THE NORTHERN NORTH ISLAND
AN ENGAGING ECONOMIC REGION?

DRAFT DISCUSSION PAPER

PREPARED FOR THE METROPOLITAN AUCKLAND PROJECT TEAM

BY

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The Challenge of Engagement

This paper is more about ideas than conclusions. It explores the proposition that a drive for productivity to sustain Auckland's international engagement might best be advanced within the context of a larger Northern North Island region. Such a region may have the scale, the natural and human resources to ensure a strong economic presence within the international community.

The investment in people, infrastructure, production and services required to secure sustainable productivity may best be considered through reference to the diverse places, capabilities, and opportunities distributed across the rural and urban areas and large and small centres of the Northern North Island.

Already, our key global organisations are doing just this. Fonterra, for example, emerged from the Waikato dairy industry to become a national and now international player in the food sector, firmly grounded in the Northern North Island region. By thinking about how an organisation might operate across this region and how its operations may be more firmly supported by the resources and capabilities available here, we can act to cement in its continuing contribution.

This is true at a variety of scales. As small and medium enterprises seek to expand beyond the confines of a local market and pursue the process, product and technology improvements required for international success, the wider opportunities for them to do this within an expanded view of "local" should support their initiative and help retain their presence.

While this paper focuses on a new construct, the Northern North Island, the issue is not whether this is a better or worse way of describing aggregates of households, individuals, and organisations. Rather, does it help lift us out of the limited thinking that might constrain our ability to rise to global challenges? The aim is not to replace one box with another, bigger one, but to widen our terms of reference when considering productivity generally.

The Challenge of Regionalism

This means considering the infrastructure, skills, resources, training, and services, materials and inputs available from a region that is wider than just Auckland. The present paper makes a start on this process. [1]

Moving to a wider regional perspective means breaking down localism and inter-regional rivalry and collaborating across towns and cities to achieve the best possible outcomes for investors and, thereby, the wider community.

It means breaking down the barriers (and prejudices) between city and town, town and country, and, in the current example, north and south of the Bombay Hills. It means seeing different places linked by their actual or potential contributions to different components of the chain of innovation, design, production and distribution.

For example, a farm supply business in Cambridge may contribute to the productivity of a Waipa farmer, supplying the Te Awamutu dairy factory, which in turn depends for

[1] The information in this report is presented in good faith using the best information available to us at the time of preparation. It is provided on the basis that Phil McDermott Consultants Ltd and its associates are not liable to any person or organisation for any damage or loss which may occur in relation to that person or organisation taking or not taking action (as the case may be) in respect of any statement, information, or advice conveyed within this report.

its success on advanced food technology skills developed in Fonterra's Auckland-based biosciences laboratories, perhaps with input from collaboration with a Hamilton-based Crown research Institute, and for financial management undertaken in Fonterra's Auckland-based head offices. Regional boundaries have little relevance to this network of enterprise, production and productivity. The efficiency of movement of information, resources, and people among them may have.

The Economic Nature of the Northern North Island region

To illustrate the sort of thinking that may lift our view of productivity and global engagement, this paper explores the dimensions of the Northern North Island in terms of population and workforce size, distribution and movement. It considers production issues and manufacturing investment across the region. It explores the relative roles of the three main ports. It raises for consideration the nature of the cross-regional infrastructure that provides some of the physical glue for the region.

It reaches some not altogether surprising conclusions.

For example, the NNI houses 52% of the nation's population and 51% of its employees on 25% of its area. On both counts, it is growing faster than the rest of New Zealand.

When a region encompasses half the nation's people and employees, it is unlikely to differ strongly from the rest of the country. Yet, there are some differences that suggest that the NNI sits apart from the rest of New Zealand.

The NNI remains a major site of farming, forestry and primary processing internationally, with dairying leading the way. Horticultural land uses may be filling some of the gaps left by the decline in other livestock.

More important than this in thinking about productivity, the NNI is consolidating a manufacturing, service and potentially a science role that extends beyond Auckland's traditional dominance of secondary industries.

The dimensions of employment and production explored provide an indication of significant scale and capacity in a wider region. One issue is how far infrastructure, or more generally connectivity, offers the integration necessary for organisations to take advantage of regional capabilities.

Infrastructure – realising the capacity

A sound internal transport network enables places to specialise in a way that confers benefits on the whole, and the individuals and organisations located at different points within it.

The road network among centres is extensive and subject to substantial ongoing investment. The three main freight ports – Port of Auckland, Port of Tauranga and Auckland International airport — are all expanding and developing in apparently complementary manners. Tauranga both complements and offers an alternative to Auckland, particularly as a nodal centre within a significant area of primary and secondary production. A sound base for tertiary education reinforces this.

Other components of infrastructure include energy, (the wider region accounts for close to 50% of New Zealand's current electricity generating capacity), communications networks (including broadband), and gas distribution.

Urban infrastructure (such as local roads, water supply, wastewater disposal) is less obviously of regional significance. However, their capacity and quality will influence the contribution individual settlements make to residential and business investment. While it has not been done for this paper, it may be fruitful to consider the total capacity of different parts of the NNI for urban development. Without this sort of consolidated information, our view of the potential of the NNI is partial at best.

Competing or complementary centres?

Consideration of some of the functional differences within the NNI confirms complementarity among component regions, underpinned by some decentralisation. (An analysis of differences at the level of urban centres and towns was not done).

Auckland is reinforcing its role as the higher order business centre for the region, and retains its position as the principal import and distribution centre. It is not the only interface between the regional and international economies, though.

Waikato and to a lesser extent the Bay of Plenty are emerging as strong production centres, with the Waikato in particular assuming a higher manufacturing profile. The Port of Tauranga is increasing its regional presence and role (supported by the provision of an inland port in Auckland).

It seems appropriate and timely to consider the extent to which the four regions (Northland, Auckland, Waikato and Bay of Plenty), and the centres within them, are complementary or competing. As they become more integrated, so their specialist contributions should become more obvious and valuable. Sufficient evidence is available to suggest that working together to secure more investment to advance international engagement will benefit the wider region and its individual parts more than competing among themselves for investment that, by and large, already exists.

A diversifying and decentralising population?

In terms of residential roles, the Bay of Plenty has long been a destination for retirees. There is reason to suggest that this role is increasing. Lifestyle-based residential choices will further increase the part played by the Bay of Plenty in housing and, increasingly, by Northland and Waikato. Decentralisation of population will continue, if only through increased growth rates outside Auckland.

At the same time, Auckland will remain the centre of international population gains, raising the spectre that the large centre becomes the melting pot while the smaller centres retain a stronger bicultural (Māori and European New Zealand) character. A more integrated view of the region and how it functions might see settlement in Auckland as potentially a preliminary step by the migrant community, towards possible long-term relocation by some members elsewhere in the NNI as they become more integrated and their skills and capabilities are realised.

Some outstanding questions

It can be concluded from this paper that the Northern North Island is a credible entity. As a construct, it can help us understand economic aggregates and the environment within which individuals and organisations operate, and in which they seek to build their capability to participate internationally. It encompasses a large and diverse workforce, a wide range of business and related organisations, and a substantial primary resource base. It is well connected in terms of infrastructure.

If it is accepted that the NNI is functioning in an increasingly integrated manner through the location and investment decisions of households and organisations, lower order questions follow regarding the capacity of different places within it to effectively cater for different components of investment.

