which are shaped by values, experiences and identities. From this point of view, the logic of network is not only determined by technical possibilities but also based on shared culture and values.

Comparing the concept of knowledge societies with that of information societies, Castells (2004a) argues that since information and knowledge are the major sources for all known societies to generate wealth, power and meaning, the concepts of information societies and knowledge societies are misleading. Instead, the label of 'information age' and the definition of the network society for the new epoch show the constructive power of information technologies in our society. Although he seems to be successful in integrating concepts such as globalisation and networks into his theory, some scholars still argue against his standpoint. According to Garnham (2004), Castells deploys the tradition of classic political economy to explain the relationship between the change in mode of production and the change of society in general and between culture and politics in particular. Thus, the paradigm of informationalism is virtually a technological determinism. Webster argues that his network society just focuses on formal organisational structures with central domination rather than on real networking interaction (Webster, 2002). In addition, Schiller and Miese state that "knowledge and communication are affected more by the basic imperative of the underlying economy and the objectives and values it generates, than by the features of the new instrumentation" (Schiller & Miese, 1990, p.161). They challenge the idea of overestimating the role of information technology in the construction of a society.

Nowotny, Scott and Gibbons (2001) use Mode-2 science in Mode-2 society to understand complexity and explain the relationship between the co-evolution of science and society. According to them, "Mode-2 science has developed in the context of a Mode-2 society ... science and society have become transgressive arenas, co-mingling and subject to the same co-evolutionary trends" (Nowotny et al., 2001, p.4). They suggest that the Mode-2 conditions show that society has moved beyond previous categories such as technology, economy and politics, and thus, the

constitution of science is related to the growing contextualisation and socialisation of knowledge. Although it is criticised as “an endorsement of applied science and an apologia for relativism”, these ideas emphasise the social and cultural context for the generation and distribution of knowledge. Similarly, Rullani (2003) uses the concept of ‘social capital’ to explain how similar technologies will cause different performances in diverse social contexts. He believes that in order to cope with complexity and uncertainty, people need to build their social capital not only from their inheritance in the past but also from currently producing social networks. Therefore,

Cultural values, aesthetic imagination, communication language and experiential capabilities can be very useful resources for the reflexive identification of ends and means ... communities of practice can usefully frame the production or adaptation of suitable social capital in different context of social life. (Rullani, 2003, p.37)

Certainly, this indicates that socially embedded knowledge has gone beyond the meaning of solely scientific knowledge. In the contemporary world, knowledge is not only produced in formal institutions but also generated when it is applied in social life to deal with the complex situation.

Accordingly, the above ideas show that the axis of the discourse of risk society is its concern on the complexity and the effect of knowledge, especially its negative effects on the public as both producer and consumer of knowledge. As consumers of knowledge, individuals face the insecurity of less knowledge and the uncertainty of more knowledge. Both situations lead to the flourishing of the ‘risk regime’ for individuals and the growth of expertise systems in society. This justifies the emergence of knowledge work to deal with uncertainties and protect the public from the insecurity. As producers of knowledge, individuals are viewed as agents of knowledge to reflect on economic and social changes. Knowledge liberates

individuals but at the same time, brings uncertainties to them. In turn, individuals' reflexive reactions to changed circumstances serve as a source of productivity and changes economic structure. At the same time, society becomes increasingly complex and uncertain while social, historical and cultural sources are being employed by individuals to deal with the uncertainty. The 'risk' discourse on knowledge can also be traced to the public domain. For example, since knowledge is invisible to others and difficult to imitate and reproduce, Foray (2004, p.215) holds that:

Defining knowledge, codifying it, providing incentives to encourage employees to describe and disseminate their skills are all high-risk activities from the point of view of the control that a business would like to exercise over its intellectual capital.

According to him, knowledge management has an increasingly crucial role for organisations to maintain good performance. In particular, the intangible nature and tacit dimension of knowledge make knowledge management necessary. From this point of view, the discourse of knowledge societies is not only constructed with the negative effect of knowledge but also the tacit feature of knowledge.

Compared with the discourse of risk society, Daniel Bell has a different view on the role of knowledge and the modernisation process. He is one of a number of well-known theorists who popularises the term 'post-industrial society'. Bell states that the concept of post-industrial societies is concerned with a social structure in which "the economy is being transformed and occupational system reworked and with the new relations between theory and empiricism, particularly science and technology" (Bell, 1973, p.13). He summarises five dimensions of the post-industrial society to show the change of the economic sector from a goods producing to a service economy, the pre-eminence of the professional and technical classes in the occupation system and the role of knowledge and intellectual technology in decision-making and future orientation. He states that "post-industrial society is organized around knowledge..."

(Bell, 1973, p.20) These ideas allow him to forecast the emergence of the knowledge society. He explains that in the knowledge society, research and development has become the major source of innovation while knowledge sectors are increasing contributing to the Gross National Product (GNP) and employment.

Although Bell positively forecasts the changes around knowledge, his ideas are criticised by other analysts. For example, Giddens (in Stehr, 1994) maintains that he inappropriately applies observations from the United States to other countries without considering national contexts and neglects the sociological reflection on the nature of 'theoretical knowledge' while explaining the axial principle of post-industrial society. In particular, Bell's practice of categorising countries as post-industrial and industrial ones is criticised as expanding capitalist logic to the global level under the new international division of labour. According to Waters (2001), the fully globalised production system allows commodity production to be assigned to the place which could generate the biggest profit. As a result, the restructuring of the global economy enables post-industrialisation and industrialisation processes in different parts of the world. The most economically advanced parts of the world, such as the US and EU, provide commodified services whereas the less developed countries focus on labour-intensive goods production. From his point of view, post-industrial societies offer nothing new; they merely continue the old logic.

To some degree, these efforts to define the new era have grasped only part of the essence of the knowledge society. The concept of the risk society discloses the uncertainty caused by the growth of knowledge and its effects on the public. The post-industrial society attempts to map out social structure through analysing the shifting role of knowledge in economic production. The information society emphasises the role of information technologies in a society. The network society focuses on analysing the economic and social structure of the knowledge society guided by the logic of network. Despite their different foci of these accounts, there are still linkages between them. For example, Lyon (1988) notes that the idea of an information society

is a restatement of the post-industrial society as the accounts of an information society have been developed under the context of 'post-industrialism'.

Lash's critique on information also shows the linkage between the information society discourse and the risk society one. According to him, "[t]he information society has often been understood in terms of knowledge-intensive production and a post-industrial array of goods and service that are produced" (Lash, 2002, p.2). However, he argues that there is a contradiction between the rational production based on information and knowledge and the incredible irrationality of information overloads as an unintended consequence in the information society. Since information-intensive production has a high level of reflexivity, the problem of reflexive modernisation is that it fails to grasp the real existing non-humans as objects. Therefore, the information society is, to some degree, a reflexive society in which "the object ... escapes the cognitive categories of the subject..." (Lash, 2002, p.50) and thus, it causes unintended consequences.

In all of the above accounts, knowledge has become a key for theorists to interpret social transformation. This seems to justify the emergence of a discourse on the knowledge society. According to Stehr (1994), the use of the knowledge society to label this newly emerging social form is attributed to the fact that knowledge has become the most crucial driving force for the constitutive mechanism of the contemporary society. In the knowledge society, knowledge is not only a crucial source of added value and an immediately productive force, but is also a mediator of social relations. From a sociological perspective, Bohme and Stehr (1986) distinguish the content of knowledge and the process of knowing. This leads them to claim that the production of knowledge in knowledge societies has enabled social and cultural sources to be introduced into the process of the codification of knowledge. Therefore, "[k]nowledge has become the agent of social change ... [p]roduction of knowledge is consequently social production" (Bohme & Stehr, 1986, p.17&19). These ideas lead them to conclude that knowledge opens to social action which enables social

transformation.

However, McLennan criticises Stehr's sociological 'creationism' on the ground that it does not address issues of the contemporary knowledge society. Rather, he interprets Stehr's standpoint as "our cultural production of reality [which] nowadays takes place in and through genuine knowledge" (McLennan, 2003, p.5). According to him, neither Stehr's actionist ontology nor Castells's 'knowledge acting upon knowledge' pay enough attention to social and cultural factors but treat them as supplementary agents when they examine the role of knowledge. One of the most apparent consequences of the knowledge society ideology is social discrimination based on knowledge. According to Fuller (1997), credentials certified through formal education and the development of information and communication have permitted the practice of social inclusion and exclusion with a new logic. The knowledge society is open for knowledge and technology haves while consigning have-nots to the edges of the society. To understand the meaning of knowledge in the knowledge society, Fuller (2001) examines three words: expertise, credentials and intellectual property. He notes that "knowledge is increasingly alienated from the person of the knower" in the knowledge society due to practices such as maintaining knowledge as a 'public good', trading it as 'intellectual capital' and constituting it based on social relations. From his point of view, the ideology that knowledge is power is conditioned with social, cultural, economic and policy factors.

These theories and debates show that the discourse of the knowledge society does not emerge suddenly but with the flow of thoughts on social transformation. The assumption of the co-evolution of economy and knowledge leads to the emergence of the discourse of the knowledge economy in order to justify the increasing significance of knowledge in economic development. Consequently, the knowledge economy is used as a metaphor for the knowledge society and the analysis of the social structure of knowledge societies always follows the logic of the knowledge-economy-society relation. By this means, the new form of society is defined based on different

understandings of the role of knowledge in economic dynamics and social transformation. Debates on these issues open to a more comprehensive and multiple-faceted causation for interpreting knowledge societies and announce both opportunities and challenges for all countries.

1.3 Countries' Strategies for Moving towards the Knowledge Society and Economy

For each country, survival in a knowledge economy and movement towards a knowledge society reflect, to some degree, how its government can make favourable policy environments in order to support the creation, production and distribution of knowledge. Since policy-makers start to proclaim that we are living in knowledge societies and economies, various departmental documents and disciplinary research on the strategies for surviving in a knowledge economy have been constantly initiated and integrated into governments' documents. Continental European countries, for example, are preparing their citizens for living and working in a knowledge-based society. The European Round Table of Industrialists (ERT) (2001, p.183) believes that “[the] new European will need not only the skills to meet the challenge of a knowledge-based economy; she or he will also need a positive attitude towards innovation and entrepreneurship”. Similarly, the UK Prime Minister laid out his vision for the development of the knowledge economy in the UK. He plans to focus more attention on improving education, stimulating competition and broadening access to the new technology, including IT technology (Golstein, 1999).

The Organisation for Economic Co-operation and Development (OECD) is one of several leading organisations which advocate the concept of the knowledge-based economy and relevant practices. In the late 1990s, this organisation attempted to design a range of indicators to enable the evaluation and comparison of the

performances of its members working towards a knowledge economy. Some indicators, such as the contribution of knowledge-based industries to Gross Domestic Product (GDP), the investment in knowledge, ICT expenditure and human resources, have become the criteria for rich economies (Organisation for Economic Co-operation and Development & Organisation for Economic Co-operation and Development Economic Analysis and Statistics Division, 1999). The OECD claims:

The rich economies are coming to depend increasingly on the creation, distribution and use of information and knowledge, involving both technology and human capital ... [t]he future prosperity of rich economies will depend both on their ability to innovate and on their capacity to adjust to change. (Which economies will benefit most from the knowledge-based growth?, 1996, p. s43 & s45)

This statement emphasises the significance of information and knowledge in economic performance and encourages its members to take actions to face the oncoming challenges. However, studies conducted by the organisation also show that the definition of the knowledge economy is still vague and thus, some unskilled workers in knowledge industries have been counted as knowledge workers (Finance and economics: Knowledge gap, 1999). These problems in practices, to some degree, reflect theoretical debates.

Although it is problematic to try to determine the way ahead, these visions on fostering a knowledge society and economy emphasise the significance of human resources and try to classify and upgrade the skill level of their people. Among traditional immigrant countries, such as New Zealand, Australia and Canada, they not only focus on internal human resources but are also concerned with their immigrant intakes. This has significantly shaped their immigration policies in past decades. Ongley and Pearson (1995) compare the immigration policies among New Zealand, Australia and Canada after 1945 and conclude that Australia tends to adopt a more

strict immigration policy out of a concern for national security while New Zealand and Canada always focus on linking their immigration policies to the fluctuations of labour demand. Despite existing different foci on settler intakes, Ongley and Pearson notice the historical parallels among the three countries. They explain that all three countries are 'settler capitalist societies' colonised by a predominantly British population and experienced a growing diversity of populations to meet their labour demand after World War II. They all are 'semi-dependent' producers of primary product in the world economy. Their immigration policies moved from discriminatory immigration policies in the late nineteenth and early twentieth centuries to comparably non-discriminatory selection procedures emphasising economic and occupational criteria, family links, and humanitarian considerations. Since the late 1980s, immigration policies have gradually shifted to target skilled migration (Ongley & Pearson, 1995). These similarities indicate that for each of the three countries, there is a high degree of competition to attract skilled migrants in the global labour market to meet its requirement of developing knowledge economies while moving towards knowledge societies.

In New Zealand, the way of developing a knowledge society and economy is a contentious issue. This is highlighted by *The Catching the Knowledge Wave Project* starting in 2001 (University of Auckland, 2001), which aimed to work out how New Zealand can benefit from knowledge creation and innovation. Themes studied in the project include: innovation and creativity, people and capability, sustainable economic strategies, entrepreneurship, social dynamism, and knowledge opportunities. Around these themes, the project not only studies issues drawn from a global context but also pays attention to the unique conditions of New Zealand for developing a knowledge society and economy. In particular, it emphasises the idea that New Zealand is not only a "brain gain" country attracting immigrants from relatively less developed countries and regions but also a potential "brain drain" country to core countries such as the US. Thus, in the increasing globalisation process, it is challenging to attract and keep the talented who may contribute to the development of New Zealand. In addition,

it suggests that although communities were typically built based on factors of geography, nationality or ethnic backgrounds, the development of the Internet will improve people's ability to create 'communities of choices' in which people can both join and withdraw freely without losing their diversity and differentiation.

These ideas also show that although the knowledge economy seems to force countries to shift their focus from traditional agriculture or industries depending on land and natural resources to knowledge-based enterprises, it does not mean that New Zealand with the priority of developing agriculture, will lose its position in the economic hierarchy. Instead, it is catching up and preparing well for the challenge. For example, in the past several years, various governmental documents, enterprise guidelines and institutional research have presented various strategies for winning the competition in the knowledge economy and moving towards a knowledge society. Based on specific social and economic conditions, the New Zealand government has increasingly put weight on knowledge-based development such as applying biotechnology in agricultural development, increasing the national talent base and developing IT enterprises, tourism and education (Finch & New Zealand Association for Co-operative Education, 2002; New Zealand Information Technology Advisory Group, Frederick, McIlroy, French, & Ernst & Young (N.Z.), 1999). Therefore, these developing strategies for moving towards a knowledge society show that the New Zealand government is attempting to equip New Zealand businesses and people to compete in the global market. Meanwhile, it is aiming to attract the talented, with its favourable business and policy environment, from other parts of the world to contribute to its economic and social developments.

At the same time as countries in the developed world are working out their strategies, developing countries also attempt to improve their performances. For example, the Malaysian government has formulated an ambitious plan to use knowledge as the basis for economic development and to catch up with that of industrialised countries. However, Evers (2003) uses socio-economic indicators in Malaysia to show that

while the ambitious strategy of knowledge development seems to move Malaysia ahead of most of other Asian nations, the country is still falling behind the OECD countries. He claims that while the knowledge gap is the precondition for development, it is not a natural phenomenon but is constructed by governments and experts. Other scholars argue this political-economic perspective on knowledge societies. For them, the knowledge economy is observed as an opportunity to share knowledge and catch up with the developed world. They believe that intensification of globalisation has brought opportunities for the developed world to share “the knowledge that underlies technological advances and prosperity ... with other communities that have been traditionally excluded from such knowledge...” (Afele, 2003, p.5). From this point of view, globalisation serves as a driving force for sharing knowledge and narrowing the knowledge gap.

In the twenty-first century, developing countries with a rapidly growing economy, such as China, are placing more importance on the development and modernisation of their ICT sectors than ever before. For example, In the 10th National People’s Congress in 2003, the former Chinese premier Zhu Rongji advised his successors to “‘energetically promote information technology (IT) applications and use IT to propel and accelerate industrialization’ so that the Chinese Communist Party (CCP) can continue to build a ‘well-off’ society” (Wilson III & Segal, 2005, p.886). Following this, the Chinese government has made huge efforts to build a communication infrastructure to foster the knowledge economy and help China acquire competitive advantages in the global market. Lawrence’s (1999) study shows that the government’s interest has gradually changed from censoring political comments and news on the Internet to the multi-billion-dollar investment in the construction of communication infrastructure. This significantly decreases Chinese users’ access cost and thus, not only facilitates business contact but also encourage the using of the Internet for the ordinary people. This strategy shows that the development of ICTs has become a criterion for the country to evaluate its degree of industrialisation, to bridge the gap between China and the developed world and thus, build a prosperous society.

However, Gurumurthy (2004) uses India as an example to show the gap in that country between the existing perceptions of the knowledge society and its social reality. He states that “the euphoria over India's meteoric rise as a knowledge society and information superpower needs a reality-check” as more than one-third of the population are illiterate (Gurumurthy, 2004, p.34). From his point of view, knowledge societies should be defined not only based on indicators related to hi-technology, such as information technology, but should also be considered with social reality. These practices and comments suggest that digital division not only exists between countries but also within countries.

Despite different geographical locations and political and religious regimes, nations attempt to weigh their advantages and disadvantages to catch the knowledge wave. Their strategies, on the one hand, show that both developed and developing countries are moving towards a knowledge-based economy although they substantially differ in their pace and priorities. On the other hand, they suggest that globalisation and ICTs have played a more crucial role in the knowledge society and economy than ever before. Globalisation enables countries to be integrated into the global economy with the flow of goods, services, investment, ideas and people while ICTs allows them to share knowledge without the limitation of time and space.

1.4 Globalisation, Knowledge, Information and Communication Technologies (ICTs), and Migration in Knowledge Societies

In recent decades, increasing globalisation, growing knowledge and advanced information technologies and frequently moving people have dramatically changed the world and reshaped societies. In particular, they have interacted with each other and linked to knowledge societies in various ways. Globalisation is a concept which has become fashionable since the mid-1980s. It is employed to describe the intensive

change in social, political, economic and cultural spheres on a global scale and thus, penetrates the discourse of all social science disciplines. The economic dimension of globalisation explains the change in production, exchange, distribution and consumption of land, capital, goods and labour services (Waters, 2001). Hoogvelt argues that “globalisation today is essentially a social phenomenon that drives cross-border economic integration to new levels of intensity” (Hoogvelt, 1997, p.131).

According to him, the work of authors such as Roland Robertson, David Harvey and Anthony Giddens provides, from a sociological perspective, an alternative explanation to overcome the limits of economic globalisation discourse. Robertson’s (in Hoogvelt, 1997) viewpoint on globalisation is related to conventional mainstream sociological theory of society as a social system. Thus, he introduces two concepts: ‘world compression’ and ‘intensification of global consciousness’ to explain how globalisation enables a process of economic interdependencies, global diffusion of environmental consequences and discourse unification. Harvey’s (in Hoogvelt, 1997) analysis of globalisation is derived from his idea on ‘time/space compression’. This allows him to explain how foot-loose capital has changed the organisation of spatial and social relationships and how technological progress enables the decrease of the ‘turnover time of capital’ on the other. Similarly, Giddens (in Hoogvelt, 1997) is also concerned with the issue of time and space. However, what is more important for him is the *relationship* between space and time. His ‘time/space distantiation’ is “a measure of the degree to which the friction of space has been overcome to accommodate social interaction” (Hoogvelt, 1997, p.119). Although these theories are concerned with the effects of globalisation on different aspects of society, they share the idea that the compression of time and space enabled by new communication and transportation technologies in the globalisation process will cause changes of spatial organisation and time arrangements in economic practices and social relations. As Hoogvelt (1997) suggests, together with the new international division of labour, these arrangements in the global system will distort the structure of economy and cause un-development in Third World countries. Consequently, dependency between

countries and social inequality within countries will deepen.

The emergence and rapid advance of ICTs in the past decades have shown the importance of ICTs in the reorganisation of space and time. Castells and Henderson (1987) suggest that ICTs have facilitated a major spatial transformation with the replacement of the space of places with a space of flows. Although social and economic processes are still based on a given place, the logic of activities is increasingly placeless. For knowledge societies, this implies that knowledge as a socio-cultural symbol can be distributed and shared without the limitation of place. As a result, it will enable knowledge economies and societies to be organised around knowledge. Castells (1989) puts great significance on the role of ICTs in the relationship between the sphere of socio-cultural symbols and the productive basis of society. He believes that information is drawn from culture, processed based on existing knowledge and verified by science or social experience. Thus, linkages among the culture of society, scientific knowledge, and the development of productive forces will be established with the development of ICTs. This analytical logic shows that technology is not created in vacuum but embedded in social, cultural and economic processes. However, the failure of distinguishing information from knowledge would lead to a critique for its technological determinism.

Stehr acknowledges the significance of the distinction between knowledge and information. He suggests that Bell's conception of knowledge and information contains the claim that "information is the handmaiden of knowledge" (Stehr, 1994, p.119). Bell defines information as:

... data processing in the broadest sense; the storage, retrieval, and processing of data becomes the essential resource for all economic and social exchange' ... By knowledge, in contrast, he means 'an organized set of statements of fact or ideas, presenting a reasoned judgement or an experimental result, which is transmitted to others through some

communication medium in some systematic form. (Bell in Stehr, 1994, p.119)

This distinction shows that for individuals, information is, to a greater or less extent, related to skill level while knowledge is associated with human cognitive capacity.

Steinmueller (2002) suggests that the acknowledgement of the distinction between information and knowledge allows us to examine issues related to the conversion of knowledge into information and the reconstitution of information into knowledge. He calls this the process of 'codification' and 'de-codification' and thus, realise that knowledge acquisition is a fundamental cognitive activity of humans. From this point of view, ICTs as both a product and medium of knowledge will play a crucial, but not exclusive role, in the production, distribution and reproduction of knowledge for knowledge societies in a global context. ICTs enable knowledge created in a specific society to be codified and distributed to other societies and thus, allow the existence of global activities with a lower cost and less time.

This justifies some theorists' claim that globalisation is one of the effects, rather than the cause of knowledge societies and economies. For example, Thurow states that "[t]he shift to an era of man-made brain-power industries is creating the technologies that are creating a global economy" (Thurow, 2000, p.19). This statement seems to be self-explanatory and assumes that globalisation is the product of a knowledge-based economy. However, no matter whether it is a cause or effect, it shows that globalisation has interacted with knowledge economies in the past several decades. Additionally, Durrenberger (1989) notes that the impact of ICTs which have greatly sped the exchange and interaction process are not limited to the economic sphere but related to the whole of social life. According to him, the basic change brought by ICTs is that they have affected social life by breaking the stable distinctions between private, public and vocational life. Therefore, vocational activities are no longer absolutely separated from the private and public sphere in space, values, relationships and culture. In recent years, these characters have increasingly been seen in

knowledge work.

In contrast, the de-codification process of information in other societies allows receivers to access the information depending on their social 'habitats', interpret it based on their own knowledge, experiences and values, and use it according to their personal needs. However, knowledge reproduction does not always go smoothly. David and Foray (2002) are concerned with the role of interpersonal relationships in the process of codifying and de-codifying knowledge. According to them, the process of learning based on a shared cognitive structure between individuals helps reproduce knowledge. From their point of view, the production, reproduction and dissemination of knowledge are related to both explicit and tacit knowledge. The term tacit knowledge was introduced by Polanyi with his well-known statement: "we can know more than we can tell" (Polanyi, 1967, p.4). It was later used to refer to "the knowledge gained from everyday experience that has an implicit, unarticulated qualities" (Sternberg, 2000, p.104). Initially, this type of personal knowledge was one of the major research topics for psychologists such as Robert J. Sternberg. In the last three decades, it became a hot topic among theorists who view knowledge and learning as a resource for the competitive advantages of business (Sternberg & Horvath, 1999). For example, Kogut's and Zander's research (in Sternberg & Horvath, 1999) shows how tacit knowledge embedded in work routines affects the diffusion of innovation within firms. From their point of view, tacit knowledge is important for people to undertake their tasks competently.

Together with the instant sharing of knowledge, the constant flow of people appears to be a solution with a great potential for developing a knowledge society and economy. Historically, the flow of people is not a new phenomenon. According to Thorns (2002), the combined forces of both push and pull factors (such as social, political and economic) in different historical periods have shaped patterns of global migration. Global migration may be loosely grouped into three distinct phases. The first phase can be traced back to the seventeenth century in the New World. The second phase,

from 1850 to 1920 served to provide manual labour for industrialisation in the western world. During the third phase, following World War II, these dynamics have continued to shape various patterns of global and local migration. Thorns writes that cultural diversity and urban heterogeneity are a direct result of global migration. At the same time, he believes that in the twenty-first century, the patterns of migration could change from unskilled labour to professional and technical workers and that 'brain drain' could become a severe problem in many countries (Thorns, 2002).

These ideas also indicate that the relationship between global migration and the knowledge economy could emerge as an inevitable topic in both 'brain gain' and 'brain drain' countries. In particular, increasing globalisation is gradually changing the process and type of migration. Using case studies on a number of traditionally Asian and European immigrant countries, Castles (2002) illustrates how globalisation has changed the context of migration. He explains that new settlers and temporary migrant workers are used to be two major models for understanding migration. New technologies of communication and transport enable the emergence of multi-directional flows of people, ideas, cultural symbols and multi-connected networks. As a result, the boundaries of the different categories of migrants are blurring. The emergence of transnational communities, multiple identities and multi-layered citizenships is an inevitable phenomenon. His study suggests that under the circumstances of increasing globalisation, migration should be understood as a dynamic process rather than a once-and-for-all activity. Thus, it will become a challenge for policy makers to try to make migrants contribute constantly to a specific country.

For 'brain gain' countries, the outcomes of skilled migration are diversified. Kanjanapan (1995) studied professional Asian migration streams in the US between 1988 and 1990. The results show that though Asians emerged as the dominant group for all professional migration during that time, the mode of entry among these professional migrants was varied. This suggests that the reasons for the entry of

highly skilled migrants would be varied and there is a need to look at specific cases to gain a better understanding. Reitz (2001) was concerned with the employment success of newly arriving immigrants in Canada's knowledge economy. He used statistical data to examine the performance of these immigrants in the labour market between 1970 and 1995. The results showed that the failure of skilled immigrants to gain employment in the labour market is multi-causal. This is attributed not only to the skills and knowledge levels of immigrants but is also determined by the education level of the native-born population. Therefore, it suggests that the socio-economic integration of immigrants is a comprehensive issue involving various aspects of receiving countries.

In New Zealand, some people complain that migrants and their knowledge appear to be 'useless' in the new land although they are eligible under highly selective immigration policies. At the same time, other people suggest that IT workers should be the major immigrant candidate group. In general, people tend to agree that immigration policies should "attract more people who will contribute to the knowledge economy, and fewer who will add to the taxpayer's [sic] welfare burden"(Get migrant mix right, 2001). These debates illustrate that although 'brain gain' countries intend to attract knowledge workers, it is problematic to identify them under existing industrial and occupational categorisation. The term 'knowledge worker' has been around for forty years but its meaning remains vague. For example, Machlup defines knowledge workers as "workers in occupations which produce and transmit knowledge" when he tries to quantify the contribution of knowledge to the post-war economy in the United States (Machlup in Stehr, 1994, p.179). However, this definition has been criticised as too arbitrary without the necessary inclusion of some groups of knowledge workers such as physicians and surgeons and too broad without differentiation to exclude some clerical and kindred workers. Moreover, the shifted understandings of knowledge have made the definition unmanageable. Thus, Joseph just sees the concept of knowledge worker as a metaphor searching for the meaning (Joseph, 2005) .

The difficulty in identifying knowledge workers is also attributed to the changing understandings on human capital as one of the sources for economic production. The concept of 'human capital' was used in Jocab Mincer's pioneering article "Investment in Human Capital and Personal Income Distribution" in the *The Journal of Political Economy* in 1958. Mincer and Becker of the Chicago school introduced the term into economics and it became a standard reference for many years with the meaning of "physical means of production" (Wikimedia Foundation, 2006, p.1). Along with changing economic circumstances, its meaning has shifted and people now increasingly recognise its multi-faceted features not only with economic but also with social meanings such as norms, interpersonal trust, social networks and social organisations. Eventually, some concepts, such as intellectual capital, institutional capital and social capital, were introduced to or associated with it and have modified its connotations. In particular, the knowledge society emphasises the relationship between human capital and the production and distribution of knowledge in different social, economic and policy contexts (Miller & Organisation for Economic Co-operation and Development, 1996). Therefore, it is necessary to explore the relationship between human capital, social networks, governmental policies and educational organisation under the new circumstances.

In recent years, the change in the institutional framework of knowledge societies has affected the economic role which is assigned to immigrants and the value of immigrant human capital (Reitz, 2001). This has led to the emergence of new themes for social scientists. Reitz (2002) summarised four aspects in studying immigration when cultural dimensions are integrated into them. They are pre-existing ethnic and race relations, labour markets and related institutions, government policies and programmes, and the process of globalisation. The emergence of these themes suggests that the research on immigration has started to pay attention to the impact of host countries on immigrants rather than merely focusing on the economic and social outcomes of immigration. For example, Watts and Trlin (2000) question to what

extent effective use is being made of the abilities and understandings of new settlers to help meet New Zealand's economic and social development objectives. Based on two studies conducted as part of Massey University's New Settlers Programme, they examined the employment and deployment of immigrants from non-English speaking countries in New Zealand companies and government organisations and suggested a social policy framework to maximise these immigrants' productive potential. These studies show that in a knowledge society, the relationship between host countries and immigrants is interactive rather than mono-causal. Therefore, "immigration policymaking needs to recognize interaction effects, develop multilateral approaches, and factor in the changed character of unilateral sovereign authority" (Sassen, 2000, p.65).

For 'brain drain' countries, global migration is usually observed as a negative effect due to the loss of their talented people. However, in recent years, the discussion has shifted from the fear of losing their elites towards efforts to re-draw their attention to their homelands. For example, the Chinese government constructs the discourse of 'new migrant', and celebrates "migration as a patriotic and modern act" to encourage the transnational practices and the construction of virtual communities among overseas Chinese through developing Chinese media and organisations overseas (Nyiri, 2001). This newly emerging discourse is expected to succeed in combining Chinese nationalism with the discourse of globalisation in order to fuel economic development without threatening the sovereignty of the nation-state. Therefore, in the era of the knowledge economy, global migrants are expected not only to contribute to host countries as knowledge workers but also to benefit their homelands as networkers. It also indicates the crucial role of ICTs in maintaining these links and supporting these practices in the global context.

Therefore, the change in knowledge societies is comprehensive and multi-faceted due to the interaction of various factors. The growth of knowledge and the advance of technology allow human activities to overcome the limitation of time and space. In

turn, the compression of time and space facilitates the process of globalisation through which knowledge is instantly being shared and people are constantly moving. ICTs as a mediator enable the conversion between knowledge and information and thus, allow knowledge produced at the local level to be shared globally. The past century saw various patterns in global migration caused by economic, political and social factors. In knowledge societies, the flow of the talented has considerably increased with the emergence of transnational communities, multi-layered citizenship and multiple identities. Skilled migrants with these multiple characters serve as knowledge workers in host countries and are expected to make contributions as a human resource. At the same time, ICTs allow their practices to expand to the global level to link with their home countries while changing the features of their work and lives at the local level. This study will use Chinese migrant knowledge workers as an example to explore the relevant issues in the New Zealand context and look at how these Chinese knowledge workers are contributing to New Zealand's knowledge society and economy.

Although there are still differing opinions on the relationship between the knowledge society and previous social forms, it cannot be denied that in the past decades, dramatic changes have occurred and shaped our understandings of economic processes and social structures. In the economic domain, the knowledge economy has become a major discourse to explain the increasing significance of knowledge in economic production and wealth creation. While the term 'knowledge economy' has always been seen as synonymous with a knowledge society, some scholars use their research to show the pitfall of this conflation and seek to encourage a greater attention to social reality. The concept of the knowledge society is acknowledged to be more comprehensive and inclusive as it is concerned with not only economic but also social and cultural meanings and forms of the society.

From the sociologist point of view, the discourse of the knowledge society is rooted in

the flow of thoughts on social transformation rather than emerging suddenly. The sociological efforts to define the knowledge society can be traced to Beck's risk society, Bell's post-industrial society and Castells's information age and network society. The risk society discloses the unintended consequences once the black box is open. Comparatively, the concepts of post-industrial society, information society/age and network society attempt to look at the prosperous aspects brought by the growth of knowledge. However, the flaw in the discourses of information society and network society are identified as the overestimation of the role of technology in social progress whereas the post-industrial society is criticised due to applying unchanged capitalist logic in the changing society. Moreover, these theorists apparently have different ideas on what should be counted as knowledge in their discourses of knowledge societies. They generally neglect the fact that knowledge societies will bring new social issues such as inclusion and exclusion, and digital division. Although all accounts merely grasp part of essence of the knowledge society, they share the idea that knowledge has increasingly played a decisive role in economic dynamics and social transformation.

The discourses on the knowledge society and economy have emphasised the importance of knowledge and brought both opportunities and challenges for all countries. Although each country is moving towards the knowledge economy at a different pace and with different priorities, knowledge workers and ICTs seem to be inevitable foci for them. Therefore, policy makers have commented constantly on and linked them with the prospect of nations. For traditional immigrant countries, the challenge is to attract the talented in the global market and keep them constantly contributing to their host countries. Therefore, the flow of talented people appears to be a contentious topic in both 'brain drain' and 'brain gain' countries and thus, shapes their strategies and expectations on skilled migrants. These debates also show the difficulties in the conceptualisation of ideas such as knowledge workers and human capital in a knowledge economy. ICTs facilitate the globalisation process with the flow of knowledge, information, goods and people. It not only enables the conversion

between information and knowledge and interaction between tacit and explicit knowledge and sharing knowledge without the limitation of time and space but also provides an opportunity for migrants to act as networkers to link different societies for sharing knowledge while serving as knowledge producers and distributors at the local level. From this point of view, globalisation, knowledge, ICTs and immigration interact with each other and change knowledge societies in different ways. Therefore, multi-causal explanation and comprehensive approaches should be deployed to understand a knowledge society and its relevant issues. The next chapter will address the theoretical and methodological considerations relating to the study of Chinese knowledge workers and their contributions to New Zealand's knowledge society.

Chapter Two Research Design

Sociology is a science concerning itself with the interpretive understanding of social action and thereby with a causal explanation of its course and consequences.

(Weber, 1968, p.4)

This definition is the starting point of Max Weber's conceptual framework for enquiring into societies in his book entitled *Economy and Society*. This work was written initially for economists; yet, it contains Max Weber's scholarly vision of society and "has become a constructive part of the sociological imagination..." (Roth in Weber, 1968, p.xxvii) According to Swedberg, although economic sociology seems to be the centrepiece of *Economy and Society*, it "also contains analyses of the relationship of the economy to politics, to law, and to religion, all of which need to be thoroughly discussed by sociologists — and economists!" (Swedberg, 2005, p.140). Therefore, an enquiry into issues related to economy and society and their relationships should employ a multi-causal analysis. It should examine not only economic and social events but also take other factors, such as politics and culture, into consideration.

Guided by Weber's perspective, this chapter will present considerations on the research design for this study from general theories to specific strategies and methods. To do so, it will start by reviewing the relevant concepts drawn from *Economy and Society* and other theories and concepts such as human capital theory and economic and sociological theories on knowledge, globalisation and migration. This will be combined with discussions on the relevance of these theories to the examination of the relationship between new Chinese immigrants and New Zealand's knowledge society. This will be followed by methodological considerations. Finally, the specific operational strategies for data collection and analysis will be addressed.

2.1 Theoretical Framework

To explore the relationship between new Chinese immigrants and New Zealand's knowledge society, appropriate theories and concepts have been deployed based on themes emerging in the literature review. The literature review in the last chapter has shown the pitfalls of inquiring into knowledge societies such as the limitations of economic explanations, technological determinism and universalism. In particular, the explanations of both economists and sociologists tend to emphasise certain features of a society while ignoring others. This inevitably causes difficulties in analysing the dynamics of the knowledge society. On the contrary, to explain the developmental direction of societies, Weber's *Economy and Society* covers various topics ranging from sociological concepts, economic actions and political power to the historic change of law and religion; in this way, it provides a good balance between economic and sociological understandings of societies. Therefore, *Economy and Society* has provided an appropriate theoretical perspective although the current relevancy of this work is still being discussed. Under such a perspective, this study attempts to use a multi-causal approach to explain how new Chinese immigrants are contributing to New Zealand's knowledge society. Applicable concepts and theories include concepts drawn from *Economy and Society*, Economic Sociology, human capital theory and the relevant economic and sociological theories on knowledge, migration and globalisation.

2.1.1 Concepts drawn from Weber's *Economy and Society*, and Economic Sociology

According to Weber, "social action ... may be oriented to the past, present, or expected future behaviour of others" (Weber, 1968, p.23). To explain 'social' features of action, such as subjective meaning and social relationships, and counter the reduction of individual behaviour to biological and psychological responses, Weber

summarises four oriented ways of social action although he acknowledges that social action in reality is usually oriented by more than one way. They are: instrumentally rational action determined by expectations, value-rational action determined by a conscious belief, affectual action determined by the actor's feelings and traditional action determined by ingrained habituation. This classification suggests that social action is multi-faceted and associated with an actor's subjective understandings of the meanings of his or her action and its results oriented to others. Emirbayer (2005) argues that distinguishing rational action from emotion-driven action and habit is problematic as the absolute boundaries have increasingly become blurred.

Despite this critique, the classification of social action is still applicable for the study. In this study, the researched subjects, Chinese immigrant knowledge workers, have a rich experience in making decisions and taking actions throughout the migration process. For them, these decisions and actions are not mono-causal but involve or integrate various rational and irrational motivations. Therefore, Weber's classification of social action provides guidance for exploring the reasons behind their decisions and actions such as migrating, receiving higher education and pursuing careers. In particular, the relationship between Weber's classification of action and his analysis of historical rationalisation processes helps explain how Chinese immigrant knowledge workers take different forms of 'rational' action in different social and political environments.

Weber conceptualises the term 'social relationship' to explain how "the action of each takes account of that of the others and is oriented in these terms" (Weber, 1968, p.26). By categorising the social relationship as communal and associative, he explains how different orientations of social action will lead to different social relationships. For him, social relationships, based on a subjective feeling of belonging, such as ethnicity and common language, always facilitate a communal relationship, while participation in a market is a typical associative relationship rationally motivated by interests. These ideas are useful for examining how Chinese knowledge workers take an action

based on economic rationality while using their own ethnic identities as an advantage to provide goods and services to specific groups of people.

To look at sociological relationships within the economic sphere, Weber distinguishes economically oriented action from economic action. The former is concerned with “the satisfaction of a desire for utilities” while the latter is “a peaceful use of the actor’s control over resource, which is rationally oriented, by deliberate planning, to economic ends” (Weber, 1968, p.63). He states that “[e]very type of action, including the use of violence, may be economically oriented” (Weber, 1968, p.64). This statement allows him to take into account both non-economic and economic considerations when examining an action. In particular, Weber believes that originally, migration is not an economic process but is instead oriented to economic considerations. This means that for countries, the desire for immigrants is derived from the consideration of economic development although immigration is not an economic action in its nature. To some degree, this idea justifies the action of some immigrant countries in attracting skilled migrants and enabling them to contribute to their economic development. Thus, this study enables us to examine how the immigration policies in New Zealand changed along with its economic dynamics. Similarly, Weber’s ideas on the comparison between market economies and planned economies, and on division of labour and occupational structure explain how different logics for economic developments affect the view of the role of individuals in economic activities and their position in the social strata. In addition, it shed light on the analysis of Chinese skilled migrants’ decisions on receiving higher education and pursuing careers to meet the different requirements of labour markets in different countries.

For the analysis of the labour market and occupations, new Economic Sociology has addressed this in detail. According to Portes, Economic Sociology

has focused on the ways in which social influences modify the assumed

maximizing behaviour of individuals and lead to predictions differing from those of conventional economic models ... [it assumes] social relationships enter every state of the process, from the selection of economic goals to the organization of relevant means. (Portes, 1995, p.3)

In particular, new Economic Sociology looks at new forms of socially oriented economic actions in the contemporary society and as such, it has provided a useful perspective to examine how social and cultural factors are linked with people's performance in the labour market. It also reveals the interaction between society and economy. To be specific, the economic sociology of immigration was applied in examining the relationship between the knowledge economy and immigrants. The concepts of 'embeddedness' and 'social networks' initiated by economic sociologists, such as Mark Granovetter and Harrison White, explain the influence of social structure and social relationships in economic transactions. According to them, economic transactions are structurally and relationally embedded. Therefore, they suggests that researchers should look at "economic actors' personal relations with one another" and "the broader network of social relations to which these actors belong" (Granovetter & White in Portes, 1995, p.6). In this study, these concepts are used to explore how social ties enabled skilled Chinese immigrants to move to, settle down and pursue their careers in New Zealand. Meanwhile, they are deployed to explain how these skilled immigrants' social habitats, such as being an intellectual and belonging to *danwei* (work units) in China, affected their ideas and performances in the labour market.

Abbot (2005) notes that for most quantitative analysis, occupation just represents tasks defined by the standard occupational classification. He argues that most work studying occupation is also related to organised structures and an enduring group of people. To understand occupational structure, he suggests researchers review the literature on professions and labour history. Guided by his ideas, this study attempts to

look at the changes in occupational structure and labour history in New Zealand and to explain how New Zealand is gradually moving towards a knowledge economy and how Chinese migrant knowledge workers are emerging in the New Zealand context.

The concept of domination is used by Weber (1968) to explain how “certain specific commands will be obeyed by a given group of persons” in the three pure types of authority: monocratic bureaucracy, traditional authority and charismatic authority. For Weber, monocratic bureaucracy is understood as a bureaucratic type of administrative organisation rooted in modern Western states. It is characterised by the capacity of attaining the highest degree of efficiency and the most rational means of exercising authority over humans as it exercises power through using rational scientific knowledge. Traditional authority is defined by traditional rules and status while charismatic authority appears when an individual is endowed with supernatural and/or superhuman power and qualities. The reason for using these concepts to this study is that Chinese immigrant knowledge workers, to various degrees, have lived or are living under the three types of authority.

In Chinese history, the system of the patrimonial administrative staff, the *literati*, in its long-standing feudalist society, Mao Tsetung’s Cultural Revolution during the 1960s and 1970s and Deng Xiaoping’s marketisation starting from the end of 1970s, to some degree, fell into different types of authority and in particular, have put Chinese intellectuals in a specific social position. As Weber states, “the educated stratum of China ... simply has never been an autonomous status group of scholars ... but rather a stratum of officials and aspirants to office” (Weber in Murvar, 1985, p.200). His concepts ‘cultivated man’ and ‘science as a vocation’ deliberately explain the impact of education on social order and individual pursuit of career in general and “the Chinese educational curriculum was formed by elements entirely different from those which were ‘useful’ in a technical sense” in particular (Weber, 1968, p.1002). These ideas guided the exploration of the desire and the way by which Chinese immigrant knowledge workers became intellectuals in China. They provided an insight into the

process through which Chinese immigrant knowledge workers adjusted their identities in New Zealand's knowledge society with a bureaucratic system exercising authority through knowledge. In particular, the examination of the process through which Chinese knowledge workers constructed and reconstructed their identities gave a clue to addressing the issue of how Chinese intellectuals, categorised by a different system of social stratification, understood and fitted into the occupational requirements of New Zealand.

The issues of intellectuals and intellectualism are also linked with Weber's analysis on the relationship between religions and economies. He acknowledges that "[i]n China ... there is no independent, unofficial intellectualism apart from the Confucian education" (Weber, 1968, p.508). For Weber, Confucianism, as a religion, not only provided a religious ethic for familial piety, neighbourly help and bureaucratic loyalty, but also brought specific ideological and economic consequences. Weber's discussion on concepts, such as transcendence, morality and rationality based on Confucian and Buddhist understandings, justifies the failure of the development of modern capitalism in feudal China and the prevalent impact of Confucianism on the values, norms and customs of ordinary Chinese. In the light of his ideas, Murvar (1985) also uses these concepts to review the influence of Maoism as a doctrine implying a godlike transcendence. To some degree, Mao's Cultural Revolution and its propaganda illustrate Weber's ideas on the revolutionary nature of Charisma and Charismatic education. Since the participants of the study, to varying degrees, grew up under such circumstances, these ideas provide a starting point to explore Chinese knowledge workers' living and working experiences and their decisions and actions based on the values and norms arising from the environments in which they used to live.