Do some of the long-term infrastructure issues facing the individual regions, Auckland in particular, need to be re-addressed with reference to growth patterns and prospects across the wider NNI region? And, do some of the constraints and costs impinging on the productivity of Auckland's producers change when viewed from the perspective of capabilities and opportunities in this wider region? These are questions that can be considered against the background of information and ideas that this report has introduced, but by no means exhausted.

1 Introduction

1.1 The Metro Auckland Project

The Metropolitan Auckland Project is assembling information to explore how Auckland might achieve and sustain the productivity growth necessary to build a competitive, inclusive, and dynamic region that can engage effectively in the regional and world economies.

The Metro project is advancing three workstreams, people and skills development, regional capacity, and business capability. This paper contributes to the regional capacity workstream.

1.2 Productivity, Capacity and Regional Analysis

In an earlier paper, it was suggested that the arbitrary definition of regional boundaries might constrain the ways in which we consider productivity. [2] The productivity issues facing Auckland are not about what has to be done to maintain economic pre-eminence within New Zealand as a basis for assuming world-class city status. Rather, the question is how does Auckland work with surrounding places so that people and entities can effectively engage in international business?

This shift in perspective raises the further prospect that some of the factor and capacity constraints seen to suppress productivity are geographic constructs. They arise because of how we regard the limits on and limits to the places in which we live and work. At the same time, as we explore the implications of the increasing mobility of international capital and labour, ideas and innovation there is a need to look to consider the wider regional setting to establish the full range of resources and opportunities that can be drawn on to exploit them.

This is an exploratory paper. It sets out a range of familiar information in a new way, comparing the performance of the Northern North Island (NNI) and the rest of New Zealand (RoNZ). The paper also presents data on differences and similarities among the four regions that encompass the new "super-region" (Northland, Auckland, Waikato, and Bay of Plenty). This helps us address the sense in which the NNI hangs together as a region.

The aims of this paper are to describe this alternative regional framework, determine whether it has integrity as a unit for thinking about economic performance, consider the possibilities it might offer to expand economic capacity, and consider, especially, the capacity of this expanded notion of region to engage more effectively in a global economy than its constituent parts.

The paper does not reach definitive conclusions, but instead, by presenting a range of indicators for the wider region, raises a series of questions for the Metro Auckland project to address.

Is the Northern North Island a credible entity? Can it help us understand economic aggregates and the environment within which individual organisations operate? Does it encompass resources that are collectively more than the sum of their parts? Are they potentially available to a wide range of players from throughout the area? In practical terms, is it easy to get around, and are the connections within it strong?

[2] Le Heron R and McDermott P *Productivity Issues in the Regional Economy*, Working Paper Metropolitan Auckland Project Team

Does its construction increase the potentials of organisations and individuals within it, and extend the array of capacities they can draw on and the opportunities they face?

1.3 Defining Regions

Definitions of region vary by purpose, context and usage. Regions in New Zealand were developed initially around local council areas in groupings that bore some relationship to New Zealand's early provincial administration. This was shaped in turn by natural "communities of interest", around port settlements, and reflecting the difficult transport conditions of the mid-19th Century. For well over a century, these early provincial boundaries defined broad communities of interest. [3]

Regions, defined much later, for the purpose of coordinating planning across a plethora of single and multi-purpose local council boundaries (Local Government Act 1974), simply assembled territorial interests into a format that facilitated cooperation on matters that spanned them.

In the local government reforms of 1989, however, a singular environmental rationale was established for regional councils, with their boundaries defined to encompass collections of territorial local authorities, with their responsibilities for local infrastructure and land use, along catchment boundaries.

As the regional mandate has broadened beyond the management of air and water quality, especially in Auckland, so the relevance of even these boundaries can be questioned, especially in economic matters. For example, Auckland has long been an export port for a productive hinterland that stretches well beyond its current boundaries, and an entry point for imports distributed throughout New Zealand. As the principal centre of population, it has historically dominated the assembly or manufacture of imported materials and components for intermediate and final demand. It is the principal point of entry for tourists

This role emphasises Auckland's linkages with other parts of New Zealand, and suggests functional connections obscured by undue emphasis on boundaries drawn according to non-economic criteria.

This paper explores the implications of constructing an economic region that encompasses the entire Northern North Island (NNI). For convenience, this is defined as Northland, Auckland, Waikato and Bay of Plenty Regions, although it is the notion of connected activities across this area and a common pool of resources that defines the region, rather than precise boundaries.

1.4 The Northern North Island Region

At 102,8 sq km, the NNI Region comprises 25% of New Zealand's land area. Urban Areas within it (as defined by Statistics New Zealand) account for just 2.5% of the region's total land area (2,586 sq km). [4]

The NNI population at June 2005 was estimated at 2.13 million, or 52% of the national total (Table 1). The region's population grew over the preceding ten years at a compound rate of 1.6% per year, a 15% increment (285,000). The national growth

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[3] The last vestiges of communities of interest defined by these boundaries broke down in New Zealand life as professional Super 12 franchises overtook provincial unions as the dominant organising force of "representative" rugby.

[4] All data in this report is sourced from Statistics New Zealand, unless otherwise noted

rate was 1% over the same period, for a 10% increase. Consequently, the NNI accounted for 78% of all population growth in New Zealand from 1996 to 2005.

Auckland and the Bay of Plenty led growth within the NNI region. As the national growth rate picked up in the early 21st century, so, too, did the rate of growth in the NNI, further stretching the gap with the rest of the country. Northland continues to lag within the wider region.

The Region had 873,000 employees in 2005, just less than 50.6% of the nation's total, up from 49.8% in 2000. At 4.3%, the region's annual compound growth rate was ahead of the national rate of 4%, explaining this increasing share of the labour force.

These figures point to half of nation's population and economy contained in the northern quarter of its land mass. The questions follow whether this region operates effectively as a single (or collective) economic entity and what its distinctive character is; how it is "held together"; and whether, treated as a single region, it encompasses more development prospects and opportunities than when envisaged as four administrative and regulatory regions.

Table 1: Northern North Island, Population 1996-2005

	1996		2005		ACGR	
	Number	**% NNI**	**Number**	**% NNI**	**1996-2005**	**2000-2005**
Northland	140,700	8%	148,600	7%	0.6%	0.6%
Auckland	1,114,700	60%	1,337,100	63%	2.0%	2.2%
Waikato	359,900	19%	384,800	18%	0.7%	0.8%
Bay of Plenty	230,600	12%	260,300	12%	1.4%	1.2%
NNI	1,845,900	100%	2,130,800	100%	1.6%	1.7%
NNI % NZ		49%		52%		
RoNZ	1,886,100		1,968,100		0.5%	0.7%
New Zealand	3,732,000		4,098,900		1.0%	1.2%