2.1.2 Human capital theory and beyond

Compared with the ideas on the ideal intellectual shaped by the Mandarin bureaucracy and Confucian teachings, the intellectual as a ‘material interest’ is linked with the capitalist economy in the western world. The concept ‘intellectual capital’ is increasingly being used to study the relationship between the use of knowledge and value creation when knowledge and information become the engine of economic development. Roos (1998) defines intellectual capital as “all the processes and the assets which are not normally shown on the balance sheet, as well as all the intangible assets which modern accounting methods consider” (Roos, 1998, p.24). He introduces the Skandia Model to explain the relationships between market value, intellectual capital and other capitals such as human capital and structural capital. According to the model, market value is divided into financial capital and intellectual capital. Intellectual capital is further divided into human capital and structural capital. Human capital originates from individual knowledge, skill, attitude, motive and adaptation while structural capital is concerned with internal and external relationships such as customer relationships and organisational relations. This scheme not only combines tangible capital with intangible ones, but also links individual knowledge and skill with structural and relational contexts. In the current study, this scheme supported the analysis on how Chinese knowledge workers invested in education to equip themselves as the resource of human capital and integrated various capitals to add to their market value under different working circumstances.

Human capital as the core of value creation is introduced into economic analysis when the acquired abilities of human agents through investing in people play an increasing significant role in the gain of productivity. The theoretical analysis can be traced to Gary S. Becker. From an economist’s perspective, Becker (1964) analyses the effects of investing in humans, such as on-the-job training and formal education, on earnings. This allows him to develop a theory for the allocation of time to cope

with earnings foregone and rate-of-return calculations. Similarly, Schultz's investment approach for explaining economic growth classifies this set of investments in man as "schooling and higher education, on-the-job training, migration, health, and economic information" (Schultz, 1970, p.8). In the present study, this theoretical framework assists in the examination of public and private investment in human capital. The former includes the discussion of New Zealand government's efforts to invest in education to contribute to the growth of knowledge and to change immigration policies in order to support economic development. The latter involves an explanation of the economic rationality guiding the decision of individual Chinese knowledge workers on pursuing higher education.

Although the human capital perspective attempts to unify the diverse social phenomena from education to migration as human capital investment, it, according to Farkas, "has emphasised atomistic individual behaviour, with little attention to the group structure of society" (Farkas, 1996, p.9). By contrast, Weber's texts on intellectualism enable him to notice the cultural world while explaining the interaction between society and economy. Following the steps of Pierre Bourdieu, Ringer describes Weber's cultural world as an intellectual field. He states:

In Bourdieu's account, the intellectual field at a given time and place is made up of agents taking up various intellectual positions. Yet the field is not an aggregated of isolated elements; it is a configuration or network of relationships. (Ringer, 2004, p.7)

This statement emphasises that the intellectual field is contextualised and relational serving as a popular culture to define individuals' behaviours. For this study, since these skilled immigrants, who used to be Chinese intellectuals, grew up at different historical times, the idea which guided the examination was the role of different intellectual cultures in defining these skilled immigrants' social status and shaping their ideas on ideal intellectuals at different times in China.

Bourdieu defines cultural capital as “a form of knowledge, an internalised code or a cognitive acquisition which equips the social agent with empathy towards, appreciation for or competence in deciphering cultural relations and cultural artefacts” (Bourdieu in Johnson, 1993, p.7). He holds that like economic capital, cultural capital is unequally distributed among social classes and social factions. Similarly, scholars within sociology, such as Randall Collins, develop the cultural capital paradigm based on Max Weber’s notion of society, which views culture as a determinant for social stratification. Their ideas show that cultural capital has parallels with human capital. However, the human capital paradigm views investment in human agents based on economic calculations while the cultural capital paradigm emphasises the role of cultural resources in shaping individual tastes and behaviours. To bridge the gap, Swidler argues for “viewing culture as a tool kit of skills, the means by which strategies of action are constructed” (Swidler in Farkas, 1996, p.11). This view expands the connotation of human capital theory by integrating cultural capital into the analysis of human capital. In the present study, the perspective of cultural capital was used to guide the analysis of the role of cultural capital in the construction of human capital. In other words, it guided the analysis on how Chinese immigrant knowledge workers used their cultural capital as a resource to justify their choice for receiving higher education in China and to contribute to their market value in the New Zealand labour market.

In addition, Bourdieu notes the relevance between social function and economic function of education through individuals’ accumulating cultural capital. He states:

[An] educational system is more capable of concealing its social function of legitimating class differences behind its technical function of producing qualifications, the less able it is to ignore the incompressible demands of the labour market. (Bourdieu & Passeron, 1990, p.164)

From his point of view, while education is putting in effort to produce more and more skilled individuals who are qualified for the demands of the economy, the social equality would be a challenging issue for a society. In the light of this consideration, the study presents how educational effort in New Zealand could support the development of its knowledge society and economy in general and how individual Chinese skilled immigrants came to New Zealand to accumulate their cultural capital in order to meet the demand of different labour markets.

The critique of individualism in human capital theory also leads to the introduction of the concept of 'social capital' into the dominant economic theory. According to Schuller, Baron and Field (2000), Pierre Bourdieu, James Coleman and Robert Putnam are leading scholars on this issue although they have different foci. Bourdieu uses social capital to examine how elite groups use their status and contacts to keep privilege while Coleman expands the analysis to various social relationships of non-elite groups and treats social capital as the parallel of other capitals, which contribute to the formation of human capital. Putnam is concerned with the policy prevalence and measurement of the concept. He defines social capital as "features of social life—networks, norms and trust—that enable participants to act together more effectively to pursue shared objectives" (Schuller et al., 2000, p.9).

Following these ideas, scholars increasingly acknowledge the social and economic functions of social capital. For example, Szreter (2000) notes that social capital enables the minimisation of the transaction costs of information in the economy as it facilitates the interpersonal sharing of knowledge. Brown and Lauder (2000) examine the relationships between human capital, social capital and collective intelligence. They believe that "the inter-relationship between capacities and relations is vital because it is within the nexus between these two forces that the 'space' or possibilities for individuals to develop their capabilities for intelligent action will be created" (Brown & Lauder, 2000, p.235). Therefore, the ideas on social capital provided guidance to look at the role of social networks and interpersonal trust in the process in

which these skilled migrants realised human capital through their transnational movement and career pursuit. In general, the notions around the relationship between social capital and other types of capital were used as theoretical frameworks to explore how Chinese knowledge workers can contribute to New Zealand's knowledge society and economy with the combination of human/intellectual capital, social capital and cultural capital.

2.1.3 Economic and sociological theories on knowledge

Knowledge is another focus of this study for three reasons. Firstly, the above theoretical perspectives indicate their linkages with knowledge to various degrees. Secondly, empirical analysis in the literature review has shown that knowledge has increasingly become a decisive force in economic and social processes. Finally, the topic of this study suggests the necessity of exploring knowledge and relevant phenomena. Thus, this study has drawn relevant theories and concepts from both the economics and sociology of knowledge to examine the creation, acquisition and utilisation of knowledge and their impacts on individual Chinese knowledge workers and New Zealand's knowledge society.

Exploring the black box of knowledge is not easy. Studies on knowledge are numerous and always based on the disciplinary perspective due to the comprehensive role of knowledge in various domains. This study focuses on economic and sociological understandings on knowledge as Chinese knowledge workers are embodied intellectuals, skilled migrants and knowledge workers within different economic and social contexts. According to Burton-Jones (1999), knowledge can be classified as codified or tacit knowledge depending on the degree of difficulty in expressing it explicitly. Codified knowledge can be expressed and transferred among the broad audience while tacit knowledge is difficult to be transferred as it cannot be expressed explicitly. Foray (2004) holds that the features of codification of knowledge

not only enable knowledge to act as the common goods for economic growth and value creation, but also accelerate the production of knowledge through the modelling and representing process supported by ICTs. From this economic point of view, knowledge is treated as systemic information which could be codified and transferred with ICTs. Thus, this shows the significance of explicit knowledge in developing the knowledge economy in the global context. In this study, the perspective of knowledge capitalism guides the presentation of statistical data to show how far New Zealand is moving to a knowledge economy.

Comparatively, the sociology of knowledge has a different emphasis on knowledge. Some theorists pay attention to the role of tacit knowledge in economic processes and social life. Referring to Polanyi's concept of tacit knowledge, other theorists summarise the nature of tacit knowledge as follows: being taken-for-granted, being action-based, being context specific, being experience-based, being difficult to express and being both valuable and hindering (Ambrosini, 2003). These ideas are used to identify and analyse tacit knowledge while exploring those immigrant knowledge workers' experiences. Meanwhile, tacit knowledge also shows its connections with explicit knowledge. For example, Baltes and Staudinger (in Mckenna, 2005, p.40) focus on the role of tacit knowledge and define wisdom as something that:

Coordinates knowledge and judgements about the fundamental pragmatics of life around such properties as: (1) strategies and goals involving the conduct and meaning of life; (2) limits of knowledge and uncertainties of the world; (3) excellence of judgment and advice; (4) knowledge with extraordinary scope, depth, and balance; (5) search for a perfect synergy of mind and character; and (6) balancing the good or well-being of oneself and that of others.

This definition suggests that wisdom is derived from the possession of explicit knowledge but goes beyond it. It is not only related to cognitive capacities but also

involved social skills and ethical consciousness. From this point of view, wisdom shows the role of the combination of explicit knowledge and tacit knowledge in social life. In the study, the pair of concepts was used to examine how Chinese knowledge workers acquired codified knowledge supported by ICTs while applying tacit knowledge based on Chinese culture and norms in their work to provide goods and services.

Popper states that “the sociology of knowledge argues that scientific thought, and especially thought on social and political matters, does not proceed in a vacuum, but in a socially conditioned atmosphere” (Popper, 1970, p.650). His statement encourages re-thinking the relationship between scientific knowledge and social contexts. In western culture, scientific knowledge is always used as a synonym for knowledge and thus it implies the exclusive form of knowledge production based on rationality (Gibbons, 1994). This seems to justify the reliability of scientific knowledge and makes it exclusive from other forms of knowledge. However, according to Holzner and Marx, common sense represents a cultural system and a particular perspective and thus, it should be treated as science, religion and ideology. “Both science and common sense ... are socially constructed meaning systems that provide models and interpretations for events which would otherwise be problematic or meaningless” (Holzner & Marx, 1979, p.21). This idea suggests that knowledge has a broad meaning including not only scientific knowledge but also social knowledge and appeals not only to emphasise the role of knowledge gained from formal education but also to focus on the role of knowledge gained from people’s life experience. Therefore, this study has examined how Chinese knowledge workers gained both scientific knowledge from formal education and common sense from their life experiences and cultural backgrounds to pursue their careers.

From a socio-cultural perspective, McCarthy defines knowledge as “any and every set of ideas and acts accepted by one or another social group or society of people—ideas and acts pertaining to what they accept as real for them and for others” (McCarthy,

1996, p.23). Although this definition is criticised as it embraces the relativism of knowledge, it suggests that knowledge is socially contextualised and collectively accepted. It is applicable for examining the production and distribution of knowledge when the knowledge economy has drawn people from different social habitats with different cultural backgrounds to a knowledge society. Specifically, the relationship between knowledge and culture drawn from the new sociology of knowledge provided a theoretical understanding on different knowledge systems and the values people put on knowledge. Since the participants of this study, Chinese immigrant knowledge workers, were supposed to be the combinative products of different knowledge systems, this conceptual framework was applied to analyse the content of knowledge possessed by them. Furthermore, the social structure of knowledge also provided a framework to study how the knowledge possessed by Chinese immigrant knowledge workers was embedded in their social relations.

2.1.4 Concepts drawn from globalisation and migration

Globalisation became a fashionable term in the 1980s. It has been linked with the practices of politics, economics, communication as well as culture. The topic of this study determines that globalisation as an inevitable factor should be discussed. In the knowledge era, the features of knowledge in economic production, such as non-rival and non-depleted, allow the production and application of knowledge at a global rather than merely a national scale. In particular, ICTs as instruments of knowledge facilitate transnational practices in both business and daily life. Similarly, global migration has transgressed national boundaries, so the relationship between global migration and knowledge societies should be examined in the global context. In this study, concepts drawn from globalisation theories, such as the network society, were used as a way to observe the flow of talented people and the networks built by them in the global context.

Portes suggests that four key concepts from the sociology of immigration can be used to study immigrants and their practices. He lists these as: core-periphery influence, modes of incorporation, middleman groups, and the informal economy (Portes, 1995). This study used concepts of core-periphery influence to look at the relationship between migration and international differences in the demand and supply of labour. This will guide the review of the settlement history of Chinese immigrants and their current situations in New Zealand's society. According to Portes,

Immigrants are viewed not simply as individuals who come clutching a bundle of personal skills, but rather as members of groups and participants in broader social structure that affect in multiple ways their economic mobility...[therefore,] contextual effects interact with human capital brought from abroad, determining the extent to which it can be productively used and increased. (Portes, 1995, p.24)

This suggests that immigrants' performance as human capital in the labour market should be examined contextually within a broad social structure. For this study, it means that the social structures in both China and New Zealand have affected the creation and application of personal skills of Chinese immigrants. Therefore, it is necessary to examine the educational experiences and the social relationships in which they are embedded both in China and New Zealand to understand their performances and contributions to New Zealand's knowledge society and economy.

Besides the above push-pull framework and neoclassical economic explanations, Massey and his colleagues (Massey et al., 1998) introduce a series of new theoretical perspectives to examine the relationship between international migration and economic development. Compared with conventional theories, these new theories not only view migration as a universal action taking a macro-level model to fit into economic structures, but also attempt to explain factors which affect individual

immigrants' decision-making. For example, social capital theory in immigration research emphasises the role of migrant networks in promoting international migration. It holds that "migrant networks ... increase the likelihood of international movement because they lower the costs and risks of movement and increase the expected net returns to migration" (Massey et al., 1998, p.42-43). This viewpoint suggests that social networks increase the efficiency of migration actions. The theory of cumulative causation states that "over time international migration tends to sustain itself in ways that make additional movement progressively more likely" (Massey et al., 1998, p.45). To understand migrants' frequent movement and multiple involvement, the theory of transnationalism explores "the processes by which immigrants forge and sustain multi-stranded social relations that link together their societies of origin and settlement" (Yeoh, Charney, & Tong, 2003, p.3-4). From different angles, these theories provide different explanations for migration at either macro- or micro-level. This gives a clue to this study to search for the multiple causations of migration decisions made by Chinese migrant knowledge workers.

2.1.5 Linkages between concepts and theories

Although the above theories and concepts focus on different aspects of the topic, they are related to one another. For example, Weber's concepts of rational and irrational social action are linked to the idea of the classification of scientific knowledge and commonsense. The classification enables the explanation of how the different knowledge possessed by actors facilitates different actions. Similarly, migration theories, including neoclassic economic explanations and new theories on immigration, are illustrations of Weber's classification of rational and irrational social action and of economically rational and economically oriented action. Besides social actions, the concept 'social relationship' also shows the linkages of these theoretical perspectives. Human capital theory, Economic Sociology, and the theory of globalisation and migration have addressed the concept in different ways. The

concepts relating to human capital theory, such as social capital and structural capital, allow the social relationships of actors to be taken into account while examining their performance in the labour market. The concepts 'networks', 'embeddedness' and 'social capital' in Economic Sociology examine how social relationships enable migrants to make their lives while the network society expands the examination to the global scale. In turn, all these explanations on social relationship are based on the recognition of the role of tacit knowledge.

The intellectual is one of the major foci of this study and such theories address the issue in different ways. Weber's intellectual world and Bourdieu's intellectual field and conception of cultural capital allow them to look at the relationships among knowledge, culture, religion, politics, economy and society. To some degree, it is linked with the idea of knowledge and culture and the relationships between knowledge, wisdom and intelligence in the sociology of knowledge, intellectual capital in the human capital theory, and the idea on occupation and profession in Economic Sociology. ICTs are a driving force for globalisation and are linked with the knowledge society and economy in specific ways. The concept of codified knowledge shows the linkages between data, information and knowledge and the role of ICTs in the process of codification of knowledge. ICTs also facilitate the construction of the networks in a broader context. In contrast, the concept and nature of tacit knowledge emphasises the role of personal inarticulate knowledge in the process of knowledge production and application. Therefore, the integration of these theories and concepts enables the examination of the relationships among knowledge, the action of migration, economic and social changes and cultural influences in the process through which Chinese knowledge workers immigrate and adapt to New Zealand's knowledge society (see Appendix 2).

2.2 Methodology and Methods

The choice of methodology and methods for this study is determined by ideas from the literature review in the first chapter and the theoretical framework in this chapter. The literature review shows that some studies focus primarily on quantitative evidence and economic statistics to show the contributions of immigrants to the knowledge economy as taxpayers and labourers while others emphasise their individual experiences in the new land as acculturated entities. This situation reflects the division between generalisation and particularisation in social science. Camic, Gorski and Trubek note that the division is so absolute that researchers working with either of these methodologies tend to ignore each other. “[E]conomics now anchors the generalizing pole and cultural anthropology the particularizing pole” (Camic, Gorski, & Trubek, 2005, p.4). Thus, methodological division always causes different focuses based on disciplinary interests.

The history of migration shows that migration is about both a collective and an individual behaviour. As a collective behaviour, migration has always been generalised and linked with global and national economic and social dynamics while individual characteristics are ignored. However, Weber’s ‘methodological individualism’ has suggested the significance of examining the role of the individual as a member of the collective in understanding social dynamics. According to Weber (1968), statistical uniformities enables the identification of sociological generalisations but fails to provide subjective understanding which is a specific characteristic of sociological knowledge. This justifies the necessity of exploring individual experience in the migration process and provides methodological guidance for exploring what is specific after the general pattern of migration as a process and a collective behaviour has been examined.

By combining quantitative approaches with qualitative ones, this study attempts to

bridge the gap between generalisation and particularisation in order to examine global migration in a knowledge society. Literature and documentary study was used to review the historical change of New Zealand's economic structure and social relations. It shows how New Zealand is gradually becoming a knowledge society. At the same time, the comparison between New Zealand and other developed countries, such as the OECD countries, has provided an insight into New Zealand's position in the global knowledge wave and its characteristics. Then, the study focused on the relationship between global migration, and New Zealand society and Chinese immigrants and their community in New Zealand. To illustrate relevant issues, the display and synthesis of statistical data are applied. The combination of the two kinds of information serves as a background to answer whether and to what extent Chinese knowledge workers are contributing to New Zealand's knowledge society and economy. At the same time, it provides generalised information on Chinese immigrants and knowledge workers.

Following this, a case study involving fourteen respondents is deployed to explore how Chinese knowledge workers were contributing to New Zealand's knowledge society. Fourteen Chinese knowledge workers who have emigrated from Mainland China to New Zealand after 1990 and are living and working in Christchurch were selected to participate in the study. The selection of interview participants is related to the identification of Chinese knowledge workers. However, there is no consistent definition of knowledge workers and there are different considerations among governmental departments in New Zealand to identify skilled labour and knowledge workers. Therefore, the process of selection of Chinese knowledge workers in Christchurch involved various activities such as theoretical reviews on the definition of knowledge workers, analysis of statistical data and department documents, and searching Chinese media and building social networks in Chinese communities. In general, by using the interwoven quantitative and qualitative approaches, this study has played both descriptive and explanatory roles. It provides a comprehensive understanding on the macro-micro link between social context and settings, and the

individual situated activity and experiences of Chinese migrant knowledge workers.

2.3 Data Collection

Three types of information sources are needed in the study. These are a review of the literature, statistical data and a case study. The literature includes the background information on the global knowledge wave, the social and economic changes of New Zealand, New Zealand's immigration policies and their dynamics and the change of the Chinese and their communities in New Zealand since 1990. The literature was identified through searching the resources in the University library. Most items were directly accessible while a few items, which are mainly about the research on the Chinese in New Zealand, were accessed through the inter-loan system in the University library and other supporting programme such as the Building Research Capacity for the Social Science (BRCSS) programme. To present the relevant information, the materials were organised based on the following sequence: the global knowledge wave, the rising of New Zealand' knowledge society and economy, Chinese communities and Chinese knowledge workers.

Statistical data relating to the following four aspects were collected. First, to set the discussion in the global context, statistical data about the comparison of the performance of New Zealand with that of other OECD countries on moving to the knowledge society and economy were used. This data includes countries' investments in knowledge, Research and Development (R&D) and higher education; ICTs expenditure on computer and the Internet access cost. These data were obtained through searching the OECD website and relevant departmental publications. Second, data relating to the change of New Zealand's economy and society, such as the change of industrial, occupational structure and social relations in the past decades were accessed through searching departmental publications, browsing relevant web pages of governmental websites such as *Statistics New Zealand* and visiting these

departments in person.

Third, the data relating to demographic dynamics and Asian migrants was used to show how Asian migrants have changed New Zealand's demographic landscape and fitted into New Zealand's labour market. The fourth type of data focused on the historical change of the Chinese, especially new Chinese migrants from Mainland China arriving after 1990. This data was obtained from *Statistics New Zealand* and *The Business Information Branch* in the *Department of Labour (Immigration)*, which includes both pre-arrival and post-arrival information on new Chinese migrants. The former is about the information provided by them while applying for entry to New Zealand as skilled migrants. The latter includes the demographic characteristics of these immigrants, such as the distribution and the proportion in New Zealand's population; their performance in local labour markets and their educational backgrounds.

Chinese knowledge workers' personal experiences were explored through fourteen interviews with relevant participants. The choice of these participants was informed by statistical data. At the same time, it was based on the concept of knowledge workers and the standard occupation classification used by both *the Department of Labour (Immigration)* and *Statistics New Zealand*. Although the relevant statistical data on the industrial and occupational structures did not directly show the information on Chinese knowledge workers, they did indicate the existence of Chinese immigrant knowledge workers in the Christchurch labour market. The criteria for selecting interview participants depended on their ethnic identity, the type of their professional work, the qualifications and education they attained both in China and New Zealand, and the customer groups they are serving. Combining statistical data with empirical observation and considering the characteristics of New Zealand society and economy, this study selected from the following types of Chinese knowledge workers as participants. They were those working in tourism, real estate, education, research, IT enterprises, finance, trading, insurance and public services as

knowledge producers and suppliers.

The interviews intended to provide valuable, but not definitive, evidence on how New Zealand's knowledge society is being linked with its minority communities through Chinese knowledge workers and how these knowledge workers' experiences and knowledge are enriching New Zealand's knowledge society and economy. Therefore, interview topics included the following information: the interviewees' educational background and working experiences in China; the process through which the interviewee decided and received higher education in China; the process through which the interviewee decided to immigrate to New Zealand; the interviewee's experiences in settling in New Zealand; the process through which the interviewee decided and received higher education in New Zealand; the interviewee's working experiences in New Zealand.

2.4 Data Analysis

This study uses a multiple-analytical strategy including historical, statistical and discourse analyses and analytical ideas drawn from phenomenology to deal with different types of information. Historical analysis dealt with the literature and documentary materials to examine the historic change of New Zealand's economic and social conditions, and the dynamics of Chinese communities. This analysis focused on historical occurrences and evidence, time and periodization, and spatiality and networks (Hardy & Bryman, 2004). This kind of analysis attempts to present macro contexts and settings in order to understand the rising of New Zealand's knowledge society and the experiences of individual Chinese knowledge workers.

Statistical analysis is used to show the relationship between the change of Chinese immigrants and their communities and the dynamics of New Zealand's economy and

society. Since this study used existing census and other statistical data to illustrate the relevant issues and provide evidence rather than hypotheses testing, the methods for statistical data analysis focused mainly on describing and presenting. To do so, statistical analysis started by grouping the data drawn from census and other statistical resources. Then, various presentation methods are used to describe the relevant data. These methods range from table and map presentations to graphic presentation including the cumulative frequency graph, time graph, bar chart and pie chart (Mueller, Schuessler, & Costner, 1970).

A discourse is regarded by Burr as “a set of meanings, metaphors, representations, images, stories, statements and so on that in some way together produce a particular version of events. It refers to a particular picture that is painted of an event (or person or class of persons), a particular way of representing it or them in a certain light” (Burr, 1995, p.49). He suggests that discourse analysts should do a deconstruction to look at both the appearance of people and things, and the meanings behind them. In the light of this viewpoint, discourse analysis is applied to interpret interviews and examine literature and documentary materials in this study. In particular, three analytical approaches were used to look at different discourses such as official discourses and individual remarks. They are: Ernesto Laclau and Chantal Mouffe’s discourse theory focusing on discursive struggle, Norman Fairclough’s critical discourse analysis emphasising discursive change through new combinations of discourse and discursive psychology concerning creating and negotiating representations of the world and identities (Jorgensen & Phillips, 2002). Guided by these analytical approaches, this study attempts to examine the Chinese government’s intellectual policies, the New Zealand government’s immigration policies and the values which individual skilled Chinese immigrants have put on knowledge at different historical times.

Ideas drawn from phenomenology were also used as an organic component of the analytical tools. Phenomenology is understood as “the study or description of

phenomena' ... phenomenology involves the description of things as one experiences them, or of one's experiences of things..." (Hammond, Howarth, & Keat, 1991, p.1). In this study, interviews focused on exploring participants' experiences in receiving education and pursuing careers. According to Spiegelberg (1975), experience is an intentional act, has temporal structure, extends to any type of individual objects and is a combination of receptive and spontaneous processes. These phenomenological findings encourage a paradigm shift when inquiring into experiences. As Psathas suggests, "in adopting a phenomenological perspective ... the social scientist must learn to regard as data some objects, events, and activities he previously did not 'see' at all" (Psathas, 1973, p.17). Therefore, these ideas guided this study to pay attention to and explore the aspects of the experiences of Chinese knowledge workers, which were important but neglected or taken for granted.

In particular, Edmund Husserl's intentional analysis, constitutional analysis and concept of 'life-world' provided guidance for analysing the experiences of Chinese knowledge workers. Intentional and constitutional analyses are respectively derived from 'double intentionality of the stream of consciousness': transverse intentionality and longitudinal intentionality. They are concerned with "consciousness of an object's identity and consciousness of the past experience that established its identity" (Rogers, 1983, p.28). In this study, the two analytical methods are used to explore knowledge workers' self-identity constituted by the different layers of experiences. The life-world, according to Rogers, "refers to the surrounding world that provides the grounds of conscious existence" (Rogers, 1983, p.49). It is used to the examination of the immediate settings for shaping the common sense knowledge and action of Chinese knowledge workers.

In general, the comprehensive feature of this research topic determines the applicability of multi-strategies for research design. The integrated theoretical framework has mapped the research foci from macro contexts and immediate settings

to actors' social action and self-consciousness. This justifies the choice of a combination of quantitative and qualitative methods. Guided by these considerations, this study attempted to make a balance of generalisation and particularisation during the data collection process. Although the analytical methods have their own foci, the study has attempted to integrate them rather than physically separate them. By doing this, these multiple strategies served as a triangulation to confirm findings and at the same time, provided rich information and justification for relevant issues. Therefore, this theoretical and methodological framework has laid a solid ground for further inquiry into New Zealand's knowledge society and the experiences of new Chinese immigrants. From the next chapter, this thesis will present the results of the research.

Chapter Three New Zealand and the Global Knowledge Wave

No two of the bottles labelled 'new economics' have the same contents ...[w]hat is touted as a panacea in one country is considered deadly poison next door.

(Drucker, 1969, p.127)

In the past decades, knowledge has played an increasingly crucial role in the modern economy and society. Although there are still debates among theorists as to the degree of changes which knowledge has caused, the centrality of knowledge in economic production and social life seems to set up a common destination for countries to pursue the development dream. However, history has never shown universality in the development process. Countries do not move to the knowledge society and economy through exactly the same route due to different historical, social and economic conditions.

New Zealand, an archipelago in the South Pacific, is the last land, except Antarctica, systematically settled by humans (Mein Smith, 2005). The first settler, the Maori and the later, Europeans are the major residents of the land although other settlers have made their new homes here. In the history of settlement, New Zealanders have constantly transformed the land, contributed to its development and made it a desirable destination in the world. Their good performance in economic development led to New Zealand being ranked eighth among the OECD countries in terms of per capita income. Today, New Zealanders are preparing for the challenges brought by the global knowledge wave. This chapter attempts to examine the emergence of New Zealand's knowledge society and economy. First, it will look at New Zealand's economic performance in the global knowledge wave. Then, it will focus on reviewing the change of economic structure and examining the economic

fundamentals of New Zealand's knowledge society. Finally, the relationship between New Zealand's knowledge society and economy will be explored.

3.1 New Zealand in the Global Knowledge Wave

The history of economic progress and social transformation enables theorists to account for economic and associated changes that have led to the shift from agriculture to knowledge. The Agricultural Revolution was regarded as the First Wave in which land and physical property created wealth and defined social structure. Following this, the Industrial Revolution pronounced the onset of the Second Wave, which shifted the focus to other factors such as capital, scientific inventions and skills. After World War I, the emergence and rapid advance of ICTs brought the Third Wave. Finally, the last several decades of the 20th century witnessed the centrality of theoretical knowledge in economic production and social life. Inevitably, the knowledge wave started to spread globally.

To catch the knowledge wave, theorists, such as Peter F. Drucker, Daniel Bell and Nico Stehr, make considerable efforts to observe and analyse knowledge-driven changes to identify the basic driving forces and modes of social transformation. Although there are distinctions among them on the indications of the knowledge society and economy, some characters of the knowledge society and economy apparently stand out with empirical evidence. According to them, some of the most basic changes have happened in the economic domain since World War II. Firstly, the gravity of the economy has shifted from goods-producing to service economy in most countries (Bell, 1973; Drucker, 1969; Stehr, 1994). Indeed, economic development in developed countries shows the same tendency to different degrees. For example, in the OECD area, between 1968 and 1988, the employment in agriculture and industry decreased 7.4 percent and 6.7 percent respectively while the share of service increased

14.1 percent (Clark, Williams, & New Zealand Employers Federation, 1995, p.65). At the beginning of the 21st century, most countries continued to have real value added in the services sector. For countries with rapid economic growth, such as Japan and the United States, real value added in the services sector is apparently faster than that in industry and in agriculture. For agriculturally based developed countries, such as New Zealand and Australia, the growth of the services sector is also the fastest one although there are concurrent increases in all three major sectors (Appendix 3-1).

According to some theorists, the emergence of the service sector in the post-industrial society is attributed to changes associated with economic production and consumption such as the expansion of transportation and of public utilities, the increase in distribution of goods with the growth of population, the increase in consumption for recreation. The increased value in the services sector indicates a shift in focus in economic production from the quantity of goods to the quality of life (Bell, 1973). As Bell suggests, “[a] post-industrial society is based on services. Hence, it is a game between persons ... the central person is the professional, for he is equipped, by his education and training, to provide the kinds of skill which are increasingly demanded in the post-industrial society” (Bell, 1973, p.127). This enables him to claim the emergence of the service class as a new class. However, Stehr (1994) argues that in reality, neither is the group of advisors, consultants and experts necessarily based on the service sector nor do they form as a service class. Therefore, the debate shows that although the emergence of the service economy is a prevalent phenomenon in recent decades, the three-sector division of the modern economic structure cannot completely explain the production and dissemination of knowledge in the economic process.

Secondly, it is widely accepted that the economic foundation of the knowledge society is characterised by the knowledge-based economy. Although various forms of investment can contribute to economic growth, investment in knowledge is an essential part in a knowledge-based economy. According to the OECD statistics, the

total investment in knowledge includes the expenditure on R&D, public spending on education and investment in software. In the last two decades, most OECD countries have increased spending on the production and reproduction of knowledge. Since the mid-1980s, the annual growth of investment in knowledge is about 2.8 percent in the OECD area (Organisation for Economic Co-operation and Development & Organisation for Economic Co-operation and Development Economic Analysis and Statistics Division, 1999). In 2002, the ratio of the total investment in knowledge to GDP in the OECD area was up to 5.2 percent. Among all reported countries, except Ireland, there was an increase in the ratio of investment in knowledge to GDP from 1994 to 2002 (Organisation for Economic Co-operation and Development & Organisation for Economic Co-operation and Development Economic Analysis and Statistics Division, 2004). During this period, New Zealand had a relatively low ratio of investment in software to GDP. Furthermore, the increase in the ratio of the total investment in knowledge to GDP was very low (see Appendix 3-2).

ICTs are the most dynamic component among investment in knowledge. There were differences in the increases of investment in ICTs among the OECD countries from 1990 to 2003. For some countries, such as Finland and Sweden, ICT shares in total non-residential investment doubled while most countries had a constant increase (see Appendix 3-3). Although this type of data enables the measurement and comparison on the production and diffusion of knowledge across countries, it does not mean that the fulfilment of these conditions will automatically lead to a knowledge society and economy. As Drucker argues, “the new technologies are not based on science alone but on the new knowledge in its entirety also means that technology is no longer separate and outside culture, but an integral part thereof” (Drucker, 1969, p.36). For example, the research on e-commerce adoption among small to medium-sized enterprises (SMEs) in New Zealand concludes that e-commerce adoption not only involves technological considerations, such as technical knowledge and expertise on how to enforce security, but is also related to social issues such as coercive power, partnership and initial trust (Ratnasingam, 2003). Therefore, for each country, the

production, introduction and application of new knowledge and technology are related not only to its ability to engage in formal scientific knowledge such as R&D, ICTs and higher education, but are also determined by the intellectual culture for introducing and applying knowledge in productive activities. Moreover, the production of knowledge is related not only to individual capacity as human capital but also to collective intelligence.

Last but not the least, the knowledge-based economy has shown its relevance to the increased openness of the world economy. According to Stehr (1994), one of the significant effects of the knowledge-based economy is the eclipse of time, distance and place as constraints for production, distribution and consumption. The development of the world economy in the past decades has shown the flexibility of economic activities in terms of place. With the decline of economic boundary lines, world exports increase from US\$ 1,970 to US\$ 5,475 billion from 1985 to 1997 (Gera, Lee-Sing, & Newton, 2001). In 2004, the total value of world exports and imports reached up to US\$ 11,140 and US\$ 11,060 billion respectively (World Trade Organisation, 2005). The correlation among world merchandise exports, production and GDP is apparent. From 1951 to 2004, there was an almost consistent change among export value and volume, production volume and GDP volume despite fluctuation (see Appendix 3-4). This indicates the significance of trading activities for countries and regions to join the world economic system.

The 2005 statistics of the World Trade Organisation (WTO) shows that in 2002, more than 95 percent of countries and regions were involved in the WTO as either members or observers. For more than 70 percent of countries and regions in the world, the ratio of exports and imports of goods and commercial services to GDP exceeded 30 percent (see Appendix 3-5 & 6). For OECD countries, the unweighted average of the trade-to-GDP ratios was close to 44 percent in 2004. The OECD statistics show that international trade is more important for smaller countries and population such as New Zealand, Luxembourg, Spain, Ireland and Belgium while technology-intensive

exports were a critical component of the growth in trade for all OECD countries over recent decades (Organisation for Economic Co-operation and Development, 2006).

Migration of the highly educated has also shown global linkages among knowledge societies and economics. Together with ICTs, the movement of people enables the sharing of knowledge globally. Nowadays, the motion of people, especially the highly educated is a common phenomenon. In many countries, foreign-born persons with a tertiary education attainment are an important human resource for the labour markets. They represent the flow of the brain at the global level. In 2000, about 4 percent of people with a tertiary degree in the OECD area were immigrants from other OECD countries while 6 percent of people came from the rest of the world. In traditional 'settlement' countries, migration of the highly educated is common. However, there are still differences among them in the net stock of foreign-born people with education attainment. Australia, Canada and the United States have a net gain of the highly educated migrants while New Zealand has net loss of migrants due to the high proportion of New Zealand-born people with higher education living in other OECD countries (see Figure 3-7).

To sum up, the global knowledge wave has provided opportunities for countries to overcome the geographical constraints to share knowledge, access markets and attract the talented. At the same time, it also puts forward questions to and brings challenges for them to gain a good position in the global competition. The emergence of the service economy challenges the conventional three-sector division of the economic structure. Investment in knowledge needs to consider both technical and cultural factors and both individual capacity and collective intelligence. The openness of the economy requires countries to develop knowledge-intensive exports and attract talented people. Under such circumstances, New Zealanders attempt to make efforts to win in the global competition. However, the development of New Zealand's knowledge economy does not simply copy the foci of the global knowledge economy but is derived from its historical change of economic and social conditions.

3.2 The changing structure of New Zealand's economy

New Zealand's rich and complex economy is built almost entirely in less than 200 years from the pioneering settlement of the Maori through the predominant development of agriculture, to the gradual engagement in the knowledge-based economy. During the whole process, the economic structure of New Zealand has experienced a dramatic change. When the first Polynesian migrants arrived in Aotearoa/New Zealand, the economic activities in which they were involved depended on the availability of natural resources such as seafood and the by-products from forests (Lloyd Prichard, 1970). For European settlers, a temperate climate provided good conditions for the production of large quantities of agricultural products at low cost. In addition, free trade with Britain allowed New Zealand's exports to enter that country without constraints. These advantages made the exports of primary-sector products (such as wool, animal skins, meat, dairy, fishing) and the products of the forestry and mining highly profitable at that time (Briggs & New Zealand Institute of Economic Research, 2003).

Although farming took the lead in the economy before 1914, its significance was declining at the beginning of the twentieth century. On the contrary, other sectors, such as manufacturing and services, started to increase rapidly. In 1926, employment in trade and services made up the largest share in total employment accounting for 35 percent (Hawke, 1985). The shift in the gravity of employment in New Zealand, to some degree, illustrates the decline of the primary sector. The period from 1934 through to 1966 saw industrialised developments in sawmilling, pulp and papermaking, steel, oil refining and aluminium smelting. During this period, the New Zealand economy was characterised by Keynesian economics that the government used fiscal policy to balance supply and demand in order to control the economy. Consequently, the controlled economy caused persistent inflation, high capital-output ratio and inevitably, resulted in vicious circles in the economy and a lower level of

real income, although it maintained full employment. For the three sectors of the economy, there were distinctive growth rates. The share of agriculture in both GDP and the labour force declined while those of manufacturing and services were increasing constantly. However, agriculture still provided most exports and had a higher output per head of population than manufacturing and services. This meant that the inefficiency in manufacturing and services put a heavy pressure on agriculture (Hawke, 1985).

The accumulation of these problems in the economy was worsened by the changing international context, which provided unfavourable international environments to a country most efficient at producing primary products. The following years since 1960 saw the drop-off of New Zealand rank in the OECD countries due to both internal and external factors such as rising unemployment and inflation in the 1970s, the first oil price shock between 1973 and 1977 and the foreign exchange crisis in 1984 (Dalziel & Lattimore, 1999). The poor economic performance led to the government's decision to restructure the economy in 1984. From 1984 to 1990, restructuring policies were targeted at 'restoring competitiveness', the free market and 'greater' investor autonomy. The processes happened on different spatial scales and in different sectors (Britton, Le Heron, Pawson, & New Zealand Geographical Society, 1992). After 1990, the key components of the reforms included the restructuring of New Zealand's welfare state and deregulation of the labour market (Dalziel & Lattimore, 1999). According to the analysis by the New Zealand Planning Council (New Zealand Planning Council Economic Monitoring Group, 1989), the outcomes of restructuring were multi-faceted. For example, occupational change was characterised by a rapid increase in non-manual jobs, particularly in professional, technical, administrative and managerial occupations. At the firm level, technological change was apparent. New technology, particularly in the area of microelectronics not only enhanced the competitiveness of small-scale producers but also provided opportunities for self-employment.

These changes can be identified in New Zealand Standard Industrial Classification (NZSIC). For example, the most apparent change from NZSIC75 to NZSIC87 is that telecommunication and software development appears in NZSIC87. This means that the development of ICTs has created relevant new economic activities in New Zealand. The 1996 Australia New Zealand Standard Industry Classification (ANZSIC96) has several significant changes: economic activities are more specialised, service activities increasingly appear in various industry groups such as the group of agriculture and of mining, activities relating to trading and consumption have increased. In addition, within the labour market, although the total number of employed people increased between 1996 and 2001, there was a rapid loss of work in parts of industry groups related to agriculture, manufacturing and government administration. In contrast, employment in other industry groups, such as health and community services, education, and property and business services increased rapidly. The increase in the numbers employed in these industries meant that the service sector became the main source of growth in employment (see Appendix 3-8). Over the last 15 years until 2002, the services industries, such as wholesale and retail trade, restaurants and hotels; finance, property and business services; and community, social and personal services, has created more 90 percent of new jobs (The Department of Labour, 2003).

Similarly, the shift of economic activities could also be traced from the New Zealand Standard Classifications of Occupation (NZSCO). For example, the changes in the 1999 New Zealand Standard Classifications of Occupation (NZSCO99) show that knowledge and skills play an important role in identifying an occupation. The major groups in the classification are defined with different levels of skills and knowledge gained through formal education (see Appendix 3-9). In NZSCO99, the term 'professionals' was increasingly used to define occupations while NZSCO68 used 'technicians' more frequently. This suggests that knowledge rather than technology had become an immediate productive force in various occupations. In addition, the specification of knowledge and skills expanded distinctions of occupation. For

example, managers in NZSCO68 were categorised into general managers and specified managers in NZSCO99 according to the knowledge requirements. Similarly, the specialisation of skill based on the technological process was used to classify tailors and dressmakers, textile product machine operators, and assemblers. In NZSCO99, each category of occupation was further differentiated according to their skill levels. For example, toolmakers were categorised as blacksmith, toolmakers and related workers, and precision instrument makers and related workers. Between 1996 and 2001, the employment in occupations which required high-level skills, such as administrators, legislators and professionals, increased while the employment in occupations, such as agricultural and fishing worker and labourers, declined (see Appendix 3-10). The changing occupation structure not only reflects the shift of the modes of production in New Zealand but also shows the increasingly significant role of knowledge and skills gained through formal education in the determination of people's identities and social status.

In the last fifteen years, the change in work patterns has been an increasingly apparent phenomenon in New Zealand. Although full-time employment is still the main work pattern, there is an increase in part-time employment for both males and females. Moreover, there are a higher percentage of females rather than males doing part-time jobs (see Appendix 3-11). In addition, self-employment has become a major type of employment in New Zealand. The 2001 census shows that overseas-born people had slightly higher rates of self-employment without employees than New Zealand-born people. Among immigrants, people from North-East Asia had the highest rates of self-employment without employees. Self-employment among immigrants was not differentiated greatly by education although immigrants with lower qualifications were more likely than those with university qualifications to be running their own business (Statistics New Zealand, 2004).

Various factors would contribute to the increase in part-time employment and self-employment in the New Zealand context, such as the relative small business nature of

the New Zealand economy and economic restructuring in the past decades. However, the flexibility of work patterns associated with different gender, ethnicity and educational backgrounds might also indicate the increase in the work depending on non-residential resources such as skills and knowledge. Stehr suggests that “[in] knowledge societies, individuals who never join the ‘regular’ workforce, who are forced out of work, or decide to be unemployed, do not simply drop out of society. They are integrated into society by knowledge as the new principle of sociality” (Stehr, 1994, p.143-144). Thus, knowledge allows people to choose the way of labour force participation based on their individual conditions and thus, enables the diversity of livelihood, the flexibility of the work style and the blurring of boundaries between economic and social spheres.

The development of the knowledge-based economy accelerates the process of shifting to a service economy. In 1997, agriculture accounted for 8.1 percent of GDP compared to 24.8 percent for goods producing and 56.3 percent for services¹ (see Appendix 3-12). However, the increasing globalisation of the New Zealand economy was still based on the export of primary products (Britton et al., 1992). In 2000, services accounted for 25 percent of its exports and they were tourism-earning dominant (Statistics New Zealand, 2006). (Comparatively, during 1888 and 1988, world trade in agricultural productions declined from 76 percent to 9 percent while that in services increased from 15 percent to 34 percent (Crocombe, Enright, Porter, Caughey, & New Zealand Trade Development Board, 1991, p.26).) Therefore, as a country with an open economy, New Zealand desperately needs to develop knowledge-intensive exports to win in the global market.

¹ “A classification commonly used in international comparisons divides the economy into three sectors: agriculture, industry, and services. Statistics New Zealand provides an alternative classification into primary (which includes forestry, fishing and hunting, mining as well agriculture itself), ‘goods producing’ (which includes manufacturing, mining, construction, and electricity, gas and water), and ‘services’ (which includes industries such as transport, communications, retailing, wholesaling and financial services as well as non-market government)” (Scollay & St. John, 2000, p.58).

The history of New Zealand's economy shows that in the past century, New Zealand has gradually shifted from a colonial economy, based on pastoral and extractive industries and non-skilled workers, to a more developed economy and society (Olssen & Hickey, 2005). While economic structure is shifting with industrial dynamics, occupational classification and work patterns, a skilled labour force, knowledge and new technologies (such as ICTs) play an increasingly significant role in economic production and social stratification. Thus, these changes indicate that knowledge and skills, which serve as indicators, are constantly doing legitimated exclusion and inclusion based on the different levels of knowledge and skills which people possess. By recognising the requirements of the changing economic structure, the New Zealand government attempts to develop a knowledge society and economy.

3.3 The Economic Fundamentals of New Zealand's Knowledge Society

As Helen Clark, the New Zealand Prime Minister, states, “[t]he countries which are prospering today are those which have the capacity to create new knowledge and to apply it to new and existing industries. New Zealand has the capacity to be one of those countries” (N. Z. Government, 2001, p.1). To respond to the exigencies of the knowledge-based global economy, New Zealand governments and non-governments, such as *The Knowledge Wave Trust* and *The Australia-New Zealand Leadership Forum*, have adopted new forms of leadership in the past decade. They attempted to make efforts in “reframing our attitudes to knowledge, stimulating domestic innovation and entrepreneurship, capitalising on our uniqueness to build our identity and market niche and preserving our core skills and values [to enable] the global transformation of New Zealand society and economy” (True, 2006, p.40). Under such a framework, the importance of R&D, intellectual capital, ICTs and skilled migration was frequently mentioned in various documents on initiating the development of New

Zealand's knowledge society and economy (Association of Crown Research Institutes (N.Z.), 2000; New Zealand Information Technology Advisory Group et al., 1999). The following are the progress in these aspects in recent years.

3.3.1 R&D expenditure: knowledge production

Research and development (R&D) is defined by the *Frascati Manual* as:

[Comprising] creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, cultural and society, and the use of this stock of knowledge to devise new applications. (OECD in New Zealand Ministry of Research & Statistics New Zealand, 2003, p.43)

From this point of view, R&D activities deal with formal knowledge and are characterised by novelty and innovation. They create new knowledge and thus, have a potential for supporting the growth of the economy and the improvement of well-being. Since the importance of investment in R&D to the quality of life and future prosperity is well known, countries put their efforts to improve their performance in the field. In the past two decades, the New Zealand government's expenditure on R&D has gradually increased. Between 1989 and 2003, the ratio of R&D expenditure to GDP increased from 0.87 percent to 1.16 percent (Organisation for Economic Co-operation and Development, 2006).

According to the survey conducted by New Zealand Ministry of Research, Science and Technology (2006), in the period between 1994 and 2004, R&D expenditure in New Zealand has increased by 92 percent with an average annual increase of 7 percent, which includes business expenditure, higher education expenditure and government expenditure. Compared with other OECD countries, New Zealand has a

larger proportion of R&D that is funded by the government because of the unique structure of the economy and the limited number and size of research, science and technology intensive firms. The structure of the economy also determines that much of New Zealand's R&D is based on primary production such as agriculture and forestry. In the same period, human resource inputs into R&D have grown by 60 percent and reached up to 19,096 people. These included scientists, researchers and postgraduates working in tertiary education institutions, Crown Research Institutes, polytechnics, hospitals, local authorities, research associations and private firms.

3.3.2 Investment in education and training: knowledge reproduction

Since human capital has played an increasingly crucial role in wealth creation, formal education and training are emphasised. According to the OECD statistics (Organisation for Economic Co-operation and Development, 2006), in 2002, public and private expenditure on educational institutions for all levels of education in New Zealand accounted for 5.6 percent of GDP which was higher than that of the OECD average of 5.1 percent. The survey by New Zealand Ministry of Research, Science and Technology (2003) showed that in 2001, 292,000 people living in New Zealand had completed a university. The New Zealand Ministry of Education and the New Zealand Department of Labour acknowledge that an effective industrial training system is critical to New Zealand's knowledge economy. In 2000/2001, \$69.7 million of the government's investment in industrial training was deployed to develop the generic transferable skills and raise the level of foundation skills. The former included teamwork, communication, multi-industry skills such as customer service and information technology while the latter referred to literacy, numeracy and communication. The qualification system was identified as needing more flexibility in order to improve the transferability of skills (New Zealand Ministry of Education, New Zealand Dept. of Labour, & Skill New Zealand (Program), 2001). Apparently, knowledge gained from the tertiary study and skills learnt in the industry training

system are well defined and valued by the qualification system to link with economic production.

3.3.3 Development of ICTs: knowledge dissemination

Since New Zealand has invested relatively little in ICTs development, supporting IT development and application are put as an essential action for moving towards a knowledge society and economy (New Zealand Information Technology Advisory Group et al., 1999; University of Auckland, 2001). For example, the Information and Communications Technology (ICT) Taskforce was established in response to the Government's Growth and Innovative Framework. The taskforce proposes a growth target for the New Zealand's ICT industry of growing 100 ICT companies by 2012 with ICTs contributing 10 percent of GDP (New Zealand Information and Communications Technology Taskforce, 2003). Meanwhile, the Next Generation Internet (NGI) Steering Committee (Zwimpfer & Next Generation Internet Steering Committee, 2002) put forward a proposal for establishing the NGI infrastructure in order to support research, innovation and education in New Zealand.

Although New Zealand is not a leading country in ICTs development, it still shows its potential in the industry due to the constant increase in ICT expenditure. For example, in 1997, New Zealand had the highest ICT intensity (ICT expenditures as a percentage of GDP) among OECD countries with 8.6 percent of GDP expenditures on ICT development (Organisation for Economic Co-operation and Development & Organisation for Economic Co-operation and Development Economic Analysis and Statistics Division, 1999). In 2003, the value of exports of ICT goods reached \$464 million, up from \$232 million in 1996. At the individual level, household ICT use has also increased in the past decade. Between 1991 and 2003, telecommunication access paths per 100 inhabitants increased from 45.8 to 117.8. In 1998, nearly 30 percent of households had computers while the percentage rose to 62 percent in 2003

(Organisation for Economic Co-operation and Development, 2006).

3.3.4 Attraction of skilled migrants: human resources

Skilled immigrants are a major human resource for the New Zealand economy. In the past decade, the ratio of skilled immigrants to total immigrants in New Zealand was at a relatively high level. The immigration data from the Business Information Branch of the Department of Labour shows that since 1997, approved skilled immigration, including general skills and skilled migrants, in each financial year accounts for more than 40 percent of the total number of approved immigrants. The financial year 2001/02 has the highest ratio of skilled immigrants to total immigrants, accounting for 59.33 percent (see Table 3.1).

Table 3.1 The Rate of Skilled Immigration

Year	Skilled Immigration (persons)	Total Immigration (persons)	The Rate of Skilled Immigration to Total Immigration (percent)
1997/98	13466	29840	45.13
1998/99	13171	28465	46.27
1999/00	16725	34813	48.04
2000/01	23288	43623	53.38
2001/02	31359	52856	59.33
2002/03	26650	48538	54.91
2003/04	16883	39017	43.27
2004/05	25943	48815	53.15
2005/06	25131	45417	55.33

Source: Produced based on the immigration data obtained from Business Information Branch, Department of Labour.

With the growth of skilled immigrants arriving in New Zealand, the challenge for the government is how to make them contribute to the development of New Zealand's knowledge society and economy with their skills.

Generally, the economic fundamentals of New Zealand's knowledge society are based mainly on formal scientific knowledge which is viewed as a commodity and capital in

the creation of wealth based on economic calculation. Thus, the efforts of investment in formal education and training are expected to enable individuals to gain cultural capital symbolised by educational qualification. The occupational classification categorises people according to their educational qualification to fit into the needs of the labour market. Skilled immigrants are treated as human resources to contribute to the growth of the economy. ICTs development is used as an effective instrument to disseminate codified knowledge globally. R&D is based on individuals' educational levels and the government's expenditures. However, the economic logic is not the nature of the knowledge society. As Carlaw, Oxley, Walker, Thorns and Nuth suggest:

If the term 'knowledge economy' is primarily concerned with knowledge as commodity and the value of intellectual labour in the creation of wealth, then the term 'knowledge society' should concern the social climate in which the knowledge economy resides. (Carlaw, Oxley, Walker, Thorns, & Nuth, 2006, p.652)

Therefore, the development of New Zealand's knowledge economy cannot be separated from social contexts. The next section will discuss issues around the relationship between New Zealand's knowledge society and economy.

3.4 New Zealand's Knowledge Society and Economy

3.4.1 Identifying the knowledge worker in the standard classification of occupation

As a skill-based classification, the NZSCO is used to define occupations and jobs in the New Zealand labour market. According to the classification, a job is a set of tasks that reflects what people do in their work. To perform a job, a person needs various

attributes, which include formal qualifications, competencies, experience, subject matter knowledge, ability to use specific tools and equipment, ability to produce specific goods and/or services. These attributes are regarded as the skill component of an occupation or job. The skill level is the basis for classification. It is recognised that the more complicated a task, the higher skill level it needs. In practice, formal education and training and experience are used as major criteria to categorise skill levels and define occupations (Statistics New Zealand, 2001). The rationale for occupational classification shows that in New Zealand labour markets, individuals are still treated as a labour, or a skilled labour to perform a specific task in the production of goods and services. Technical artefacts are still the focus of occupational classification. According to education attainment, knowledge gained by individuals is defined and categorised to fit into specific skill levels (see Appendix 3-9). Therefore, “[functioning] in the manner of a huge classificatory machine which inscribes changes within the purview of the structure, the school helps to make and to impose the legitimate exclusions and inclusions which form the basis of the social order” (Bourdieu & Passeron, 1990, p.x).

However, economic and social changes in recent years have raised a new question. The growth in the dependence on expert knowledge is a profound phenomenon in a knowledge society (Stehr, 1994). No matter whether people use knowledge in a negative fashion or a positive one, the demand for the expert knowledge results in the increasing employment opportunity for ‘knowledgeable employees’ or knowledge workers in the labour market. To categorise modern occupations and analyse the structure of the American labour market, Machlup (in Stehr, 1994, p.179) broadly defines knowledge workers as “workers in occupations which produce and transmit knowledge”. Although he does not clarify the meaning of knowledge in this definition and this results in being problematic in the estimation of the contribution of knowledge work and workers to the economy, his practice in categorising occupations indicates that knowledge especially formal knowledge is used as the focus of defining an occupation. However, in the knowledge society, the nature of knowledge has

expanded from referring exclusively to explicit/formal knowledge to including tacit/informal knowledge. Therefore, knowledge worker should refer to not only workers dealing with explicit knowledge gained from formal education and trainings, but also workers working with tacit knowledge accumulated through life experiences in different cultural and social systems.

If Machlup's definition of knowledge worker is understood in this way, there is inevitably a gap between the existing occupational classification and the definition of knowledge worker. In the New Zealand context, the different foci also lead to difficulties in identifying knowledge workers in the existing occupational classification. Firstly, knowledge workers do not exclusively belong to a specific occupational category but exist in various occupations within the existing structure. For example, knowledge workers would appear in the following major groups including major group 1: Legislator, administrator and manager; Group 2: Professionals; Group 3: Technicians and associated professionals; Group 6: Agricultural and fishery workers (see Appendix 3-9). Moreover, even in these groups, knowledge workers will be identified through examining the form of knowledge they use and the process through which knowledge is produced and distributed. Secondly, since the classification uses a framework that values formal knowledge based on the western culture, people from alternative knowledge systems and with tacit knowledge could be under-presented in the classification.

Thirdly, the change in the service sector has not been reflected in the classification. Major Group 5: Service and sales workers of the occupational structure just presents non-knowledge-producing workers such as waiters and caregivers. However, the recent change in economic activities shows that New Zealand is moving towards a service economy. There is a constant growth in knowledge-based occupations such as consultants and advisors in the service sector, and therefore, the classification may not present changes over time. Finally, the lag in the recognition of new occupations is one of problems in the classification practice. For example, 'knowledge manager'

emerges as a popular term in the business field to refer to workers involved in knowledge management. However, this occupation has not been included in the classification. Therefore, it seems that despite the increasing significance of knowledge in economic activities and social relations, “statistical reporting based on the knowledge characteristics of different types of economic activity is not yet an accepted practice. Meantime economic perspectives remain limited by the ‘industrial lenses’ through which the world is still defined and described” (Burton-Jones, 1999, p.4).

3.4.2 R&D in the New Zealand context: knowledge as both a public good and private property

From an economic point of view, the dilemma in knowledge production is attributed to the nature of knowledge as both a public good and private property. The nature of the public good implies that knowledge should be free for accessing to ensure efficient use. As private property, knowledge could be produced when the creator’s interest is guaranteed (Geuna, 1999). In New Zealand, although both governmental and non-governmental organisations have increasingly input personnel and funds into knowledge production (namely R&D), the dilemma still exists. The lack of economic incentive has resulted in a relatively low level of spending in the private sector on R&D. This slows down the process of turning new knowledge into marketable goods and services (Lowe, 1998).

Three ways are used to encourage the provision of the public R&D in New Zealand: patronage, procurement and property. However, there are debates around all of them. Patronage is a way of awarding publicly financed research on the basis of competitive process with the expectation of serving the public. However, since the 1990s, holding onto intellectual property (IP) has been a prevalent accepted practice since the two major research organisations, Crown Research Institutes (CRIs) and universities, re-

aimed to retain a profit. Procurement is based on the contract between the state and the preferable research organisation; yet, the contracting party acts like a doorkeeper to determine access to the results of research. The arrangement through property allows the private producer to be granted IP and collects fees for the use of their knowledge (Carlaw et al., 2006).

The third arrangement seeks to provide enough incentives for the producer of knowledge to engage in R&D and meanwhile, to guarantee social returns. However, Carlaw et al. (2006) note that the rise of the new forms of communication will challenge the protection of IP. According to them, in knowledge societies, the culture of innovation encourages the increasing production of new knowledge whereas the development of ICTs facilitates new forms of clusters and connectivity and speeds up the diffusion of knowledge. These changes raise a series of issues around the role of IP such as protection and authentication of materials, protection and enhancement of the commercial value of innovation, and ensuring equal access to and acquisition of information. From this point of view, R&D does not happen in a vacuum and the concern of R&D goes beyond solely having enough inputs. The balance between protecting the private producer's interests and maintaining benefits to society is an issue which always needs to be addressed to guarantee both equality and efficiency.

3.4.3 The multicultural society and acquisition of knowledge and access to information

According to estimates from Statistics New Zealand (Statistics New Zealand, 2005), the resident population in New Zealand was 4.10 million at 30 June 2005 (The 2006 Census shows that the resident population in New Zealand was 4,163,783 on 28 December 2006). Although the size of the population is relatively small, the population is growing at an accelerating rate. The population reached its first million in 1908, second in 1952, third in 1973 and fourth in 2003 respectively. With the

settlement of Maori, Europeans and others, the population of New Zealand experienced changes in both size and structure. The change in New Zealand's population has depended greatly on the fluctuation of net international migration. In the history of New Zealand, the pattern of international migration in the past century has evolved from colonial migrations and labour migrations to regional and global migrations (Thorns & Sedgwick, 1997). Not only have these migrations changed the size of population, but they have also shaped the composition of population. People born overseas appear to be a significant component in New Zealand's population. During the 1990s, in particular, the number of people, who were Asia born, increased rapidly.

With the growth in the percentage of people born overseas, more multilingual people are living in New Zealand. In 2001, multilingual people increased by 20 percent from the 1996 Census. Although English is still the dominant language, other languages, including Maori, Samoan, French, Yue (Cantonese) and German, are widely spoken in New Zealand (see Appendix 3-13). Similarly, there is an increase in non-Christian religions such as Hindu, Buddhist, Islam and Spiritualism (Statistics New Zealand, 2002). Therefore, the changes in New Zealand's population suggest that New Zealand has become a new home for people from different regions and with different cultural, language and religious backgrounds and thus, it has moved from a bicultural to a multicultural society. The diversity in ethnicity and culture does not merely mean that ethnic groups as variables appear in statistical tables, but more importantly, they put forward a set of questions for policy makers to address about both equality and diversity.

Particularly, when New Zealand is moving towards a knowledge society, the significance of knowledge in the knowledge society justifies the government's efforts to invest in the production, reproduction and distribution of knowledge to win the competition in the global market. Today, knowledge increasingly appears in symbolic forms such as books and databases. As Stehr believes, "[t]he social significance of

language, writing, printing, data storage etc. is that they represent knowledge symbolically or provide the possibility of objectified knowledge” (Stehr, 1994, p.93). Therefore, in a knowledge society, an individual’s capacity to appropriate objectified knowledge into their own context depends hugely on whether they can access and understand the symbolic forms of knowledge. It is crucial to ensure that people from different backgrounds can equally access social resources to gain knowledge and at the same time, can efficiently use their knowledge and skills to contribute to the development of New Zealand. In the past decades, governmental investment in education and the development of the Internet has shown their intention to support individuals in accessing knowledge and thus, enabled them to contribute to the rising knowledge economy.

However, as a multi-cultural society, New Zealand’s efforts are conditioned by its complicated social reality. For example, although New Zealand has a relatively high public and private expenditure on education among OECD countries, education attainments are varied within each ethnic group. The data from Statistics New Zealand show that in 2001, there were high proportions of Maori people and Pacific people without qualification or with low levels of qualifications. The rate of higher education attainment was high among Asian people and people from other ethnic groups such as Russians. European people had the highest rates of vocational qualifications (see Figure 3.1). These differences in educational attainment suggest that although globalisation provides opportunities to share knowledge across cultures and geographic barriers, it also needs education practices that consider cultural diversity. Otherwise, the cultural endowment, according to Bourdieu, would make inequality legitimate (Bourdieu in Delanty, 2001).

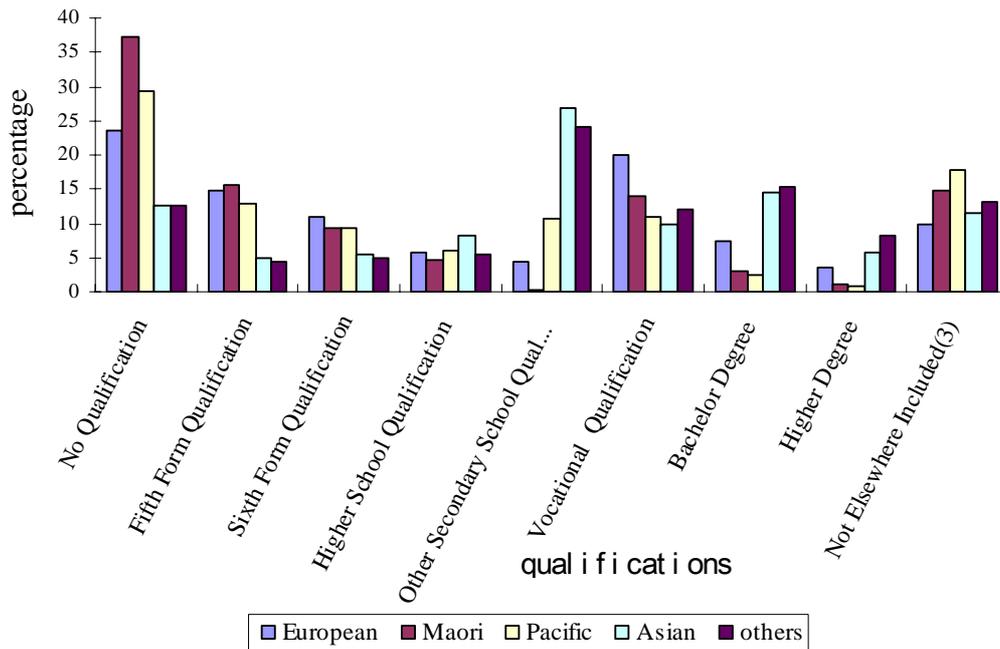
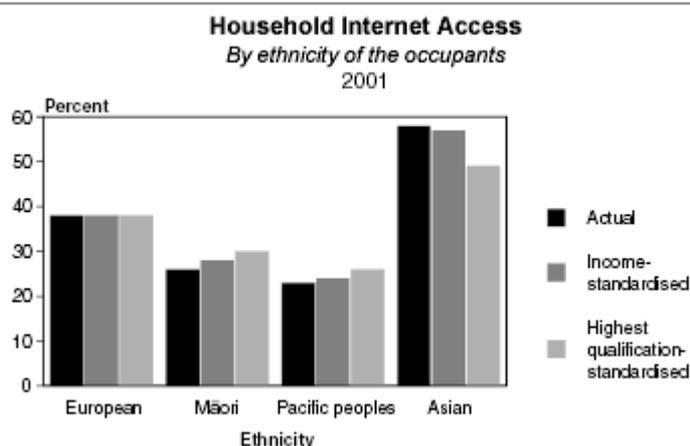


Figure 3.1 The Highest Qualification by Ethnic Group in 2001

Sources: Produced based on data from Table Builder Table 14a, Statistics New Zealand. (<http://www.stats.govt.nz/products-and-services/table-builder/default.htm>)

Besides the formal education system, today, the Internet is an essential resource for people to access knowledge and information. Castell’s idea of the network society presents an ICTs-mediated utopian society in which people can access information and share knowledge equally. However, the digital division and the degree of connectivity are still an issue which should be addressed. For example, in New Zealand, although investment in both ICTs and household Internet appears an increasing tendency, digital division is still a challenge for the government. Figure 3.2 shows the gaps of household Internet access among ethnic groups in 2001. Asian people had the highest rate of household Internet access while Maori people had the lowest one. The difference indicates that the difference in the possession of technological facilities also creates distinctive possibilities for people to access information and knowledge.

Figure 3



Source: Statistics New Zealand, 2001 Census of Population and Dwellings

Figure 3.2 Household Internet Access

Source: *2001 Census of Population and Dwellings*, Statistics New Zealand, retrieved on August 20, 2006 from

<http://www.stats.govt.nz/products-and-services/Articles/hhold-access-inet.htm>

Similarly, in New Zealand, there are gaps in the capacity to speak English among people from different language backgrounds. In 2001, 68 percent of Asian people spoke a first language other than English. Comparatively, Europeans and Pacific people had lower rates of the first non-English language speaking with 58 percent and 46 percent respectively. Among these groups, Asian people were the least likely to speak English. In particular, Koreans were the most likely to speak their first language other than English while Indians had the largest proportion of people speaking English among the Asian group (see Appendix 3-14). The gaps indicate that the dominance of English would isolate and discriminate people who do not have the capacity of speaking English and would put them at a disadvantage.

In general, although New Zealand is moving towards the knowledge economy with investment in the growth of knowledge and the advancement of technology, ethnic and cultural diversity brings challenges for the government. Formal education is distinguishing people according to their qualifications while advanced information technologies bring different opportunities for technological haves and have-nots. At the same time, the lack of the capacity to speak English would constrain the development of social citizenship for some residents. Therefore, a knowledge

economy, at least in the New Zealand context, does not automatically lead to a knowledge society.

3.4.4 The gap between cultural and economic reproduction

In the economic domain, human capital is one of the major factors for economic production and reproduction. The increasing significance of knowledge in wealth creation encourages governments to invest in education, especially higher education to support the development of human capital. The past decades have seen the constant increase of public and private expenditure in higher education in most countries. However, the effort does not immediately lead to expected results. On the one hand, higher education as a cultural reproduction attempts to produce and supply an increasing number of highly qualified people for economic reproduction based on legitimated culture. On the other hand, the limited labour force participation of people in relevant occupations shows that the conversion from cultural capital to human capital is still problematic and cultural reproduction does not completely match economic reproduction.

In New Zealand, the gap between them is still apparent. For example, the survey conducted by the New Zealand Ministry of Research, Science and Technology (2006) shows that 70 percent of the R&D effort is provided by researchers who have tertiary qualifications. However, the supply of and the demand for human resources involved in R&D is mismatched. For example, in 2001, only half of the 292,000 who were qualified were actually employed in the relevant occupations while only about one-third of the 436,000 employed in R&D relevant occupations were qualified. It means that although the demand was much bigger than the supply, nearly half of all highly qualified people were not working in relevant occupations and would be deskilled (see Figure 3.3).

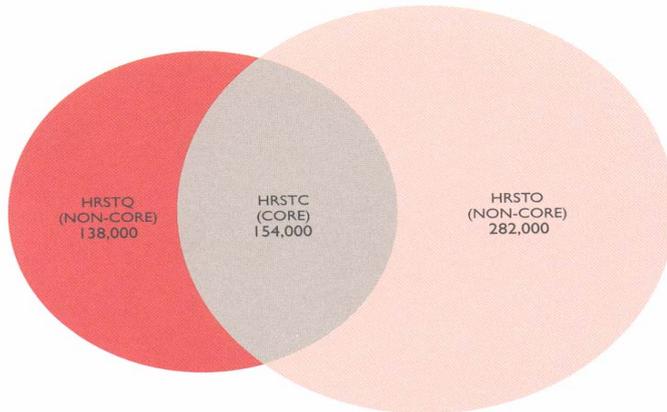


Figure 3.3 The Overlap between the Supply and the demand of Highly Qualified People

Source: Research and development in New Zealand: A decade in review, p.9, 2006, New Zealand Ministry of Research, Science and Technology. (HRSTQ: the supply; HRSTO: the demand)

Not only can the gap between educational attainment and employment be identified in the New Zealand population as whole, but it also can be observed among different ethnic groups. The inconsistency between educational attainment and employment varies among different ethnic groups. The data from the 2001 Census show that, in general, overseas-born people were more highly qualified than New Zealand-born people. In 2001, just 19 percent of overseas-born population had no any qualification comparing with 30 percent for New Zealand-born population. On the contrary, the former had lower labour force participation than the latter in the same period of time (Statistics New Zealand, 2004).

3.4.5 Educational attainments and income division

“The training and instruction of the young for the business of life is one of the most ancient concerns of mankind” (Boyd & King, 1972, p.1). Education is not a new idea in human history. In the past centuries, the history of western education has evolved from the educational ventures of the Greek people to democratic education after World War II. During the process, various leading educational ideas shaped the different modes of knowledge to meet changing social, economic, political and

cultural circumstances. *The New Zealand Education Act of 1877* started an aggressive bureaucracy in education. The following nearly 130 years saw continued change in educational administration in order to address constantly emerging problems (Dakin, 1973). The most radical change in modern education entailed moving towards self-managing schools in the 1980s with the introduction of Tomorrow's Schools and the 1989 Education Amendment Act (Thorns & Sedgwick, 1997). Today, education institutions include early childhood, primary, secondary and tertiary education. Primary and secondary education are generally free and compulsory for all residents aged over five. The New Zealand Qualifications Authority (NZQA), as a government department, is responsible for providing the assessment of secondary and tertiary qualifications and education providers, evaluating overseas qualifications and administering the New Zealand Register of Quality Assured Qualifications and the National Qualifications Framework (The Wikimedia Foundation). Awarded qualifications are used as a crucial indicator for the occupational classifications and for employers to judge applicants' levels of knowledge and skills and to decide on their status and role in work. Therefore, educational attainments are important for people to enter the labor market.

In particular, with the growth of employment in knowledge-based occupations, higher education becomes more attractive for ordinary people. From 1991 to 2003, the percentage of tertiary attainment for the age group 25-64 increased from 22.9 percent to 30.9 percent (Organisation for Economic Co-operation and Development, 2006). Moreover, there is a gender difference in education attainments. The statistical data from the 2001 Census of Population and Dwellings show that there were more women with low levels of qualification or without qualifications than men. Women tended to get advanced vocational qualifications while men preferred skilled vocational qualification. Regarding university attendance, there was just a slight difference between men and women. The number of women who got a Bachelor Degree was slightly higher than men. On the contrary, men appeared more frequently in degrees above Bachelor level (see Figure 3.4). These data may suggest that since women have

an approximately equal participation in higher education, women would increasingly appear in knowledge-based occupations.

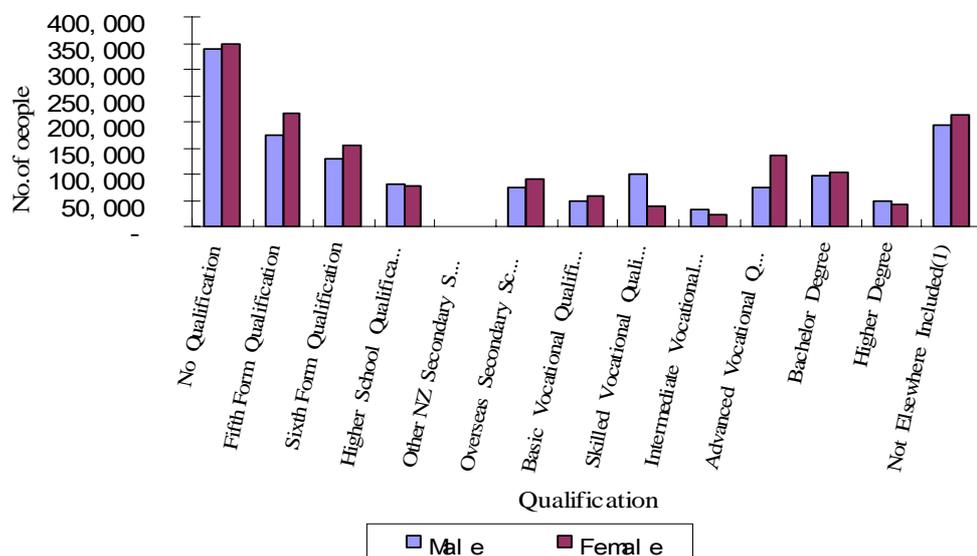


Figure 3.4 The Division of Sex by Highest Qualification in 2001

Source: Produced based on data from *Table Builder: Table Total Personal Income and Sex by Highest Qualification*, Statistics New Zealand (<http://www.stats.govt.nz/products-and-services/table-builder/default.htm>)

Conventionally, education is considered to be able to reduce social inequity and lead to the development of social citizenship. However, Bourdieu (in Delanty, 2001) argues that as a social reproduction, education, particularly higher education, produces inequality as much as it reduces it. In New Zealand, educational qualification is one of the decisive factors for the level of personal median income. Figure 3.5 shows the separation of the personal median income by qualification in 2001. It illustrates that while tertiary education leads to a relatively high income for both men and women, in general, men have a higher income than women even if they get the same qualification. To some degree, the difference in the level of personal incomes illustrates how education attainment maintains and reproduces economic inequality in New Zealand.

According to the human capital theory, “[people] who invest relatively large amounts in themselves tend to receive relatively high profits and measured earnings after the

investment period” (Becker, 1993, p.120). From an economic point of view, this justifies the correlation between educational attainment and personal income. However, sociologists read different meanings from the difference. Bourdieu maintains:

[T]he educational system ... exercise its power of transmuting social advantages into academic advantages, themselves convertible into social advantages, because they allow it to present academic, hence implicitly social, requirements as technical prerequisites for the exercise of an occupation. (Bourdieu & Passeron, 1990, p.166-167)

From this point of view, the differences in educational qualification disguises social stratification into occupational classification and economic inequality. Therefore, since New Zealand is moving towards a knowledge society, this credential effect based on the differentiation of cultural capital should be properly addressed.

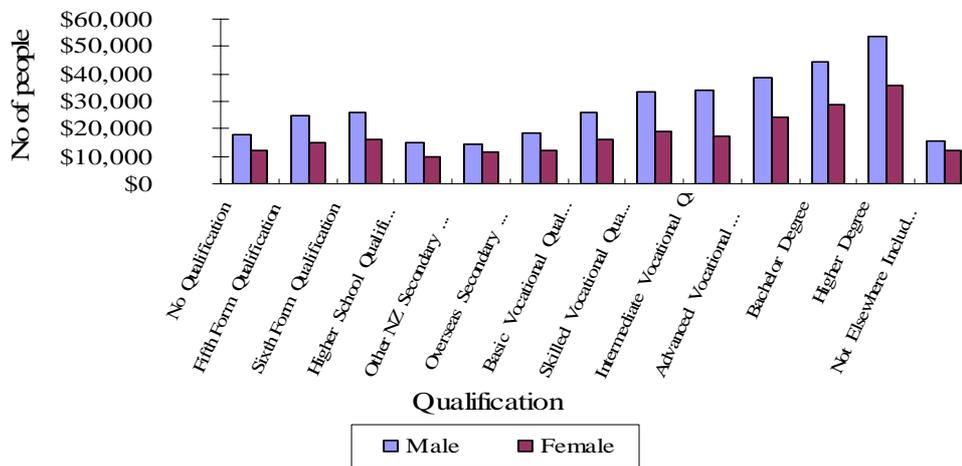


Figure 3.5 Personal Median Incomes and Sex by Highest Qualification in 2001
 Source: Produced based on data from Table Builder: Table Total Personal Income and Sex by Highest Qualification, Statistics New Zealand (<http://www.stats.govt.nz/products-and-services/table-builder/default.htm>)

3.4.6 Cultural value and tacit Knowledge in New Zealand's knowledge society and economy

For knowledge societies, competitive advantage is knowledge. Most practices in exploiting knowledge are based around formal scientific knowledge. In the New Zealand context, concerns around skilled migration, formal education, R&D and ICTs development are all linked with the production, reproduction and dissemination of formal knowledge. However, other forms of knowledge are increasingly recognised. For example, the debate among New Zealand's education providers on the basic issues for curricula is related to the nature of knowledge, that is, what counts as knowledge? What forms of knowledge should be included in curricula? In particular, the balance between know how (skill), know what (the content of knowledge), know who (social relations), know when and where (the context of knowledge) is emphasised in reforms of the New Zealand Curriculum Framework. For technology education, the goal is made to raise the awareness of the relationship between technology and society since technology is recognised to be embedded in social systems (Marshall, 2000). Similarly, the claim for the requirements of human resources for New Zealand's knowledge society also emphasises networking, relationship skills and learning through working together (Buwalda, 1998). The shifting ideas show that the role of tacit knowledge and the knowledge between individuals are also important in New Zealand's knowledge society and economy.

Cultural capital is regarded as an indispensable component in building New Zealand's knowledge society and developing its knowledge economy. Various types of national cultural resources, which New Zealand could be drawn upon to attract the attention of the world and provide goods and services, are identified by and become attractive for New Zealand's industries. Some of examples are the New Zealand film and television industries, flourishing New Zealand art and literature, international sporting prowess, indigenous ways of life, and wilderness activities and images (Wallace, 1999). From

this point of view, New Zealand has a rich soil for the development of the symbolic economy based on culture. Therefore, in the knowledge era, cultural knowledge is not out of the economic domain and separated from scientific knowledge but enriches the content of knowledge societies and economies.

Another influence of cultural knowledge can be traced to the role of tacit knowledge in knowledge management practices in New Zealand business. According to Davenport, for some successful firms, “[national] culture and doing things in a ‘Kiwi’ way appears to be very important ... [they] all had a certain intangible ‘self-confidence’ about being a New Zealand firm that in many ways was a great enabler and platform for their international success” (Davenport, 2002, p.52). The experiences of these firms show that various types of knowledge, such as knowing why, knowing how, knowing whom and knowing yourself, are useful for their business. These types of knowledge enable them to know direction in order to define an organisation’s activities, capacity for technical innovation, relationship and identity to keep their competitive advantage through reflexive interaction. Moreover, while explicit knowledge is globally accessible through the process of codification and de-codification, the tacit dimension of knowledge would appear as a competitive resource for organisation to win in the global market (Davenport, 2002). From this point of view, an organisation’s knowledge resource is derived from not only explicit knowledge but also tacit knowledge and from not only knowledge within the individual but also between individuals.

Generally, when history enters the knowledge era, the rapid growth of the service economy, the development of the knowledge-based economy, the further openness in international trading and the frequent mobility of highly educated people show, in different ways, the significance of knowledge in economic development and social life and bring opportunities for countries. Meanwhile, they challenge the conventional three-sector division of the economic structure; request considering both technical and

cultural factors and both individual capacity and collective intelligence while investing in knowledge; and emphasise developing knowledge-intensive exports and attracting the talented people. Facing both opportunities and challenges brought by knowledge, every country is moving on its own path. In the past more than one and half centuries, the structure of the New Zealand economy has experienced a dramatic change with its changing social and historic conditions. During the process, knowledge has played an increasingly important role. Today, the economic fundamentals for New Zealand's knowledge society are taking a shape. The growing investment in R&D, the development of ICTs, and the strengthening attention on education and skilled migration bring the hope for a rapid economic development.

However, these efforts put on developing formal scientific knowledge is only one side of the story. The shifting meaning of knowledge in the knowledge era brings various new issues for the government. The difficulties of identifying knowledge worker in the New Zealand Standard Classification of Occupations show that the existing classification system based on formal education and training does not reflect the reality of occupations. Especially, in areas where change is taking place, the standard occupational classifications fail to present what people actually do. Supporting R&D goes beyond investment but needs to balance producers' interests and societal benefits. Increasing ethnic and cultural diversity challenges the inadequacy and inequality in accessing knowledge and information. The difference in educational attainment is creating social inequality. The mismatch between cultural reproduction and economic reproduction still needs to be address. Cultural values, knowledge between individuals and tacit knowledge show their role in New Zealand's knowledge society and economy. Therefore, the development of New Zealand's knowledge economy cannot be separate from the knowledge society. The production, reproduction and dissemination of knowledge go beyond solely economic processes but are associated with various external and internal social, policy and cultural conditions. The next chapter will focus on the interaction between international migration and New Zealand's knowledge society to look at how various factors are involved in the

process of knowledge production, reproduction and dissemination.

Chapter Four International Immigration and New Zealand's Knowledge Society and Economy

New Zealand is looking for people with the skills, qualifications and experience to help our country grow and innovate in the future. We also want skilled migrants to settle here feeling welcome and able to make a positive contribution.

(New Zealand Immigration Service, 2005, p.4)

Not only does this announcement indicate the New Zealand government's intention to attract talented migrants in order to contribute to its social and economic development, but also shows how different immigration policy interventions in receiving countries will allow entry for migrants with different qualities and thus, shape immigration patterns. Migration is not a new phenomenon in human history, but it always gains a high level of attention due to the constant interaction between immigration policies and changing socio-economic structures. Historically, migration was associated with the colonisation process and the demand for labour in plantation economies and industrialisation. During the past several decades, most receiving countries created points systems and gave preference to immigrant investors, entrepreneurs, and skilled migrants (Meyers, 2004). The shift of immigration policies happened along with the transition from an industrial society to a post-industrial one to meet the changing requirements of economy.

As a traditional immigrant country, New Zealand has similarities with some other countries, such as Canada and Australia, in terms of immigration policy. Meanwhile, its immigration policies have evolved with its specific economic concerns and social issues. In particular, while New Zealand is moving towards a knowledge society and economy, immigration policy is shaped and reshaped to meet emerging requirements

for skills and knowledge. This chapter will focus on exploring the relationship between immigrants, especially skilled immigrants and New Zealand's knowledge society and economy. It starts by reviewing New Zealand's immigration policies and the changes in skilled immigration streams. Then, against policy intentions, it will examine how the potential of skilled immigrant can be completely used to contribute to New Zealand's knowledge society and economy. In the light of the broad picture, this chapter will finally take Chinese immigrant (including the Chinese outside China and Mainland Chinese) as an example to discuss the relevant issues.

4.1 New Zealand's Immigration Policies and Skilled Immigration Stream

4.1.1 From biculturalism to multiculturalism

New Zealand's immigration policies have always played a significant role in shaping the volume and direction of immigration since the early period of immigration. In the settlement history of this country, the nineteenth century immigration was characterised by European settlement promoted by various forms of assisted settlement and the Immigration and Public Works Act of 1870. As a result, the pattern of European-Maori relation in the nineteenth century saw a complex balance between settler impact and Maori autonomy (Pearson, 1990). For Europeans, the mass settlement of New Zealand coincided with the decline of slavery in the Americas and the Caribbean. Thus, the paradox between humanitarian idealism and social control has always been identified in colonial policies. For Maori, their response to settlement by Europeans was equally diverse as they viewed Europeans as sources of trade and teachers of new beliefs and skills but also invaders of their lands (Pearson, 1990). During the initial period of colonisation by the British settlers, wars between Pakeha and Maori and the signing of the Treaty of Waitangi in 1840 were extreme examples reflecting this controversial relationship. Meanwhile, a series of Acts, such as the

Chinese Immigrants Act 1881, took on racial connotations and excluded immigrants who were not of European origin. Thus, the history of this period for those non-European groups, such as the Chinese community, was full of struggle for recognition.

The first half of the twentieth century came with an irregular course of immigration due to fluctuating economic conditions, two World Wars and the Great Depression. The invasion by Japan of China during the Second World War provoked public sympathy for and changed the New Zealand government's policy to Chinese. At the time, a refugee scheme brought the wives and children of early-arrived Chinese migrant workers to New Zealand. After the Second World War, immigration policy aimed to increase New Zealand's population and deal with labour market shortage. In the following three decades, the New Zealand government adopted differential immigration policy depending on the skill level needed to attract immigrants from different countries and regions. Most immigrants from the UK and the Netherlands were professional and skilled workers while Pacific Island migrants filled the low end of the labour market as unskilled workers (Pearson, 1990). During this period, migrant recruitment expanded from the traditional source of Great Britain to other European countries and Pacific Islands and thus, the composition of immigrants started to diversify (New Zealand Immigration Service, 1997).

However, New Zealand's national identity was still based on a British ethnic heritage. Under such a 'one cultural' perspective, successive generations of other ethnic groups were expected to be acculturated and assimilated (Pearson, 1990). The assimilation was problematic for ethnic minorities, especially for Maori who were identified as a national ethnic minority. They desired to be recognised by Pakeha as a people different from them. Although biculturalism has a long history in Maori politics, it was not until the 1970s that the debate about the Treaty of Waitangi and the role of the Waitangi Tribunal brought the notion of biculturalism into public policy (Vasil & Victoria University of Wellington Institute of Policy Studies, 2000). For Maori, the Treaty provided the basis for settlement of the Pakeha and a bicultural New Zealand

since they saw this as guidelines for the partner relationship between Maori and the Crown. Meanwhile, the debates on the Treaty of Waitangi were also entangled with the ideology of egalitarianism. For most New Zealanders, they believe that “all ethnic groups must be accorded similar treatment within an egalitarian society” (Pearson, 1990, p.231). Thus, the concept of multiculturalism was introduced to eradicate the discrimination of ethnic relations.

In the early 1980s, the Government’s programme of economic restructuring in New Zealand changed the country in various ways including that of immigration. The 1986 review of immigration policy asserted that New Zealand is a multicultural immigrant country. It stated that the aim of the new immigration policy was to “enrich the multicultural fabric of New Zealand society through the selection of new settlers principally on the strength of their potential personal contribution to the future wellbeing of New Zealand” (Burke in Walker, 1995, p.286-287). This statement shows the ideological shift in immigration policy from biculturalism to multiculturalism and the redefinition of ethnic relations in New Zealand. To enrich the multicultural fabric of society, immigration policy turned away from focusing on traditional source countries of immigrants towards emphasising personal merits. Thus, economic liberation pushed immigration policy makers to realise the role of immigration of skilled, experienced and innovative people for the country in the increase of economic competitiveness (Trlin, 1986). Skills and knowledge, therefore, rather than national origins became major indicators in immigration selection.

To support the new policy orientation, the programme of occupational immigration, which used the Occupational Priority List (OPL) produced through labour force surveys, was introduced as the guideline to recruit skilled migrants while protecting employment opportunities for New Zealanders. Meanwhile, family reunification and humanitarian grounds were deployed as two categories for permanent entry in response to national and international debate on human rights and equality. This policy intervention greatly contributed to the rapid increase of Asian population in

New Zealand. Between 1986 and 1991, the Asian population grew from 55,000 to 99,000 people, an increase of 45 percent (McKinnon, Asia 2000 Foundation of New Zealand, & Victoria University of Wellington Institute of Policy Studies, 1996). However, the policy was still criticised for excluding skilled people whose occupations did not fall in the OPL at any time and was perceived as lacking of the equality. This led to the introduction of a new policy in November 1991.

4.1.2 The points system and debates on Asian immigrants in the 1990s

A 1991 review of policy set up the goals of immigration policy as follows:

To allow entry to migrants who would make the highest contribution to employment and income growth; and to maximise the gain in productive human capital while maintaining provision for migrants to enter New Zealand for social and humanitarian reasons. (New Zealand Immigration Service, 1997, p.7)

In the light of these goals, four major categories for residence approval were introduced. These were a general category for skilled migrants, business investment, family and humanitarian categories. Among them, the general category was a major instrument to attract skilled migrants. It used a points system to grant applicants for residence. In the system, assessment points were given to various qualities of applicants including employability (educational qualification and business or work experience), age and ability to settle. A high score was set up as a threshold for auto-pass level, that is, applicants who gained a score at or above the high score set up by the New Zealand Immigration Service were guaranteed automatic approval. Under the business investment category applicants needed to show evidence of direct investment, qualifications and work experiences, and a minimum level of English language ability.

Family and humanitarian categories had no significant changes from previous policy guidelines (Trlin, 1986).

Under the new policy, there was a sharp increase in numbers of migrants in skilled and business streams and in Asian migrants. Overall, between 1993 and 1995, the total number of people approved under general skills and business investment categories rose from 70 percent to 75 percent of all immigrants. Asian migrants presented a strong increase from 33.8 to 44.2 percent of persons approved (Trlin, 1986). According to Trlin (1986), the policy with economic (human capital) focus caused widespread criticism and debate. One criticism targeted the failure of the general category on the grounds that the policy was weighed heavily in favour of university qualifications especially science degrees while undervalued applied skills. This resulted in an oversupply of migrants with high qualification but with a concentration on some particular types of occupations and skills. In addition, the rapid increase in the number of Asian immigrants also became a controversial issue for the public and media due to social and economic outcomes, such as the increase in property price and shortage of education facilities.