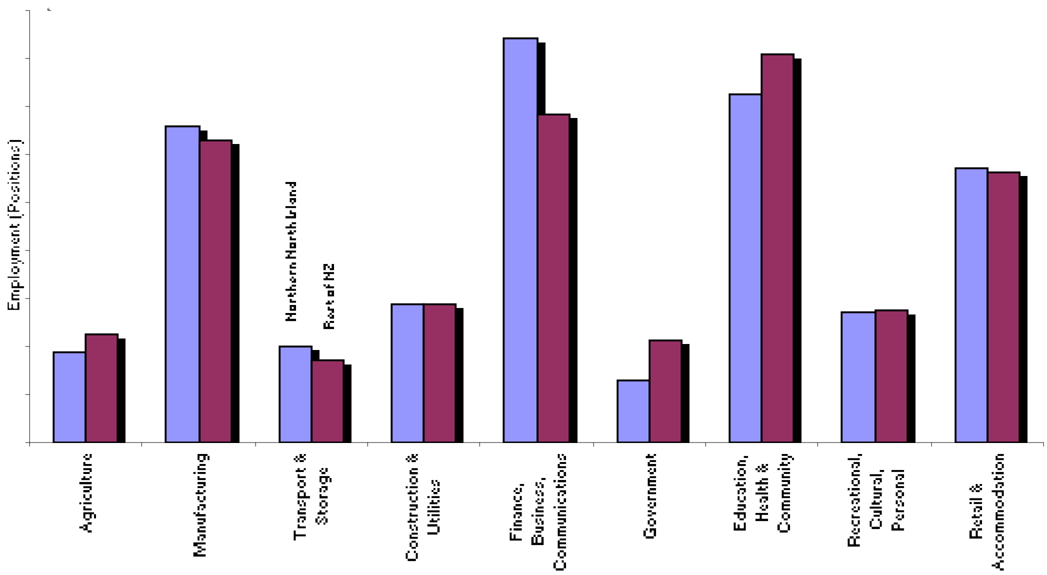
Source: Statistics New Zealand Subnational Population Estimates (as at June 30)

2 The Economic Base

2.1 Recent Employment Growth

Comparison of total employment ("positions") in 2005 indicates that the NNI is weighted slightly more towards production, distribution and particularly business services, and the RoNZ towards agriculture, government and community services.

Figure 1: Distribution of Employment, 2005



A comparison of employment growth rates between the NNI and the RoNZ (Figure 2) indicates for production and business activities that:[5]

- The NNI (4.3% Annual Compound Growth Rate) grew substantially ahead of the RoNZ (3.7% ACGR)
- The difference in job generation was most pronounced in manufacturing, where 3.2% growth in NNI (compared with 1.7% for RoNZ) generated at least 9,000 more jobs;
- The difference in growth rates was more pronounced in transport and wholesale (4.3% NNI, 2.6% RoNZ), although a smaller sector meant that the difference in jobs added was just 3,500;
- Communications services, also a small sector, grew significantly faster in the NNI (3.7% versus 0.8% in the RoNZ), but the finance and business services sector grew a little ahead in the RoNZ (6.3% compared with 5.1% in the NNI). Because this was from a smaller base, there were still a few more jobs gained in the NNI (+33,620) than in the RoNZ (+32,550).)

Among sectors that are more population-oriented, NNI still had a growth edge:

- Education services clearly centralised, with a 1.2% gain in the NNI contrasting with a 0.7% decline in the rest of the country.

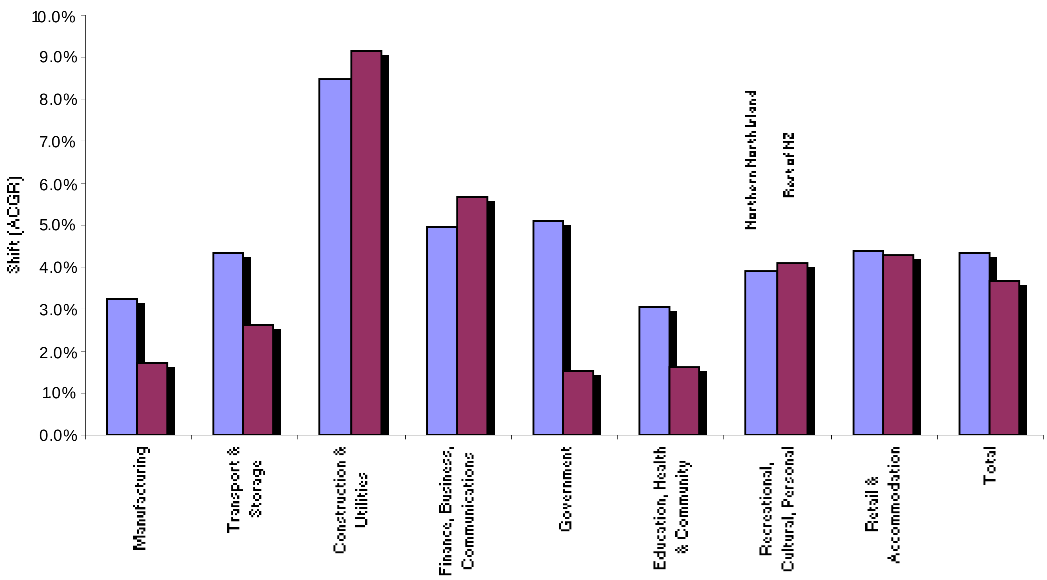
5 Comparable agricultural employment data is not available prior to 2004

- Health and community services favoured the NNI (4.6% ACGR for 16,600 new jobs compared with 3.4% for 14,900 in the RoNZ);
- Some decentralisation of government services was evident, with NNI recording a 5.1% ACGR, and the RoNZ 1.5%.

Sectors in which growth was more evenly spread, or in which the RoNZ grew more strongly than the NNI included:

- Construction and utilities, NNI 8.5% ACGR (+19,200 jobs); RoNZ 9.2% (+20,400 jobs);
- Retail, accommodation and catering, NNI 4.4% ACGR (+31,900 new jobs); RoNZ 4.3% (+32,500)
- Personal and other services, NNI 5% (+6,400), RoNZ 5.4% (+7,400).

Figure 2: Employment Growth by Sector, 2000-2005



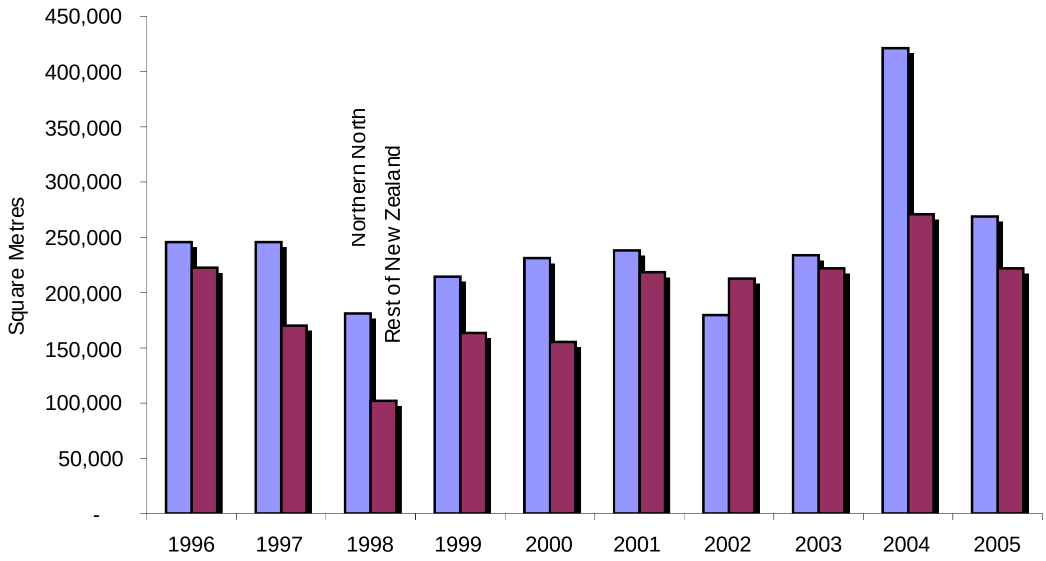
Recent economic growth favours production activities and community services in the NNI. Activities directed towards final demand may be equally strong, or even stronger, elsewhere. The case of construction is interesting. It is not clear from these aggregate figures whether its stronger growth in RoNZ also reflects the impact of final demand (new housing, tourism, retail and accommodation facilities) or more traditional productive activities (including primary processing, manufacturing and commercial investment).