In particular, an article titled 'Inv-Asian', which was published in April 1993 in the suburban newspaper *The Eastern Courier* highlighting the views of those Aucklanders' uneasy about the increase of Asians in their areas, started a citizenship debate. The debate in the media and among parliament members temporarily ended up with the argument that it is problematic to hold the view of traditional 'national' citizenship and assert the link between cultural or ethnical identity and national identity with increasingly cultural diversity and economic globalisation. However, the National Government did not adhere to this line of argument but introduced a series of changes in immigration policy (McMillan, 2005). The new policy containing the General Skills (GSC) and Business Investor (BIC) categories came into effect in October 1995 with the goal of "economic growth with social cohesion". The strategic objectives included building New Zealand's human capital, strengthening

international links and encouraging enterprise and innovation, and maintaining cohesion. The most significant changes were the abolition of 'auto-pass', the amendment of the points system, the separation of GSC from BIC points-based ranking system and the introduction of prerequisites (Trlin, 1986). An assessment framework was deployed to guide the selection of eligible skilled and investor migrants. According to the framework, five aspects should be considered in granting applicants for residence. They were prerequisites, human capital factors, employability factors, settlement factors and commitment of New Zealand.

Regarding the prerequisites, both GSC and BIC applicants needed to meet the minimum set standard for health, character and English language proficiency (Level 5 of the General Module of the International English Language Testing System (IELTS)) before arrival. Therefore, qualifications were used as an indication of human capital in the framework. In the 1995 policy, the points structure was changed to give increasing points to higher levels of qualifications and to applicants with trade and technical qualifications; this was expected to lead to a broader skill mix. Employability factors included job offer, work experience and age. Increased points were given to an offer of skilled employment, to emphasise the validation of applicants' skills, while a more flexible approach was used to give value in terms of work experience which is relevant to the applicant's qualification. Settlement factors included settlement funds, spousal human capital, New Zealand work experience and family sponsorship while commitment to New Zealand was evaluated through the tax residence status of the principal applicant (New Zealand Immigration Service, 1995).

The research conducted by the New Zealand Immigration Service (1997) shows that there was a significant change in the composition of primary source countries for migrants under the new policy. The number of migrants from Taiwan, South Korea, India, Hong Kong and Iraq reduced while increasing approvals came from South Africa, Great Britain, China and Samoa. In addition, the policy adjustment also led to an increase of migrants with a job offer. Under the General Skills Category, about 60

percent of migrants have gained points for a job offer. Thus, the New Zealand Immigration Service stated that compared with the 1991 immigration policy, the changes in the 1995 immigration policy not only reflected more precisely the reality of the labour market but also controlled more effectively both the quality and quantity of migrants (New Zealand Immigration Service, 1997).

In the following years, the assessment framework was continually used as a guide for selecting skilled immigrants although there were adjustments in points given to different factors from time to time (see Appendix 4.1). For example, the 1998 immigration policy adjustment was still based on the original framework to select qualified migrants but made slight changes to reflect the reality of the labour market. In the policy, non-principal applicants were required to pre-purchase English for Speakers of Other Languages training through the Education and Training Support Agency. Applicants under the General Skills category received points for all work experience rather than just qualification relevant work experience and additional points were awarded for graduates of New Zealand tertiary institutions to encourage international students to apply for residence when they graduate (New Zealand Immigration Service, 1998).

During this period, citizenship debates continued with the introduction of neo-liberal policies and practices. According to McMillan (2005), New Zealand has been greatly influenced by the mode of social citizenship since World War II. This mode ensures that all citizens enjoy economic welfare and security and thus, are encouraged to participate in society through paying a comparatively high rate of taxation. However, this was criticised by economic liberals in the 1990s. They held that the idea of sharing risk and responsibility collectively, which was central to social citizenship, became a barrier for developing the capacity of individual citizens in the market economy. Thus, they appealed a shift to neo-liberal understanding on citizenship with an emphasis on the reduction of social assistance and encouragement of self-dependence. One of the significant effects of the neo-liberal view of citizenship,

which was identified by McMillan, was the decrease in the provision of settlement and post-settlement support services for new migrants. By placing an emphasis on individual responsibility, the Government assumed that new immigrants should make their own way with little assistance (McMillan, 2005).

4.1.3 Towards an outcome-oriented immigration policy

These political debates led to discussions on settlement outcomes of new migrants and initiatives on assisting migrants in successful settlement (Bedford, Ho, & Lidgard, 2005). In addition, the action of some Asian immigrants who went to Australia or returned to China after having gained the New Zealand citizenship put forward further questions to the immigration service in New Zealand. In 1997, the New Zealand Immigration Service set up a settlement programme to provide settlement-related information for new migrants. This consisted of three strands including information for potential immigrants to make a decision on moving to New Zealand, the Settlement Kit on various aspects of the life in New Zealand and *LiNKZ* providing information on how to access services for new migrants (Ho, Cheung, Bedford, & Leung, 2000). A survey conducted by the Settlement Information Programme of the organisation in 1998 revealed that city and district councils offered a wide range of different services for migrants although there was generally lack of nationally co-ordinated services and information (National Research Bureau (N.Z.) & New Zealand Immigration Service, 1998). In addition, there were various government-funded educational programmes, such as *Kiwi Ora*, to provide new migrants with information and knowledge on post immigration settlement. These supports show that immigration policy started to shift from focusing on annual targets to paying attention to settlement outcomes of new migrants.

From 2000, the annual report prepared by the New Zealand Immigration Service on migration trends also showed the gradual change of the points system for each

financial year to guarantee new migrants' successful integration into New Zealand's society and economy. In General Skills Points Profile 2001/02, increasing points were given to qualifications completed in New Zealand and relevant offers of employment (see Appendix 4-1). It indicates that the applicants who had initial experiences in education and work in New Zealand would be more competitive than other applicants. This change was actually made to respond to the initiative of the first conference of 'Knowledge Wave' in Auckland in 2001 and the Government's strategies for attracting talented migrants to contribute to New Zealand's knowledge society and economy (Bedford et al., 2005). Meanwhile, the requirement for applicants' English language proficiency was gradually upgraded: from November 2002, applicants for General Skills had to score an average of 6.5 in IELTS. Despite these adjustments, the settlement outcomes of new skilled immigrants were still not as good as expected. Many skilled immigrants could not find a job appropriate to their qualification and did low-skilled work or even manual work.

As a result of this, the policy on skilled and business streams experienced an apparent change in 2003, by which the Skilled Migrant Category was replaced by the General Skills Category. Under this 'work to residence' category, applicants who met the requirements of the threshold points needed to register first with an expression of interest and enter a pool. Then, after initial verification, they would be invited to apply for residence through the Skilled Migrant Category. Similarly, applicants under Business Investor Category needed to apply for residence through the similar procedure of the expression of interest (See appendix 4-2). At the same time, the points system continued to be used as an assessment method but it was hugely adjusted. In the new assessment framework, bonus points were deployed to give additional points to employment, work experience and qualifications in identified areas of absolute skill shortage or within identified clusters and qualifications gained in New Zealand (*What is required?-skilled migrant category*, 2005). For applicants, points gained in factors relating to skilled employment and qualification were determinants to get an approval for residence.

These changes show that immigration policies in New Zealand have changed with economic and social concerns. The nineteenth century saw the dominance of British migrants through immigration policy efforts to support colonisation and a resource exploiting economy. The colonisation process showed the controversial European-Maori relations while other ethnic minorities, such as the Chinese, were struggling for recognition. In the first half of the twentieth century, both the fluctuation of the domestic economy and external political and economic environments shaped immigration policy. After the Second World War, labour force shortages became the major concern driving immigration policy. Migrants from other European countries and the Pacific Islands came to the country in increasing numbers to meet the need for labour with different skill levels. In the 1970s, the debates on the Treaty of Waitangi and the role of the Waitangi Tribunal led to the added resonance of biculturalism in public policies. In the 1980s, the liberation of the economy pushed immigration policy to value the personal merits of skilled migrants while family reunification and humanitarian grounds were the other two major categories for gaining permanent residence. This policy change happened alongside the debates about biculturalism and multiculturalism.

In the late twentieth century, socio-economic concerns and debates on human rights and equality led to the 1991 policy review, which introduced the points-system to emphasise building New Zealand's human capital. Since then, this perspective has become predominant in the recruitment of immigrants. In the following decade, the adjustments in the points system and the recruitment procedure focused on attracting qualified migrants to contribute to New Zealand's society and economy. The changes in the points system indicates that the New Zealand's immigration policy has gradually shifted from the recruitment of labour forces with general skills to being in favour of people with a good English language ability, special skills and trans-national education and work experiences, particularly education and work experiences in New Zealand.

4.2 Skilled Immigrants in New Zealand's Knowledge Society and Economy

To achieve the goal of supporting 'economic growth and social cohesion', immigration policies attempt to control for both quantity and quality of immigrants through constant adjustment. Since 1991, the inflow of skilled migrants has, to some degree, reflected the policy intention for control over the number of immigrants. The 1991 policy change allowed immigrants to gain 'auto-pass' and thus, led to an increasing inflow of migrants under General Category. The introduction of the minimum standard of English language skills in the 1995 policy effectively brought the annual number of immigrants back to the target level of 35,000 people from nearly 56,000 people in the year to the end of June 1996 (New Zealand Immigration Service, 1997). The data from the Business Information Branch in the Department of Labour shows that since 1997, the annual number of immigrants has also been controlled under target levels. During this period, the inflow of people under the business and skilled stream had a significant effect on the fluctuation of the total number of immigrants each year. Between 1999/2000 and 2001/2002 financial years, the strong growth in immigrants through the business and skilled stream caused the total number of approved arrivals to exceed annual target levels. In 2003, the adjustment in assessment framework, including the increase of the threshold score for the English language test brought the annual number of immigrants back again (see Figure 4.1).

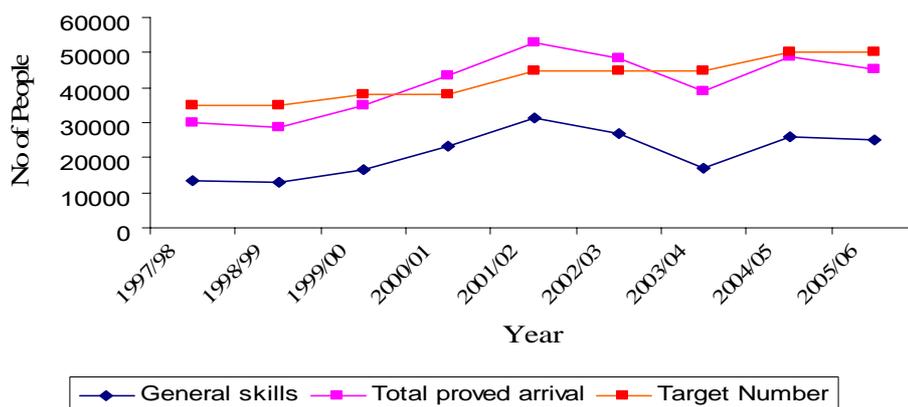


Figure 4.1 1997-2006 Annually Approved Arrivals and Targets

Source: Produced on data from *Table 2: People included on residence applications decided by residence substream and financial year of decision*. Business Information Branch, Department of Labour (Immigration).

To regulate the quality of immigrants, immigration policies have given increasing weight to the factors related to quality of human capital such as qualification, English language proficiency and work experience while selecting skilled immigrants. It is expected that the recruitment of talented people will contribute to the development of a knowledge-based economy in New Zealand. In reality, perceived barriers for new immigrants to settle down in New Zealand are inadequate English language ability, lack of New Zealand work experience, unrecognised qualifications, lack of communication skills and cultural difference (Benson-Rea et al., Department of Internal Affairs in Yee, 2005). The controversy between policy intentions and the difficulties immigrants faced leads to inquiring into the reliability of the relevant policy requirements such as English language proficiency and qualification.

4.2.1 Skilled immigrants and language in New Zealand's knowledge society

Since the 1986 policy changes which allowed recruiting immigrants from non-traditional English-speaking countries, language requirements have always been a focus of immigration policies. Between 1986 and 1991, all applicants for occupational

entry and their families were expected to have a 'reasonable level' of English to gain a residential approval. However, the requirements were generally vague and applied flexibly from case to case. With the introduction of the application of a points system in 1991, applicants needed to reach a minimum standard of English language skills. However, this was still assessed differently depending on the applicants' country of origin. For example, all applicants from P. R. China were required to attend a face-to-face interview while this method was not common elsewhere. This difference was based on the 'evidence' that China was less westernised than other countries or regions and had less opportunity to benefit from the burgeoning provision of English as a foreign language. This logic is criticised to be economically oriented and culturally biased as the similarities of economies and cultures are used as a determinant of the application of the English test (Henderson, Trlin, Pernice, & North, 1997).

The 1995 immigration policy set up a modest level of English for applicants and explained:

English is a key to successful settlement. Immigration is more successful for the immigrant, the community they live in, and the whole country if the new resident has a modest command of English. This applies not only to the principal applicant but also to the whole family unit. Lack of English can be costly for everyone. (New Zealand Immigration Service, 1995, p.10)

Undoubtedly, a sound level of skill in the English language was regarded as one of the most significant factors for migrants' success in settlement. Guided by this logic, the government continued to increase the threshold score of English requirements for applicants although there was a temporary relaxation in 1998. After November 2002, applicants were required to pass IELTS Band 6.5 as one of the major prerequisites for submitting an application. The annual report from the Department of Labour (2005)

shows that in 2004/2005, the number of applicants providing an IELTS certificate declined. It means that there were fewer applicants from non-English speaking countries than before. Although high English requirements would be a good way to guarantee a sound level of English proficiency for newcomers, this seems to contradict the initial intention of immigration policies to diversify the country's talent pool and build global linkages.

For accepted applicants, the average level of English language proficiency seemed to have increased. Compared with the IELTS result for 1995 General Skills, the average IELTS scores for skilled and business stream in 2004/2005 were much higher. The average of the overall bandings for principal applicants increased from 6.4 to 6.9. In particular, the scores for oral and listening tests increased by 0.6 and 0.5 respectively though those for reading and writing did not increase as much as the former (see Appendix 4-3-1). However, a breakdown of the data by country suggested that there were distinctions in IELTS scores among applicants from different countries. Generally, applicants from South Africa and European countries such as the Netherlands and Germany had a higher score than those from East Asian countries such as China, South Korea and Japan (see Appendix 4-3-2). As a result, the universal standard of English language proficiency would devalue applicants' knowledge and skills if they differed from the British one. To some degree, the criteria for assessing English language skills have defined the way by which people articulate their knowledge and use their skills 'effectively'. As Bourdieu and Thompson note:

Linguistic competence is not a simple technical capacity but a statutory capacity with which the technical capacity is generally paired ... [l]egitimate competence is the statutorily recognized capacity of an authorized person—an 'authority'—to use, on formal occasions, the legitimate (i.e. formal) language, the authorized, authoritative language, speech that is accredited, worthy of being believed, or, in a word, performative, claiming (with the greatest chances of success) to be effective. (Bourdieu & Thompson, 1991, p.69-70)

English has, thus been used as a legitimate label to distinguish people and to evaluate their knowledge. To regulate immigration, the requirements for English language proficiency have acted as an economic leverage to adjust the flow of ‘knowledgeable’ immigrants through a legitimatisation process. By this logic, it seems to be reasonable for governments to use English language proficiency as an indicator in immigration selection.

However, Henderson’s (2002) PhD study, which examines the importance of English language proficiency in immigration policy and its role in conjunction with other factors in the settlement experiences of skilled immigrants from China, shows a different idea. Through the study, she concludes that the manipulation of English language proficiency as a regulating tool undermines the expected function of English language proficiency requirement in immigration selection. The expectation that new immigrants who can meet the requirements of immigration, including English language proficiency, can successfully integrate into New Zealand’s society and economy failed to recognise the negative effects of social, institution and personal factors. The failure of immigrants to find suitable employment further constrained the development of their English language proficiency. Her research suggests that English language proficiency should not be used separately as a regulating tool in issues relevant to immigration. Thus, she criticises the way of using immigrants’ English language skills

as a panacea for resettlement problems; and have been applied only intermittently, and at times only selectively, give rise to legitimate questions regarding both discrimination and the very importance of English as a major factor affecting immigrant adjustment. (Henderson et al., 1997, p.21)

On the contrary, she supports the need for a balance in regulating the entry of immigrants and providing support to their post-arrival needs. From her point of view,

the support of the external environment is essential for newcomers to achieve their goal of becoming proficient users of English (White, Watts, & Trlin, 2002). In particular, new immigrants tend to have high expectations about life in New Zealand and this causes them to underestimate difficulties in settlement including the English learning environment. A positive external environment for newcomers to communicate effectively will benefit the society in a whole rather than 'be costly for everyone'.

For individual immigrants, English language is not only a technical capacity which would enable immigrants to make contributions but is also related to the concerns of the maintenance of immigrants' own cultures and languages. Immigrant communities and individuals see that language and culture maintenance is a crucial issue related to their own and their children's identity. In general, they hope to become proficient English users but not to give up their own language. The maintenance of their own language is seen as a vital medium to transmit their values and culture and contribute to self-esteem and a sense of identity and achievement throughout life (Trlin & Spoonley, 1986). For New Zealand, these non-English linguistic skills are also valuable. Although the practices are limited, a number of companies are making a good use of the language skills of immigrant employees. The New Settler Programme by Massey University (Watts, Trlin, & Massey University New Settlers Programme, 1999) shows that companies in international business, trade and tourism are more likely to be lacking in people with other language skills than other companies. In these companies, tasks involving use of immigrant language skills are assisting clients, translating, interpreting and handling correspondence. Linked with the language concern, responses from these companies also value the role of their immigrant employees to the New Zealand economy in areas such as assisting in the export market and bridging cultural gaps between customers and companies. Therefore, the research shows that it is significant to change monolingual attitudes and use the untapped language resource of New Zealand's non-English speaking immigrant population in the international business sector.

4.2.2 Skilled immigrants and their qualifications and contributions to New Zealand's knowledge economy

As one of the main characteristics of human capital, qualification is a major factor for applicants to get residential approval through the skilled and business stream. With the 1986 policy change and the introduction of a point-based system in 1991, immigrants with school and university degrees appeared increasingly in the immigrant population. The 1986, 1996 and 2001 Censuses show that in general, overseas-born New Zealanders are more likely than the New Zealand-born population to have higher education, and the distinction is more apparent in recent years (Winkelmann et al., 1998) (see Table 4.1). In 2001, 18 percent of immigrants had university qualifications compared with 10 percent of New Zealanders. For higher degrees such as doctorates, masters' degrees or post-graduate diplomas, 7 percent of immigrants had such qualifications compared with 3 percent of other groups in the population. Among overseas-born adults, the more recently arrived the immigrant, the higher the level of education s/he had. For example, immigrants who arrived within 10 years prior to the 2001 Census were better qualified than those arrived more than 20 years ago (Statistics New Zealand, 2004). In general, immigration of highly qualified people becomes a major characteristic in immigrant recruitment.

Table 4.1 Educational Attainments of Immigrants and New Zealand Born (in percent)

Year	No qualification	School Qualification	Vocational Qualification	University Qualification
1986 Immigrants	30.9	27.9	31.2	8.5
1986 New Zealand born	38.8	28.5	24.8	5.2
1996 Immigrants	23.3	31.9	27.8	15.5
1996 New Zealand born	29.6	34.7	26.1	8.0
2001 Immigrants	16.4	40.6	15.5	15.5
2001 New Zealand born	26.9	34.4	19.1	9.1

Source: Winkelmann, L., Winkelmann, R. & University of Canterbury Dept. Of Economics. (1998) *The labour market outcomes of New Zealand's old and new immigrants*, Christchurch, N.Z., Dept. of Economics University of Canterbury.

Table builder from Statistics New Zealand Website ([http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/web/Reference+Reports+2001+Census:+People+Born+Overseas+2001+TableBirthplace+and+sex+by+highest+qualification,+for+the+census+usually+resident+population+count,+aged+15+years+and+over,+2001/\\$file/Table%2013.xls](http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/web/Reference+Reports+2001+Census:+People+Born+Overseas+2001+TableBirthplace+and+sex+by+highest+qualification,+for+the+census+usually+resident+population+count,+aged+15+years+and+over,+2001/$file/Table%2013.xls))

According to the immigration policy intentions, these highly educated immigrants should have fully contributed to social and economic developments in New Zealand. However, the statistical data show that overseas-born people, in general, have a higher unemployment rate than New Zealand-born people. Unemployment rates among university-qualified immigrants who have been in New Zealand less in one year was 37.8 percent compared with 5.5 percent of university-qualified non-immigrants. However, unemployment rates among those who arrived in New Zealand more than 10 years ago had similar rates of unemployment to New Zealand-born people with university degrees (Statistics New Zealand, 2004). It suggests that skilled immigrants need to take some time to participate in the New Zealand's labour market. For immigrants from different countries and regions, the unemployment rate varied. Figure 4.2 shows the difference in the unemployment rate among immigrants in 2001. In general, people from North Africa and the Middle East, and North-East Asia had relatively high unemployment rates. People from America and North-West Europe

had the lowest rates of unemployment.

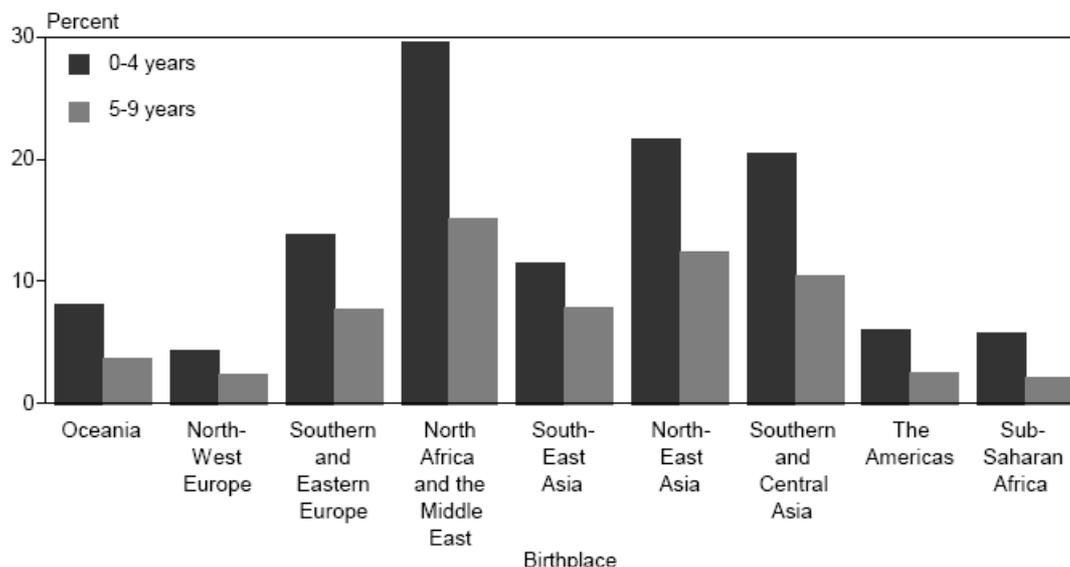


Figure 4.2 Unemployment Rates for Immigrants with University Degree in 2001 (By birthplace and years in New Zealand)

Source: *Degrees of difference: The employment of university-qualified immigrants in New Zealand*, p. 4, 2004, Statistics New Zealand.

Although the reasons for the distinctive labour force participation rates among immigrants from different countries varied, some basic factors can still be identified from both the supply and demand sides in the New Zealand labour market. On the one hand, most immigrants do not prepare well before they arrive in New Zealand although they have high hopes of their new life and work. A survey conducted by the Department of Internal Affairs shows that immigrants generally tend to be over-optimistic and to lack information on New Zealand and their life and work in New Zealand before they arrive. Consequently, they would face unexpected problems and are likely to experience difficult situations in finding work relevant to their qualifications to various degrees (New Zealand Dept. of Internal Affairs & New Zealand Ethnic Affairs Service, 1996). This situation suggests that it is hard for new immigrants, at least at the beginning, to use their knowledge and skills to contribute to New Zealand society and economy. On the other hand, employers have different expectations of skilled immigrants. The research by the Department of Labour, from the New Zealand employers' perspectives, displays another picture. Generally,

employers valued immigrant employees with attributes such as skills, overseas work experience and recognised qualifications and training. However, they also expressed a reluctance in dealing with immigrants who have difficulties with the English language and problems getting used to New Zealand workplace cultures (Wallis & New Zealand Dept. of Labour, 2006). In other words, these employers expect that their employees should not only have explicit/formal knowledge but also possess tacit knowledge about the working environment. Apparently, there are gaps between the needs of New Zealand employers and the practical situations of new immigrants.

Although it is not an easy task to bridge the gap, some New Zealand organisations have started to adopt positive approaches to use immigrants' knowledge and skills. The research conducted in the New Settler Programme of Massey University (Watts, White, Trlin, & Massey University New Settlers Programme, 2004) in 2003 shows that the cultural capital of immigrants was properly used by New Zealand tertiary educational institutions in follow-up interviews with 17 participants. Besides immigrants' skills and formal knowledge, these institutions recognised that immigrants brought experiences of different ways of doing things as they come from different cultural backgrounds. This gave a wider perspective to assess issues critically and thus, greatly contributed to the human capital factors for New Zealand's economy. Therefore, the researchers conclude that the integration of immigrants into workplaces in New Zealand needs the efforts of the whole society rather than immigrants alone. Since New Zealand has become a multicultural society, it is significant to support the effective management of this diversity and avoid wastage of the talents of skilled migrants (Watts & Trlin, 2000).

4.3 Chinese Immigrants and New Zealand

4.3.1 The dragon's footprints in New Zealand

As a multicultural society, New Zealand has a high rate of overseas-born people who come from different countries to make New Zealand their home. They have been, in different ways, contributing to economic and social developments in New Zealand as they know that their fates are firmly bound with the society. As one of the earliest arrived population in New Zealand, the Chinese could not be neglected. Although the Chinese Diaspora started as early as in the eighteenth century, the Chinese initially lacked interest in overseas migration as they regarded the ancestral land as 'Middle Kingdom'. It was not until the early nineteenth century, during the rule of the Manchus (whom the Han Chinese regarded as 'foreign' rulers) that the first substantial wave of migration started in China (Gibney & Hansen, 2005). For the early Chinese migrants, the motives for going aboard were not for adventure or colonisation; instead, they were seeking a means of living due to numerous problems and chaotic situation in their homeland (Ip, 1990). Since the late 1830s, wars, rebellions and natural calamities worsened economic and social conditions and ruined the livelihood of many Chinese. They had to go aboard to find an alternative.

The Chinese pioneers to New Zealand were among those who went overseas to earning a living for themselves and their families. The first organised group were twelve Chinese invited from the Victorian goldfields of Australia to New Zealand as goldminers in 1866, due to the reputation of the Chinese for hard work and endurance. Subsequently, more Chinese males came to work in the Otago goldfields directly from a coastal Province in the Pearl River Delta in Southern China, Guangdong, which was the hometown of these early-arrived Chinese goldminers. Guangdong Province was the earliest geographic origin of the Chinese Diaspora due to its coastal location and high population intensity. Moreover, the Chinese culture, which values family ties and kinship, played an important role in the accumulated migration among people in this

area at that time. By the 1871 Census, the number of Chinese in New Zealand grew to 2,641. The increase in the number of Chinese caused protests and agitation to such extent that the Government convened a selected committee to investigate the 'Chinese question'. The result of the investigation showed that the allegations, such as polygamy, frugality, maltreatment of European women, avoidance of taxation and gambling, were without proof and suggested that local people should generally accept the Chinese as long as they could be kept a minority and provided a reliable work force at a cheaper cost. Under such a circumstance, the government did not take any action (Sedgwick, 1982). The purposeful neglect endorsed by political reasons resulted in little accurate statistical data collected on the Chinese community and made ethnic statistics inaccurate and unverifiable (Thorns & Sedgwick, 1997).

The lack of attention to the Chinese in New Zealand society reflected some local individuals' concerns with the economic and cultural threats brought about by the arrival of the Chinese. For individual Chinese male goldminers who left their wives and children in China, earning enough money and going back home for their old age was their sole goal. They were more like sojourners than settlers (Ip, 1990). The separation and misunderstanding between the majority and the minority finally led to institutionalised exclusion of the Chinese and a series of restrictive policies. For example, the Chinese Immigrants Act 1881 imposed a tax of 25 pounds on every Chinese person arriving in New Zealand and the poll tax was raised to 100 pounds in 1899 (New Zealand Immigration Service, 1997). Ferguson (2003), who studied the historical process of making the White New Zealand Policy between 1880 and 1920, argues the idea that economics and racism are widely accepted explanation for the exclusion of the Chinese. His research shows that the Chinese appeared to be "the group most consistently 'othered' in the development of the New Zealand nation state and the emergence of nationalism and concepts of citizenship attempted to define idealist types of citizen. Thus, the exclusion of the Chinese at that period is a combination of social, political, economic and ideological factors.

Despite the series of increasingly restrictive Acts, the Chinese community did not sit back passively in the difficult times. They organised their own associations, petitioned local politicians and established formal political links with the Chinese government to protect against local restriction (Pearson, 1990). During the Second World War, immigration policy with respect to the Chinese shifted in a more tolerant direction due to the alliance between New Zealand and China during the war and some wives and children were allowed to enter New Zealand as refugees. When the goldfields declined, the newly reunited Chinese families started to settle elsewhere in New Zealand and opened grocery shops, laundries or worked as market gardeners. Their hard working gradually made the Chinese community prosperous and robust. The products, such as vegetables and fruits, from the Chinese orchards greatly contributed to New Zealand's strong economy throughout the first half of twentieth century. When the war ended in 1945, the Chinese appeared to be more accepted in both public opinion and by the government who wanted to increase the country's population. Some groups of Chinese were entitled to permanent residency and legislation issued in 1952 gave the right to Chinese living in New Zealand to be naturalised as New Zealand citizens.

The following three decades between the 1950s and the 1980s saw the growth of the Chinese community in New Zealand. Its population increased from 6,731 in the 1956 Census to 10,283 in 1966; with locally born New Zealand Chinese exceeding 75 percent of the Chinese population. However, the already urbanised and organised community were not free from internal factions (Pearson, 1990). Sedgwick's PhD thesis on the social history of the Chinese in New Zealand shows that:

the segmentary structure of the community provides the most efficacious means through which the Chinese community governs itself as well as articulating its needs and mediating external demands ...[and] has ensured its survival and integration. (Sedgwick, 1982, p.ii)

However, the community still sought to achieve a high degree of solidarity, to seek wider recognition and mutual assistance by ethnic ties remaining through language, diet, religion and recreation. Although the loss of their own language was a real threat for the second generation and the views of different generations on their identities were conflicting and complementary, a considerable degree of cultural and material capital is still stockpiled through formal westernised education and informal family and community propaganda (Pearson, 1990).

The 1986 immigration policy change encouraged a new wave of Chinese immigration to New Zealand. These new immigrants were not humble manual labours but successful business people, entrepreneurs, and technicians. They came to New Zealand for different reasons under the macro-environment of increasing globalisation. At the beginning of this period, most of the Chinese immigrants came from outside China such as Hong Kong, Taiwan, Malaysia and Singapore. In 1991, only 1,077 out of 6,044 Chinese who were granted residency came from Mainland China (Ip, 1995). However, in the following decade, the number of Mainland Chinese in New Zealand increased rapidly and Mainland Chinese started to play a crucial role in both the Chinese community and mainstream society in New Zealand. Gradually, the interaction between these newcomers and New Zealand's mainstream society raised concerns from the public and media.

4.3.2 New Mainland Chinese in New Zealand

Since 1986, China has become one of the major source countries for New Zealand to recruit skilled immigrants. The population of Mainland Chinese living in New Zealand, in particular, increased quickly in the second half of the 1990s. According to New Zealand census data, from 1986 to 1996, the population of Mainland Chinese in New Zealand increased from 4,497 to 19,521 while in the following five years until

2001, the number reached 38,929. The rapid increase of Mainland Chinese in the New Zealand population was due to two factors. On the one hand, the changes in the New Zealand immigration policies since 1986 shifted the government's attention from country of origin to personal merits when selecting immigrants. This allowed New Zealand to open the door to Mainland Chinese although they were living under a different culture and regime. On the other hand, the policy environment in Mainland China and the expansion of global interpersonal relationships among the Chinese played a crucial role in facilitating the immigration of Mainland Chinese. In the early 1980s, the Chinese government issued Open Up Policies, which included: absorbing foreign direct investment (FDI), opening for international trade and building Special Economic Zones. In the following years, Chinese entrepreneurs from Hong Kong, Macau and Taiwan were the major investors. They had advantages in cultural similarities and propensities, and knowledge of how to get things done in the high risk and uncertain policy environment of China (Smart & Hsu, 2005). Their investment played a crucial role in developing China's new sectors such as computers and semi-conductors. Meanwhile, to some degree, their interpersonal relationships with people in Mainland China built through their business enabled the latter to know more about the outside world that facilitated their decisions on immigration.

Under such a circumstance, the number of skilled migrants from Mainland China increased despite fluctuations. Figure 4.3 shows the change in the number of immigrants from Mainland China through skilled and business streams between 1997 and 2006. Apparently, the year 2002 was a turning point. Before 2002, there was a sharp growth, initiating in 1997, in the number of Mainland Chinese under the skilled and business category. In 2002, 6,260 applications from Mainland China under this category were accepted. Following this, the number started to decline with 2,784 approvals in 2004/05. This fluctuation would be attributed to the 2003 immigration policy change that increased English requirements and adjusted the point structure.

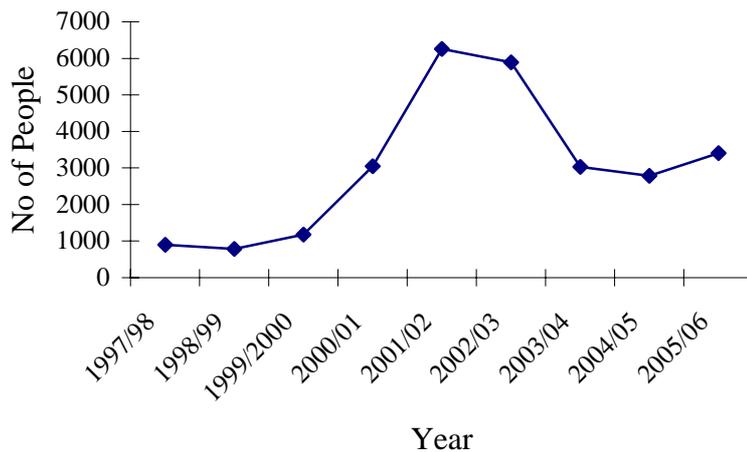


Figure 4.3 Annual Number of Immigrants from Mainland China Under the Skilled and Business Category

Source: Produced on data from *Table 2 People included on residence applications decided by residence substream and financial year of decision*. Business Information Branch, Department of Labour (Immigration).

Unlike the old Chinese sojourners, most new Mainland Chinese seek to settle in central urban areas to facilitate contact with existing Chinese communities and to access relevant services. Figure 4.4 shows the distribution of Mainland Chinese in New Zealand in 2001. The top six destinations for Mainland Chinese were: Auckland, Wellington, Christchurch, Hamilton, Palmerston North and Dunedin. Auckland was the most popular place for Mainland Chinese to settle. The concentration of the population of Mainland Chinese on Auckland urban area would contribute to the development of the locally existing Chinese community. However, at the same time, this put a heavy pressure on the local public service system and labour market (Poot, Cochrane, & University of Waikato Population Studies Centre, 2005) .

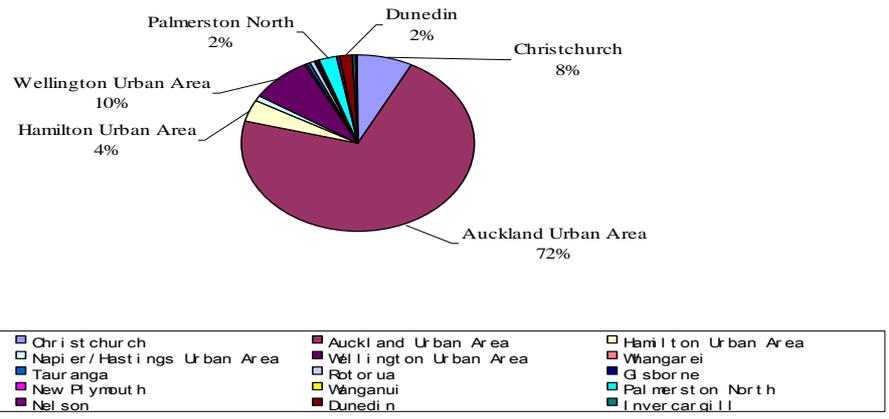


Figure 4.4 The Distribution of Mainland Chinese in New Zealand in 2001
 Source: Produced based on data provided by Statistics New Zealand according to the 2001 Census

Statistical data show that Mainland Chinese living in other areas have more opportunities to be employed. Figure 4.5 shows that in 2001, the top five cities whose Mainland Chinese population had a relatively high employment rates were Nelson, New Plymouth, Invercargill, Napier/Hastings Urban Area and Tauranga. These were none of areas in which Mainland Chinese settled intensely. This means that channelling the settlement preference of Chinese immigrants to coincide with the interest of the governments in development will become one of the most challenging tasks for both central and local governments.

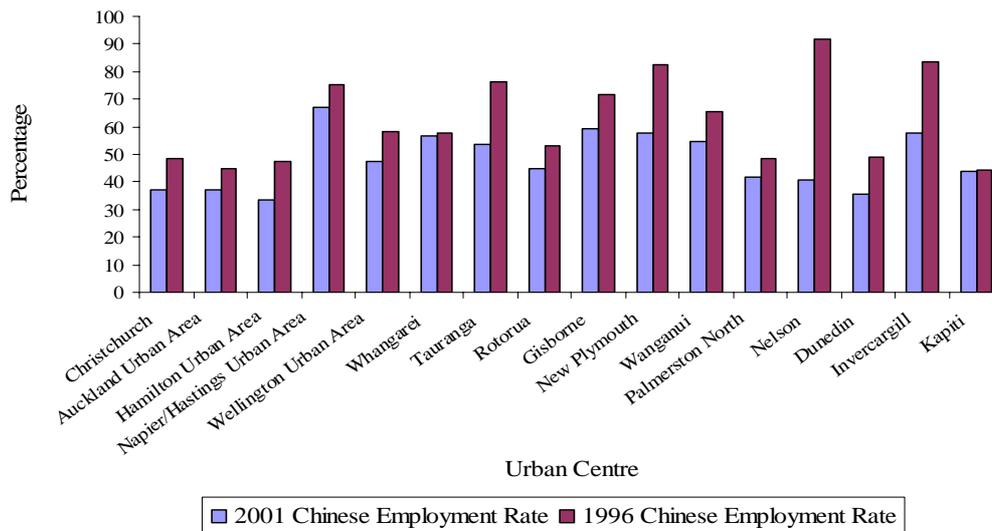


Figure 4.5 Employment Rates of Mainland Chinese in 1996 and 2001

Source: Produced based on data provided by Statistic New Zealand according to the 2001 Census

Although high unemployment rates among new immigrants are the target of the public and media critiques, the statistical data show that compared with their old counterparts, new Mainland Chinese immigrants’ performance has actually improved. As Figure 4.6 shows, new Mainland Chinese immigrants² in most urban areas have a higher employment rate than older ones. Particularly, in urban areas such as Auckland, Christchurch and Hamilton, employed new Mainland Chinese immigrants who arrived in New Zealand after 1990 accounted for more than 60 percent of the employed population among the total Mainland Chinese population in 2001. The different divisions of the employment between old and new Mainland Chinese in different regions could be attributed to the distinctive structure of industry in these regions. Some areas would have more employment opportunities suitable for new immigrants while other areas relied on traditional industries and thus, had less job opportunities for new immigrants to use their skills and knowledge.

² In the study, ‘old Mainland Chinese immigrants’ and ‘new Mainland Chinese immigrants’ refer to Chinese immigrants arrived before 1990 and after 1990 (inclusive) respectively. The division is based on the availability of the census data and the consideration of the target group of the case study in the study.

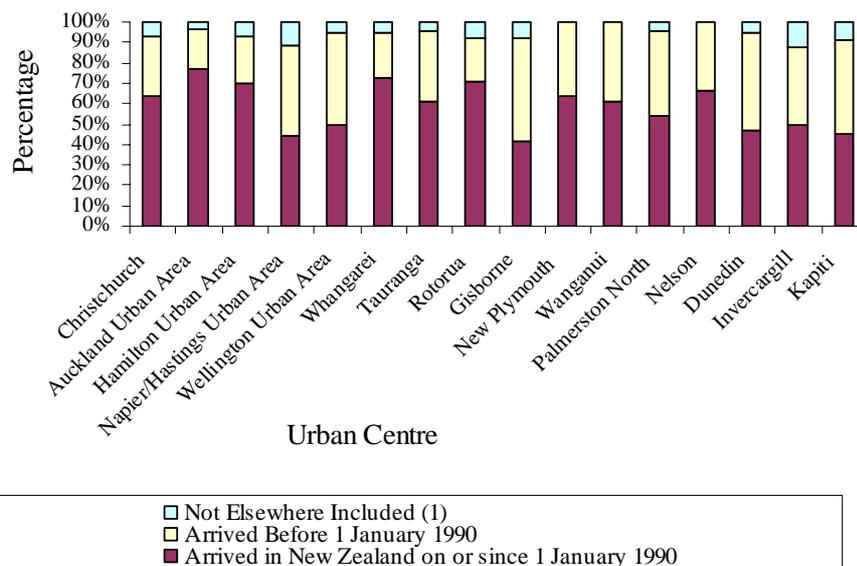


Figure 4.6 The Division of Employment of Mainland Chinese in 2001

Source: Produced based on data provided by Statistic New Zealand according to the 2001 Census

In addition, the less homogeneity in terms of occupational and qualification backgrounds would be another major reason for new Chinese immigrants to have a better employment result in the local market. For example, the 2001 Census shows that Mainland Chinese were not only engaged in the traditional occupations of manual workers in the Christchurch labour market, but also worked in various occupations such as managers, professionals and service workers. Moreover, their university qualifications have greatly contributed to the change (see Figure 4.7). In some occupations such as legislators and managers, professionals, and technicians and associated professionals, there were a reasonable number of Mainland Chinese who had university and above degrees. Although a large proportion of ‘not elsewhere included’ appeared in the statistical data and the accuracy of the data was constrained by practical situations³, the data, to some degree, showed that there were indeed

³ The following is a discussion on the accuracy of the data in terms of immigrants’ occupations between the researcher and the expert from Statistics New Zealand. The expert said:

knowledge workers working in various occupations in Christchurch.

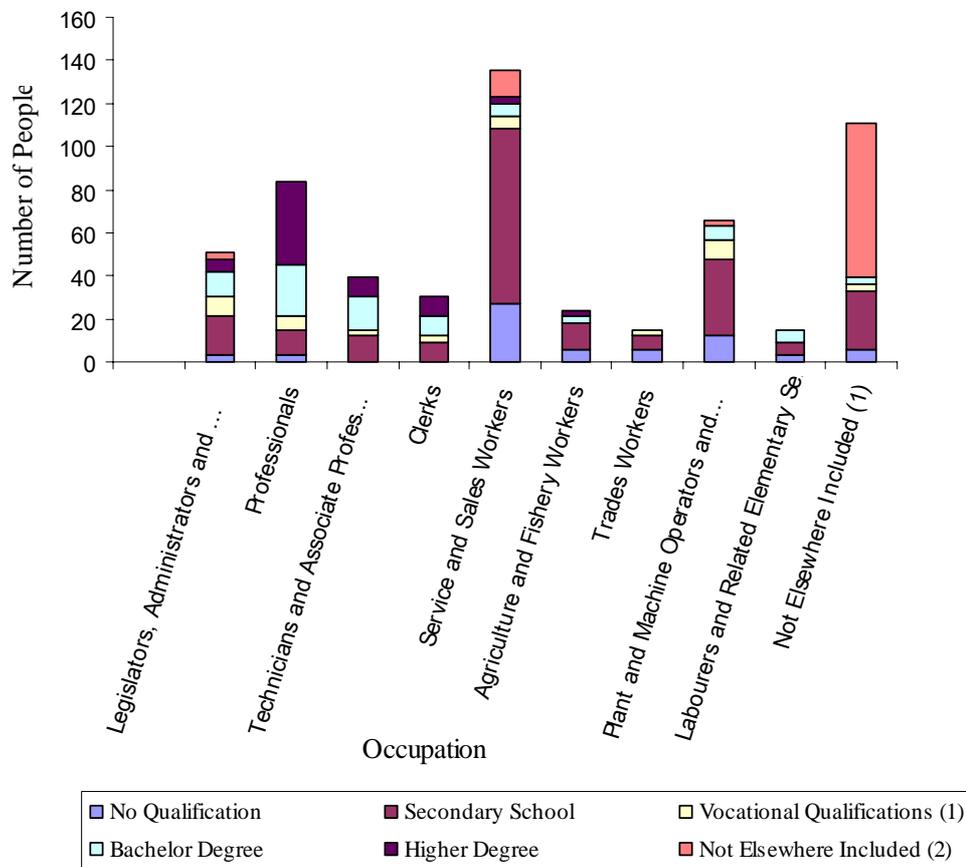


Figure 4.7 The School Qualification of the Chinese Employed in the Christchurch Labour Market by Occupation

Source: Produced based on data provided by Statistic New Zealand from the 2001 Census

The success of these skilled immigrants to integrate into the local labour market

“I have discussed the information relating to immigration with the person who deals with this on an ongoing basis. He tells me that there is no information that we have that he regards as being very reliable in respect to occupations of those people who have arrived since the 2001 Census. The problem is that the only information we have is taken from the migration cards that people fill in when they are arriving in the country. There is a small space on the card but there is not much room to put any information. Also some people do not fill in the card and it is not checked when collected to ensure it has been completed. Also, some people may fill in the occupation they had in China and some may fill in the occupation they are going to have in New Zealand.”

seems to articulate another voice. Although the voice is still weak, it appeals for looking at the bright side of immigrants' performance in general and Chinese immigrants' performance in particular. In 2005, a Masters student from the Economics Department of University of Canterbury explored the success factors for Mainland Chinese immigrants who gained skilled employment with a 'reduced' time. Her research combined a survey with a sample of 38 skilled Mainland Chinese migrants who were living in New Zealand, with a focus group; and five semi-structured interviews with members of the target population and identified seven factors contributing to immigrants' success. They included: acculturation, a "process of culture change and adaptation that occurs when individuals with different cultures come into contact" (Gibson in Yee, 2005, p.15), English ability, confidence in job seeking tasks, previous work experience, previous education, age and gender. The result shows that being male and having a high level of confidence in job-seeking tasks significantly reduced the length of time taken to find full-time skilled employment. On the contrary, other factors "were not significant and did not predict the time taken to find full-time, skilled employment" (Yee, 2005, p.51).