2.2 Manufacturing Investment

Over the ten years to 2005, \$3.7 billion worth of consents were issued for factory construction, extension or alteration nationally, 53% in the NNI region. New factories accounted for 64% of consents issued by value (the balance being alterations and extensions), but for 66% in the NNI compared with 61% in the RoNZ.

Consents for new factories amounted to 4.4 million m^2 of additional factory space over the ten years. 56% of this total (2.5 million m^2) was in the NNI. Growth in floorspace was cyclical and fluctuated, though; with the data suggesting that 200 consents issued gave a major boost to activity in the NNI in 2004, settling back to more typical levels in 2005 (Figure 3).

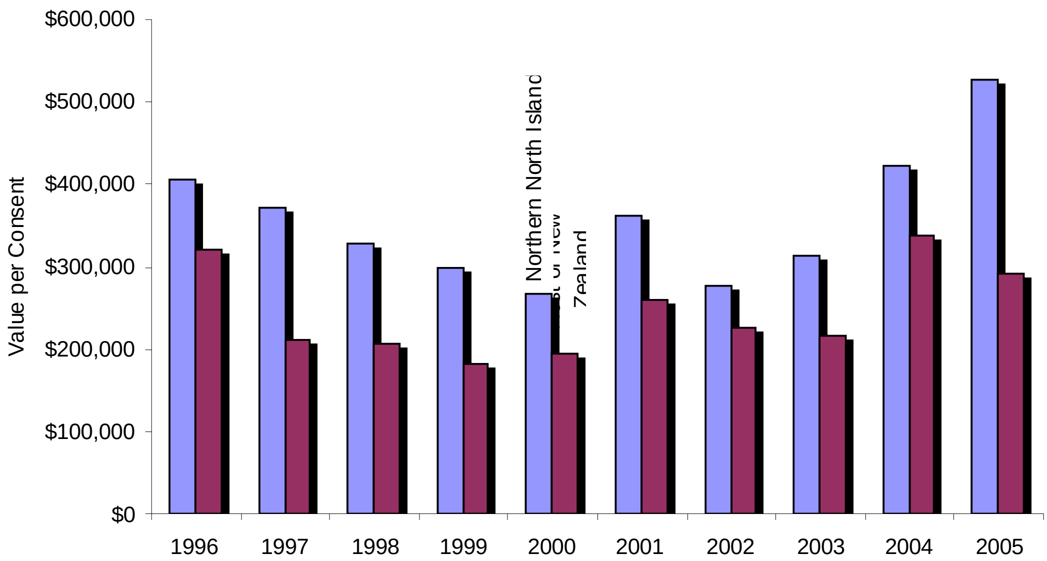
Figure 3: New Factory Area Consented, 1996-2005



The fact that the majority of planned investment was predominantly in the NNI suggests that the concentration of manufacturing there will be sustained.

This is reinforced by the apparently higher average value of new factories consented in the NNI compared with the RoNZ (Figure 4). This may be a function of higher costs, a premium investors are prepared to pay to be close to the major Auckland market and business infrastructure, or a higher order of activity, with more complex and higher cost structures reflecting more intensive development.

Figure 4: Average Value of Factory Consents



2.3 Primary Activities

The NNI accounts for 30% of the nation's cultivated land, but 40% of grassland (excluding danthonia and tussock used for extensive grazing). It also encompasses almost half of New Zealand's land committed to horticulture, and accounts for well over a third of the planted forestry estate (Table 2).

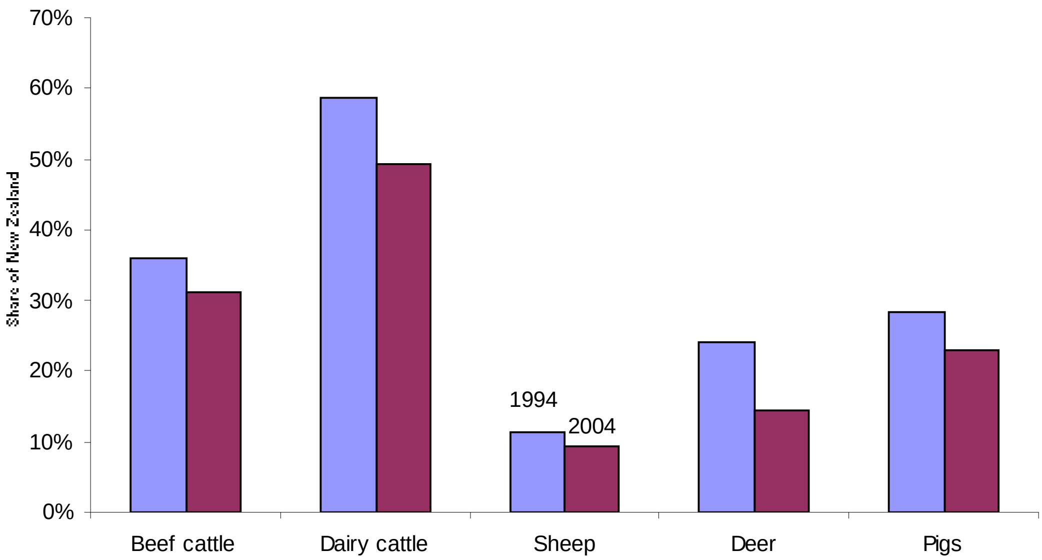
Table 2: Major Primary Land Uses, 2003

Landuse		Farms	Hectares
Grassland	Number	20,895	2,022,965
	Share NZ	40%	25%
Grain, etc	Number	882	17,330
	Share NZ	10%	5%
Horticulture	Number	6,135	38,854
	Share NZ	48%	32%
Production Forest	Number	5,622	1,829,136
	Share NZ	35%	45%

Source: Statistics New Zealand

The share of grassland farming is significant. The NNI contained 49% of the country's dairy cattle in 2004, although this was less than its share from ten years earlier. Similarly, the beef herd fell from 36% to 31% of the national total (Figure 5).

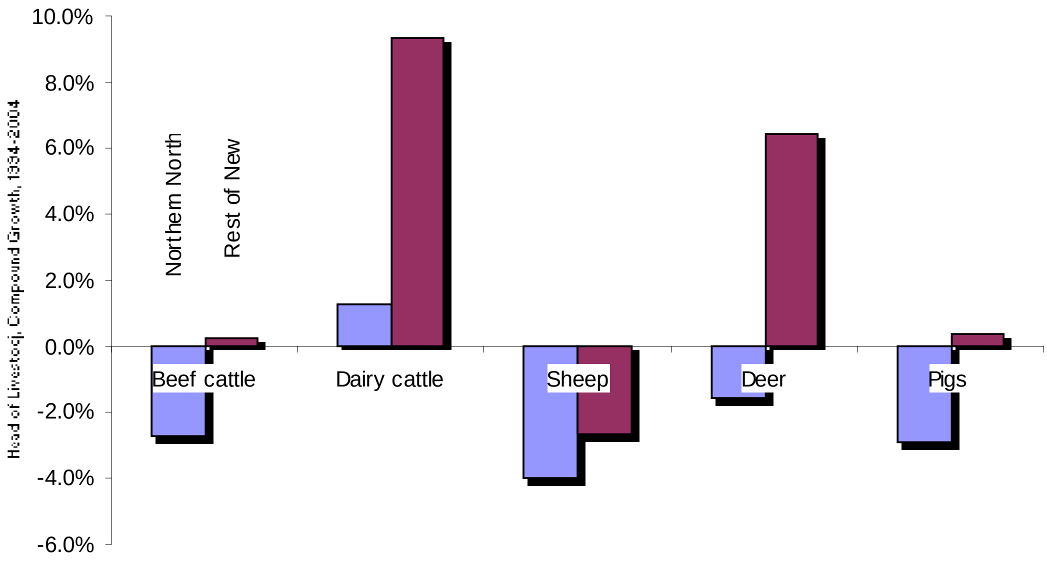
Figure 5: Northern North Island Livestock Shares, 1994 and 2004



Source: Statistics New Zealand

These shifts reflect the resurgence nationally of dairying, and some decentralisation out of the hearth area around Auckland and Waikato. The growth rate of the dairy herd was over 9% in the RoNZ between 1994 and 2004, and 1.3% in the NNI (Figure 6).

Figure 6: Annual Livestock Growth Rates, 1994-2004



Note: Annual Compound Growth Rates

The other significant categories of livestock fell in the Region, contrary to gains in beef, deer and pigs elsewhere in the country (Figure 6). The decline in sheep numbers was significantly greater in the NNI than elsewhere.

These figures are reflected in a 46% share of national agricultural employment in the NNI (38,000 people) in February 2005 up 3.1% from 2004. Growth across the rest of New Zealand was higher, though, at 6.1%.

The NNI remains a major force in agriculture. The fact that much production is at the higher value end of the sector (dairy and horticultural produce) is likely to reinforce this position in income terms.

2.4 Comment

When a region encompasses half the nation's people and employees, more or less, it is unlikely to differ strongly from the rest of the country. Yet there are some differences of degree that suggest that the Northern North Island sits apart from the Rest of New Zealand as a credible region. [6]

The NNI is a major of site farming and processing internationally, with high-end dairying leading the way. Other forms of livestock are a lot less important relative to their role elsewhere in New Zealand, and their role is diminishing. At the same time, more intensive horticultural land uses, may be filling some of the gaps.

More than that, the NNI is consolidating a manufacturing role with a complementary concentration of business and financial services, transport and storage. A tradition of production, then, is supporting the development of associated intermediate handling, logistics and business service activities.

[6] The obvious implication is that other parts of New Zealand might also "hang together" as economic regions with the scale, significance and distinctiveness to operate as economic super-regions. The Southern North Island would most likely qualify, while the whole South Island may make more sense as an economic region in terms of international economic engagement than its constituent parts.

3 The Infrastructure

This section deals with infrastructure that has regional significance, especially for business, rather than infrastructure geared to the need of local communities.

The key elements of infrastructure in these terms comprise internal and external transport routes and nodes (Figure 7).

Figure 7: Northern North Island, State Highways, Ports and Airports

The road network is dominated by the State Highway system, supplemented by the Main Trunk Railway running from north to south with a branch through to Tauranga and Western Bay of Plenty. This links three international ports, Auckland and Tauranga, the bulk handling port at Marsden Point, a small general goods operation at nearby Whangarei, and a small coastal port at Onehunga in Auckland; two international airports, at Mangere and (on a far smaller scale) at Hamilton, both with domestic scheduled operations, and domestic airports at Whangarei, Rotorua, Tauranga, Whakatane, and Taupo. With the exception of Rotorua, the latter operate with light schedules involving mainly small aircraft.

The internal transport network links five main urban areas (with populations exceeding 50,000) and six secondary or minor urban areas. Defined in this way, 82% of the population of the NNI dwells in urban centres, 58% in the Auckland Urban Area, and 19% in secondary urban areas. (Table 3)

Table 3: Population Urban Areas, 2005

Urban Area	Population	Share
Whangarei	48,600	2%
Auckland	1,241,700	58%
Hamilton	185,100	9%
Tauranga	109,100	5%
Rotorua	54,900	3%
Pukekohe	21,500	1%
Tokoroa	14,000	1%
Taupo	22,100	1%
Whakatane	18,700	1%
Cambridge	15,200	1%
Te Awamutu	14,000	1%
Urban	1,744,900	82%
Non-Urban	385,900	18%
Total	2,130,800	100%

On of the key issues in considering the coherence of the NNI is the density and quality of the road network.

3.1 Roads

The NNI contains 32% of the country's roads, and one third of its state highways (Table 4). Waikato dominates state highway and rural roads; Auckland dominates urban roads.

Table 4: Roads in the Northern North Island, 2005

	State Highway		Local Roads (Km)			Total Roads		Sealed Roads	
	Km	Share	Urban	Share	Rural	Km	Share	Km	Share
Northland	750	7%	507	3%	5,273	6,530	7%	2,830	5%
Auckland	326	3%	4,125	25%	3,583	8,034	9%	6,834	11%
Waikato	1,729	16%	1,717	10%	6,834	10,280	11%	8,297	14%
Bay of Plenty	745	7%	1,076	6%	2,763	4,583	5%	3,611	6%
Total NNI	3,550	33%	7,425	44%	18,452	29,427	32%	21,572	36%
Rest of North Island	2,423	22%	4,303	26%	16,794	23,519	25%	16,536	28%
South Island	4,922	45%	5,093	30%	30,187	40,202	43%	21,972	37%
New Zealand	10,894	100%	16,820	100%	65,434	93,148	100%	60,080	100%

Source: Land Transport New Zealand, Network Statistics 2004/05

Not surprisingly, the region has a high density or roading relative to the rest of New Zealand, especially urban and sealed roads (Table 5). As the most heavily urbanised area, Auckland leads the way. The Waikato also has a substantial density of roads generally and of rural roads in particular.

Table 5: Roads Densities in the Northern North Island, 2005

		Metres/sq km				
	Land Area	SH	Urban	Rural	Total	Sealed
Northland	30,105	25	17	175	217	94
Auckland	16,282	20	253	220	493	420
Waikato	34,603	50	50	197	297	240
Bay of Plenty	21,864	34	49	126	210	165
Total NNI	102,854	35	72	179	286	210
Rest of North Island	88,309	27	49	190	266	187
South Island	412,480	12	12	73	97	53
New Zealand	603,643	18	28	108	154	100

Road improvements are more concentrated in the NNI than the region's share might otherwise suggest, reflecting in part its economic significance. With 32% of national roads, and 33% of highways, the NNI accounted for 49% of budgeted expenditure on maintenance and 50% on improvements in the national land transport programme for 2005/06 (Table 6). These figures are in keeping with the region's share of population and employment rather than its share of roads.

The implication is that the NNI has a substantial investment in connection and that this is currently sustained by a disproportionate commitment to maintenance and improvements relative to other parts of the country.

Table 6: National Land Transport Programme, 2005/06 ($m)

	Maintenance		Improvements		Total	
	$M	% NZ	$M	% NZ	$M	% NZ
Northland	17,004	4.8%	8,044	1.6%	25,048	2.9%
Auckland	58,732	16.5%	186,457	36.0%	245,189	28.1%
Waikato	59,728	16.8%	39,839	7.7%	99,567	11.4%
Bay of Plenty	33,667	9.5%	25,731	5.0%	59,398	6.8%
Total NNI	169,132	47.6%	260,070	50.2%	429,202	49.2%
Rest of NZ	185,878	52.4%	258,127	49.8%	444,006	50.8%
Total allocated	355,010	100.0%	518,198	100.0%	873,208	100%

Source: Land Transport NZ NLTP 2005/06, Table B

3.2 International Freight

In 2005, the ports of the Northern North Island handled goods valued at around $45 billion, 67% of New Zealand's total (Table 7). This was an increase of 12% over the five years from 2000. Imports accounted for the majority of growth, growing 18% by value, compared with export growth of 5%.