For the gender factor, possible explanations include: the nature of traditional male and female roles, the effects of gender discrimination compounded by being an ethnic minority, the result of gendered culturally-related behaviours which suggested that Chinese females might be less likely than Chinese males to exhibit qualities valued in Western societies. Regarding confidence in job seeking as a major success factor, the explanation was given that the cultural and language differences between China and New Zealand may affect Chinese immigrants' confidence in dealing with New Zealand employers. This research seems to pay more attention to the issue on how skilled migrants can gain skilled employment with a relatively short time rather than considering their performance in their work. It would have been more meaningful if these skilled employments had been broken down according to involved occupations when discussing relevant issues as these skilled immigrants would be evaluated differently while they were applying for jobs in different industries and occupations.

However, the research challenged the conventional ideas on barriers for new immigrants' socio-economic integration as some immeasurable factors, such as immigrants' confidence in job-seeking, were identified as a predictor for their success. To some degree, this research indicates that new emerging factors for the successful socio-economic integration of Chinese skilled immigrants are important and should be paid attention to.

Immigration is not a new phenomenon but it has always brought new issues for the policy-makers. While New Zealand is moving towards a knowledge society and economy, skilled immigrants represent a high level of human capital and become the focus of immigration policy. A series of policy changes and adjustments put more weight on individual intellectual factors, such as English language proficiency, qualifications and work experience, to regulate the quantity and quality of immigrants. The way of defining 'skill' in the skilled immigration framework gives different values on different kinds of knowledge. However, the difficulties, which immigrants face in their settlement, especially in their labour force participation, have challenged the reliability of these factors on which immigration policies depend for granting residency. The changes within the Chinese community illustrate the relationship between immigration policies and the change in New Zealand society. In particular, the growing number of skilled immigrants from Mainland China in recent years has drawn attention from various fields. Their unique experiences in both their home country and New Zealand cause concerns from the host society on their role in New Zealand. In the next chapter, findings drawn from interviews with fourteen skilled Mainland Chinese immigrants who are working as knowledge workers in Christchurch, New Zealand will show the interaction between these 'descendants of the dragon' and New Zealand's knowledge society and economy in the process of knowledge reproduction, production and application.

Chapter Five Chinese Knowledge Workers and Their Transnational Experiences in Knowledge Reproduction and Application

The dragon is considered an auspicious creature because it brings forth blessings, festivity and happiness, benefiting everything on the earth.

(Lai)

While New Zealand is moving towards a knowledge society and economy, new Mainland Chinese immigrants increasingly come to this country and make it their new home. How can these ‘descendants of the dragon’ bring benefits to the new land with their knowledge gained in a different context? To explore the issue, this chapter will present the results of a case study which includes in-depth interviews with 14 Chinese knowledge workers who are living and working in Christchurch. It is categorised into four sections and elaborates how knowledge plays a role in the process through which these interviewees immigrated to New Zealand and contributed to its development.

5.1 Value on Intellectuals as Knowledge Subjects in Different Contexts

5.1.1 Value placed on Chinese intellectuals in China

In this study, almost all of the participants entered New Zealand as skilled migrants under relevant immigration policies after 1990. Their pre-immigration qualities, such as having a university degree and relevant work experiences, were crucial factors for them to be granted residence. Incidentally, these qualities meant that they used to belong to a specific social group in Mainland China: the intellectual. During the

interviews, interviewees frequently mentioned the term ‘intellectual’ while they were talking about their experiences in China. The term held a comprehensive meaning for them and directly determined their choices when pursuing higher education careers. For all participants, receiving higher education was the first step to becoming an intellectual and involved them in knowledge reproduction although they had different concerns with the identity and process. When one interviewee was asked about the reason for her attending university, she explained:

My parents were intellectuals. For me, going to university was a kind of family effort. Four of us, sisters and brothers all went to university. It came from my parents as well. When we were little, we always saw them sitting there and reading, so it was how we naturally went on the path.

As she explained, her intellectual family background led her and her siblings to value university study and to become an intellectual just like their parents. In China, people always used the phrase ‘*Shu xiang men di*’ (Intellectuals’ house full of the fragrance of books) to describe a family with the intellectual background and to show their admiration. It was widely accepted that people originating from this kind of family were deemed to inherit prestige and to become intellectuals. Like this participant, several others also mentioned their intellectual family background. According to them, going to university was a ‘natural’ process in their personal lives. For them, their parents’ lifestyle served as a social habitus which “is ... internalized and converted into a disposition that generates meaningful practices and meaning-giving perceptions” for them (Bourdieu, 1984, p.170). Therefore, receiving higher education and being an intellectual became a taken-for-granted taste and disposition.

Besides of the cultural capital inherited from their parents, these intellectuals also drew intellectual traditions to reinforce their decisions to receive higher education. For example, one interviewee commented:

I did not think much about it [the reason of going to university] as I was young. At that time, there were a few university students as the government had just restored the examination system for the university admission after the Cultural Revolution. Most people thought that it was an honour to go to university and intellectuals were respectable. The examination was just like the selection of literati at ancient times. The ordinary Chinese people still believed the Confucian teaching that 'schooling is the most honourable choice while doing anything else is humble' (Wan ban jian xia ping, Wei you duo shu gao).

His comment shows that the reputation of the intellectual was still a major factor for the ordinary Chinese people to value higher education after the Cultural Revolution. For him, the traditional idea of schooling and being an intellectual had significantly affected his choice of going to university in China. In Chinese history, intellectuals gained their reputations with their social functions at different times. Unlike the origin of intellectuals in the Western world, Chinese intellectuals did not emerge to struggle for the freedom of literary and artistic expression at the transition to modernity. Instead, they could trace back to the patrimonial administrative staff, the *literati* in Ancient China. At that time, imperial elites were selected, through a highly competitive examination system, as bureaucrats to serve the state in the long-standing feudal society. Within the framework of Confucianism, these educated people had a special insight into the established moral norms and served as 'doctors to society' to improve the relationship between the ruler and the ruled (Goldman & Cheek, 1987) .

In the period of the 'enlightenment movement of May Fourth' in the 1910s and 1920s, Chinese intellectuals became aware of their duty to China's survival as a nation under the emergence of nationalism. They studied abroad and formed strong intellectual and cultural communities unattached to any political parties in order to express the

aspiration to freedom and democracy. Unlike imperial elites, the May Fourth intellectuals imbibed in these Western values, and emancipated themselves from 'patriarchal authority' in order to become politically committed and intellectually autonomous. Therefore, Chinese history has shaped Chinese intellectuals as ideological spokesmen, professional and academic elites, and critical intellectuals (Goldman & Cheek, 1987). The knowledge which they draw from the Eastern and Western cultures and their commitment to society and willingness to serve the people have enabled them to have a high prestige among the ordinary Chinese. This is the reason that this interviewee observed the public aspiration to become an intellectual. For the ordinary Chinese, the intellectual is not only an individual identity but also a collective cultural icon with various social functions. It represents diligence, wisdom, freedom, autonomy, advancement, democracy and so on. Regarding this participant, he intended to construct his identity as an intellectual by drawing from Chinese intellectual traditions. The aspiration for schooling can also be traced in the other part of the study. When one interviewee commented on new Chinese immigrants' preferences for getting a university degree in New Zealand, surprisingly, he used the same Confucian teaching to justify these immigrants' choice. Apparently, Chinese people value education and view the intellectual as an honourable cultural capital either drawn from their collective culture or from individual backgrounds.

Although intellectuals have usually held a prestigious position in the ordinary Chinese person's mind, they do not always have the equally high social status in Chinese society. Throughout Chinese history, intellectuals have become, from time to time, the target of power struggles due to their role of acting as the servants of the state with concern more for political issues, such as equality and democracy, than with their own political status in the state bureaucracy. The Cultural Revolution between 1966 and 1976 is an extreme example when intellectuals suffered from power struggles. According to scholars of 'Cultural Revolution Studies', the Cultural Revolution was a nationwide mass movement caused by comprehensive political, economic and social factors such as the factional struggle which attempted to seize political power,

modernisation without impersonal bureaucratisation and the general climate of mass hysteria (White III & Law, 2003). No matter what reasons are identified, it could not be denied that the force of the Cultural Revolution has invaded ordinary Chinese people's lives to various degrees.

In this study, all participants graduated from university after the Cultural Revolution but four of them went to university in 1977 or 1978 when the government had just restored the examination system for the university admission shortly after the Cultural Revolution. To some degree, the Cultural Revolution changed their pathway of becoming an intellectual. One interviewee described:

I went to university in 1977. It was the first year when the Chinese government resumed the examination system for the university admission after the Cultural Revolution. Before 1977, intellectuals were criticised as 'stinking old ninth' (chou lao jiu) and knowledge was devalued. All high school graduates must go to the countryside to receive the re-education of peasants. As an 'educated youth', I was also doing manual work in a farm ... university was just opened to so called 'worker-peasant-soldier university students' (gong long bing da xue shen) who were recommended by the leaders of work units, production communes and armies. There were no formal examinations and the criteria for selecting candidates were based on their overall practice such as political advancement. Most people had no opportunity to go to university. In 1977, all sixty 'educated youth' in our farm voluntarily took the examination. The competition was intense as universities had closed their doors to ordinary people for ten years. I was only one who passed the examination and was accepted by a university on our farm ... You could not imagine how hard we worked in the university... Everyone cherished the opportunity of sitting in the classroom of the university as they knew that compared with thousands of people refused by universities, they were 'children spoiled by the Heaven/God' (Tian zhi jiao zi). Craving for knowledge was the only motive for

us to work so hard ... The Deng Xiaoping era started to rehabilitate the social status of intellectuals, people increasingly perceived the significance of knowledge and intellectuals for the country. Especially, when Deng Xiaoping put forward the slogan that “science and technology is a productive force”, people commented that he brought the Spring of Science and gave intellectuals the second opportunity to survive...

What a long monologue! It highlighted unforgettable intellectual history in Contemporary China and the changing social status of intellectuals in the 1960s and the 1970s. The terms used by this interviewee, such as ‘stinking old ninth’, ‘educated youth’, ‘worker-peasant-soldier university students’ and ‘children spoiled by the Heaven/God’ were the specific products of this period. The labelling practice seemed to have their ‘logic’. Since founding the P. R. China, the Chinese Communist regime has struggled to align the contradictions of maintaining socialist ideals of equality while promoting modern industrial development (Wang, 2003). To build an egalitarian society, a high productivity was needed. For the young socialist country, intellectuals would be a great human resource to contribute to the realisation of the goal. However, they might not be ‘reliable’ as most of them were trained overseas with ‘bourgeoisie’ knowledge and skills, were proud of themselves and isolated from workers and peasants. Moreover, their theoretical knowledge was believed not adequate to deal with the practical problems in the field. Therefore, these pure intellectuals were downgraded and labelled as ‘stinking old ninth’⁴ to do manual labour and learn from workers and peasants and hopefully, they could be transferred into ‘intellectual workers’ (Asia Research Centre, 1968).

In contrast, the effort was made to foster ‘working people intellectuals’. It was

⁴ During the Cultural Revolution, people were categorised as ‘advanced’ and ‘backward’ symbolised as ‘red’ and ‘black’. There were five categories of ‘advanced’ people and nine categories of ‘backward’ elements. Intellectuals were ranked the ninth among the ‘backward’ elements while workers and poor peasants were the most advanced and revolutionary.

believed that the country of worker and peasant mass should give the right of receiving higher education to workers and poor peasants, so the education system of 'worker-peasant-soldier university student' was introduced. The candidates were recommended from workers, poor peasants and soldiers by leaders based on their overall practice, such as willingness to serve the people and to acquire knowledge not for personal advantage, rather than just on intellectual criteria. Meanwhile, the task of socialist construction was also given to 'educated youth'. They were regarded as 'real' proletarian intellectuals as they had both book knowledge and empirical practices learnt from their association with peasants in the countryside. One interviewee explained that the idea of sending 'educated youth' to the countryside was partially aimed at relieving the population pressure of urban areas and avoiding chaos caused by the high unemployment rate. No matter whether it was for political or economic concern, the new social structure built through creating and labelling social groups actually resulted in worsening social relations, devaluing knowledge and downgrading intellectuals' social status. Consequently, none of groups of intellectual could serve as highly qualified human capital to contribute to economic development. The experience learned from the Cultural Revolution suggests that the realisation of human capital is socially conditioned. Social cohesion and inclusion will contribute to economic prosperity.

After the Cultural Revolution, there was another social and political landscape in China. The interviewee's description on individuals' craving for gaining knowledge and the government's valuing of science and technology illustrated the revitalised significance of knowledge and intellectuals in the Deng Xiaoping era. Deng Xiaoping was one of the leading figures of the Rightist faction in the Chinese Communist Party who were interested in ruling through economic measures rather than solely from political ideology. He gained ruling power after the death of Mao Tsetung (a Leftist) and started to launch a series of reforms from 1977. Among these policies, the reform of intellectual policies and economic reforms had far-reaching effect on China's intellectuals. The change of intellectual policies including restoring the exam-based

selection system for university enrolment and rehabilitating the social status of intellectuals aimed to “rekindle the enthusiasm to intellectuals, so that they might help the country modernized ” (White III, 1987, p.254). Upgrading social status after the Cultural Revolution would contribute to rebuilding their social capital. In the study, some participants explained how their intellectual parents’ social networks with their former classmates enabled them to access complete information on the university admission system and facilitated their decisions on choosing an appropriate university and major for receiving higher education. Other participants indicated that their intellectual parents’ good relationships with leaders enabled them to get a good job or transfer from one work unit to another.

In this study, the choice of receiving higher education for most participants was attributed partially to their intention to find a good job. In their talking, they always linked higher education with decent jobs and good work units. For some interviewees, university study served as a springboard to jump from the countryside to central urban areas. One interviewee justified her choice for receiving high education in China and said:

Before I went to university, I started my study in a college in 1980 ... since I came from a peasant family, my objective for receiving higher education was to get a job in the city. At that time, graduates who majored in Education in colleges could be ensured to get a job in primary or high schools in urban areas, so I chose to major in Education and spent two years in an education college.

For her, becoming an intellectual served as a strategy of earning a better livelihood in the city. In China, there was a huge gap between the countryside and the city in various aspects. In the early 1980s, the most apparent difference was that peasants living in the countryside could not access social welfare; in contrast to urban dwelling

people who held an urban household registration book (*chengshi huko*) and usually engaged in work units (*danwei*). In addition, the system of household registration constrained the mobility of people from the countryside to urban areas by excluding people holding a rural household registration book to get a job in these work units. For most young peasants, the only pathway to living in the city permanently was going to university and then getting a job in the city. By this means, their household registration book could be converted to an urban one and they could thus access various benefits.

Generally, these participants' diverse reasoning on their intention to receive higher education and become an intellectual shows that in the Chinese context, intellectuals as knowledge subjects not only have economic value but also have social function and cultural meaning.

5.1.2 Value of Chinese intellectuals in the New Zealand context

Although those interviewed benefited from the value placed on intellectuals in China at most times, they had a different experience once they were living in New Zealand. In fact, some intellectual traditions based on Confucianism, to some degree, constrained these interviewees when pursuing their careers in the New Zealand context. Aspirations for schooling and attachment to the social status of intellectuals were, sometimes, major constraints for these former intellectuals in adaptation to the new environment as they had high hopes for themselves and their careers. Since the Chinese egalitarian regime guarantees full employment, a job was not only a way of breadwinning but also a symbol of achievement and social status. When one interviewee started her job as a travel agent in New Zealand, she said:

The feeling was complex. Indeed, I should have been satisfied with the fact

that I got a full-time job. However, thinking deeply, I felt frustrated. I used to be a university teacher, an intellectual for ages and then, I worked as a manager of the Asian Branch in an international company in the US. I couldn't link these identities with a travel agent in any ways. There were not any relationships between them. I felt that a travel agent was a job with a low status and like a domestic servant ... when I handled customers, I had to hide all bad moods as they were not machines but human beings with different personalities. I had to keep smiling all the time. I thought that the service sector was a 'smile selling' sector.

This is a typical understanding on the service sector among Chinese people. For this interviewee, intellectuals should be academic and posit in a high position in occupational hierarchies rather than doing something like a domestic servant. However, in New Zealand's knowledge society, the rise of the service economy has meant that part of a knowledge worker's tasks is to deal with people using their knowledge. They may be located between capital and labour (Stehr, 1994). Their intellectual qualities determined that they should have had a high position, but their work was inevitably involved tasks similar to low status manual labourers. For these Chinese intellectuals rooted in Confucian teachings who viewed their job as a symbol of social status, this would often lead to feelings of discomfort..

The influence of Confucian teachings on schooling seemed to be apparent while considering the gender difference in finding a qualification-relevant job. Interestingly, there were different ideas among participants on the issue. Opinions could be categorised into two groups. One group of interviewees did not think that women and men should have different ideas and behaviours on finding a qualification-relevant job but personalities would determine people's performances. According to them, extrovert and open-minded people would accept western values and give up their ideas on ideal types of intellectuals easier than introvert ones. Another group thought there was a difference between women and men in finding and being competent in a

qualification relevant job.

Opinions differed depending on the gender of the interviewees. Most female interviewees believed that women were more flexible to adapt to the new environment than men, and that men tended to be stubborn and stick to their traditional ideas on the role of themselves as family heads, cultural bearers and icons. Thus, men would find that it was hard to find a position, which they could accept, in the new land. On the contrary, most male interviewees held that women would find a job more quickly than men because they tended to have better English. Men needed a longer time to think about what they wanted to do. However, once men had made a decision, they would perform better than women because men were used to working independently with less supervision while the Chinese tradition decreed that most women be followers and need guidance. Despite the distinctive ideas on the gender difference on the ideal type of the intellectual, all their explanations suggest that individual performance as human capital would be conditioned by non-economic factors such as traditions, cultures and personalities.

The influence of the Chinese tradition in their performance in New Zealand can also be identified in some interviewees' comments on the knowledge and skills, which most Chinese needed at job interviews. One interviewee in the study said:

When we Chinese apply for a job, employers will look at our expertise and skills. They will get to know us mainly from the materials written and provided by us and then, assess the information at interviews. Therefore, it is important to have a good skill in and capacity of presenting ourselves. I think that it is the most essential for new Chinese immigrants ... Most Chinese lack such a skill. We would do very well in their work but would fail to express clearly at job interviews. As a result, what we say does not exactly reflect what we know and then, people will doubt our competence in the work ... a reasonable level of language is important in convincing people, but it goes beyond language. It

is a comprehensive capacity relating to the language proficiency, communication skill and presentation skill, which we, as new migrants, needed. I think that the problem is that most new Chinese migrants lack a capacity of integrating all knowledge and skills, which they have, to present a complete self. We tend to have very specialised knowledge but lack a comprehensive capacity. Perhaps, we do not get used to presenting something publicly due to our culture and education. For New Zealanders, they have lots of opportunities to do presentations and speak out ... Of course, once we work with employers, they will know what sort of person we are. However, before the first contact, it is hard for us to convince people and get a job.

The interviewee gave one of the basic reasons for new Chinese migrants' failure to be convinced at job interviews and thus, to find a job. He noticed the problem of overspecialisation and lack of general knowledge and comprehensive capacity was prevailing among the Chinese scholars and apparently stood out at job interviews. The more important aspect is that he identified that different cultural values of the intellectual as knowledge subjects and their knowledge were a challenge for new immigrants to adapt to the new environment.

5.2 Values on Different Forms of Educational Qualifications in China and Distinctive Pathways of Adapting to New Zealand's Knowledge Society and Economy

This study shows that these interviewees had a specific idea on different forms of educational qualifications at different times. When the interviewees were asked why they chose a certain subject as their major for university study, most of them explained that it was attributed to personal interest. However, beyond personal interest,

something needed to be explored further. Eight of the fourteen interviewees had a science or engineering major and started their university study before 1983. Three interviewees studied in the Foreign Language Department in the mid-1980s (One of them did Chinese Literature for her Bachelor's Degree and shifted to do a Master in American Literature in 1986). Two interviewees majored in Economics, which was chosen for them by their parents. One interviewee majored in Medical Science. Although this study used a limited number of interviews to open up relevant questions, the results are still meaningful if these interviewees' comments on different forms of knowledge and the macro-environment are considered.

The following are examples showing considerations behind the choice of major for university study among these interviewees. One interviewee explained:

I started university study in 1979 and majored in Economics. There were a few people choosing such a subject at that time. It was my parents' decision. I was just 16 year old and had no idea on this. The subject was between science and humanities although I belonged to the stream of Science in the high school. At that time, Science and Engineering were popular among students. It was said that people who were good at Mathematics, Physics and Chemistry would not worry about their livelihood while travelling around the world ('Xue hao shu li hua, zou pian tian xia du bu pa'). Top students tended to do Science and Engineering. Actually, some students would be good at humanities, but they finally chose to do Science or Engineering under such a circumstance.

Although the interviewee studied Economics, she gave a basic reason that people tended to do Science and Engineering shortly after the Cultural Revolution. Her parents' preference for Economics and the popularity of Science and Engineering seemed to contradict the historical origin of the idea on the valuable intellectual knowledge. Originally, Confucianism valued humanistic education and had a low estimation of merchants. In the long-standing feudal society, Confucian

patrimonialist bureaucrats were qualified as a generalist with moral characters rather than professionals and technicians with skills (Yu, 1985). The main subject taught was the Six Arts including Rites (rituals and rules), Music, Archery, Chariot-Riding, History and Mathematics. The purpose of education was to cultivate good human nature to attain virtue, wisdom and moral perfection (CHEC in Du, 1992). These ideas were predominant in China more than two thousand years.

The shift of the subject preference from Humanities to Science happened in the mid 1890s. Young May Fourth intellectuals started to learn science and technology abroad. They believed that such scientific knowledge could salvage China from economic collapse and political chaos caused by the depression of semi-feudalism and semi-colonialism. Meanwhile, the government's effort to modernise China's higher education was greatly influenced by foreign missionary organisations which established educational institutions in China (Du, 1992). Then, the preference for Science and Engineering was reinforced while ordinary people were witnessing the vicissitudes of the fate of some intellectuals who majored in humanities during the Cultural Revolution. Chinese idiom '*chun qiang she zhan*' (lips like the gun and tongues like the battlefield) is used to describe the power of literature in political disputes. During the Cultural Revolution, literary arts were always used to serve political ends. Mao Tsetung's comment quoted from Lenin on the writers' role as 'cog and screw in the revolutionary machinery' served to politicalise humanist knowledge (Wagner, 1987). Literature became a 'weapon for education' of the masses and many intellectuals in the social science field were labelled as Rightists and as such, incarcerated because their views were deemed to contrary to the socialist ideology. These bitter experiences seemed to serve as a silent persuasion for the ordinary Chinese people when thinking of receiving higher education and becoming an intellectual. For most people, they would suggest their children major in Science and Engineering once they had an opportunity to receive higher education because the choice would be much safer and could survive in political movements.

Finally, Deng Xiaoping's vision of modernisation pushed to extremes the affection of ordinary people for scientists and technologists. After the Cultural Revolution, the country faced a severe shortage of high-quality human resource, especially scientific and technological personnel. Deng's slogan: "science and technology is a productive force" encouraged young people to major in Science or Engineering. Until then, the history seemed to have always taught the ordinary Chinese people to value the knowledge of Science and Engineering and thus, came the teaching that 'Xue hao shu li hua, zou pian tian xia du bu pa' (people who are good at Mathematics, Physics and Chemistry will not worry about their livelihood while travelling around the world). In particular, the rapidly increasing flow of intellectuals who majored in Mathematics, Physics and Chemistry to the US for study since the early 1980s seemed to provide 'hard' evidence for the belief.

Under such a circumstance, individuals naturally had biased preferences when choosing a major for receiving higher education. The bias was so strong that it even affected one female interviewee's idea on choosing a husband. She said:

I was interested in the Chinese Literature and I studied in Department of the Chinese Literature. I always believe that reading can make people wise, enrich their emotion, activate their ideas and open their mind. However, girls in our department tended to avoid making a boyfriend from Department of the Chinese Literature as they believed that their male classmates were too romantic to be dependable ...You can see, I married a man with the science background.

Interestingly, while she and her classmates majored in Chinese Literature and valued the knowledge gained from literature reading, they did not think that men studying the subject were appropriate partners to marry. This account seemed to suggest that knowledge was gendered; men should focus on scientific knowledge to make them rational and thus, dependable while women are suitable to learn from reading

literature and thus, become emotional but wise.

Unfortunately, the preference for studying Science and Engineering did not last indefinitely. With the implementation of Deng's economic reforms and the open-door policy, other kinds of knowledge emerged to show their significance and served to shift intellectuals' focus. When one interviewee explained her choice of studying English Language and Literature, she said:

Personally, I was interested in Mathematics, Physics and Chemistry. At that time, my boyfriend (who is my husband now) was studying in a university and he got friends from the Department of English Language. His friends told us that people from this department had more opportunities to study aboard and suggested to me to major in English Language and Literature ... Moreover, learning English was very popular among intellectuals in the city in which we were living. I finally passed the examination and started to study in a foreign language university although I was still interested in Science. However, the decision seemed to be right. After several years, when I met my high school classmates who majored in Science, they admired me and said that I made a correct decision. They said that if I had had studied in Science, I would have lost my 'rice bowl' as people with a science major were oversupplied.

Apparently, the comments of the interviewees' friends showed that she benefited from the shift from a science to an English language major. In the mid-1980s, English Language became a skill in increasing demand in China. People who were good at English had various advantages such as studying aboard and being employed in foreign funded companies in some advanced coastal cities. What is more, English language skills seemed to serve as a tool for job mobility. In the study, several interviewees transferred between jobs and even between cities by taking advantage of their high level of English language proficiency.

One interviewee who majored in English Language resigned from her permanent job as a university teacher and worked in a foreign funded company in the late 1980s. She explained her decision as follows:

Teachers in the university were classified into lecturers, associate professors and professors according to their performances. There were some criteria, such as the number of articles and books published, for entitlement. I still remembered the scene that my colleagues and I worked together to write a book titled Marketing and went to bookshops to sell it. We learnt what was marketing when we marketed “Marketing”. At that time, intellectuals became ‘semi-commercialised’. Gradually, I was tired of the job. At that time, being a university teacher means hardworking but bad-paid. Most intellectuals were living in a simple and frugal life. Some of them started to think about ‘xiahai’ in the late 1980s (engage in business activities while giving up one’s permanent job in state-owned work units). I was also affected by the wave. My final decision on ‘xiahai’ was attributed to my intention to buy an apartment. The university sold apartments to teachers. As long as I could afford 30,000 yuan RMB (about NZ\$6,000), the apartment would belong to me. You could not believe! Both my husband and I had been university teachers for ages but could not afford to buy the apartment. I felt quite upset and finally, decided to xiahai and work in a foreign funded company.

Her experience was typical among intellectuals at that time. Although intellectuals’ social status had improved after the Cultural Revolution, their economic conditions did not increase significantly due to the economy developed continuing to rely on the egalitarian regime. During the mid-1980s economic reforms brought a series of changes in both the labour market and work units. In the labour market, the performance-based wage gradually replaced the egalitarian wage to allow labour to act more like an economic entity than political tool. Coupled with the implementation

of the labour contract system and the increase of non state-owned enterprises, people started to realise the economic value of the labour force and accept job mobility. Within work units, a series of reforms in housing and social security reduced the workers' dependency on their work units (Larus, 2005). The two forces played a crucial role in changing people's ideas on their relationship with their work units and on the value of knowledge as a direct productive force.

Particularly, immediately after the Cultural Revolution, economic reforms seemed to enable people who dared to engage in business activities to become rich rapidly no matter what educational background they had. The social status of businesspersons increased hugely and '*xiahai*'⁵ became the most popular activity in China. Witnessing the change, this interviewee could not stand a frugal and simple life as an intellectual and decided to '*xiahai*'. Her action seemed to show that under such circumstances, intellectuals became dissatisfied with their situation as merely an ideological icon. They started to search for realising their value through learning and using more 'practical' knowledge and skills.

These interviewees' concerns on their qualifications show the role of different forms of knowledge at different times in China. What is more important, the qualifications affected these interviewees' pathways of integrating into New Zealand's society and economy. All fourteen interviewees in this study had university or above degree and were identified as intellectuals in Chinese society. When they entered New Zealand and participated in the local labour market, their characters relating to education and work changed in various aspects. Their qualification gained in New Zealand ranged from a two-month training certificate to a PhD degree according to their own interests and the requirements of their work. Generally, male interviewees who went to university in China before 1983 tended to get a university or above degree in the

⁵ In Chinese, '*Xiahai*' means jumping into the sea without a life buoy. It was used vividly to describe the action that people break their 'iron rice bowls' and become engaged in business activities to make money without consideration of their job security.

universities of New Zealand and most of them had a science or engineering major. Thus, when they entered the local labour market, they tended to engage in an academic field and work in research institutes and universities. Female interviewees or interviewees who used to work in private-owned or foreign funded companies in China preferred getting a training certificate and working in the service sector. The limited number of interviews and a specific sampling method mean that it is not possible to generalise. However, the various patterns identified seem to suggest that the Chinese immigrants who grew up and entered university in China at different historical times had different preferences in their career pursuit in New Zealand although there are exceptions. This also suggests a strong linkage between pre-arrival and post-arrival experiences.

5.3 Mobility, Knowledge, Social Networks and Identity

5.3.1 Knowledge, social networks and immigration

This study shows that knowledge also penetrated into various aspects of the process of the cross-border knowledge application in which those interviewed were involved. For example, concerns on immigration were related to different types of knowledge in various ways. Among the fourteen interviewees, four came to New Zealand as students and then got residence approvals under the category of skilled migrant. (Three arrived here around 1990 while one arrived in 2002.) Ten interviewees entered New Zealand as skilled migrants; their mobility seems to have different motives. One interviewee who arrived in New Zealand as a student said:

I attended a training course provided by WHO experts in Beijing in 1989. I really admired those experts. I thought that one day I would get an overseas degree and become just like them, so I went to New Zealand when my sister's

New Zealand English teacher agreed to sponsor me.

For her, the motive for coming to New Zealand is quiet simple: studying aboard to gain knowledge, get an overseas degree and become an expert like those she admired. She articulated the dream of most Chinese intellectuals in the 1980s and 1990s. Moreover, interpersonal networks enabled her to realise her dream. Like her, two other interviewees who came to New Zealand around 1990, were also under such a wave of studying aboard although they were sponsored by the government's programme rather than through interpersonal networks.

Since 1978, one of the reforms of Chinese higher education was to allow scholars and students to study aboard either by individual sponsorship or on government programmes. This aimed to introduce foreign knowledge to China through the mobility of the talented people. At the beginning, a large number of Chinese university students and scholars got scholarships from American universities by themselves through taking examinations called Test of English as a Foreign Language (TOEFL) and Graduate Record Examinations (GRE) or were sponsored by their overseas friends or relatives. A few people went overseas to study at public expense under the quotas set up by the State Education Commission. Gradually, provincial and municipal bureau of higher education started to make their own plans for sending people overseas and thus, the proportion of students at public expense increased.

Among developed countries, American curricular patterns seemed most attractive to the Chinese government as they supported progressive aspects of the Chinese scholarly tradition rather than maintaining Confucian tradition (Hayhoe, 1989). Meanwhile, the United States had economic and political interests in interaction with China. Under such circumstances, China and the United States signed a series of agreement to build cultural, educational and scientific relations. One interviewee explained that in the 1980s, Chinese people generally had a very good impression of the United States. The Chinese media were full of reports on the positive aspects of

the American society and economy during the mutual official visits of the leaders of the two governments. According to him, Chinese students' interest in studying in the United States was naturally shaped along with the government's preferences by the orientation of the media.

However, the '6.4' Tiananmen Movement changed the relationship between the governments of the two nations. China started to pay more attention to other developed countries, such as OECD countries, as knowledge transferors. In addition, the needs of knowledge for China's development had become diversified. The Chinese government realised that China needed to learn from different countries rather than solely transferring knowledge and skills from one country. It was under such a circumstance that the three interviewees came to New Zealand around 1990. They undertook the task of transferring foreign knowledge to support the process of modernisation in China. Unlike them, another participant who came to New Zealand in 2002 was more self-interested and autonomous. She explained that her purpose of studying abroad and getting an overseas degree is to find a better job in China. She submitted her application to the embassies of several countries because she received first reply from the New Zealand Embassy and decided to come to New Zealand. She represented the new wave outflow of Chinese students. In the last two decades, economic development and political openness has enabled more and more individual Chinese to access Western education. For young Chinese students, studying abroad became an effective way of building their cultural capital and equipping them to face the gradually intensifying competitiveness in the China's labour market although, inevitably, some of them found their position in receiving countries rather than in China.

Although this group of interviewees was motivated by the Chinese government's intellectual policies at different times, their decision was not always facilitated by formally organised arrangements. When one interviewee explained his decision to come to New Zealand, he said:

I worked in another department of the university after I had finished my Masters study. I had always worked there before I left China. Some of my classmates left the university after graduation and prepared for taking tests and studying overseas. Now, most of them are working in America. For me, I did not think much about going aboard as I felt that working in the university was a good choice. At that time, most people had no ideas on going aboard. Usually, my classmates who wanted to go aboard were from some big cities, such as Beijing, Shanghai and Guangzhou, and had relatives or friends overseas so they had the information and eagerly wanted to study overseas ... After having worked several years, I noticed more and more people going aboard to study. Particularly, most of the students graduating in 1977 and 1978 had gone aboard. I got a few classmates left in China ... Suddenly, I realised that there were few people left in my friendship circle and it seemed that I did not belong to the community there anymore. I thought that I probably needed to leave China and make a change ... Finally, I went to Australia as a visiting scholar through a co-operative project and then immigrated to New Zealand with the help of one of friends here...

Superficially, this interviewee still went overseas through the government programme. However, his decision was attributed to the social networks he was part of in China. Since the action of his friends and former classmates in going aboard had made some of his social networks in China temporarily disappear, he felt unsettled and decided to make a change. Meanwhile, he also explained how social networks among the Chinese facilitated some of his classmates' transnational mobility. Similarly, another interviewee who went to New Zealand as a visiting scholar explained that although he came to New Zealand as a visiting scholar through a government programme, his choice of New Zealand as his destination was attributed to his personal contact with a professor in New Zealand at an international conference.

Other interviewees, who entered New Zealand as skilled migrants, told a different story on their transmigration. For them, increasing knowledge and information on immigration to New Zealand encouraged them to make a decision on immigration. Moreover, the way by which they got the information and knowledge was unique. Most of them gained the information on migration through their relatives or friends while for a few interviewees, it was through the advertisement of immigration consultant companies. Generally, those interviewed tended to trust the information flowing from their social networks rather than that being provided by consultant companies. One participant explained his concern on immigration. He said:

We did not have a strong desire to go somewhere else. It [immigration to New Zealand] happened incidentally. We started to think of immigrating to New Zealand when I chatted with a friend. He talked about his daughter's family who had immigrated to New Zealand. He told me about the beautiful natural environment and well-organised health service system in New Zealand ... Actually, when we arrived in Shenzhen in 1991, I noticed the advertisements of seminars on immigration to New Zealand organised by immigration consultant companies. I even went for some seminars but did not take them seriously and thought that the information was forged. Otherwise, we would have had come here earlier. Until I met the friend, I started to believe in what those consultant companies talked about immigration to New Zealand. Then, my wife and I discussed [immigration to New Zealand] and decided to ask a consultant company to process our application.

He gave an interesting example of the way they gained information and knowledge on immigration to New Zealand and then, made a decision on immigration. His action suggests that even in the information age when people can access information easily through various sources, social ties and networks still played a crucial role for people, at least for those interviewed, in the process of immigration.

Similarly, social ties appeared to be reliable for their settlement. When they arrived in New Zealand, they usually chose the city in which their relatives and friends were living as their destination; by this means, they could get help from their relatives and friends. Besides the support from relatives and friends, just one interviewee mentioned that they received help from an immigration consultant company; none of the other interviewees mentioned any governmental or non-governmental services. Apparently, social ties served as a valuable support for them to settle down.

Although there were different concerns among those interviewed, the curiosity for life in the western world served as a major motive for their transnational movement. One interviewee said:

When we received visas, we started to think about the advantages and disadvantages of immigration. I hesitated to leave China as I did very well in the university and my husband hadn't finished his study for a PhD degree. When foreign teachers in our department knew that I planned to emigrate, they asked me what I wanted to do in New Zealand. I replied that I didn't know. Now, I think that they might know that it was not easy for immigrants to find a position in the new country although they did not tell me that directly. We did not know what would happen to us; yet, we still decided to come to New Zealand. I think that my decision was partially because of my curiosity. I wanted to know the real western world through my own experience. I taught English and read many articles about the western lifestyle such as foods and etiquette. I wanted to know what they looked like in a real world ... Finally, my husband and I resigned from our work units and moved to New Zealand in 1999.

For this interviewee, the hesitation of leaving China was an understandable feeling as she and her husband had achieved satisfactory lifestyles in China. However, the intention to know more about the real western world still motivated them to move to

New Zealand.

Like this interviewee, several other interviewees were motivated to immigrate by their knowledge of the western world although they had a different experience of exposure to western knowledge and getting information on immigration. For example, when one interviewee talked about his decision to migrate, he explained that when he went back China from Norway, after having finished his study, he started to feel unsettled and wanted to bring his families aboard to experience a different life. Similarly, while talking of her experience in immigration, one interviewee said:

I had never thought about immigration before. I planned to open my own company in Shenzhen at that time. However, when one of my friends who had immigrated to New Zealand encouraged me to immigrate, I accepted her advice without hesitation. I went to the United States working for a while when the company with which I was working had co-operative projects with counterparts in the United States, so I know what the western world looked like.

For her, the process of making a decision on immigration was related directly to her desire to expand upon her existing experiences of the Western world. In the early 1980s, the Chinese government issued Open Up Policies including absorbing foreign direct investment (FDI), openings for international trade and building Special Economic Zones. Under these policy intentions, Shenzhen, a small and undeveloped rural commune bordering Hong Kong, was built as a new city which created thousands of jobs, especially skilled jobs. In the early 1990s, Shenzhen became the popular and attractive destination for university graduates and intellectuals working in hinterland cities. Under these circumstances, this interviewee gave up her job and went to Shenzhen in 1990. Like her, several interviewees were attracted to Shenzhen in the same period. Interview results show that among interviewees who entered New Zealand as skilled migrants, this group generally came to New Zealand three to five

years earlier than those living in hinterland cities in China. This would be attributed to their position in the frontiers of China's opening up to the outside world and their direct exposure to the western knowledge and information.

5.3.2 Mobility and embedment in the New Zealand society

After those interviewed arrived in New Zealand, their cross-border movement did not stop but advanced to a trans-national level. After gaining New Zealand citizenship and finishing her studies, One interviewee went to the US and Australia working for a while. Several interviewees who were working in the academic field regularly went overseas to attend international conferences. One interviewee explained that when he was doing a PhD degree in New Zealand, he did not consider buying a house as he was not sure where he would go to find a job after graduation. According to him, a person with a PhD degree could look for a job in a global market rather than just focusing on local ones. Their intentions and actions of transnational mobility would lead people to be curious about their view on their identity and their commitment to a certain community.

During the interviews, several interviewees expressed their concerns about getting a New Zealand passport to enable their transnational movement. One interviewee explained his choice of applying for a New Zealand passport and said:

Actually, I would like to keep two citizenships at the same time if possible. I applied for the New Zealand citizenship in 2001, eight years after I have got a visa for permanent residency. Regarding the welfare, there are not many differences between holding a PR and being a citizen. Probably, there are some influences in children when they apply for scholarships. The major reason for me to apply for a New Zealand passport is that the Chinese

passport is not so convenient to use. I need to apply for visas to go to most countries. I usually go aboard twice or three times each year for attending conferences. I noticed that I could get visas from some countries, such as Canada and Australia, more easily than other countries. Sometimes, there is an invisible barrier. Furthermore, the procedure of applying for the extension of the Chinese passport is complex, so I decided to apply for the New Zealand citizenship. As you know, I am more interested in academic research than political issues. I just thought that a New Zealand citizenship could allow me to deal with my work, especially to attend conferences in other parts of the world more easily. One thing that makes me feel relieved is that although I am holding a New Zealand passport now, I do not feel hard to apply for going back to China. I felt that I am still welcomed by China and the Chinese government. Actually, I just came back last week after having attended an international conference held in China.

There were no political slogans and high-sounding words! The interviewee gave a practical reason for his action while facing this situation. He articulated an ordinary scholar's voice. Doing research and communicating with scholars in other parts of the world were his basic concerns for applying for citizenship. For him, the New Zealand passport enabled him to travel freely in order to access the global academic community. In particular, the open attitude of the Chinese government, as he mentioned, made him feel that he still had a strong connection with his original land. His concerns indicated that in the knowledge age, the political practice of the citizenship would constrain the mobility of experts and scholars and thus, make sharing knowledge among the global academic community problematic.

In the study, another interviewee working in an environmental institute in New Zealand expressed her disinterest to identity based on her ethnic origin. During the interview, she preferred talking in English as she thought that speaking Chinese made

her struggle for meanings and fluency. She explained that since she arrived in New Zealand seventeen years ago, she had always been living in English speaking environments such as universities or institutes. It was not necessary for her to speak Chinese at most times. Instead, she seemed to be in favour of her membership of the international academic communities while talking. Her explanation seems to suggest that in the academic domain, the standardised language of English has disguised the difference of culture and ethnicity and given her a new identity: scientist. This identity based on knowledge she possessed “is no longer defined by social structures ... It has lost its reference points as a result of globalization ...” (Delanty, 2001, p.143). Particularly, for people, like this interviewee, working in the academic community, knowledge is a major indicator to define the relationship between themselves and others. Thus, the knowledge they possessed is a label to define them.

However, their disinterest to political issues and frequent travel across borders do not mean that they had no attachments to New Zealand. One interviewee said:

At the beginning, I just thought that I would stay in New Zealand long enough to get a permanent resident visa and then went to Australia to join my husband [who was studying there]. However, I gradually became interested in my work, Christchurch and New Zealand ... I do not want to go anywhere now. I feel happy to live in Christchurch as I have my families, new friends and work here.

After she got a residency visa, she did not leave New Zealand as she initially planned. Instead, she started to take roots in the new land and contributed to its development through her work. Like her, almost all the interviewed expressed their affection for New Zealand after having lived here for many years. They have their work, families, new friends and unforgettable memories here. Besides these emotional attachments, the comprehensive living conditions in New Zealand were also attractive for them. One interviewee said:

I like New Zealand. New Zealand is an ideal place to live. The life quality is a comprehensive issue. If I paid more attention to money, I would choose to go to America, Britain or Australia. If I wanted a better cultural environment, I would choose to go back to China, or go to Singapore or Hong Kong. However, when I make a decision, besides those concerns, I will consider the conditions for my research work, my family and friends, natural and social environments and security. When I consider all the conditions comprehensively, I will choose New Zealand to live.

Therefore, the attraction of a country to the talented goes beyond the material affluence. It is also related to social networks, natural environment, policy and cultural conditions. As one interviewee said, “I will open to all opportunities but I like Christchurch and New Zealand”. In the knowledge age, knowledge has created and will continually create various opportunities for this group of people to move across cultural, geographic and even political boundaries. However, their career has started to flourish in the new land and their affection has become firmly attached to the new home. They will bind their future with this country’s future.

5.4 Different Types of Knowledge in Action

5.4.1 Know what and know how: difficulties in accessing information in New Zealand

The difficulties, which these interviewees faced in accessing information and knowledge in New Zealand, show the relevance between social structure and knowledge dissemination. As one participant commented, “applying for immigration is one thing while settling down is another thing”. Indeed, most interviewees had trouble in the settlement process in various degrees. Accessing information in the new land appeared to be the biggest challenge for them at the beginning. It appears that

they had very limited knowledge on New Zealand before they arrived. One interviewee said that she did not know anything else about New Zealand except the fact that Auckland is the biggest city and Wellington is the capital of the country. Another interviewee commented that after several years, he realised that he had been so naive that he underestimated difficulties in finding a job due to lack of knowledge on New Zealand at arrival.

One interviewee described her feeling at arrival and said:

My friend was very helpful. However, I still had to depend on myself. I felt disappointed when I arrived in Christchurch in 1999. It was a so small city and was not advanced as I imagined. My first impression was that most cars on the road just had two doors. I thought that it would mean that the life quality here might not be high. Although I brought some savings with me, I did not dare to waste a coin. The feeling was complex. There were so many worries, anxieties and misunderstandings in my mind. I think that at the beginning, I experienced the process from lacking of knowledge about New Zealand to misunderstanding New Zealand and thus, becoming disappointed. There was a huge gap between my expectations and the reality.

Like her, most interviewees experienced a similar process because they lacked knowledge on New Zealand. They had various expectations on the new home and once they found that the reality was not coincident with their expectations, they would naturally feel disappointed and frustrated. For example, one interviewee said that after school time, taking care of her daughter was the most difficult thing for her as she had to work and study and did not know about available services for childcare. Another interviewee complained that he did not feel that there was any settlement support available for new migrants when he arrived in New Zealand in 1997. The interviews show that most of them did not regard the English language, as expected, as the major barrier for them to settle down. Instead, lack of information and knowledge on New

Zealand society turned out to be a major challenge at arrival.

However, things seemed to go beyond this. An interviewee working in a university library as an information librarian commented on the difficulties for Asian students when using New Zealand's libraries. She said:

For international students, especially students from Asian countries, they generally have no ideas on how to use libraries in New Zealand as they received different education and used different library systems from the western one. Coupling with language barriers, they even do not know how to ask questions although they want to.

Although she talked about the difficulties faced by Asian students, her comments gave the most basic reason that new immigrants were always facing settlement difficulties. Since they came from different social, cultural and economic systems, they had no idea how to access information and knowledge they needed in the New Zealand context. Therefore, for new immigrants, difficulties in their settlement are not only attributed to 'knowing what' but also to 'knowing how'.

5.4.2 Knowledge and wisdom: successful integration into New Zealand's society and economy

For those interviewed, the success in settlement shows the power of knowledge and wisdom. The downward mobility in their careers and their social status seemed to be inevitable for those interviewed when they arrived in New Zealand. Most interviewees expressed their feelings of disappointment and frustration about what they faced at the beginning. However, they finally stepped out the predicament with not only knowledge but also wisdom. When one female interviewee could not find a job and faced a broken marriage after arrival, she felt extremely helpless. Finally, she

found the meaning of the life from the Buddhist doctrine. She described her experience and said:

I took part in activities organised by a Buddhist Association. I joined some members of the association doing a 'yuanji' dancing ... 'Yuanji' dancing was similar to Taiji and keen to keeping people's physical and mental health. I found that it was very suitable for me ... I was taught that everybody except Masters would be a Buddha in the future and the life itself was practising Buddhism and self-cultivating. This doctrine is most attractive for me. When I learnt this, I felt that my life was upgraded. I recalled my miserable marriage and realised that although I could not change the world, I could change myself to give my daughter a better future. I learnt that everything, including one's weakness, was brought by pre-life. The doctrine taught me to notice my weakness and avoid it. Although the life is full of bitterness, I should find happiness among it. The decisive factor for this action is my attitude to the life. If I look at the positive aspects of life, I will become tolerant and have courage to face various challenges. The doctrine helped me to keep physical and mental health...

Her experience showed that she had benefited greatly from her religious beliefs and the Buddhist doctrine enabled her to find the real meaning of life. Like her, some interviewees mentioned how their religious beliefs helped them to rebuild their social networks, find their position in society and sort out a way of dealing with their relationships with others. Another interviewee explained that she changed her attitudes to others and became tolerant and forgiving after she started to go to church. According to her, she did not keep complaining about the unfairness in the life but helped others and saw giving as a means to happiness. Similarly, one interviewee also explained how his academic work had benefited from the energy and activeness gained through persisting on practising *Qigong* everyday.

Besides religious beliefs, some interviewees were self-reflective through their work experience in New Zealand to think about the changes happening in their lives. For example, the interviewee who thought that the service sector was a ‘smile selling’ sector said:

Working as a travel agent, I have opportunities to meet different people and know more about the society. However, when I witnessed the different pathways of the life, I start to re-think about my life. Why did I come to New Zealand? Why did I struggle for survival and for getting a loan to buy a car and a house in New Zealand? I could enjoy the material comfort in China and even could get it better and faster. When I realised that I had given up so much and came here to search for a simple and relaxing life, I thought that I should not pay too much attention to worldly gains and losses. Then, I spent a long time adjusting. Until I had worked in the agency for a year, I started to accept the reality and see the positive aspects. Now, I think that working in the services sector does not mean that my social status is lower. Actually, it is a kind of way of giving happiness and love. I do not flatter customers with smiles but I am a giver of love and happiness and facilitator and organiser of other people’s lives. I feel that I experienced a process of downgrading, moulting and finally finding a new balance point. Now, I always feel a kind of achievement when I provide services with my knowledge rather than seeing it as a passive task I have to do. Sometimes, I would make mistakes; however, I am sure that I use both my mind and heart to provide services, so I can smile from the bottom of my heart rather than making a grin.

For this interviewee, witnessing of different life pathways through her work enabled her to rethink her transnational experiences and her job as a travel agent. She succeeded in searching for new meanings for her life and career. Her changed ideas on the services sector and working as a travel agent show that a knowledge society “has its roots in epistemology ... its members [will] inquire into the basis of their

beliefs about man, nature, and society” (Stehr, 1994, p. 5). Therefore, this interviewee did not just accept the change passively but actively searched for the new meanings of the society, herself and her relationships with others. The epistemological shift made her smile naturally.

These interviewees also showed wisdom through self-evaluating their knowledge and skills. Under changed circumstances, they prudently identified their own strengths and weaknesses and used the former to compensate for the latter. For example, some interviewees found that they were good at communicating with others, so they drew upon the strength for their career providing customer services through working as an insurance advisor, a property consultant or a travel agent. Others depended on their solid theoretical backgrounds to pursue their careers as scientists and researchers. Regarding weaknesses, they all saw that their relatively low levels of English language proficiency was one of the major weaknesses. However, they did not use it as an excuse to give up pursuing their dreams. On the contrary, they had different strategies to overcome it. Some interviewees used their specialities in the academic field, such as special knowledge and skills, to compensate for their paucity of English language. Other interviewees focused on a different English skill to provide services and goods in the labour market. For example, when the interviewee, who was an IT expert, realised that his English writing and reading skills were better than speaking and listening skills, he determined to give up his former job in a company and started to work on setting up a bilingual website to provide his service.

In addition, these interviewees showed wisdom through their practice of combining mind and character properly. When one interviewee, who used to be a marine engineer in China and the project manager of ship maintenance and marine transportation in New Zealand, commented on the significant personal characters in career pursuit, he said:

Occasionally, I realised that what I learnt from books were being used.

However, I think that I learnt more on 'zuo ren' (being a human) through studying in the university and working on the ship. Our teachers told me, "If you could not forget calculus, you would never be able to become a captain." It means that it will take a long time to become a captain. At the same time, it also means that if I just knew calculus but failed to know the real world and have the basic qualities of being a human, I could not become an eligible captain. What we learnt at that time made me believe that once I determined to undertake a task, I would try my best to make it as good as possible. Otherwise, I would feel sorry for the opportunity of receiving education ... My career also enabled me to have a strong sense of responsibility because while working on the ship, everyone had to have his own responsibilities and make sure that he could complete it ... In addition, team work is important. There is an idiom: 'tong zhou gong ji' (cross a river in the same boat). On the sea, we needed to do everything in this way to survive. Usually, there were twenty to thirty sailors on a ship. We needed to cooperate with each other and worked as a team. It was impossible for anybody to undertake tasks without considering on co-operation...

His remarks highlight some qualities of 'zuo ren'. According to him, pure book knowledge, such as calculus, could not lead to a successful career if some necessary qualities of 'zuo ren', such as persistence, responsibility and cooperation, were absent. His experience suggests that wisdom achieved through understanding ethical bases of the practice would be a significant condition for the realisation of the value of knowledge. Like him, other interviewees frequently indicated that the qualities of 'zuo ren' were important in their career.

However, there were various understandings on the rule of 'zuo ren'. For example, another interviewee explained how the quality of kindness originating from her religious beliefs led her to gain a business opportunity. She said:

One day, a man came to my office and tried to sell the insurance to me. However, he finally asked me to help to sell his father's house. He said that he noticed that I was a patient listener and willing to help others because although I was busy, I still gave him an opportunity to explain his goods and services. He said that my kindness made him believe that I was a trustable person ... I just thought that since we were living in a society, we could not avoid asking for help. Buddhist doctrine says that we should feel happy when we have an opportunity to help others. It is a 'Yuanfen' (predestined affinity) and cannot be obtained with money.

In the light of her religious belief, this interviewee valued the quality of kindness and made it as her rule of 'zuo ren'. Her willingness to help others enabled her to take virtuous action naturally while communicating with others. This quality made her attractive in the intensely competitive business field and gained a business opportunity. In the study, various virtuous characters mentioned by these interviewees included trustable, responsible, kind, cooperative, confident, persistent, diligent, honest, tolerant and forgiving. From their point of view, these knowledge workers are not merely named because of their knowledge but also their wisdom and their virtuous qualities of "zuo ren" which made them 'zhi shu da li' (knowledgeable and being aware of the rule of being a human).

5.4.3 Engaging in knowledge work in New Zealand

Knowledge work in which these interviewees engaged provided them a platform to use different forms of knowledge in distinctive ways. Although most interviewees used to work in *danwei* as intellectuals in China, their work patterns in New Zealand varied. In New Zealand, they were doing knowledge work as consultants, advisors, scientists, accountants, doctors, experts, managers and so on. The following is the nature of the different groups of interviewees who were working as knowledge

workers and their concern on being competent in their work.

5.4.3.1 Interviewees focusing on the production of knowledge

In the study, four interviewees were working as researchers and scientists in institutes and universities in New Zealand. They each had a PhD degree and were involved in research in the fields of environment protection, the development of marine resources, agriculture and higher education. Their work was directly related to the concerns of R&D of New Zealand focusing on the production of knowledge. They were contributing to their fields in various ways. Some interviewees were undertaking government-funded research projects contributing to the increase of knowledge in their fields while others were playing an active role in co-operative projects between New Zealand and China.

This group of people emphasised the importance of gaining a tertiary qualification in New Zealand. Most of them believed that Master and above degrees were necessary for them to be recognised and to gain relevant skills and capacities in order to work in New Zealand's institutes and universities. Moreover, they emphasised the role of special skills and academic strengths in being competitive in the labour market. According to them, academic skills involved in research in New Zealand were similar to those in China, so they could rapidly become competent in the necessary academic tasks. During the interviews, they talked more about how they learnt the way of getting things done in the New Zealand context. When one interviewee talked about his experience in the workplace in New Zealand, he said:

To do the research in New Zealand, I needed to organise everything independently. Since I did lots of research in China I did not find it hard to do something academically in labs. What I learnt was more about living and social skills. For example, I had to learn to drive, contact people outside the

university and prepare materials. I did a research on wastewater treatment and needed to communicate with technicians in an environmental department and ask them for help. I had to organise everything such as getting waste water, booking cars, sending waste water to experimental sites ... Although we usually got someone else to get these things done in China and did not see that they were valuable skills which need learning, I, actually, learnt lots through the process while contacting and communicating with others.

From his viewpoint, working in the academic domain was not only related to work in labs and dealing with advanced equipment, but also the whole process from the field to the labs in which personal contacts would be needed. For him, academic work was also linked with day-to-day living skills, so he became interested in getting tacit knowledge while working in the academic domain. Like him, other interviewees mentioned various kinds of tacit knowledge they found they needed while working in new academic environments such as applying for the fund, publishing articles and communicating with colleagues and supervisors. One interviewee commented that sometimes, cooperative opportunities between colleagues were identified through informal chats. Their talks suggest that even in the academic domain, tacit knowledge is necessary, which conditions the production and circulation of the scientific knowledge.

5.4.3.2 Interviewees focusing on the distribution and application of knowledge

Besides the above group, other interviewees worked in the service, information and symbolic economies and other industries, such as traditional professionals, to provide either customer service or business services. They include a travel agent, an insurance advisor, a property consultant, an accountant, a manager of ship maintenance and marine transportation, an information librarian, a website designer and maintainer, an

online foreign exchange agent, a headmaster of a Chinese language school and a medical doctor. This group of interviewees focused more on the distribution and application of knowledge although they also produced knowledge. They mainly, but not exclusively, provided goods and services to the Chinese customers. Although they had different ideas on whether they should focus on customers from this ethnic group, they apparently benefited from their ethnic identity and capacity for speaking Chinese. These types of cultural capital were crucial resources in their businesses.

Unlike the first group of interviewees, the educational qualifications of this second group seemed not to be as important as the social capital they possessed. Some of them expressed that they preferred getting a reasonable training certificate, which enabled them to work in industry, rather than spending a long time studying in university. Instead, they paid more attention to building good relationships with their customers. For example, one interviewee said:

Occasionally, some customers would ring me at midnight to book a ticket due to something happened urgently. I have never refused to provide service under such a circumstance although I cannot get any extra payment. I think that it shows that the customer trusts me if he rings me under such a situation. I will feel a kind of achievement if I can solve a problem for him or her. Moreover, a friendly relationship between customers and me is emotional interaction. When I do something for them, they always bring gifts to me to show their appreciation. Gradually, the good relationship unexpectedly led to more business opportunities as old customers would introduce new ones to me. I have got many old customers whom I have served for years. We always keep in touch although I have worked in different companies ... They trust me to such an extent that some of them leave their credit card numbers to me so that they just ring me when they need booking tickets and have a travel arrangement.

According to her, the rationality in the business did not conflict with emotional inputs.

A good relationship with her customers was more valuable than getting an extra payment as the trust built through the process strengthened and even expanded social networks between herself and her customers and led to more business opportunities. From this point of view, both rational and irrational actions contribute significantly to her success in business. Similarly, the manager involving in ship maintenance and marine transportation was keen to explain the role of rational and irrational action in his business. According to him, it was very important to provide services with a high technical standard as personal contacts with his customers, who were based in China, were limited due to the distance. Meanwhile, he explained that the relationship was strengthened when he voluntarily spent his spare time accompanying customers travelling from China to shop in Christchurch or visit tourist resorts. In his business, the emotional input had conditioned the rational input to build a trustful relationship. For them, the investment in building their social capital is the key of success.

However, they focused on the different aspects of knowledge to distribute knowledge and provide services. For example, when the insurance advisor was asked how she dealt with the potential customers who were not interested in the insurance, she said, “They need to be educated with the knowledge of the insurance”. When she explained how she ‘educated’ them, she used various examples from daily life to illustrate her idea that society was full of risks. By this means, she focused on the negative fashion of knowledge and drew information from different sources, such as the health care system in New Zealand and incidences in the daily life, to construct her stories in order to bring out her services. Differently, some interviewees were concerned on how to draw knowledge from the larger stock of knowledge through information and communication technologies to provide individualised services. For example, the travel agent commented:

Today, most of the information on travelling can be accessed through the Internet, but why do people still keep coming to ask for services? I think that it is just because I can provide efficient and satisfied services. What I need to do

is to process the information drawn from different sources in my mind and reproduce it for different customers ... I will ask different questions and focus different aspects while serving different customers. For example, if a person from Shanghai came to make a booking, he would be interested in how to get a lower price but a high quality of service for his or her travelling. On the contrary, a Beijinger would say, "I don't mind paying an extra 10 or 20 dollars as long as I can have the first-class service." A Cantonese would ask more questions before making a decision. Therefore, I should know the differences and provide information with different details to people from different backgrounds and regions. Then, they will feel comfortable.

For her, tacit knowing about how to deal with different customers is the key to providing a satisfactory service. Like her, several other interviewees, such as the information librarian, the designer and maintainer of a Chinese website and the online foreign exchange agent, had similar concerns. On the one hand, they relied heavily on the information and communication technologies to access relevant information. Thus, knowing how and where to access information online was crucial for them. On the other hand, they were concerned with an individual customer's preferences and requirements to enable them to provide satisfactory services.

The work of some interviewees shows that the co-existence of different cultural and knowledge systems with the globalising processes would provide both opportunities and constraints for knowledge work. For the headmaster of the Chinese language school, his work benefits from an increasing recognition of cultural differences and value put on the exchange and communication between New Zealand and China. In contrast, the work of the doctor seems to be challenged by the process of emerging different knowledge systems in the New Zealand society. For her, she has to get her qualification recognised by the New Zealand's medical system to allow her to resume her career. Moreover, the knowledge of medicine possessed by her patients, which was gained from a different culture and medical practice system, challenges her

practice based on the New Zealand standard. This suggests that the increasingly recognised sources of knowledge would not only enable the action of these knowledge workers but also constrain them to achieve their potential completely.

5.4.4 Tacit knowledge in different contexts: understanding interpersonal relationships under different cultures

Tacit knowledge on working relationships, in other words, knowing how to deal with relationships in different cultures, was a concern arising during the interviews. When the interviewees talked about their work experience prior to the mid-1980s in China, they paid more attention to explaining people's preference for working in governmental departments and state-owned enterprises in big cities. In the work unit, they focused more on how to get an occupational qualification, as it was important for them to access various resources in work units such as housing and wages. Interestingly, some interview participants mentioned the 'hard' and 'soft' criteria for granting an occupational qualification for candidates in China's work units. According to them, the 'hard' written criteria included candidates' academic performance such as the level of the university degree and the number of published articles. The 'soft' criteria were tricky and unwritten depending on leaders' impressions of the candidates.

During an interview, one interviewee described how teachers in the university, in which he worked, invested in different capitals in order to be granted a certain level of occupational qualification. According to him, some teachers tried to build a good relationship with leaders through satirically called 'tennis diplomacy' or 'fishing diplomacy' (accompanying leaders to play tennis or go fishing), while others worked on 'hard' criteria by getting a higher degree, such as a Masters or PhD degree. Although his descriptions seemed to suggest that most intellectuals scorned people working on the 'soft' criteria, it still showed the resourcefulness of intellectuals working and living in such circumstances. In fact, both ways showed that they tried to

convert either social or cultural capital into human capital. In the Chinese context, both ways seemed to work well and to be applicable to people with different personalities.

In the study, several participants chose to work in non state-owned companies at the end of the 1980s. They had a different understanding on work and achievements as they had broken their 'iron rice bowl'. However, it does not mean that they did not care about building their social capital. Instead, one participant commented:

In the mid-1980s, loan, investment and joint venture were new concepts even in Special Economic Zones like Shenzhen. Our company established some co-operative subsidiaries with our counterparts in the US. Besides academic tasks such as field investigation and report compilation, I had to take charge of applying for the fund for new projects from the city council. It was a complicated procedure. I had to get approvals from the leaders of the city council at first and then, to deal with those straight-faced staff in banks and departments in order to get loans from banks. I learnt lots from the work ... I think that how to build good social relationships with different people is very important knowledge. In the university, most classmates were naive and the relationship was simple. However, when I left the university, I encountered people and things that were not simple and easy to deal with. It was not a good idea for me to be stubborn. I had to learn from the real life. Some colleagues in our company had not got a university qualification. However, they were good at dealing with complicated relationships. I learnt lots from them.

For her, knowledge was not only contained in books but also in daily life. The capacity to build a good relationship with others was a kind of knowledge which she could not gain from books but from her business activities.

For most interviewees, interpersonal relationships seemed to be extremely important for them to work in China. While talking about the relationship in the Chinese environment, one interviewee commented:

In China, people had to consider more on how to behave and to deal with interpersonal relationships. They had to be cautious. For example, if you were young, you would need to consider elder colleagues' feeling when you did something. You had better not show off. Of course, it was not because other people were not friendly but because we were living with the specific culture and tradition. Sometimes, people behaved in a certain way just because they themselves thought that they should do in this way. However, in China, if you dealt with interpersonal relationships well, you would benefit from them. People would be willing to help you in various ways and treat you as a close friend.

His comments show that Chinese people have a specific model of behaving based on their culture and tradition. They were expected to be modest and respect prestige. Appropriate behaviours could lead to a beneficiary interpersonal relationship. This would also explain why Chinese people tend to keep silent in the public sphere and pay more attention to deal with interpersonal relationships in the workplace.

In another interview, the person talked about his feelings on the differences in interpersonal relationships in the workplace between China and New Zealand. He said:

Generally speaking, I can get along with my colleagues. Sometimes, I found that I could reach a tacit agreement with a Chinese easier than with a New Zealander although the latter was still friendly to me. It would be because we grew up with different cultures and we have different understandings on friendship. I noticed that for New Zealanders, they had different circles for friends and colleagues. I seldom found that people became close friends

through working together unless they had already been close friends. For us Chinese, it is different. Working relationships are one of our major social relationships. Our close friends would be our colleagues.

Like him, several interviewees mentioned the issue in various ways. For them, both the entrepreneur tradition based on family and kinship, and communities based on danwei (work units) shaped their ideas on searching for friends in the workplace and dealing with their colleagues in a specific way. However, once they were living in New Zealand and perceived the different culture in the workplace, they will have to formulate appropriate ways of dealing with different working relationships.

Generally, the study shows that knowledge has penetrated into and interacted with various spheres of these interviewees' transnational experiences in the process of knowledge reproduction and application across borders. Values on intellectuals as knowledge subjects in different cultures significantly affected their performance in the New Zealand's labour market. Values on the different forms of educational qualifications led to distinctive pathways when pursuing their careers in New Zealand. Transnational mobility and social networks became crucial strategies for them to accumulate knowledge. Different types of knowledge play a crucial role in their lives and work when accessing information on New Zealand, integrating into society and engaging in various economic activities. The next chapter will analyse and discuss these aspects in detail while drawing on theoretical perspectives.

Chapter Six Knowledge, Society, Economy and Immigration

We can know more than we can tell.

(Polanyi, 1967, p.4)

The last chapter shows that knowledge has penetrated into various aspects of these interviewees' transnational experience. For these intelligent individuals, the formal academic knowledge, which they gained through higher education, made them respectable intellectuals, qualified skilled immigrants and successful knowledge workers. However, the transformation of these identities does not mean that there was a straightforward route for them to integrate into New Zealand's society and economy with solely formal academic knowledge. The difficulties and successes they experienced in the process of transnational migration also showed the power of other types of knowledge such as tacit knowledge. This chapter will explore how different types of knowledge, namely, explicit knowledge and tacit knowledge, played their roles in the process. To do so, it will discuss the issue from four aspects to look at knowledge reproduction and application surrounding their entry into New Zealand's society. Based on these analyses and discussions, suggestions and policy implications will be put forward.

6.1 Economic and Cultural Values on the Intellectual and Intellect:

Tacit Knowledge Conditions Explicit Knowledge

The significance of knowledge is due to the increasing recognition of its role in economic production and wealth creation. Therefore, the discourse of 'the knowledge

economy' and countries' efforts to build their intellectual capital has arisen. Human capital development, which creates the workforce of intellectual capital, is one of the policy foci. In New Zealand, investment in education and attraction to the talented are emphasised and used as major indicators for the knowledge economy. In particular, the skilled migration criteria contained in New Zealand's immigration policies carefully defines the qualities required of immigrant candidates. In the past two decades, the shifting requirements for the English language skills and educational qualifications were constantly focusing on inclusion and exclusion. These practices focus mainly on the explicit feature of knowledge and assume that the transferring of knowledge through skilled immigration can contribute to rapid economic development.

However, research presented in the study also shows that tacit knowledge and cultural values are useful resources for some industries to keep their competitive advantages. For individuals, acquisition of formal academic knowledge does not always guarantee full employment. In New Zealand, some people including some skilled migrants with university qualifications, gain work unrelated to their educational qualifications and become deskilled. Thus, there is a gap between cultural reproduction and economic reproduction. Furthermore, "[k]nowledge acquisition (learning) and creation (invention, innovation) can only occur to any significant degree in the human brain" (Burton-Jones, 1999, p.6). For individuals, the personalisation and articulation of knowledge are affected by various conditions such as individual value and intellectual culture. As Sternberg, Wagner, Williams and Horvath (1995, p.917) suggest, "[t]acit knowledge is instrumental to the attainment of goals people value". Thus, a person's value is correlated with his/her tacit knowledge. The more highly valued the goal is, the more applicable the tacit knowledge.

In this study, the values, which those interviewed placed on the intellectual as a knowledge subject and its knowledge, show the role of tacit knowledge in the process

of the reproduction and application of formal academic knowledge. For example, the interviewees' reasoning for receiving higher education in China suggested that they valued schooling and being an intellectual due to its social function and cultural meaning. Eventually, this aspiration became an internalised disposition and a kind of tacit knowledge. Thus, they viewed receiving higher education as a taken-for-granted 'natural' pathway. When choosing a major for university study, they or their parents seemed to depend on common sense in making their decision. For them, the vicissitudes of intellectuals working in humanities during the Cultural Revolution, the revitalisation of science and technology in Deng's era and the demand for English language skills in economic reforms served as implicitly shared understandings to choose an 'appropriate' major at different historical times.

Similarly, teaching methods in education in China not only decide the content of formal knowledge these interviewees gained but also affected their tacit knowledge on how they saw their identities and behaviours in the academic domain. In Chinese history, the ethics of Confucius was the source of traditional education philosophy. In ancient times, education was designed to train youth for the Civil Service examination (Taylor, 1981). To pass the examination, students needed to memorise authority figures' writings and wrote articles in a fixed form. This authority-centred ideology directly affects instruction methods in the Chinese higher education system. Generally, in universities, instruction methods are characterised by spoon-feeding and memorisation (Du, 1992). In this study, some participants mentioned various methods in higher education in China that partially originated from this tradition. These included the large proportion of lectures at university, textbook-based examinations and teacher-centred teaching methods.

Another apparent characteristic in the Chinese higher education is overspecialisation, which was drawn from the Soviet model and transplanted to China during the early 1950s. Under this model, students specialised in a limited number of compulsory

subjects for the whole of four or five years (Du, 1992). According to some interviewees, these teaching methods resulted in Chinese students having a solid theoretical knowledge and belief in authorities but a lack in their own thinking. This would explain why new Chinese immigrants tend to remain silent in public rather than vocalise their own ideas. For them, traditional education has shaped their ideas on appropriate behaviour in a public place and this has been internalised as tacit knowledge. The experiences of the interviewees appear to show that tacit knowledge is acquired concurrently with the reproduction of formal academic knowledge and shapes their interests, aspiration and behaviour.

For those interviewed, tacit knowledge also conditions the cross-cultural application of formal academic knowledge. When they came to New Zealand, the interviewed faced a completely different intellectual culture, which could be identified in its educational practices. For New Zealand, “[from] earliest beginnings, schooling in this country was charged with the task of sorting and allocating children for working life” (O’Neill, 2004, p. 30). In other words, education is responsive to the needs of the economy. Philosophical underpinnings of the curriculum are liberal-humanitarianism and economic rationalism (O’Neill, Clark, & Openshaw, 2004). This emphasises the balance between academic education and vocational training; although there are debates on this approach. Apparently, the ideology in educational practices in New Zealand reflects a pragmatic culture with an emphasis on the applicability of knowledge rather than merely focusing on fundamental researches.

Some interviewees who had been trained at the Christchurch Polytechnic after arrival expressed their appreciation of the teaching methods and pragmatic culture in educational practices in New Zealand. It is hard to say which of the methods used in higher education is better due to the distinctive social, political and economic conditions between China and New Zealand. However, the differences in the practice of higher education suggest that the interviewees’ tacit knowledge gained in the

Chinese context would not support them in their career pursuit in New Zealand. “[Since] tacit knowledge is acquired largely from experiences, preferably from experience in the environment where the tacit knowledge later will be needed ... it would become a conservative force when there is need for change” (Sternberg & Horvath, 1999, p.233&235). In this study, both the comments of the travel agent on the service sector and different ideas between male and female interviewees on finding a qualification-relevant job in New Zealand showed that their tacit knowledge on the ideal types of intellectual became a barrier for them to perform well in New Zealand’s labour market. Similarly, another interviewee noticed that Chinese new immigrants tended to be in favour of specific knowledge but lack practical skills and failed to adapt to the pragmatic culture in New Zealand and thus, to perform successfully during job interviews.

On the contrary, the success of these interviewees in their career pursuit was partially attributed to their adjustment to the New Zealand’s value on intellectual work. Most participants had got a qualification in New Zealand in order to enter the labour market. They still believed that formal knowledge was important. However, they were more flexible and practical on schooling. In particular, for the interviewees who stayed in New Zealand longer or where self-employed, they expressed the preference for learning something that could be used directly in the workplace rather than receiving higher education just for prestige. For them, knowledge gained through the formal learning process should be linked with their practical life and work rather than just serving as a symbol. According to them, the skills learnt at the Polytechnic were practical and provided support for them to facilitate their adaptation to the new working environment. Even for the interviewees who were interested in university study and intended to get a Masters or doctoral degree, they also wisely matched the demands of the local labour market with their own interests and skills. In such cases, their adjustment to the cultural value of New Zealand on intellectual work would enable them to acquire new tacit knowledge and it, in turn, would support them to use

their formal academic knowledge. Therefore, the realisation of economic value for the intellectual is not confined to formal academic knowledge but conditioned by tacit knowledge through cultural value and traditions

6.2 Tacit Knowledge in Transnational Mobility, Social Networks and Accumulation of Cultural Capital

In the contemporary world, people everywhere seem to be on the move. Mobility has become complex due to various factors such as economic globalisation, technological advancement, cultural exchange and political openness. In the last three decades, international migration has increased significantly and its patterns are diversified under different social, economic, cultural and political concerns. There are various migration theories and debates attempting to account for diverse experiences in migration in the changing world. This study shows that the experiences of Chinese immigrants at different historical times illustrate different theoretical perspectives and bring new content to the relevant debates.

The first wave of Chinese immigrants to New Zealand in the mid-1860s developed under the general mode of push-pull forces. On the one hand, economic collapse and political chaos in China served as push forces for those Chinese pioneers to find a means of living overseas. On the other hand, the goldfields in New Zealand, which desperately needed labourers, played a role of pulling forces for the Chinese. After a century when changed immigration policies allowed New Zealand to reopen the door to the Chinese, the composition of Chinese immigrants to New Zealand has changed. With the changing requirements of the immigration policy, the inflow of skilled immigrants becomes a major stream which greatly affects the fluctuation of the total number of immigrants. In addition, the increasing arrival of Mainland Chinese has

become one of the characteristics for the Chinese settlement since 1990s. For new immigrants, macro-environments in their home countries still affect their decisions; yet, universal push forces seem to be less. Instead, individual choices appeared to be common in immigration practices. Consequently, the push and pull forces become varied from case to case. In particular, the phenomenon that some Asian immigrants, including some Chinese immigrants travelled to Australia and returned to China after gaining New Zealand permanent residency and citizenship raises new questions in the debates on citizenship and transnationalism in the 1990s. It suggests that there are new patterns in international migration emerging.

Indeed, the case study shows several new characteristics in international migration. Firstly, there are some changes in push and pull forces. Those interviewed were well off in terms of material conditions and social status in China. They were formerly university teachers, scientists, experts, doctors, managers or businesspersons. Thus, gaining economic benefits seemed not to be so important for them to go aboard. On the contrary, non-economic factors played a more crucial role in their decision on immigration than ever before. For example, some of them were attracted by New Zealand's unpolluted natural environment and the free and relaxed lifestyle whereas others just came to allow their children to escape the intense competitiveness in China and access western education.

In particular, "knowledge adds to the capacity for action" (Stehr, 1994, p.234). For those interviewed, knowledge became both a cause and an objective for their movement. For example, one interviewee's decision on moving to New Zealand was partially attributed to her formal knowledge on the western world. Her university study and the work in which she was involved enabled her to learn about the western world in books. This encouraged her to move to New Zealand to experience western life and gain social knowledge. For her, gaining social factual knowledge through life experiences seemed to be more attractive. Her action seemed to reflect the Chinese saying that a knowledgeable person should read ten thousand volumes of books and

travel ten thousand kilometres (*'du wan juan shu, xing wan li lu'*). In particular, technological advancement has made book knowledge and people's life experiences able to be interwoven and transferred easily. Eventually, book knowledge encouraged her to gain social knowledge. Similarly, another interviewee explained that her transnational movement was precipitated by her personal life and work experiences in the western world. According to her, she thought that she knew what life in western countries looked like. Thus, the tacit knowledge on the western world she possessed facilitated her action. From this point of view, both explicit knowledge and tacit knowledge play equally important roles in facilitating their transnational mobility.

Secondly, the role of social networks in the sharing of tacit knowledge on immigration to and settlement in New Zealand is apparent. "Drawing on social ties to relatives and friends who have migrated before, non-migrants [can gain] access to knowledge, assistances, and other resources that facilitated movement" (Cholden in Massey et al., 1998, p.43). For people who intend to go aboard, social ties provide access to various resources. All interviewees in this study mentioned the role of their direct or indirect social ties in the process by which they moved to New Zealand and settled down in a certain city. The social ties, in particular, effectively facilitate and support the flow of knowledge and information about how to apply for immigration to New Zealand and find their own ways in the country. For example, although those interviewees who were students or visiting scholars came to New Zealand mainly through the Chinese government's programme, they still depended on various social relationships, such as sister's English teacher, friends and previous contacts with a professor in New Zealand, to arrange their transnational mobility. In particular, the experience of the interviewee who decided to immigrate to New Zealand while noticing most of his friends and classmates had gone aboard suggests that changed social networks significantly affects people's feelings of belonging, this, in turn, would facilitate the mobility.

For the interviewees who entered New Zealand as skilled migrants, their relatives and

friends appeared to be the most trusted information channels for their immigration. With these types of social ties, which were built for other purposes, their relatives and friends were willing to share their experiences with them on immigration to and settlement in New Zealand on the one hand. On the other hand, the shared experiences through face-to-face interaction became these interviewees' tacit knowledge, which they desperately needed in the process of immigration. Particularly, the Chinese government's neutral attitude to emigration and the New Zealand's neo-liberal ideology, which emphasises individual responsibility, mean that there were limited formal networks and explicit knowledge available for them to deal with issues relating to migration and settlement. Moreover, the attitude of one interviewee, who trusted his friend as an information source rather than consultant companies, suggests that those interviewed tended to rely on informal networks. For them, the knowledge acquired in this way was trustworthier for them and could lower the risk in their movement. Thus, these social ties appeared to be the most effective and secure way of sharing tacit knowledge and facilitating immigration.

Thirdly, these interviewees' tacit knowledge also supported them to accumulate cultural capital through transnational mobility. The experience-based feature of tacit knowledge means that the mobility of people is a crucial way of acquiring tacit knowledge. In this study, these interviewees had rich experiences in movement prior to international migration. Seven interviewees experienced voluntary job mobility in China, three interviewees transferred from hinterland cities to the cities of coastal provinces such as Guangdong Province. Three interviewees had worked or studied in western countries prior to immigration to New Zealand. This frequent movement enabled them to notice the difference between regions and thus, believe that travelling will bring more opportunities for their future lives. As the Chinese say, trees will die if removed but humans will be revitalised through movement (*shu luo si, ren luo huo*). In the study, one interviewee explained that he felt unsettled when he went back to China after having finished his study in Norway and this led him to take his family

abroad to experience a different type of life. This kind of tacit knowing through personal travelling experiences implicitly encouraged their further movement.

“Once someone has migrated, therefore, he or she is very likely to migrate again, and the odds of taking an additional trip rise with the number of trips already taken” (Massey et al., 1998, p.47). This frequent movement finally facilitated them to move to New Zealand. Moreover, the movement did not stop but developed into a transnational one. For example, after having received New Zealand citizenship, one interviewee went to the US and Australia to work for a while. Several interviewees travelled frequently to other parts of the world to attend conferences and participate in co-operative projects. For those interviewed, the direct effect of transnational mobility is to accumulate cultural capital. Some of them came to New Zealand to study to gain book knowledge while others intended to acquire tacit knowledge on the western world through personal experiences. After they arrived in New Zealand, the ease of movement between New Zealand and countries in other parts of the world enabled them to share knowledge at the global level.

To accumulate cultural capital, people inevitably have multiple involvements in different nation-states, “[their] identities, behaviour and values are not limited by location; instead they construct and utilize flexible personal and national identities” (Yeoh et al., 2003, p.3). In the study, one interviewee’s explanation of his decision to apply for New Zealand citizenship and another interviewee’s preference for speaking English and her membership of international academic communities seemed to illustrate the logic of identity taking. For them, these flexible personal and national identities could allow them to travel freely and access global academic communities to share knowledge. Their transnational movement and citizenship commitment seem to conflict with New Zealand’s liberal and neo-liberal perspectives of citizenship, which emphasises both the rights and obligations of citizens. However, their comments on attachment to and embedment in New Zealand did not show so placeless logic. Although they could travel freely, they still subconsciously weighed

various social, environmental, cultural, policy and economic conditions and tacitly knew how to choose the appropriate place to make a balance between pursuing their careers and enjoying their lives. From this point of view, their tacit knowledge significantly shaped their view on transnational mobility for knowledge accumulation.

6.3 Tacit Knowing in Different Social Structures

Tacit knowledge not only played a crucial role in knowledge reproduction and transnational movement, in which those interviewed were involved, but also conditioned the way by which they accessed explicit knowledge. The difficulties faced by these interviewees after they had just arrived in New Zealand showed the significance of tacit knowledge for them. Comments on the lack of information and knowledge on New Zealand lead to questioning the availability of immigration services and information. However, as a newly emerging knowledge society, New Zealand does not lack information and services. Various governmental and non-governmental organisations attempt to provide information and supports for new migrants, so the issue does not appear to be whether there was information but to be how new migrants could gain the existing information and convert it into their own knowledge. The information librarian's comments on the difficulties which international students faced while using libraries in New Zealand provides a clue to trace the reasons behind these difficulties. To some degree, the different arrangements of the library mentioned by one interviewee physically represent the distinctive way of organising and diffusing information based on different social, economic and political conditions.

In China, libraries have a less significant role than those in the western world. Instead,

danwei (work units)⁶, which are publicly owned workplaces, are the fundamental social unit distributing information in urban China. “The *danwei* phenomenon is the most typical and most comprehensive expression of the many unique features that have been formed over many years as a result of China’s economic and political practices” (Zhu Guanglei in Bray, 2005, p.3). They are not only a place for providing material benefits, such as wages, houses and social welfare for urban residents, but also one of major outlets of information. The hierarchical structure of work units determines that information is distributed from the central government to its people. In the study, all interviewees used to belong to different types of *danwei* such as universities, research institutions, hospitals and governmental departments although some of them transferred to private-owned companies before they came to New Zealand. Generally, they got used to waiting passively for formal information and relying on *danwei* as a major information resource to organise their lives and works collectively. As Bourdieu notes, “the cognitive structure which social agents implement in their practical knowledge of the social world are internalised, ‘embodied’ social structure” (Bourdieu, 1984, p.468). To some degree, the social structure based on *danwei* implicitly shaped their ideas on finding relevant information and converting it into their own knowledge to get things done.

When they came to New Zealand whose social structure is expressed with Toennies’s pair of concepts: *Gemeinschaft* and *Gesellschaft* (Pearson, 1994). Various communities replaced *danwei* and played a crucial role in daily life. This challenges the inherited way of getting things done. On the one hand, shared understandings based on common sense in New Zealand, such as finding a childcare service, were not

⁶ According to Bray (2005), *danwei*, the urban workplace, is the basic social and spatial organisation in socialist China’s cities. It is a walled-compound and provides a symbolic representation of social relationships in Socialist China. This kind of spatial practice could be traced to the traditional Chinese culture, the rise of urban planning in Europe and the Constructivist architects of the early Soviet Union. It has become central to governmental planning and intervention since 1949. With the economic reforms in the past three decades, it has gradually lost its dominant role although most of China’s urban population is still working and living within various *danwei*.

available to these new immigrants. On the other hand, there were plenty of information sources, though they were individualised and organised in a different way. Under such circumstances, they had to sort out a way of asking a 'right' question in order to access the information those interviewed needed in a new framework for knowing. Not only did they need to 'know what' but also 'know how' as "knowledge always requires some kind of attendant interpretive skills and a command of the situational circumstances" (Stehr, 1994, p.120). From this point of view, "knowledge refers to the cognitive structure of society in its cultural and institutional forms in so far as this relates to learning mechanisms" (Nowotny et al., 2001, p.18). Different social structures construct distinctive ways of knowing. These ways of tacit knowing, in turn, shape their ideas of accessing information in different contexts.

6.4 Social Interaction between Tacit and Explicit Knowledge

Although these interviewees inevitably meet various difficulties in everyday life and work with transnational mobility, they eventually stepped out of predicaments by drawing on not only their knowledge but also their wisdom. Wisdom, the higher form of knowing and the highly developed knowledge they possessed, enabled those interviewed to acquire tacit knowledge about themselves, others and situational contexts to find out wise solutions. For example, when they recognised the limitation of their knowledge, such as relatively low levels of English language proficiency, they tried to complement it with other strengths. While rethinking their lives and re-evaluating themselves and the changed environment, they re-defined their role in New Zealand society. They wisely used their religious beliefs as a mediator in their everyday life and work. They prudently combined their intellectual abilities with good character, such as kindness, honesty and diligence, in their knowledge-based works. Emphasis on the role of this type of tacit knowledge seems to exaggerate the influence

of uncontrollable super-natural powers and unstable human nature. However, these interviewees' wise action in different processes shows that "wise action, although reasoned, requires us to act and think outside the bounds of rationality and accepted, codified knowledge; that it is grounded in worldly day-to-day activity; assumes that life is contingent; and is virtuous and humane" (Mckenna, 2005, p.40). Therefore, wisdom allowed these interviewees to combine their tacit knowledge with explicit knowledge and develop into a higher level of knowing to overcome the difficulties in settlement and integration.

To provide goods and services, the interviewees engaged in different occupations and focused on either the production of scientific knowledge or the dissemination of theoretical knowledge. They used knowledge as either an economic good or a cultural symbol in either a positive or negative fashion. Their work was related to the flow of people, capital, material goods or information on both a local and global scale. The situation suggests that knowledge worker is not a single category of occupation. It denies the static conceptualisation of knowledge worker as a new class initiated by Drucker (in Joseph, 2005). Despite the diversity, their practices still show a common feature: social interaction between tacit knowledge and explicit knowledge. All interviewees generally dealt with theoretical knowledge. For the interviewees who focused on the production of knowledge, they produced theoretical knowledge through their research activities, which significantly added new knowledge to the stock of knowledge. The interviewees who focused on the dissemination of knowledge also worked with theoretical knowledge and provided knowledge rather than technical artefacts as the product for end-users. On the one hand, they had different disciplinary knowledge. For example, the travel agent needed to have a basic knowledge of tourism; the informational librarian required knowledge of library systems; and the doctor needed to have medical knowledge. On the other hand, the services or goods, which they provided, were knowledge or objectified knowledge. The specific relationship between them and knowledge makes their work differ from

some traditional occupations.

However, they still need practical knowledge and skills to support them to deal with theoretical knowledge. For example, all scientist and researcher interviewees have Masters or above degrees and focus on research. Meanwhile, they pay attention to tacit knowledge and life skills such as how to apply to a fund and get an article published and even how to drive a car. The interviewees as the transmitters of knowledge emphasise the role of tacit knowledge in their work while dealing with explicit knowledge. For example, to provide individualised services, the travel agent accessed information and knowledge on touring arrangements online and at the same time, she used her tacit knowledge to ask appropriate questions and provide specific pieces of information to each customer. During the process, tacit knowledge was objectified in the goods she provided to her customers although it was hard to articulate. This process suggests that in knowledge societies, individuals had different demands for knowledge and information and thus, tacit knowledge and explicit knowledge could not be separated in order to provide individualised services. If tacit knowledge conditioned the dissemination of explicit knowledge in this case, the work of the information librarian was related directly to disseminating tacit knowledge because she not only needed to provide information but also needed to show her customers how to access the relevant information. For her, knowing how was as important as explicit knowledge in her work.