Table 7: Value of Imports and Exports by Port, 2000 and 2005

	2000			2005			% Shift, 2000-2005		
	Exports	Imports	Total	Exports	Imports	Total	Exports	Imports	Total
Port of Auckland	6,168	12,634	18,802	6,049	14,095	20,144	-2%	12%	7%
Port of Tauranga	6,533	1,882	8,416	6,896	4,007	10,903	6%	113%	30%
Auckland Intl Airport	3,446	7,050	10,496	4,044	6,923	10,967	17%	-2%	4%
Total NNI	16,450	23,965	40,414	17,289	27,832	45,121	5%	16%	12%
Share of New Zealand	55%	80%	68%	55%	79%	67%	-1%	-2%	0%
New Zealand	29,820	29,919	59,739	31,575	35,435	67,010	6%	18%	12%

Note: NNI includes Whangarei

Within the NNI, there is a significant difference in the direction of trade between the Ports of Auckland and Tauranga. Exports accounted for 63% of trade through the Port of Tauranga in 2005, and only 30% through the Port of Auckland. There was some convergence over the period, though, as booming imports and static forestry exports pushed exports down from 77% of Tauranga's total trade in 2000.

The other interesting feature of NNI trade is the role of Auckland International Airport, which matches Tauranga for value. The Airport had similar total trade figures in 2005 to 2000, but with a significant shift towards exports during that period, up to 37% of the total from 33% five years earlier.

3.2.1 Exports

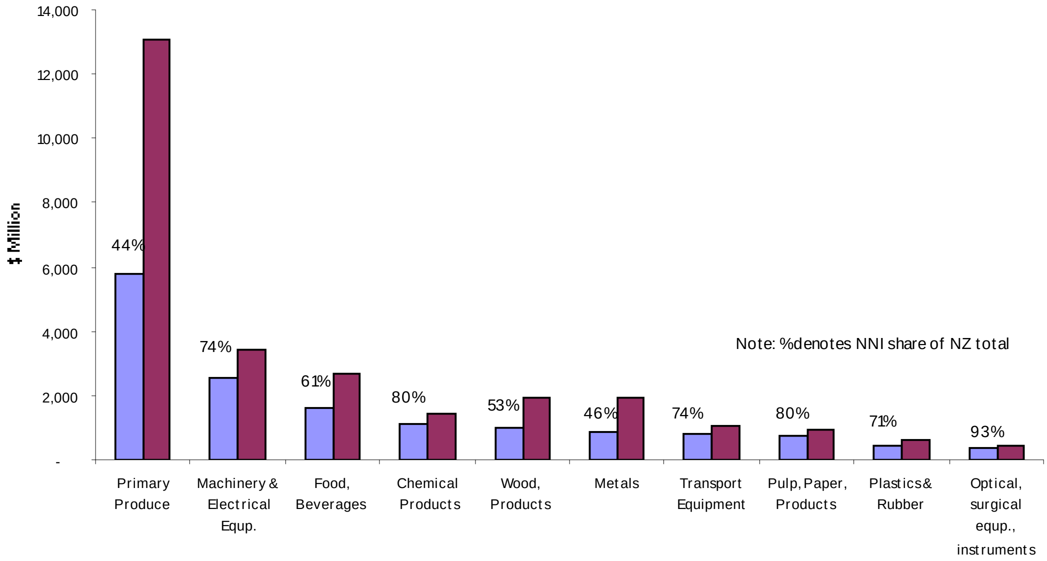
The composition of trade by port has been considered by considering by comparing the value of the NNI region's top ten export categories by port of export (Figure 8).

Primary produce dominates, accounting for 34% of exports, compared with a national share of 41%. The dominance of primary and associated (processed) products is still the dominant feature of the region's trade. Taken together, primary produce, food and beverages, wood and wood products, pulp and paper account for 53% of regional exports (59% nationally).

Perhaps the most interesting point here, though, is that the processed end of the spectrum leans more heavily towards the NNI Region. Hence, 61% of food and beverages, 53% of wood and wood products, and 80%of pulp, paper and paper products exported in 2005 originated in the NNI.

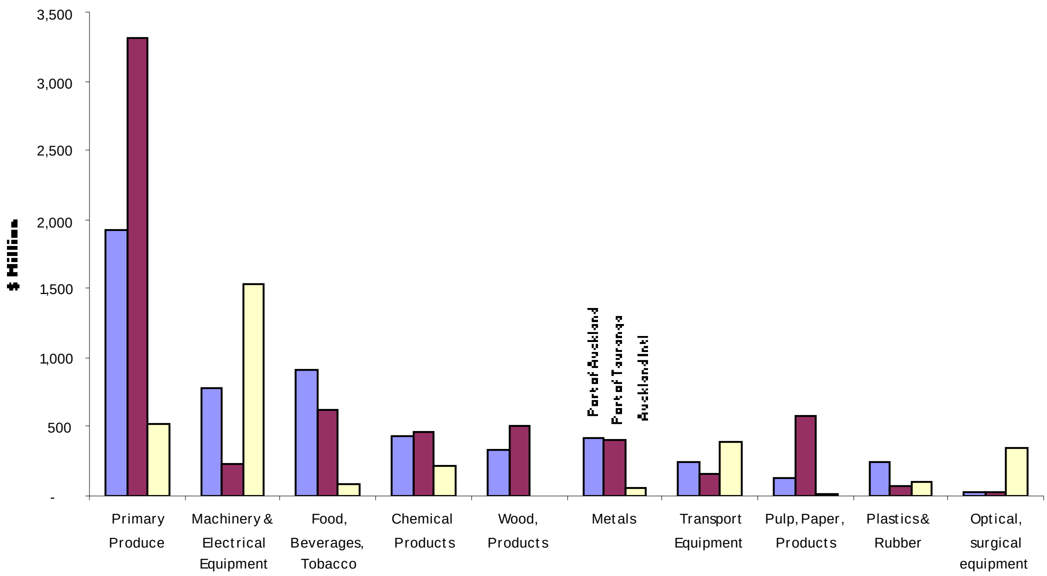
Indeed, the NNI dominates exports in the more highly processed and engineered activities generally. The region accounted for 74% of national exports of machinery and electrical equipment, 80% in the chemical products category, 71% in plastics and rubber products, 74% in transport equipment and 93% in surgical, optical and other instruments.

Figure 8: Principal Exports, Northern North Island, 2005



Within the NNI, the Port of Tauranga dominates primary product exports (Figure 9). It is the principal export point for the region's timber and pulp and paper sectors. The Port of Auckland is the principal point of export for intermediate and heavy manufactured goods, although primary products are still the principal export group at the port, denoting its important role in a wider rural catchment. Auckland International Airport dominates exports of higher value to weight items. There is a clear complementarity among these three ports.