The combination of accessing information at the global website and providing services at the local level is the work of some of the interviewees. This kind of practice enables explicit knowledge to interact with tacit knowledge through the connection between technological networks supported by ICTs and social networks through personal communication. As knowledge workers in the global economy, most interviewees emphasised the role of ICTs in supporting them to access information and knowledge through the Internet. For them, ICTs support them to access the stock

of codified knowledge, such as knowledge on insurance, travelling, and “select, legislate, organize and transform [the] knowledge in the course of pursuing their routine occupational or professional tasks” (Stehr, 1994, p.198-199). Thus, the flow of knowledge in fact shapes a complex mode of networks online. In the process, the transition between information and knowledge shows that “information is the handmaiden of knowledge” (Stehr, 1994, p.119) while knowledge is nourishing the strategies of accessing information. From this point of view, both the information librarian and the website maintainer are not just information providers but knowledge workers. Their work vividly illustrated the facilitating role of ICTs in both the social and academic lives of the ordinary people.

However, it is not because of the technology itself but the interaction between the interviewees and others that the technology became meaningful and powerful. Social networks expand online networks by linking with their customers at the local level. In the process, the interviewees’ tacit knowledge on building a good relationship with customers makes the process of disseminating explicit knowledge work more smoothly. For example, the online foreign exchange agent regarded the advancement of the electronic information system and software, which he was using, and good services as two pillars for his business success. Similarly, the travel agent had similar concerns on accessing information online and emotional interaction with her customers offline. Both of them served as a ‘node’ of networks either online or offline and linked the global with the local. Through their work, the rational and technological networks have been linked with the specifically social networks of local Chinese. By this means, both traditional and advanced networks interact with and compensate for each other in the process of knowledge dissemination. Eventually, the process enables the interactions between individuals and the connections between countries and thus, the interdependence with a greater complexity would be the reality among knowledge societies.

For the interviewees, the process of knowledge production and dissemination is active and communicative and thus, it enables tacit knowledge on social relationships to interact with explicit knowledge. For interviewees working as scientists and researchers, they not only focused on the individuals' research activities such as doing experiments in the laboratory but also emphasised the role of communicating with colleagues and even with scholars in other parts of the world. According to them, communication with others either formally or informally at both the global and the local levels informed them of developments in the academic field in which they engaged, and enabled them to fit their research into the broad picture and find opportunities of co-operating with one another. For them, knowledge does not just exist in individuals but between individuals. Thus, their tacit knowledge on dealing with social relationships under different culture shows its significance in the production and dissemination of explicit knowledge. To be competent in their work in China, the interviewees emphasised the significance of social relationships and the acceptable behaviour mode. When they worked in New Zealand, their social relationships are less tangled with working relationships. They noticed a different culture, which had shaped interpersonal relationships in the new work environment and were keen on gaining tacit knowledge about the ways of interacting with their colleagues. For them, tacit knowledge on working relationships is greatly attributed to their competence at work to produce and disseminate explicit knowledge.

6.5 Implications of the Study

Although there were a limited number of interviews conducted in the study, the results of these interviews still have some implications to individuals, programmes and organisations.

Individual Chinese Immigrants:

For new Chinese immigrants, the experiences of those interviewed in the study show that it is possible for immigrants to find a position in their new land, but there is not a universal route leading to this success. Their experiences have the following implications for new Chinese immigrants. Firstly, it is important to prepare well and get the necessary information on New Zealand through various sources such as the Internet, friends and consultant companies before moving to the country. This could avoid unrealistic expectations and high hopes for the coming life. Secondly, these interviewees' experiences show that new Chinese immigrants should have a clear but flexible plan for settlement and their own future rather than waiting there for information and help. Since the social structure of New Zealand is quite different from that of China, there is a different framework for getting information and knowing. It would be better if new immigrants could work out how to access various services and get a general idea of different systems. The experiences of those interviewed also show that it would be helpful to contact friends and relatives in New Zealand and participate in activities organised by local communities, which will help to rebuild their social networks. Finally, while considering finding a job or receiving further education, new Chinese immigrants are expected to have a different idea on these pursuits from that in China. These interviewees' experiences show that in New Zealand's knowledge society, various types of knowledge are generally valued and could bring economic benefits for both the society and individuals. Therefore, it is crucial for new immigrants to identify their own strengths and to find their own position in the society. There is no universal route leading to the success. New immigrants should not blindly copy others' successful experiences or follow something popular. It is not true that the higher the education degree, the more the job opportunity.

Policy makers:

This case study puts forward some questions on the criteria for immigrant recruitment. In the assessment framework for recruiting skilled migrants, candidates' features, such as educational qualifications, work experience and English language proficiency, are major criteria for granting residence. The interviewees' experiences show different ideas on the significance of these criteria. For example, all interviewees thought that reasonable level of English language skills is significant for new immigrants to settle down and restart their career. However, it is apparent that different jobs have different requirements for these skills. A universal criterion for applicants engaging in different industries and occupations would be problematic. Moreover, some interviewees' experiences show that the exam-dependent assessment would fail to reflect the real level of English language skills of immigration applicants.

Similarly, the case study shows that immigrants working in different occupations need different level of educational qualifications. The universal requirement for educational qualifications would lead to the result that immigrants working in some occupations are overqualified. Regarding work experience, the assessment framework in the immigration policy focused on the time, which applicants have spent in their work. These interviewees' experiences show that work experiences, such as job mobility and building social networks, are crucial indicators showing how they get tacit knowledge and social skills. Therefore, it would need more indicators to show candidates' work experiences in the assessment framework. In addition, the latest immigration policy shifted to place heavier weight on applicants' work and study experiences in New Zealand. It assumes that there is a better settlement outcome as applicants know more about New Zealand society. However it would lead to devaluing applicants' experiences (tacit knowledge) gained and social networks built in their home countries. This seems to contradict the strategies of New Zealand's open economy, which needs its people to be able to build good relationships with different regions and countries. Generally, since a knowledge society needs different people involved in

different stages of the process of producing and transmitting knowledge, it seems to be necessary to differentiate these criteria in the assessment framework while recruiting skilled immigrants with different skills and knowledge.

Both settlement difficulties and successful experiences presented in the study show that it is important to recognise that the attraction of talented people is not a once-and-for-all action for immigration policies. Instead, immigrant selection policies are just a starting point. A package of immigration policies and settlement policies and programmes should be integrated in order to focus not only on selecting qualified immigrants but also on supporting their adaptation to New Zealand society. In particular, this case study shows that it is significant to work on not only the qualities of skilled migrants as human capital with explicit knowledge but also their qualities relating to their social and cultural capital such as social networks and tacit knowledge. With comprehensive settlement support strategies, new migrants can adapt to New Zealand society more quickly and contribute to its economic and social development.

In addition, these interviewees' concerns on citizenship commitment also show that the attraction of a country for people is a comprehensive issue which goes beyond merely ample material conditions. It implies that immigration is not only related to immigration policies and departments but is also linked with various aspects of the society including social, economic, political, and cultural conditions for settlement. Thus, an integrated development strategy should be adopted to make New Zealand an attractive destination in order to attract the talented people in the global market and keep them contributing to the society.

Immigration Research:

In the past several decades, an increasing number of research on immigration, immigrants and their performances and settlements has been conducted in New

Zealand. This case study shows that some research aspects would be valuable for understanding new Chinese immigrants. For example, it is necessary to research new immigrants' pre-arrival living and working experiences. In the study, all participants were classified as intellectuals in their country of origin, so their living and working experiences as Chinese intellectuals have significantly shaped the structure of their knowledge and their cognitive structure and social networks. Therefore, research efforts should be put on understanding how these factors would bring strengths and weaknesses to them when they arrived in New Zealand and attempted to adapt to New Zealand society. This could partially contribute to finding out proper and effective supports for them in the process of settlement and career pursuit. The study also shows that study on the successful experiences of immigrants could not only identify the difficulties faced by new immigrants but also help them to find most suitable solutions for solving these problems.

It is not only important to study the changes of social, economic, cultural and policy environments in the receiving countries of immigrants, but also necessary to study how the changes of these conditions happened in the sending countries of immigrants. In the study, all immigrants came to New Zealand after 1990. However, interviewees who went to university and grew up in different periods in China showed the different pathways of adaptation to the life and work in New Zealand although there were exceptions. At least, two broad groups of new Chinese skilled immigrants could be identified in the study. Interviewees who went to university in China before 1983 generally grew up in the macro-environment in which people valued scientific knowledge and were keen on schooling and high educational qualifications. They tended to carry on their work in the same field after receiving relevant higher education in New Zealand. Interviewees who went to university in China after 1983 tended to pay more attention to the economic value of their knowledge and have more experiences in job mobility than the first group of interviewees. They became more flexible in their requirements for educational qualifications and career choices after arrival. The different tendencies suggest that studying and identifying the changed

features of immigrant resources would help to adjust immigration policies in order to absorb appropriate types of talented people at different historical times.

Immigration service and settlement support:

This study shows that it would be a challenging but valuable endeavour for the programme of immigration services and settlement attempt to bridge the gap between the available information on immigration services and support and new immigrants' incapacity to access the information and convert it into their own knowledge. For new Chinese immigrants, the way of knowing and the application of knowledge seemed to be more important than information and knowledge themselves because they came from a different cognitive structure shaped by the distinctive cultural, political and social conditions. This suggests that new Chinese immigrants needed to know how to get things done rather than merely acquire formal information on various available services because some common sense knowledge shared by New Zealanders is not necessarily available for new migrants on arrival. If the information on the services does not become new Chinese immigrants' knowledge, the services are not able to function when needed.

There were increasing efforts to help new immigrants in these respects. The findings of this study suggest that knowledge and information on services and their applications could reach new Chinese immigrants in Christchurch through various channels. For example, several interviewees in the study mentioned that teachers and classmates in the programme of English for Speakers of Other Language (ESOL) in educational institutes played a very positive role in their settlement. Some interviewees' experiences also showed that various Chinese communities and media would be partners for distributing the relevant information and knowledge. Meanwhile, the study shows that informal networks have played a very important role in knowledge dissemination surrounding the process in which new immigrants enter and settle down in New Zealand. Thus, it would be helpful if linkages between

immigration support programmes and these informal networks were properly built.

Organisations:

This study shows that new Chinese immigrants are generally willing to take roots in the new land, integrate to the society and respect the culture and traditions of New Zealand while keeping their own culture and traditions. During the interviews, most interviewees showed a great interest in understanding the working environment and culture in New Zealand. However, they also showed their concerns at the misunderstandings between themselves and their New Zealand colleagues due to the differences in culture and tradition. Their concerns suggest that it is worthwhile for organisations, companies and departments to address the issue in order to strengthen the mutual understandings.

This study shows that knowledge has multiple facets and penetrates into the various spheres of society. In the process surrounding the entry of new Chinese immigrants into New Zealand, both explicit knowledge and tacit knowledge played equally significant roles. Their tacit knowledge on receiving higher education in China shaped the way by which they gained explicit knowledge. Thus, their cultural values on the intellectual conditioned the realisation of its economic value. For them, both tacit and explicit knowledge facilitated their movement while tacit knowledge played a crucial role in the flow of information on immigration to and settlement in New Zealand through social networks and the accumulation of cultural capital through transnational mobility. The difficulties, which they faced in New Zealand, show that their tacit knowledge, on the way of accessing formal information and knowledge on New Zealand, affected their adaptation to society. On the contrary, wisdom, which they demonstrated in the process of integrating into New Zealand society and economy, shows the inevitable interaction between tacit and explicit knowledge. Similarly, the interaction between the two types of knowledge enabled them to competent in

knowledge work in which they were involved. In general, tacit knowledge is not separated from explicit knowledge but interacts with it through cultural values, social networks and structures, and interpersonal relationships. The engagement of those interviewed in New Zealand's knowledge society and economy shows that the knowledge economy is not exclusively economic but socially and culturally conditioned and the knowledge society is not universal but diversified and interdependent. The stories on their success suggest that new Chinese immigrants could contribute more to the development of the country.

Conclusions and Suggestions for Further Study

Knowledge has always played a significant role in human history. In the knowledge era, it penetrates into various aspects of society and causes dramatic changes. Thus, the debate on the relationship between the knowledge society and the previous forms of society actually leads to exploring the connotation and role of knowledge. From either an economic or sociological point of view, different understandings on the knowledge society and economy and their relationship show diverse interpretations of knowledge and relevant changes. With these understandings and interpretations, countries exert their efforts to move towards a knowledge society and economy with various strategies of exploiting knowledge. In recent years, increasing globalisation, growing knowledge and advanced information technologies, and frequently moving people have dramatically changed the world and reshaped societies. In particular, they have interacted with each other and contributed to the growth of knowledge societies. Globally, the rapid growth of the service economy, the development of the knowledge-based economy, the further openness in international trading and the increased mobility of highly educated people seem to define a universal way of developing the knowledge economy and shaping the knowledge society. However, the reality is that different countries have distinctive pathways leading to a knowledge society and economy.

To catch the global knowledge wave, the New Zealand government has emphasised the development of ICTs, investing in R&D and education and attracting talent. These efforts bring opportunities for the country to gain competitive advantages in the global market. Meanwhile, the government faces various challenges. For example, it is difficult to identify knowledge workers in the standard classification of occupation. Knowledge as both a public good and private property means that the government has to balance efficiency and equality while investing in R&D. Acquisition of knowledge and access to information should consider the reality of New Zealand as a multicultural society. The gap between cultural and economic reproduction and

income division due to different educational attainments need to be addressed. Cultural values and tacit knowledge play a crucial role in some economic activities and ask for an increasing attention.

Therefore, the development of New Zealand's knowledge society and economy brings new evidence to the debate on the relationship between the knowledge society and economy. The development of ICTs, the investment in education and R&D and the recruitment of talented people show the government's efforts to generate greater explicit knowledge. However, the strategies focus mainly on the conventional economic notion of knowledge as an economic good and its features, such as non-excludable, non-depleted and non-rival, and constrain our understandings on the role of knowledge in a knowledge society. On the contrary, the challenges faced by the New Zealand government mean that in the New Zealand context, the knowledge economy does not automatically lead to the knowledge society. Knowledge has brought both economic benefits and social inequality. The development of the knowledge society goes beyond solid economic fundamentals and needs an increased focus on social and cultural factors.

As an immigrant country, New Zealand has always concerned itself with international immigration and deployed different immigration policies to support its economic development and social prosperity. With economic, social and political considerations, New Zealand has moved in a liberal direction in its immigration policies since the mid-1980s in order to attract talented people and it expect them to contribute to New Zealand's knowledge society and economy. In the last two decades, the recruitment framework of skilled migrants in immigration policies put different weights on different types of skills and knowledge to attract talented people needed in New Zealand's economy. However, the performance of these skilled migrants in the New Zealand economy and society suggests that their socioeconomic integration is not only related to their quality as human capital but also affected by social and cultural conditions in which they are embedded.

The entry of new skilled migrants from Mainland China provides a specific example showing the relationships between knowledge, society, economy and immigration in a knowledge society. The tacit knowledge of those interviewed on receiving higher

education and choosing a major for university study enables the cultural value placed on the intellectual to condition its economic value. Not only explicit knowledge but also tacit knowledge facilitates their transnational mobility for accumulating cultural capital. In particular, tacit knowledge plays a crucial role in disseminating information and knowledge through social networks about immigration to New Zealand. The difficulties they faced on arrival suggest that tacit knowledge is important for them to access formal information and knowledge within different social structures. Wisdom, which they demonstrated in the process of successfully integrating into New Zealand society, shows the inevitable interaction between explicit knowledge and tacit knowledge. In their work, they focused on different kinds of knowledge and used knowledge in different ways. However, tacit knowledge still interacted with explicit knowledge through combining life skills with expertise, connecting technological networks with social networks and understanding interpersonal relationships in different work environments. Therefore, with both explicit and tacit dimensions of knowledge, these former Chinese intellectuals and today's New Zealand knowledge workers can contribute to the development of New Zealand's knowledge society and economy as long as the efforts of supporting their integration are put together wisely (see Appendix 1).

This study not only provides empirical evidence showing the contributions of new Chinese immigrants but also serves to test theories. Although the new Chinese immigrants were attracted to New Zealand as human capital, their contributions were significantly conditioned by their cultural values and social relationships. This challenges human capital theory that views humans merely as labours or skilled labours and thus, their qualities could be easily quantified to fit into economic calculations but neglects the role of cultural values and social relationships. From this point of view, human capital theory should be modified while considering the role of cultural and social factors in people's performances in the economy. This study also expands our understanding on knowledge. The experiences of those interviewed in immigration and settlement show the power of different types of knowledge. For example, knowledge gained from both formal education and personal life experiences supported them to take actions in immigration, so knowing how and knowing what are equally important in the settlement process. Formal education allowed them to accumulate cultural capital as intelligent individuals, whereas social ties and

interpersonal trust enabled the conversion of knowledge between individuals. Therefore, in the knowledge society, knowledge does not exclusively refer to scientific and explicit knowledge but has a broader meaning.

Naturally, the shifting understanding of what constitutes knowledge means that knowledge workers are not concentrated on certain occupations in the standard classification of occupations. On the contrary, the interviewees' socio-economic integration as knowledge workers shows that the tacit knowledge involved in their work allowed them to do their work in the more flexible ways. Therefore, knowledge work and worker should not be viewed merely as a static position in the classifications but should be examined as a dynamic process including both knowledge and knowing.

Similarly, the transnational mobility of those interviewed adds new content to our understanding of migration which is based mainly on the theory of push-pull forces. In this case, knowledge, especially tacit knowledge, becomes both a major push and pull force facilitating mobility. Therefore, in the knowledge era, the conventional theories on migration would be extended with the emergence of the new patterns of migration. In particular, the transnational movement and citizenship commitment of those interviewed do not necessarily show placeless and benefit-orientated logic. As one interviewee suggested, "I will open to all opportunities but I like New Zealand". For them, there is no contradiction between frequent movement and local attachment. Their tacit knowledge enables them to know how to balance their life and work. Therefore, this case study will provide an alternative clue to trace the debates on transnationalism and citizenship.

Frequent movement and local attachment enable those interviewed to build their networks in the global context. This reflects the logic of the network society. Particularly, the interaction between technology-supported networks and social networks during the process of their integration into New Zealand's knowledge society and economy, shows that the network society is not only confined to formal structures and organisations supported by ICTs but also includes networks built in daily life through individual's social ties, interpersonal trust and kinships. From these theoretical perspectives, the process by which these skilled migrants enter New

Zealand society and integrate into its economy has reshaped the relationships between knowledge, society, economy and immigration. Therefore, the knowledge economy is not exclusively economic but socially and culturally conditioned and the knowledge society is not universal but diversified and interdependent.

During the study, some new questions emerged as the research question was explored. For example, this study has shown the increasingly crucial role of tacit knowledge in new skilled migrants' life and work in particular and the knowledge society and economy in general. However, the unsolved question is to what extent this kind of knowledge could be identified and measured in a knowledge society. The study shows that various factors, such as cultural values, personal characteristics, social skills and life chances, have significantly affected interviewees' tacit knowledge, facilitated the settlement process and conditioned their contributions. Thus, further research should be conducted to identify these features and then, to use them as indicators for immigrant recruitment and other practices. In particular, the factors shaping transnational movement have changed over time and knowledge has become one of the crucial factors. Thus, research efforts should be put into exploring the role of different types of knowledge in the migration and settlement process.

In addition, the relationship between networks and knowledge dissemination is an interesting topic showing the interaction between tacit and explicit knowledge. The transnational experiences of those interviewed show that social and technological networks cannot be separated from each other when examining the process of knowledge dissemination. In particular, social networks based on Chinese culture and tradition are an important resource for the Chinese to access information and acquire knowledge. However, they also depend heavily on ICTs to function in the knowledge era. Therefore, what would be useful for academic inquiries is to explore how different types of knowledge enable linkages between individuals or between knowledge societies in the global context. In general, this study not only shows us the socio-economic integration of new Chinese skilled immigrants and their contributions to New Zealand's knowledge society and economy but also opens up a series of questions for further inquiry to understand immigration in the knowledge society.

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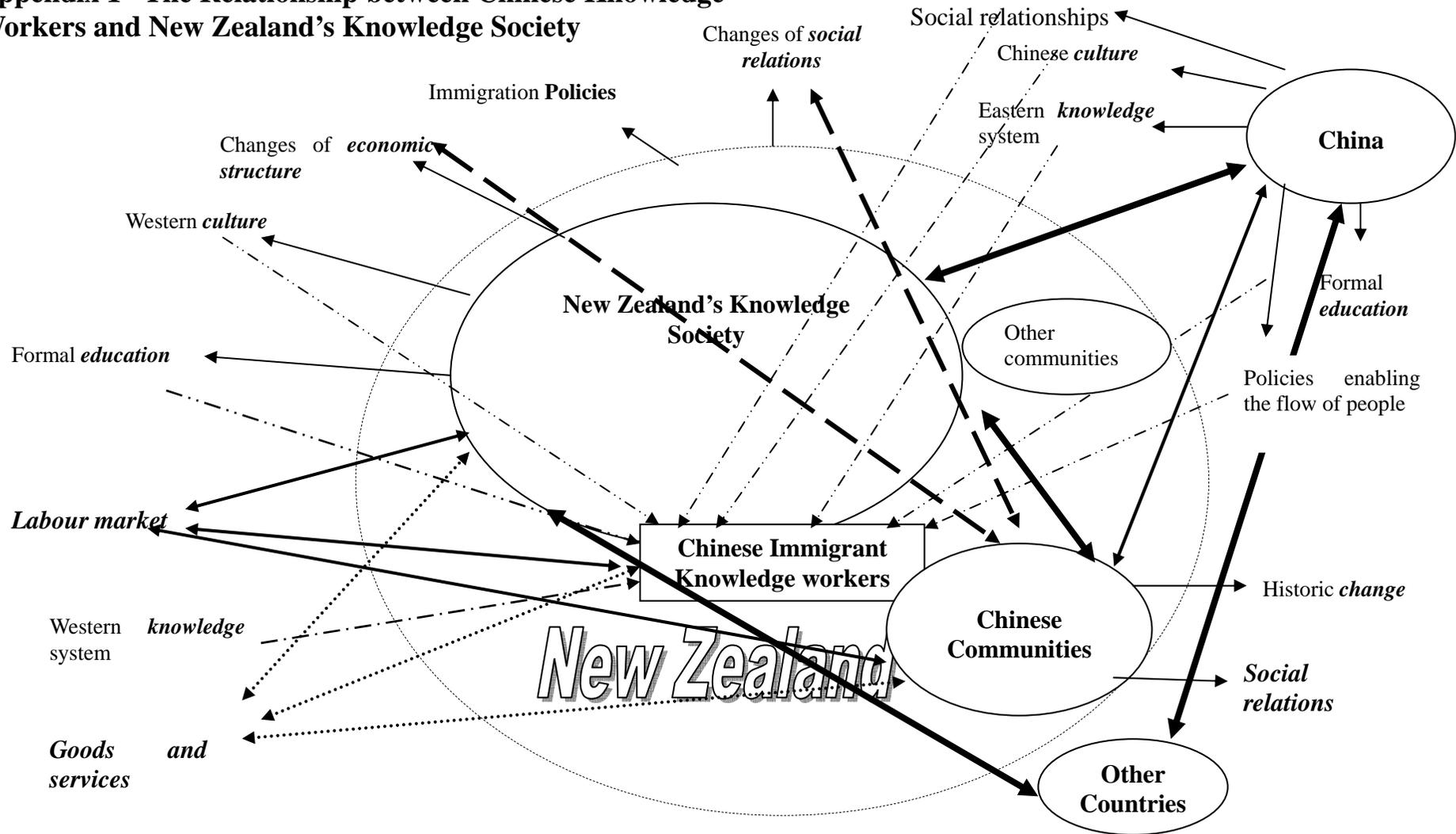
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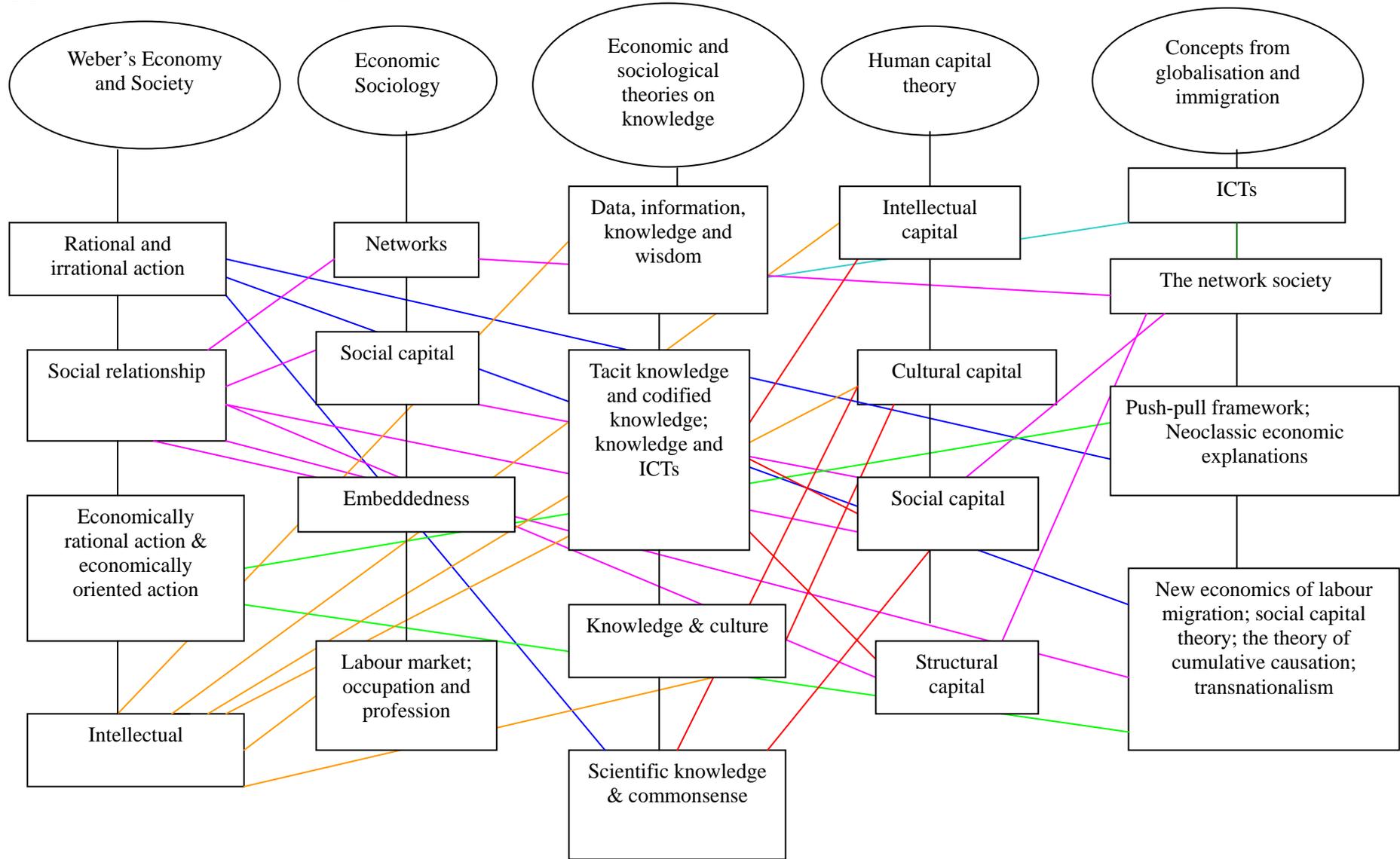
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Appendices

Appendix 1 The Relationship between Chinese Knowledge Workers and New Zealand's Knowledge Society



Appendix 2 The Relationships between Theories and Concepts



Appendix 3-1

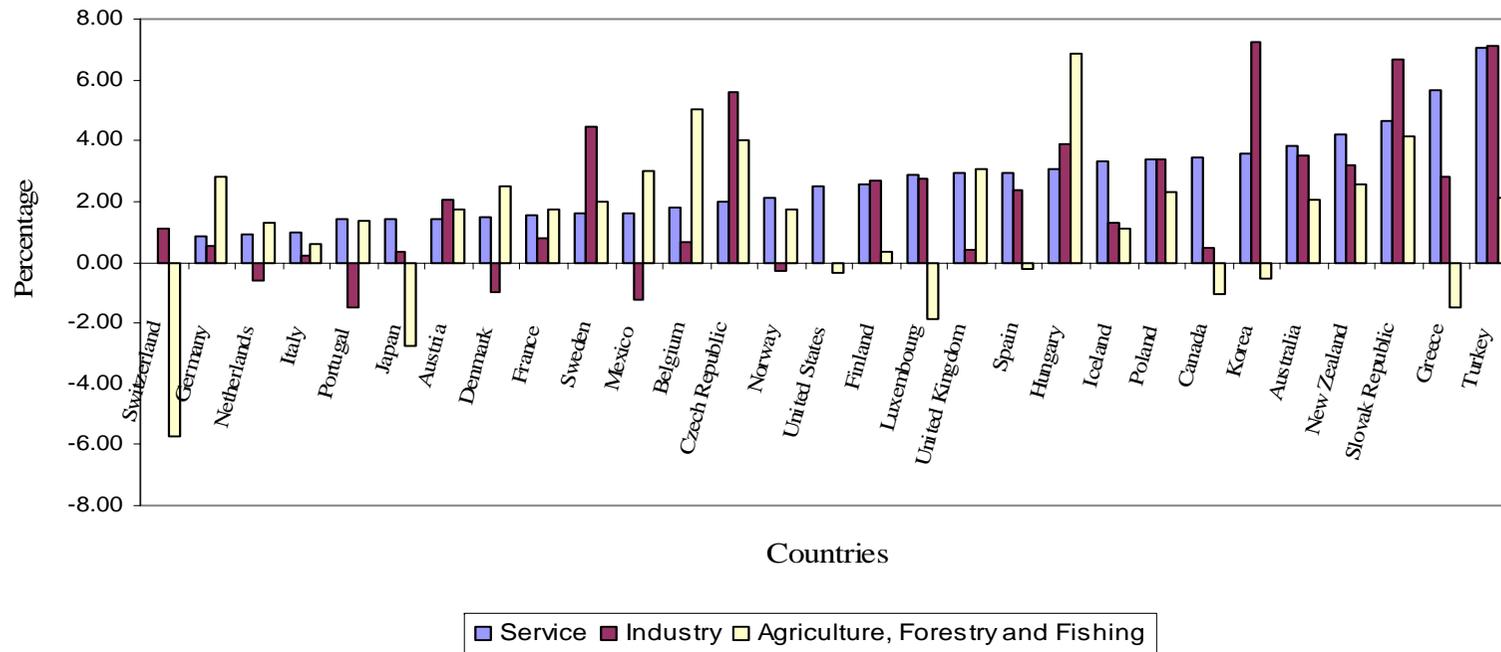


Figure 3-1 Annual Growth in Percentage Average Over the Latest Three Years Data Available Prior to 2004 in Services, Industry and Agriculture
 Source: Produced based on data from *OECD Factbook 2006: Macroeconomic Trends*, retrieved on 17 July, 2006 from

<http://ocde.p4.siteinternet.com/publications/doifiles/302006011P1-02-04-02-g03.xls>
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Appendix 3-2

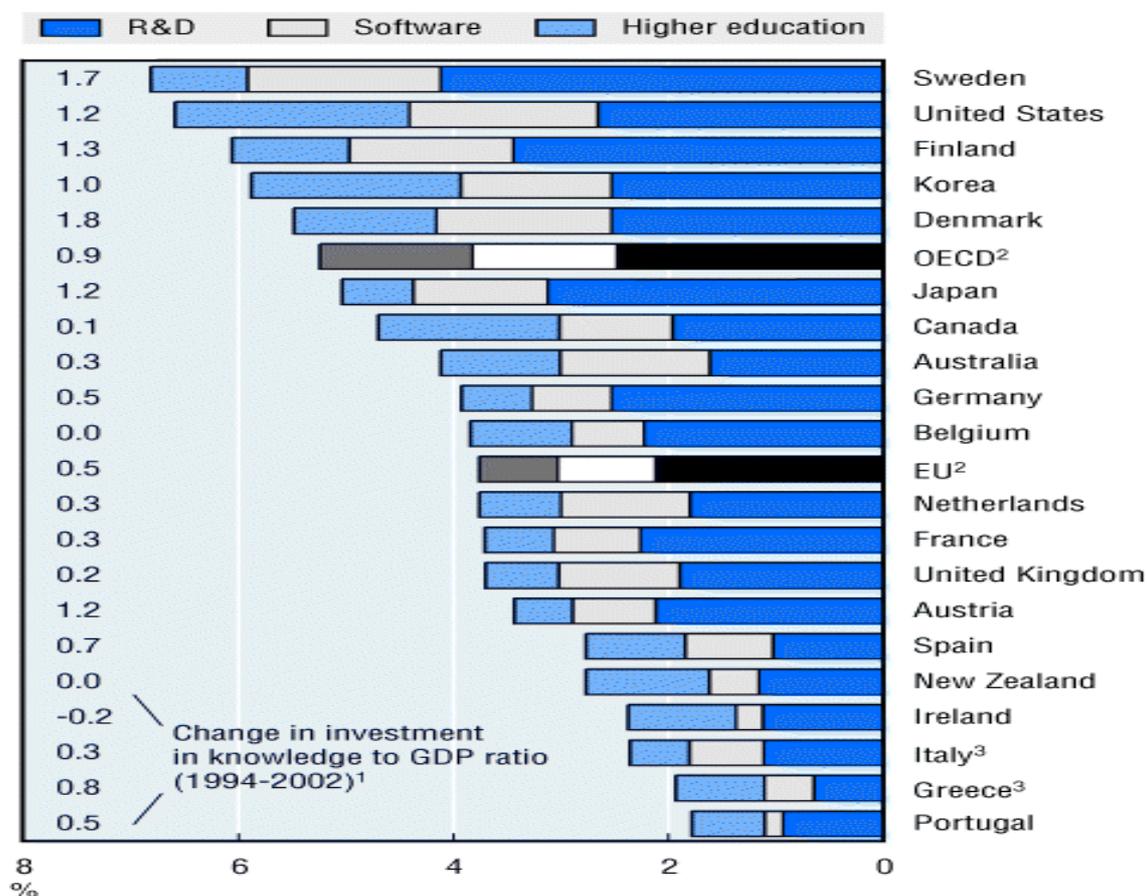


Figure 3-2⁷ Investment in Knowledge as a Percentage of GDP, 2002 among OECD Countries

Source: *OECD Science, Technology and Industry Scoreboard 2005—Towards a knowledge-based economy*, OECD, retrieved on July 18, 2006 from <http://caliban.sourceoecd.org/vl=2662751/cl=13/nw=1/rpsv/scoreboard/ga01a.htm>

⁷ Note: 1. 1994-2001 for Greece and Italy. 1995-2002 for Korea. EU figure excludes Belgium, Greece and Italy. OECD figure excludes Belgium, Greece, Italy and New Zealand; 2. Excludes Greece and Italy; 3. 2001 data

Appendix 3-3

Table 3-3 Shares of ICT Investment in Non-residential Fixed Capital Formation

Shares of ICT investment in non-residential fixed capital formation

As a percentage of total non-residential fixed capital formation, total economy

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Australia	15.6	17.6	19.2	19.3	18.9	19.1	20.3	21.9	22.7	25.7	28.6	26.7	25.3	..
Austria	12.0	12.0	11.0	11.8	13.0	12.4	11.8	11.9	13.8	14.3	13.7	15.1	14.0	13.2
Belgium	17.7	17.8	18.8	15.9	16.9	18.0	18.4	19.4	21.5	21.7	24.2	23.3	20.3	19.9
Canada	13.2	14.2	16.1	16.9	16.4	16.8	18.0	17.5	18.8	19.9	20.6	20.1	19.3	18.4
Denmark	16.6	17.0	17.6	19.3	17.5	19.1	19.1	19.6	19.1	20.2	19.5	18.8	19.4	19.6
Finland	12.4	14.8	18.5	22.9	25.7	25.8	20.2	25.1	25.2	26.4	26.3	25.9	27.6	26.6
France	7.8	7.5	7.6	8.1	8.6	9.0	9.8	11.0	11.9	12.2	12.8	13.2	13.7	..
Germany	13.9	13.7	13.2	13.3	13.2	13.3	14.2	14.7	15.3	16.5	17.4	17.8	16.9	15.5
Greece	7.5	9.3	9.3	13.2	11.7	10.0	10.9	11.0	12.4	11.7	12.8	14.3	11.5	10.8
Ireland	4.3	5.7	5.7	5.8	6.7	9.6	8.7	8.2	9.6	10.9	14.2	11.4	9.6	8.1
Italy	14.2	14.2	14.2	14.3	15.1	14.8	15.1	16.3	15.9	15.4	16.1	16.9	15.7	15.8
Japan	8.2	8.8	8.9	9.1	9.1	10.3	12.5	12.4	12.9	14.2	14.7	14.7	13.6	..
Korea	..	..	..	..	..	12.2	12.7	13.5	15.2	18.1	20.8	20.0	18.8	16.4
Netherlands	12.7	12.4	13.0	13.7	13.5	13.1	14.0	15.5	17.1	17.6	17.7	17.7	16.8	17.8
New Zealand	16.7	17.6	17.7	15.8	16.0	14.9	15.3	16.2	18.9	18.1	21.0	19.5	19.6	..
Norway	8.6	8.0	8.4	8.4	9.3	9.9	9.8	10.0	9.6	10.9	11.8	12.5	12.6	..
Portugal	9.7	11.3	10.6	10.7	11.4	12.2	12.2	12.0	13.0	13.4	12.4	13.1	11.9	13.6
Spain	13.9	12.6	11.7	12.7	13.0	12.7	14.6	14.4	14.7	15.6	16.0	15.3	14.1	..
Sweden	15.7	16.9	19.4	24.6	23.8	23.5	22.7	24.2	26.3	27.9	30.5	27.8	25.5	26.6
United Kingdom	14.3	14.8	15.6	17.2	19.1	21.7	22.7	21.3	24.3	23.7	25.0	23.4	22.0	21.8
United States	24.7	26.5	28.0	27.2	26.8	27.6	28.5	29.6	30.1	32.4	34.2	32.9	32.4	33.2

Source:: *OECD Factbook 2006-Economic, Environmental and Social Statistics*, 2006 OECD, retrieved on July 19, 2006 from <http://thesius.sourceoecd.org.vl=26161340/cl=18/nw=1/rpsv/factbook/06-02-02.htm>

Appendix 3-4

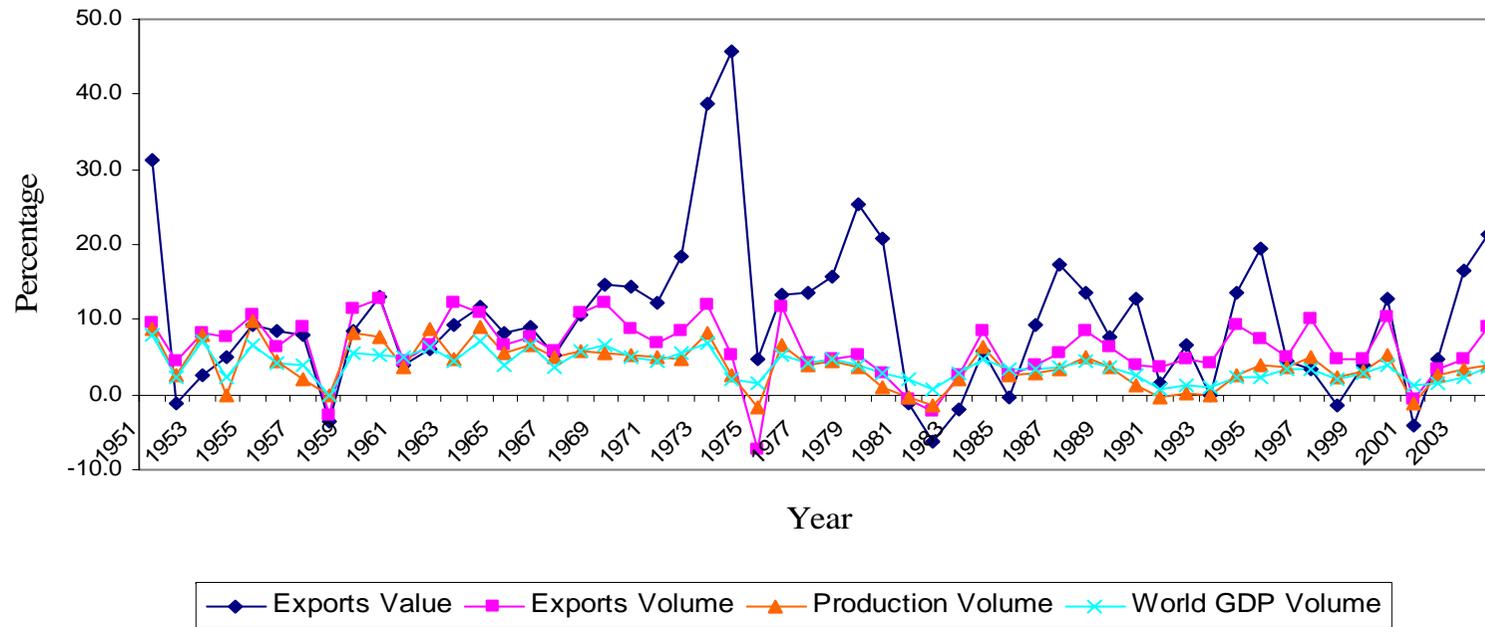
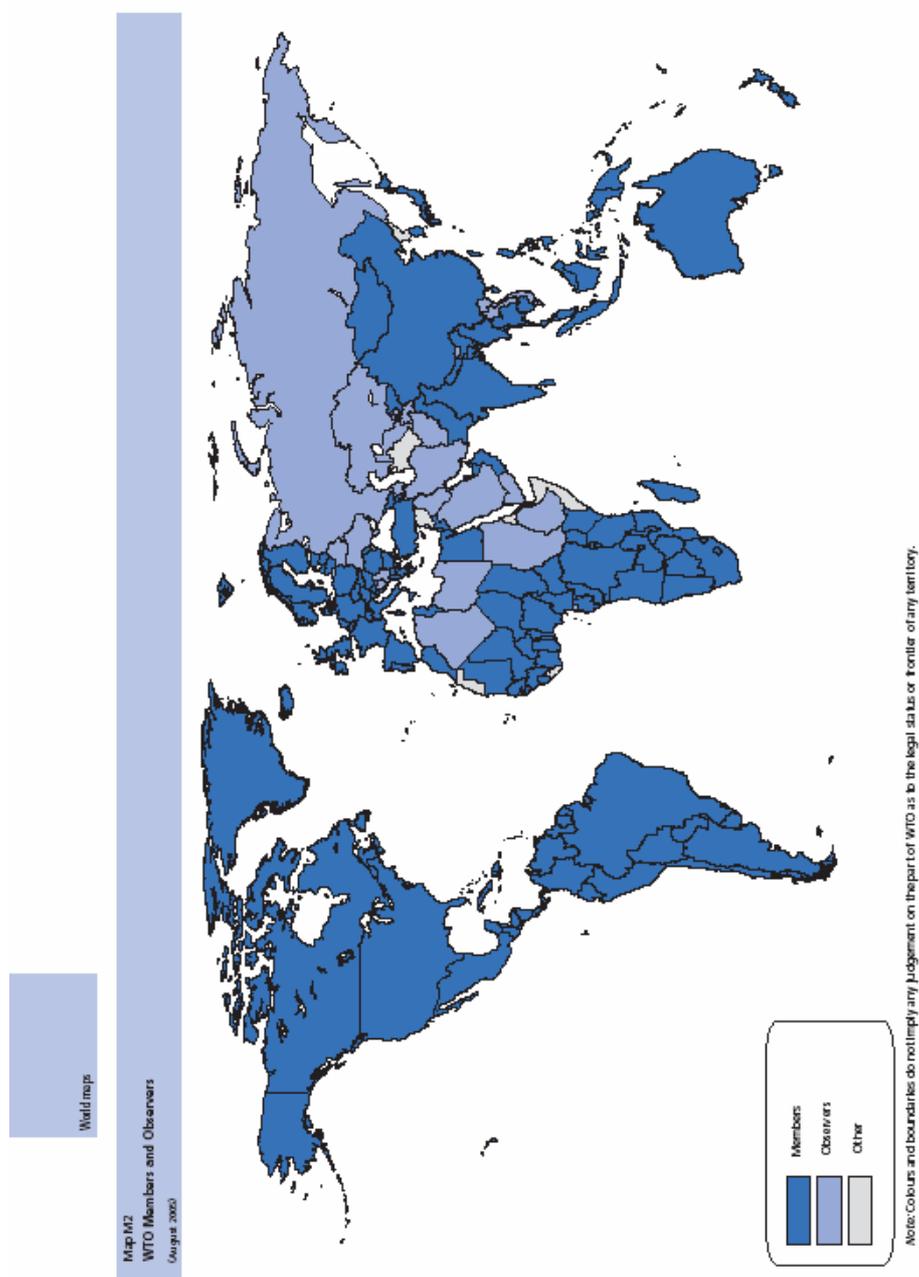


Figure 3-4 World Merchandise Exports, Production and Gross Domestic Product, 1951-2004

Source: Produced from *International Trade Statistics 2005*, World Trade Organisation, retrieved on July 24, 2006 from <http://www.wto.org/english/res-e/statis-e/its2005-e/its05-toc-e.htm>

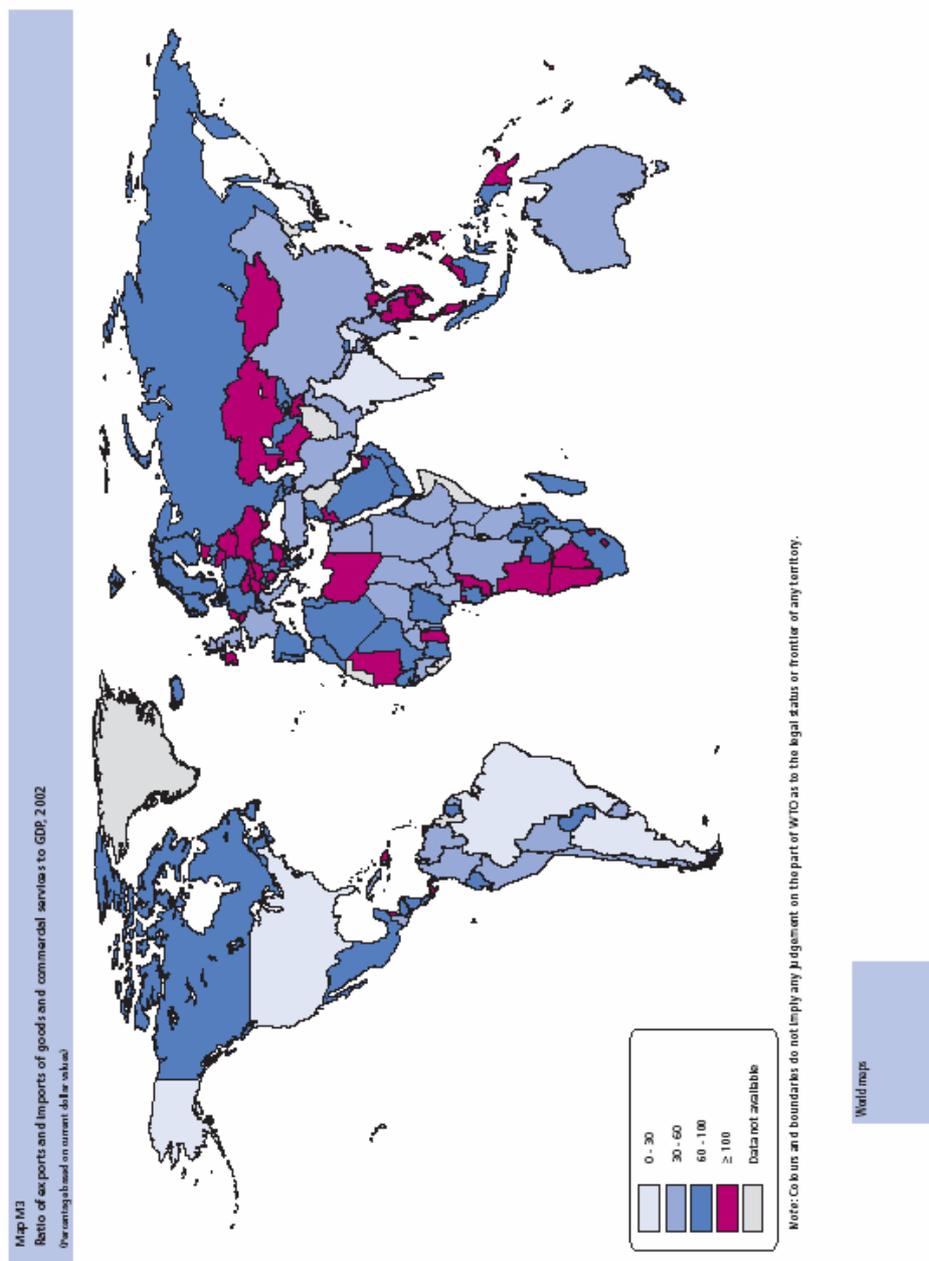
Appendix 3-5 WTO Members and Observers



220

Source: *International Trade Statistics 2005*, p. 220, 2005, World Trade Organisation, retrieved July 19, 2006. from <http://www.wto.org/english/res-e/statis-e/its2005-e/its05-toc-e.htm>

Appendix 3-6 Ratio of Exports and Imports of Goods and Commercial Services to GDP, 2002



221

Source: *International Trade Statistics 2005*, 2005, p.221, World Trade Organisation, retrieved July 19, 2006 from <http://www.wto.org/english/res-e/statis-e/its2005-e/its05-toc-e.htm>

Appendix 3-7

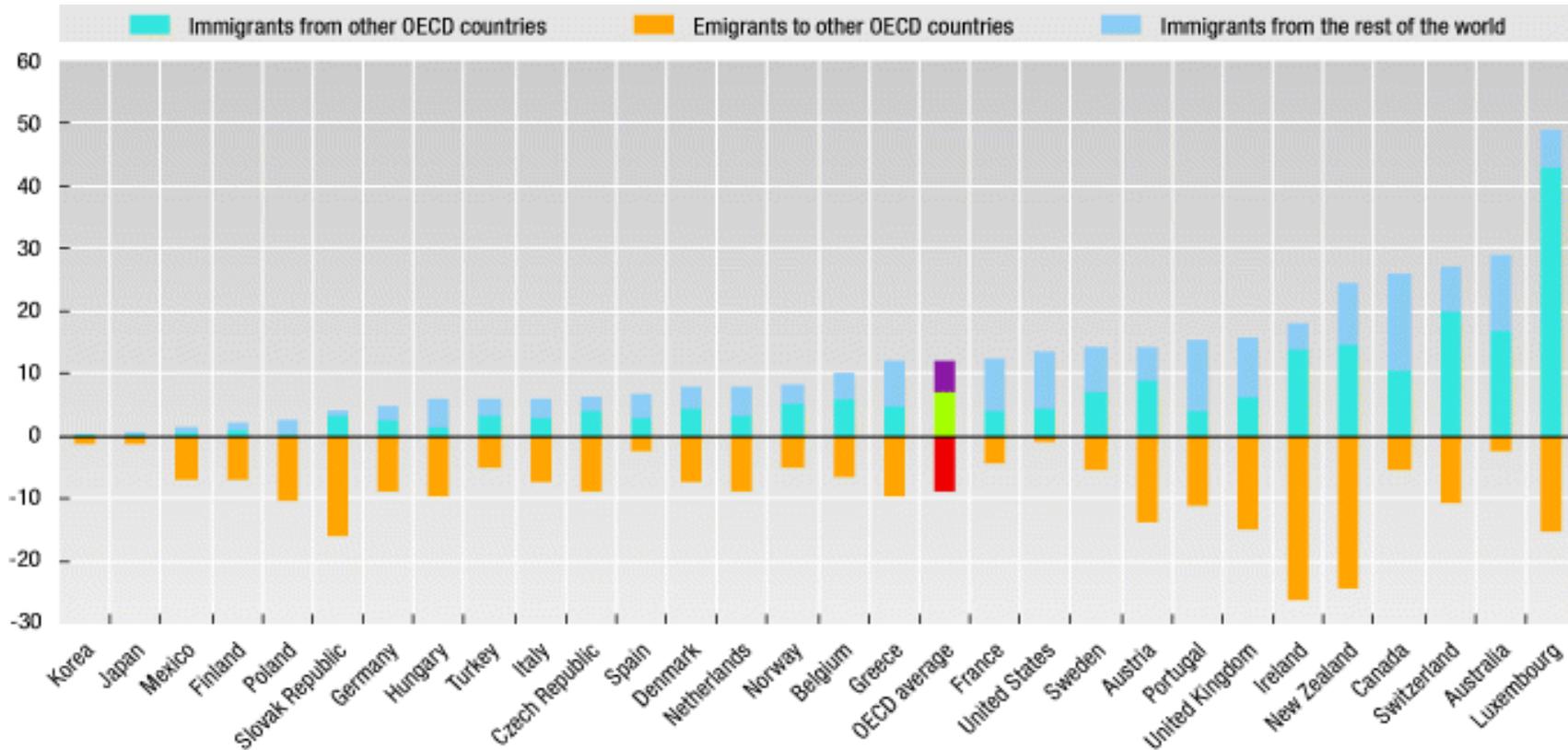


Figure 3-7 Foreign-born Persons with Tertiary Education among OECD Countries, 2000

Source: *OECD Factbook 2006-Economic, Environmental and Social Statistics: International Migration*, 2006, OECD, Retrieved on July 19, 2006 from <http://titania.sourceoecd.org/vl=42296980/cl=21/nw=1/rpsv/factbook/01-03-03-g01.htm>

Appendix 3-8

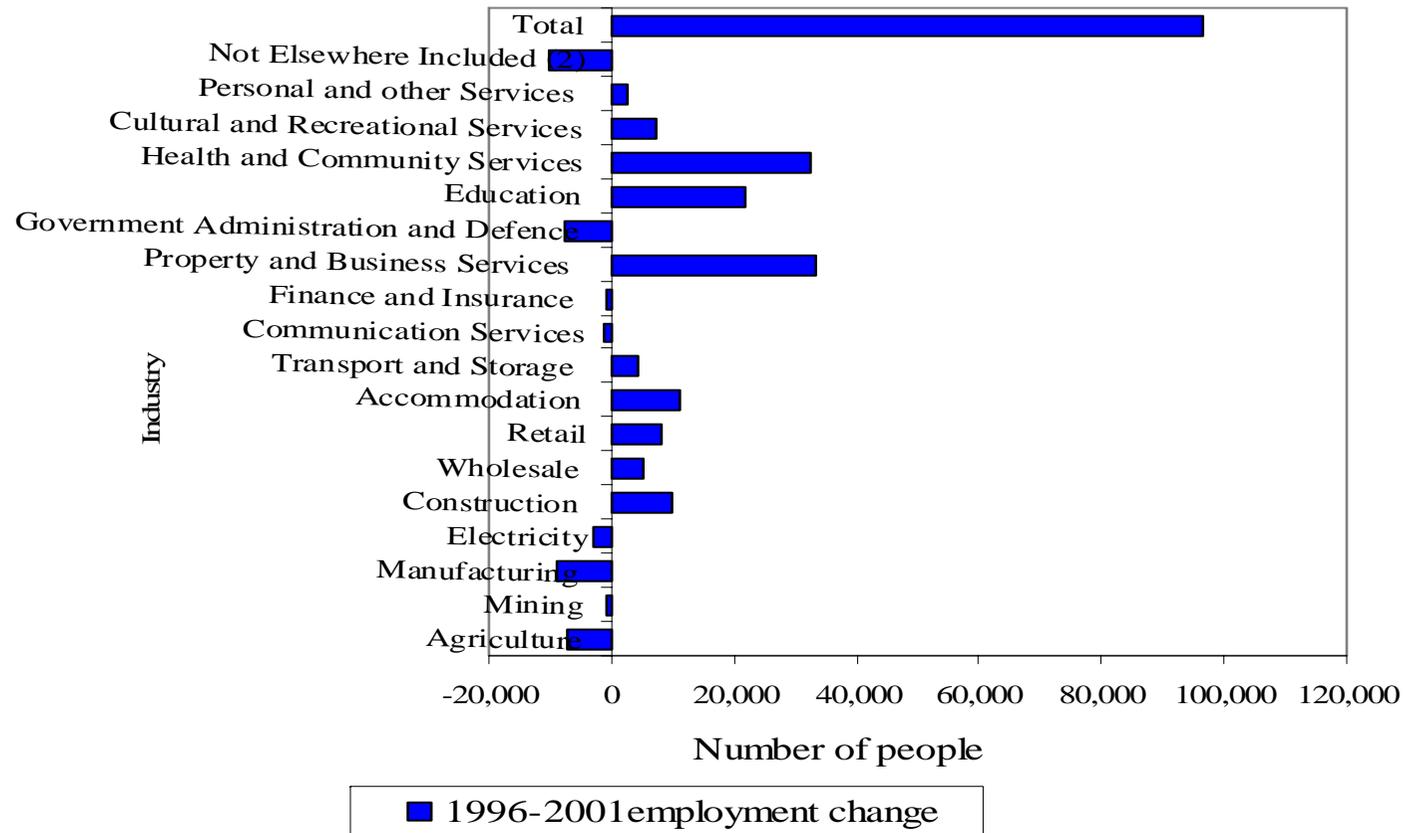


Figure 3-8 Employment Change by Industry (1996-2001)

Source: Produced from the 1996 and 2001 Census of Population and Dwellings, Statistics New Zealand

Appendix 3-9 Relevant Information from New Zealand Standard Classification of Occupation

Skill levels for determining the major group in NZSCO 99

Major Group	Skill Level
1 Legislators and Administrators	Experience and/or formal qualifications
2 Professionals	University degree
3 Technicians and Associate Professionals	New Zealand Certificate or other advanced vocational qualification
4 Clerks	On-the-job training
5 Service and Sales Workers	On-the-job training
6 Agriculture and Fishery Workers	University degree, on-the-job training, experience
7 Trades Workers	Trade Certificate or other vocational qualification
8 Plant and Machine Operators and Assemblers	On-the-job training
9 Elementary Workers (incl Residuals)	On-the-job training

Source: *New Zealand Standard Classification of Occupation 1999*, p. 12, Statistics New Zealand, retrieved on August 31, 2006 from <http://www.stats.govt.nz/NR/rdonlyres/4109C9E6-EECB-4FC3-B48A-A7C8A37E90A7/0/NZSCO991.pdf>

Appendix 3-10

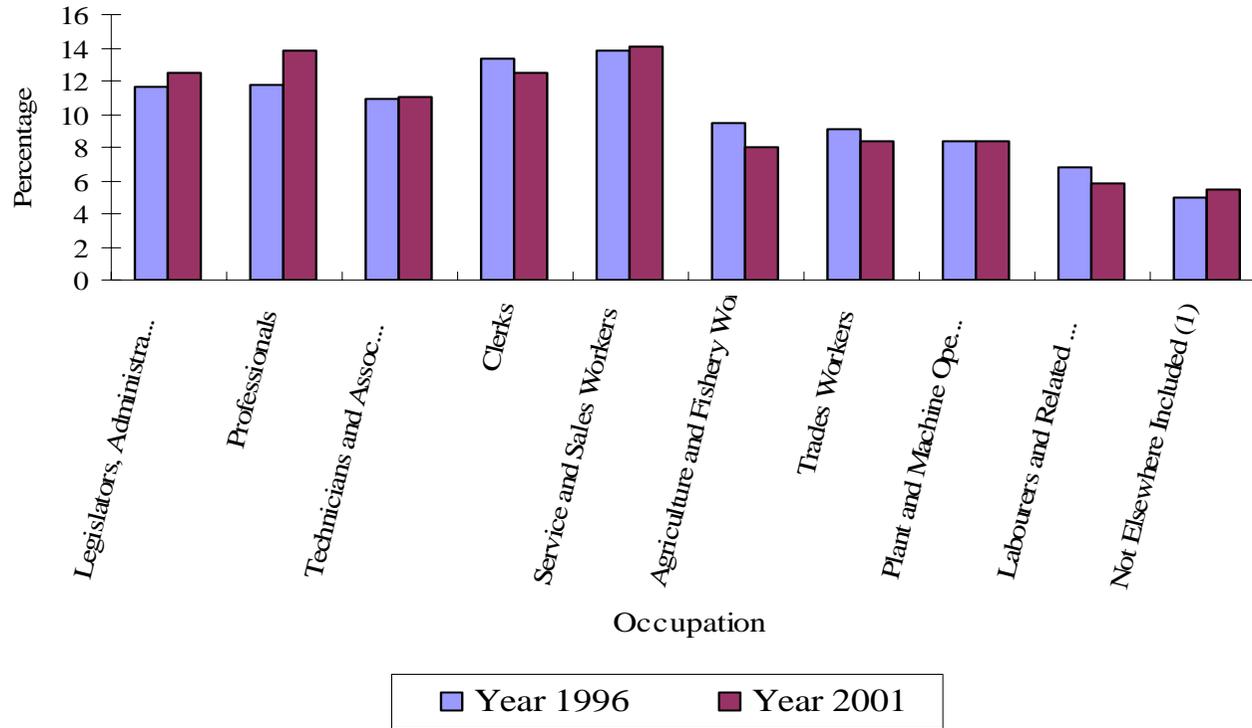


Figure 3-10 The change of Employment by Occupation between 1996 and 2001
 Source: Produced from the 1996 and 2001 Census of Population and Dwellings, Statistics New Zealand

Appendix 3-11

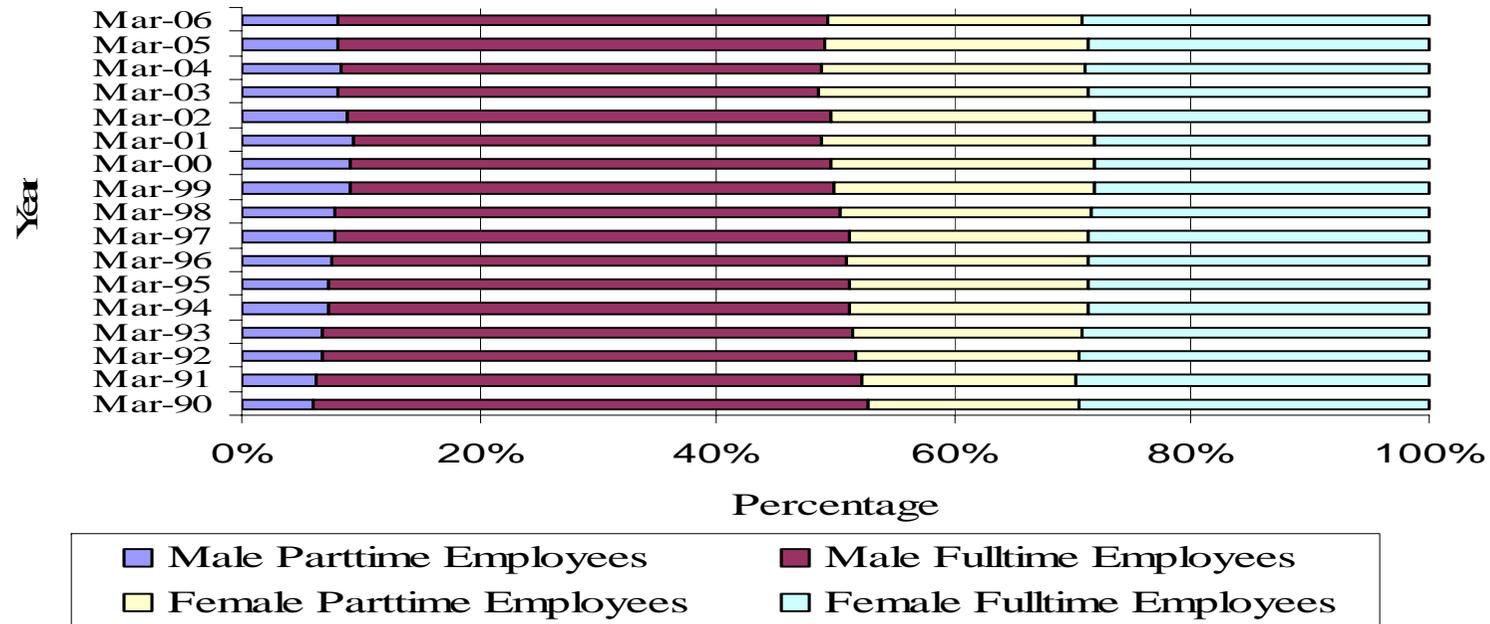


Figure 3-11 The Change of Work Pattern from 1990 to 2006

Source: Produced from *Filled jobs by ANZSIC group, sex and employment*, Statistics New Zealand, retrieved on August 15, 2006 from [http://xtabs.stats.govt.nz/eng/TableViewer/Wdsview/dispviewp.asp?ReportName=Employment%20and%20Unemployment/Filled%20Jobs%20by%20ANZSIC%20Group,%20Sex%20and%20Employment%20\(000s\)](http://xtabs.stats.govt.nz/eng/TableViewer/Wdsview/dispviewp.asp?ReportName=Employment%20and%20Unemployment/Filled%20Jobs%20by%20ANZSIC%20Group,%20Sex%20and%20Employment%20(000s))

Appendix 3-12

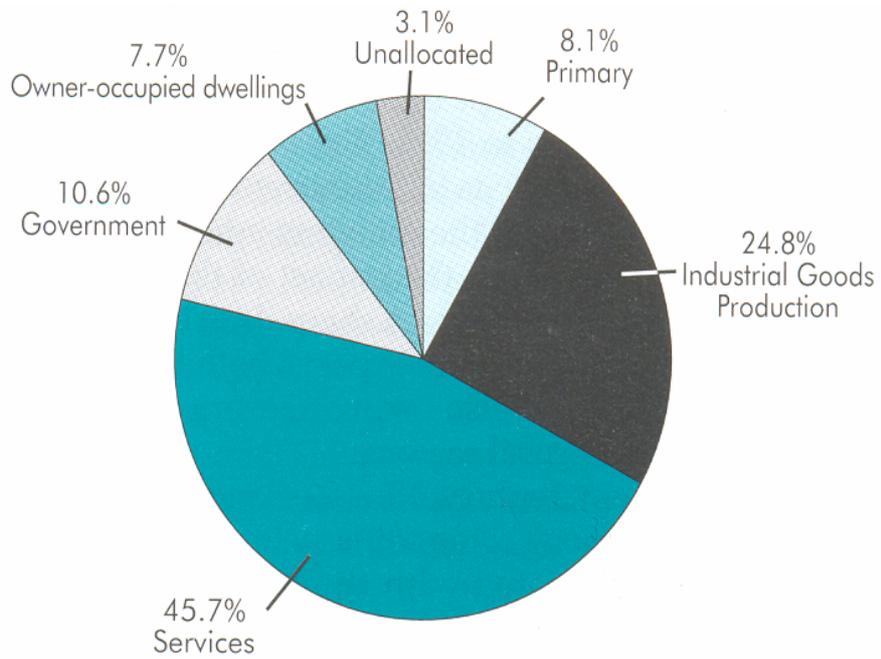


Figure 3-12 Structures of the New Zealand Economy 1997

Source: Scollay R. and St John S. (2000), *Macroeconomics and the Contemporary New Zealand Economy*, p.58.

Appendix 3-13

Table 3-13 Language spoken by ethnic group usually resident population, 2001

Ethnic group	Number speaking first language	Proportion speaking first language	Number speaking English	Proportion speaking English
		%		%
Pacific peoples				
Samoaan	71,766	62	96,003	83
Cook Island Maori	8,973	17	48,096	91
Tongan	21,888	54	33,045	81
Tokelauan	2,508	40	5,481	88
Niuean	5,154	26	18	91
Fijian (excl Fiji Indian/Indo-Fijian)	1,851	26	6,489	92
Total ⁽¹⁾		46		
Asian				
Indian	38,520	62	54,063	87
Chinese	72,471	69	79,587	76
Khmer/Kampuchean/Cambodian	4,026	76	3,657	69
Vietnamese	2,478	72	2,289	66
Korean	15,360	81	12,720	67
Total ⁽¹⁾		68		
European				
Dutch/Netherlands	16,347	59	26,235	95
Greek (incl Greek Cypriot)	1,431	63	2,088	92
Croat/Croatian	1,626	65	2,334	93
Italian	1,095	37	2,733	92
Total ⁽¹⁾		58		

Source: *Reference Reports Concerning Language 2004 Chapter 1: Profile of First Language Retention*, Statistics New Zealand, retrieved on August 28, 2006 from

<http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/7cf46ae26dcb6800cc256a62000a2248/4c2567ef00247c6acc256f6c00083b3d?OpenDocument>

Appendix 4-1 The Changes of New Zealand's Points System for Recruiting Skilled Immigrants

Factors	The 1991 Policy	The 1995 Policy	The Policy Changes in 1998	The Adjustments in 2001/2002	The Adjustment since 2003 (2006)
The Prerequisites					
English Language	Only the principal applicant must meet a minimum standard of English language	Principal applicants needed to meet a minimum standard of English by passing IELTS General Module (Level 5) Non-principal applicants meet the same standard or pay fees	No change for principal applicants Work permit holders could pre-purchase English language training if don't meet the requirements for English language skills Non-principal applicants needs to pre-purchase English training if do not meet the English language skills requirements	From November 2002, principal applicants needed to pass IELTS General Module (Level 6.5)	No change
Character and Health	Applicants are required to be of good character and meet health requirements	No change	No change	No change	No change
Human Capital Factors					
Qualifications	2 to 15 points are allocated, with a weighting in favour of academic degrees (especially science, technical and engineering)	Flatter points structure; 10 to 12 points are given to qualifications such as diploma, advanced professional qualification and Masters or higher qualifications	1 additional points to applicants with NZ qualifications	2 additional points to qualification complete in NZ	50 or 55 points are given to recognised basic qualification or recognised post-graduate qualification Bonus points for recognised NZ qualification (and at least two years study in NZ) (10 points); Qualification in an identified future growth area, cluster (5

					points) or area of absolute skill shortage (10 points); partner qualifications
Employability Factors					
Job Offer	An offer of skilled employment gains 3 points	An offer of skilled employment gains 5 points	No change	Up to 8 points scored if the applicant has genuine offer of relevant employment (the offer must be assessed) Non-relevant offer of employment gains 2 points	50 points to offer of skilled employment in NZ or current skilled employment in NZ for less than 12 months Bonus points for offer of employment in an identified future growth area (5 points), identified cluster, area of absolute skills shortage (10 points); region outside Auckland (10 points)
Work experience and Age	1-10 points depending on work experience and age	More flexible approach to recognising relevant pre-qualification work experience	All work experience qualify for points	No change	Up to 30 points are given to work experience
Settlement Factors					
Settlement Funds	2 points for settlement funds Up to 3 points for investment funds	2 points for settlement funds No points for investment funds	No change	No change	No change
Spousal Human Capital	Only the principal applicant is assessed	2 additional points are given depending on spousal qualifications	No change	No change	10 points to spouse/partner qualifications; 10 points to spouse/partner employment or offer of

					employment
New Zealand Work Experience	No specifically recognised	Additional 2 points are given to New Zealand work experience	No change	No change	60 points to current skilled employment in NZ for 12 months or more Up to 15 bonus points are given to more than 2 years work experience in NZ Up to 10 additional bonus points are given to more than 2 years work experience in an identified future growth area or cluster
Sponsorship	3 points to community sponsorship 2 points to family sponsorship	3 points to family sponsorship No points to community sponsorship	No change	No change	10 points to close family in NZ
Commitment to New Zealand	No single objective measure of whether someone had been resident in New Zealand	Status of all migrating family members linked to the tax residence status of the principal applicant	No change	No change	No change

Source: Summarised based on *New Zealand's Targeted Immigration Policies: Summary of October 1995 Policy Change (p.17-18)*;
Destination New Zealand: Summary of October 1998 Policy Change (p.4-7&16-18);
Trends in Residence Approvals-2001/2002 Volume 2 (p.30);
New Zealand Immigration Service Website (www.immigration.govt.nz/skilledmigrant)

Appendix 4-2 Skilled /Business Stream

Category	Key Policy Features
Skilled Migrant (from 17 December 2003)	Applicants must meet a minimum threshold of 100 points to register an expression of interest into a pool. Expressions of interest are selected from the pool based on a selection point that currently can change fortnightly. After initial verification, applicants are invited to apply through the Skilled Migrant Category.
General Skills (closed 1 July 2003)	Applicants were required to meet a minimum level of points, earned through a combination of their qualifications, work experience, offer of skilled employment in New Zealand, age (no older than 55 years), and settlement factors.
Interim General Skills (closed 12 November 2003)	Replaced the General Skills Category (GSC) from 2 July 2003 until its closure on 12 November 2003. Policy requirements were the same as they were under the GSC with the exception that applicants were required to have a skilled job offer in New Zealand.
Entrepreneur	Established for people who can demonstrate they have successfully set up and operated a business in New Zealand. See the note on Long Term Business Visas under <i>Temporary Categories</i> earlier in this section.
Investor (from 4 July 2005)	Applicants must first submit an expression of interest, after which they may be invited to apply for residence. The minimum amount of investment is NZ\$2 million, and these funds are held by the New Zealand Government for five years. Applicants may withdraw up to NZ\$1 million after two years to invest in a business that will benefit New Zealand. Applicants must be no older than 54 years and have at least five years' business experience. Conditions will apply for the first five years post residence.
Investor (closed 13 June 2005)	Based on the principal applicant meeting a minimum level of points, earned through a combination of the money they have available for investment (minimum of NZ\$1 million), age, and business experience.
Employees of relocating businesses	Established for key people in a business relocating to New Zealand who do not qualify for residence under any other residence category. There is a two year employment period before the residence permit is endorsed.
Work to Residence	This category provides a pathway to residence for holders of permits granted under three specific work policies: Talent (Accredited Employers); Talent (Arts, Culture, and Sports); and the Long Term Skill Shortage List policy.

Source: *Migration Trend 2004/2005*, p. 75, 2005, Department of Labour.

Appendix 4-3-1 Skilled/Business Stream IELTS Assessment Scores in 2004/2005

Application criteria	Applicant type	Number sitting test	Average score				Overall
			Listening	Oral	Reading	Writing	
Skilled Migrant	Principal	804	6.9	7.1	6.7	6.8	6.9
	Secondary	717	6.2	6.4	6.0	6.1	6.2
1995 General skills	Principal	332	6.4	6.5	6.3	6.5	6.4
	Secondary	202	5.8	6.1	5.6	6.0	5.8
Entrepreneur category	Principal	101	4.9	5.4	5.1	4.9	5.1
	Secondary	248	5.5	5.4	5.1	5.1	5.3
Investor category	Principal	54	6.2	6.4	6.3	6.0	6.2
	Secondary	36	5.8	6.2	5.8	5.6	5.9
Overall averages	Principal	1,291	6.6	6.8	6.5	6.6	6.6
	Secondary	1,203	6.0	6.1	5.7	5.8	5.9

*This table excludes categories with fewer than five people sitting the IELTS test. These categories include: Employees of Businesses, Talent (Accredited Employer), Talent (Arts and Culture), and Long Term Skill Shortage List occupations.

Source: *Migration Trend 2004/2005*, p.51, 2005, Department of Labour.

Appendix 4-3-2 Skilled/Business Stream IELTS Assessment Scores in 2004/2005

Country	Applicant Type	Number sitting test	Average score				Overall
			Listening	Oral	Reading	Writing	
South Africa	Principal	68	7.5	7.8	7.3	7.4	7.5
	Secondary	54	7.1	7.7	6.7	7.1	7.2
Netherlands	Principal	60	7.4	7.4	7.3	7.0	7.3
	Secondary	55	7.1	7.4	6.9	6.8	7.0
Germany	Principal	69	7.2	7.3	7.1	6.9	7.1
	Secondary	64	6.9	7.0	6.6	6.7	6.8
Malaysia	Principal	22	7.2	7.7	6.8	6.7	7.1
	Secondary	25	6.4	6.5	6.0	6.1	6.3
Russia	Principal	21	6.8	7.3	7.0	7.0	7.0
	Secondary	15	6.1	5.9	5.9	6.1	6.0
Romania	Principal	18	6.8	7.1	6.8	6.5	6.8
	Secondary	34	5.6	5.7	5.9	6.0	5.8
India	Principal	315	6.6	6.9	6.3	6.9	6.7
	Secondary	227	6.2	6.6	5.9	6.3	6.3
Philippines	Principal	116	6.8	6.8	6.3	6.7	6.6
	Secondary	79	5.9	5.9	5.5	5.9	5.8
Fiji	Principal	49	6.7	6.8	6.1	6.6	6.5
	Secondary	22	5.2	5.7	4.9	5.2	5.2
China	Principal	208	6.3	6.2	6.3	6.1	6.2
	Secondary	215	5.5	5.6	5.3	5.4	5.4
Japan	Principal	35	6.2	6.1	6.4	5.9	6.2
	Secondary	39	5.2	5.2	5.2	4.9	5.1
South Korea	Principal	116	5.6	5.7	5.6	5.4	5.6
	Secondary	202	5.5	5.2	5.2	5.0	5.2
Other Countries	Principal	195	6.7	7.0	6.7	6.6	6.8
	Secondary	178	6.0	6.5	5.9	6.0	6.1
Overall Averages	Principal	1,291	6.6	6.8	6.5	6.6	6.6
	Secondary	1,203	6.0	6.1	5.7	5.8	5.9

*The 12 countries with the most principal applicants sitting the IELTS test are ranked in this table in descending order of the principal applicants' average total score.

Source: *Migration Trend 2004/2005*, p.90, 2005, Department of Labour.

Appendix 5

On Fieldwork

For researchers in social science, interviews, especially in-depth interviews are one of the major methods in fieldwork. There are numerous books on conducting a successful interview, so when my supervisors suggested that I write something about my fieldwork, I felt that it would be a sort of '*Ban Men Long Fu*' (showing how to use an axe in front of a carpenter). However, after I had finished all the interviews for my research, I realised the necessity of summarising my experiences in fieldwork. For me, conducting interviews has gradually changed from the most difficult task to the most exciting experience. Therefore, it is worthwhile reviewing the whole process.

According to the plan, I was required to undertake ten interviews with Chinese knowledge workers living and working in Christchurch, to look at their experiences in receiving higher education and pursuing careers in both China and New Zealand. I was anxious about the task as it seemed hard. For one thing, I was concerned about finding enough interview participants although I had planned well to identify and contact interviewees through various sources and with different strategies. As I understand, most of Chinese people do not like to talk about themselves with a stranger. For another, I worried about the attitudes of the interview participants to me as they were supposed to be selected from new Chinese immigrants who succeeded in their careers to various degrees and had high social status. In addition, even if people accepted an interview, I was afraid that I would get lost when they kept talking about what they were interested in rather than what I needed during the interviews.

With these concerns, I took two actions before conducting the interviews. Firstly, to find enough interview participants, I tried various sources and strategies to identify and contact them. For example, I told all my friends about my research and asked them to help me to find potential interviewees. I also tried to identify participants through browsing Chinese directories and newspapers. The snowballing method turned out to be a useful way of finding interviewees. However, I realised that if I did not want to conduct too many interviews with people from a similar background and occupation, I should not use one single method of identifying interviewees intensively.

I found that Chinese immigrants tended to associate with each other based on the time when they moved to New Zealand and the occupation in which they engaged. If I relied solely on the snowballing method, I would end up with interviewees with a similar background. On the contrary, the strategy of finding interviewees through multiple sources avoids over-presenting a certain group of people.

During the process of contacting potential interview participants, I learnt to keep positive about what I would face. At the beginning, I felt frustrated when someone refused to provide me with information on potential interview participants. Gradually, I realised that I should not focus too much on the negative response but take it easy. My supervisors reminded me of the necessity for patience as I needed interviewees' help. I tried to put myself in the shoes of the interviewees. I asked myself what I would do if someone asked me to talk about my experiences for a research project. By thinking in this way, I started to feel relieved with negative responses. This encouraged me to continue asking and contacting potential interviewees. Interestingly, this idea was reinforced by the experience of one of my interviewees. The interviewee was a property consultant. She told me how reluctant she was initially to tell people that she was working in the industry of real estate. Then, her manager encouraged her to look for potential buyers and sellers. She said, "You could get two kinds of answers from asking: Yes or No. It is better than not asking as you still have 50 percent of opportunities". The interviewee's experience enabled me to realise the value of doing an interview. It not only allowed me to get information for my thesis but also encouraged me to face the complicated world with a positive attitude.

Meanwhile, I tried to understand people who did not want to be interviewed. For me, interviews were very crucial. However, I could not do interviews without consideration of other people's feelings. In the process of finding interviewees, I tried very hard to invite a potential interviewee with a PhD degree to participate in my project. At the beginning, he just said that he was very busy and insisted that he was not an appropriate interviewee. Then, he seemed to be avoiding me. Incidentally, I found the real reason behind it. As a person with a PhD degree, he was over-qualified to do the job which he was holding. Finally, I gave up asking him to participate in the project, although I knew that his case would provide very valuable information for my study. I did not regret my decision as I always kept one thing in my mind: the research

aims to do something good and make contributions rather than disclosing people's scars and putting salt on them. Although I would not be able to arrange for this interview, this experience led me to pay attention to exploring the relationship between doing a PhD and finding a relevant job while I was talking with other interviewees with a PhD Degree.

Similarly, the process of finding interviewees and inviting them to participate in the project enabled me to notice the gender differences in the issues relating to my study. Generally, I found that it was much easier to invite Chinese women than men to participate in my research. Furthermore, it seemed that there were more women matching the criteria for selecting interviewees than men. I thought that this could be attributed to two factors. The first hypothesis was that as a female interviewer, I could associate and communicate with other women more easily than with men. However, the first interview with a Chinese man did not support the assumption. Although the male interviewee did not want to be interviewed at the beginning, we communicated well and he was friendly towards me. Then, I moved to think about the second hypothesis that there were different performances in adaptation to the new life between men and women and thus, men appeared to be more conservative when talking about their experiences. In the interviews, I asked most interviewees to comment on this issue. It is interesting that there were quite distinctive understandings on the gender difference in the issue related to my study between women and men interviewees. If I had not been involved in the whole process of identifying and contacting interviewees, I would not have been able to notice the emerging questions. Therefore, for researchers, fieldwork is a process of deepening their understandings on the topics rather than just directly getting answers to questions.

Although I tried to be considerate of people who would not be interviewed, I still insisted on putting my efforts into encouraging people who were reluctant to be interviewed. For some potential interviewees, I went to their workplaces several times in order to explain the purpose of my study and finally, many agreed to be interviewed. Through the process, I learnt that it was important to be enthusiastic while approaching the interview participants. I found that to some degree, interviewers' attitudes to their own research would affect interviewees' attitudes and interest. If you gave people the impression that you just wanted to get answers to finish your task,

they would treat your interview as a questionnaire. On the contrary, if you were full of enthusiasm and truly wanted to communicate with them, there would be another result.

To avoid getting lost during the interview, my second action was to make a comprehensive list of questions for oncoming interviews. When my supervisors read the questions I proposed, I assumed that they would be shocked by the complicated details although they did not say so directly. They suggested not setting up overly specific questions which might constrain the conversation. After having conducted a few interviews, I found that what interviewees wanted was a real conversation rather than a forged one. I started to understand what my supervisors told me and started to treat each interview as a real life conversation. Thinking in this way allowed me to be more practical. I was no longer anxious about getting expected answers as I needed to understand what people told me rather than trying to shape their ideas to fit into the existing framework in my mind. Naturally, I started to treat interviewees as real persons with their interests and concerns rather than samples to test my hypotheses. Suddenly, I realised why my supervisors asked me to think about what impression I wanted to give to interviewees and how I would behave in each interview. Although I was always being an interviewer on the surface, I actually played different roles while meeting different interviewees. Sometimes I would be like a friend while other times I would be like a customer or student depending on whether the relationship could function well to support the conversation. It does not mean that I acted in a purposeful manner. On the contrary, in the first few minutes of each interview, the interviewee's and my perceptions on the relationship, to some degree, determined my role in the interview.

Again, I found that a positive attitude was also helpful during interviews. Since people voluntarily agreed to receive an interview and share their experiences, I thought that I should appreciate their generosity. For me, their experiences were so precious and allowed me to gain insights that I would have never been able to learn in the classroom. Therefore, I treated each interview as a learning process. The attitude enabled me to be more flexible for interviews without complaints. During the six-week period when I conducted the interviews, I met interviewees at different times depending on their timelines. Most interviewees allowed me to record the conversation while a few of them were reluctant to be recorded. Similarly, most

interviewees were speaking in Mandarin Chinese while one of interviewee preferred talking with me in English. Therefore, flexibility is a necessary quality for interviewers to be able to conduct interviews. Of course, being flexible does not mean that as an interviewer, I could not make any request. I found that interviewees felt more comfortable if I spoke honestly about my concerns and requests. I told them that if possible, I did not want to talk with them at coffee shops and I needed to record the conversation for doing transcripts as I was a student and was not skilful at taking notes while talking with them. Surprisingly, they did not laugh at me. Instead, most of them showed their understanding and became supportive and co-operative during the interviews.

Until now, I would talk too much about ideas on interviews rather than specific interview skills. By conducting those interviews, I realised that I should not separate interview skills from having a positive attitude to interviews. A positive attitude made me apply interview skills naturally and flexibly. I had read some books on interview techniques before doing interviews; yet, the motivation to communicate with interviewees enabled me to treat the knowledge acquired from books differently. I did not use interview guidelines and methods as a formula to follow them exactly. Instead, I tried to get main ideas for each method and applied them critically to my interviews. Before each interview, I tended to stay alone for half an hour to warm up and prepare for the oncoming interview. During this time, I would read some background information related to the interviewee whom I was going to meet and wrote down topics and themes which we would be talking about on one side of each piece of paper while leaving another side free for note taking.

When I met an interviewee, I usually did not talk about the interview topics immediately but asked something about his or her work or life. I found that this enabled us to start a relatively formal conversation more naturally. At the beginning of each interview, I tended to talk more than the interviewee as I needed to explain my purpose and convince him or her that the interview would not do anything harmful to him and her. I would ensure the confidentiality of his or her identity and the interview content. When he or she felt comfortable to talk about himself or herself, we would move to interview topics. When the interviewee was describing his or her experiences, I did try to ask different types of questions as some books suggested. However, I felt

that there was no fixed model to combine different types of questions. I did not find that a closed question was always a bad one. The key was to encourage people to talk rather than focusing on the type of question. If interviewees did not want to talk, they would not talk much even if you asked an open-ended question. Some books warn interviewers not to ask leading questions. For the interviews I conducted, I did not find that this was a serious problem. This could be because the interviewees for my research were well educated, had their own ideas and were not easy to be led. Actually, they would sometimes argue against what I intended to approve. Therefore, I think that during the interview, an interviewer is more like a facilitator than a judge or skilful expert. Similarly, after each interview, I spent half an hour briefly recalling the conversation and jotting down the main ideas of and my reflections on the interview. I found that it was a very useful way for me as my brain was actively processing the new coming information immediately following the interview. Then, I would leave the notes and tape recordings for transcribing later. Generally, I think that a successful interviewer should not just use interview skills for demonstrating their skilfulness.

Besides the above-mentioned aspects, there are three more points I learnt from the fieldwork. Firstly, if possible, an interviewer should try to keep in touch with interviewees after interviews. Books on interview methods always suggest that when closing interviews, interviewers should tell interviewees that they would contact him or her again to confirm information. The suggestion is especially important in my case as sometimes, I needed to check the transcripts with the interviewees following the translation into English. The second issue is about gifts. Some books mention incentives for interviewees. In my study, I dealt with it differently. I felt that since my subjects had agreed to be interviewed, they had never thought about getting anything from me. Especially, they thought that I was a poor student. Instead, they always were considerate and took the interview seriously. For example, one of my interviewees drove me home after an interview while another bought a cup of coffee for me during the interview. One interviewee forgot her research samples in the field in order to rush to a meeting with me at the proposed time.

To show my appreciation, I tried to bring something to each of interviewees when I conducted the interviews. It was not an easy thing to deal with. If I bought anything expensive, it was not suitable for my identity as a student and they would not accept it.

Furthermore, the interviewees for my study came from different backgrounds, it was not appropriate to buy anything similar to all of them. Therefore, I brought different things for different interviewees when I felt that it was appropriate. For example, when I visited a general practitioner, I bought a bottle of hand cream for her as I thought that she would always wash her hands. When I met interviewees who had little children, I would consider buying some Chinese snacks for them. When I met interviewees at lunchtime, I would buy a pack of Sushi for them. For some of them, I did not buy anything but sent a 'thank you' card afterwards. Although those tokens were not expensive, I showed my appreciation and did not embarrass them.

The third issue is about the number of interviews. I planned to do ten interviews and finally, ended up with fourteen interviews. I do not intend to say that the more interviews, the better the result. At most times, the number of interviews should be determined by various factors such as research questions, time and available interviewees. For my study, ten interviews were not a small number. However, during the period of conducting interviews, three emerging issues led me to decide to do four more interviews. While noticing the issues relating to gender and people with a PhD degree, I decided to do three more interviews to explore relevant questions. When I attended a seminar on introduction to New Zealand's health system for the Chinese community, I realised that I needed to interview a general practitioner to see the interaction of expert knowledge and non-scientific knowledge. However, after having finished the fourteen interviews, I realised that I should stop doing any more. During the process of the fieldwork, each interview had become such exacting experiences for me that I needed to make the balance between considering the requirement of my thesis and pursuing my personal interest.

In general, although I still need to learn lots about interviews and fieldwork, the fieldwork for this study was productive and constructive for me. Not only did I get ample information for my thesis, but also I learnt from others' experiences and built social relationships in the Chinese community in Christchurch, which is crucial for my personal life and study in the future.