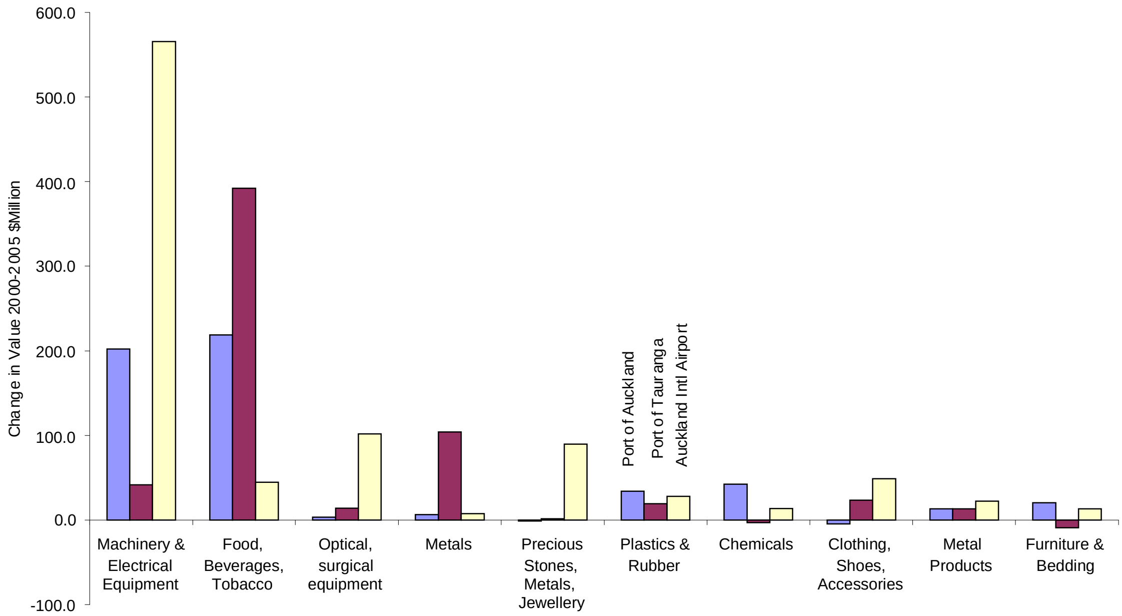
Figure 9: Principal NNI Exports by Port of Shipment



The most rapid growth in the value of exports over the past five years has been in the broad machinery and electrical equipment category (Figure 10). The fact that this has favoured Auckland international Airport ahead of the Port of Auckland suggests that the emphasis is towards the higher end of the value:weight spectrum, and potentially involves high value added products. Other high value goods that have helped push the growth of airfreight exports are the instruments and precious metals categories.

The other significant movement has been in the expansion of the food and beverage sector, driven mainly out of the Port of Tauranga. This suggests the continuing development and strong growth of the primary processing sector, presumably based on dairying and horticulture, as dry stock farming has been static in the region.

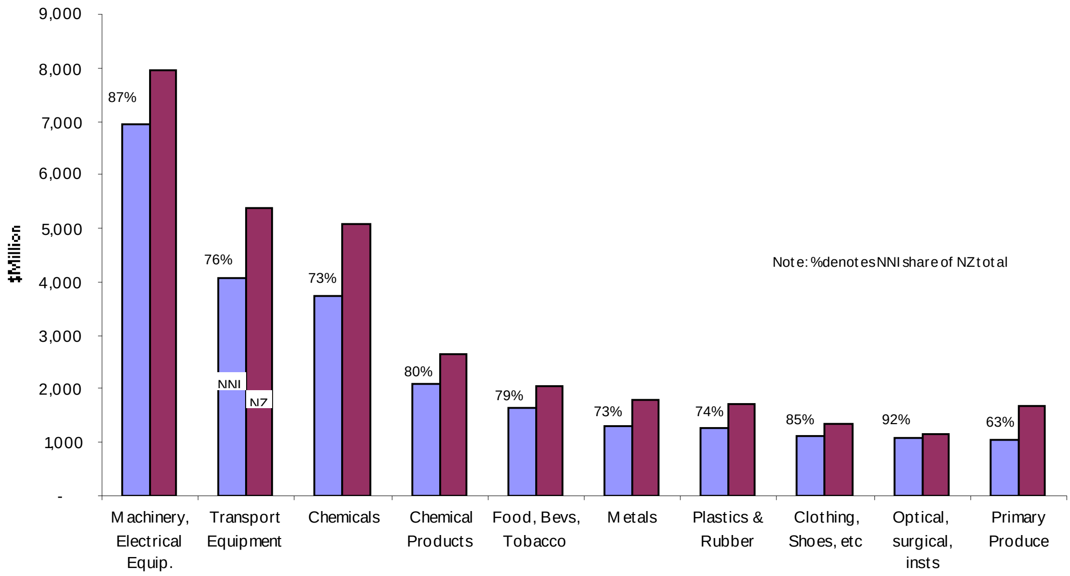
Figure 10: Changes in Exports by Port of Shipment, 2000 & 2005



3.2.2 Imports

The NNI accounts for 67% of New Zealand's imports. The largest categories of imports into the region by value dominate nationally (Figure 11).

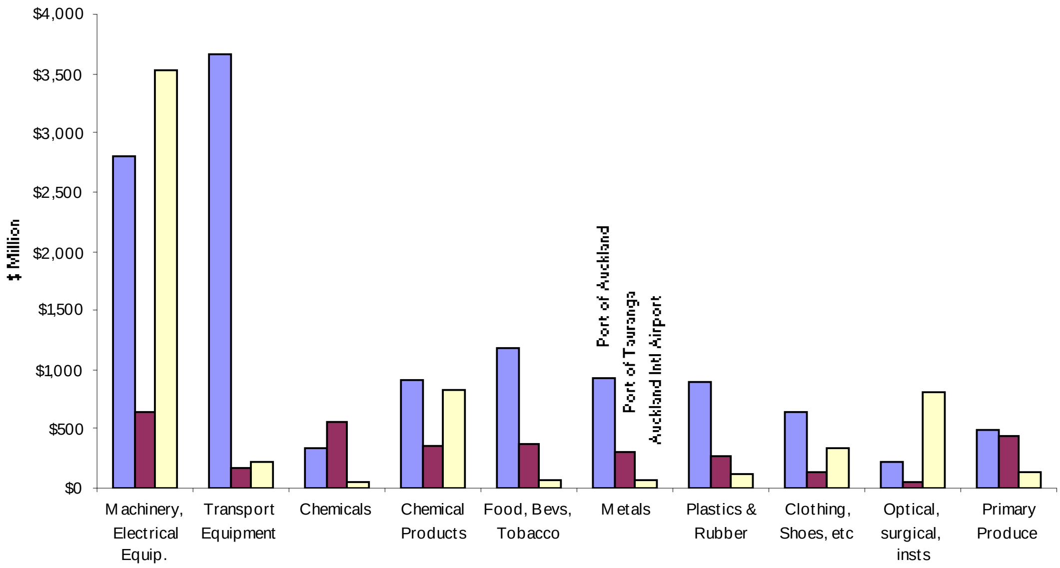
Figure 11: Principal Imports, Northern North Island, 2005



NNI ports account for 87% of New Zealand's machinery and electrical equipment imports, 85% of clothing and shoes, and 92% of surgical, and similar instruments.

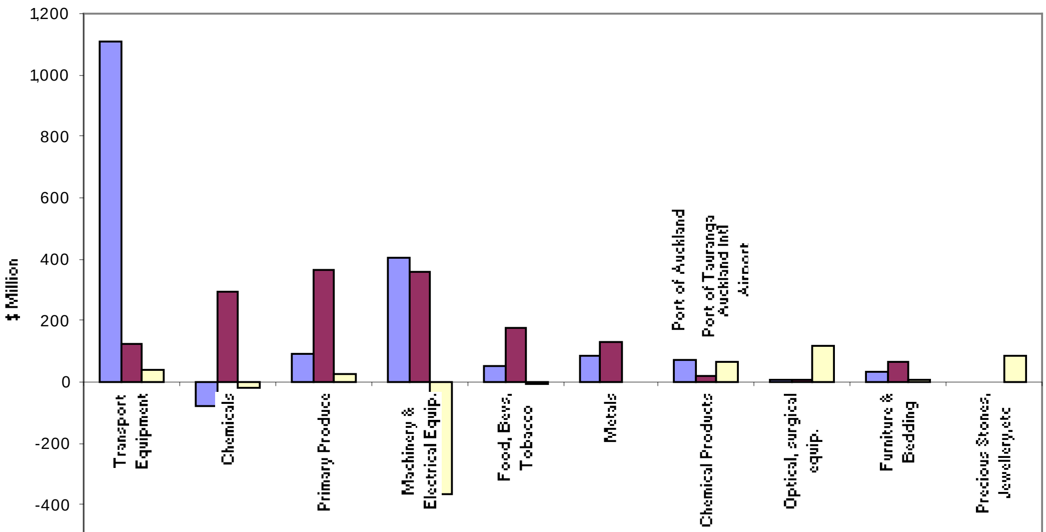
Again, there is evidence of specialisation and complementarity among the three principal ports (Figure 12). Auckland, through the port and, especially the airport, dominates the more fabricated or processed products. The Port of Tauranga is more to the fore in intermediate goods, metals, chemicals and, also primary products.

Figure 12: Principal NNI Imports by Port of Shipment



Shifts in the mix of imports have been dominated by growth in the value of the transport equipment (including cars) imported through the Port of Auckland (Figure 13). Tauranga features through the growth of intermediate and machinery imports, while the notable feature at the International Airport is the much lower level of electrical equipment imported in 2000 compared with 2005.

Figure 13: Changes in Imports by Port of Landing, 2000 & 2005



3.3 Energy

The NNI region contains a substantial share of the nation's electricity generating capacity (Table 8) covering some 29 sites. These include extensive hydro and geothermal, substantial gas and coal fired generation, with some cogeneration and landfill-based sources.

Table 8: Distribution of Electricity Generation Capacity, 2005

	MW	% NZ
Northland	11	0%
Auckland	579	6%
Waikato	3826	40%
Bay of Plenty	179	2%
Northern North Island	4690	49%
Rest of North Island	1340	14%
South Island	3454	36%
New Zealand	9484	100%

Note: Plants 10MW or greater, only

Source: Energy Datafile 2005, Ministry of Economic Development

Potential additions to capacity within the region include the refiring of 300 MW Marsden B based on coal and Ngawha II (15 MW capacity) geothermal station. Both these projects are both based in Northland. Genesis Energy has proposed a gas-fired station in the vicinity of the Kaipara in Auckland Region (up to 250 MW capacity). This locality would help overcome or defer the requirement for major cross-region transmission investment.

Additional future sources include geothermal power from Kawerau (70 MW capacity) and Poihipi geothermal near Wairakei (25 MW), and a combined cycle gas turbine addition for Huntly, which could add a further 365 MW in capacity by 2007. Altogether, planned and proposed projects could add another 1,025 MW to NNI generating capacity, a 21% increase.

Although a net consumer of electricity, these diverse sources and prospects for additional geothermal and coal-based capacity suggest a reasonably diversity and security of supply going into the future. However, energy costs are likely to increase significantly as more expensive sources, a reduced dependence on renewable energy, and the capital cost of additional capacity. Equally critical, is the investment required in renewal and expansion of network infrastructure to provide both capacity and security of supply.

The other major energy facility in the Region is New Zealand's only oil refinery based at Marsden Point, and the capacity for that to distribute product efficiently.

3.4 Education

A key element of economic infrastructure is tertiary education. Higher-level education remains a draw card of large cities and a major reason for migration of young people to them. Consideration of the available statistics confirm this to be the case, with Auckland Region, for example, accounting for 85% of NNI postgraduate enrolments.

Interestingly, the NNI accounted for 43% of the country's postgraduate and degree enrolments in 2004 (Table 9). The fact that this is below the region's population share (49%) points to the importance of universities in other centres, Palmerston

North, Wellington, Christchurch and Otago, and the reduced tendency for students to follow traditional “provincial” affiliations when moving to tertiary education.

Table 9: Distribution of Tertiary Enrolments, 2004

	Post-Graduate		Degree Level		Diploma Level		Certificate Level		Total	
	No.	**% NNI**	**No.**	**% NNI**	**No.**	**% NNI**	**No.**	**% NNI**	**No.**	**% NNI**
Northland	-		408	1%	3,651	8%	5,137	6%	9,196	4%
Auckland	13,099	85%	50,965	79%	29,251	62%	38,078	45%	131,393	62%
Waikato	2,341	15%	11,450	18%	8,494	18%	31,524	37%	53,809	25%
Bay of Plenty	46	0%	1,769	3%	5,406	12%	10,585	12%	17,806	8%
NNI	15486	100%	64,592	100%	46,802	100%	85,324	100%	212,204	
Share NZ	43%		43%		44%		31%		37%	
Total	36,037		151,415		105,431		273,779		566,662	

Source: Ministry of Education

Perhaps of greater concern is the under-representation of diploma and certificate-based enrolments in the NNI, a level of education that can be expected to have a more immediate impact on vocational skills, including retraining and labour mobility. This issue clearly requires further investigation.

Within the NNI, Northland and Bay of Plenty have reasonable representation among certificate and diploma students, and Waikato has a substantial share of the latter, well above its 18% of total population. This distribution may point to differences in economic structure and vocation composition of the workforces in the respective regions, as well as differences in educational opportunities. An absence of a full university may encourage students to attend courses offered by polytechnics and other providers.

The other implication is that outside degree level education, Auckland is not a compelling drawcard for training in the region.

However, the concentration of degree conferring institutions there and, especially, the University of Auckland, means that Auckland will continue to dominate the higher levels of education within the NNI.

3.5 Comment

While only partial, this section has provided basic information on some of the elements that make up a region’s infrastructure. On the one hand, this can be used to assess capacity. On the other, it can identify initiatives that might lead to investment in infrastructure, or more generally in connectivity, that will ensure the integration necessary for the region to function.

In particular, a sound internal transport network enables places to specialise in a way that confers benefits on the whole, and the individuals and organisations located at different points within it. Good infrastructure opens up a range of choices for investment. Tauranga both complements and offers an alternative to Auckland, particularly as a nodal centre within a significant area of primary and secondary production. A sound base for tertiary education reinforces this. Higher level education needs however, can b met at Auckland or Waikato, facilitated by satellite campuses and distance learning modes. Waikato sits at the heart of the rural industry in the region, and it too is assuming a growing role in manufacturing production. In this it benefits from good road and rail links with both Auckland and Tauranga.

The following section looks at some of the internal contrast that might strengthen – or weaken – the region defined in this way.

4 In what sense a region?

Physical geography provides the setting and infrastructure provides some of the glue that holds a region together; how it functions economically is the key to the integrity of a Region as a useful economic entity.

In economic terms, there are several ways to define regions:

1. Defined by a dominant industry, often extractive, and associated activity;
2. Specialisation in a particular process, technology, or product category such as vehicle manufacture;
3. Defined by its nodal functions – concentrating transport routes, assembly and distribution of goods;
4. Depth, diversity and inter-connection of functions, typically an urban region.

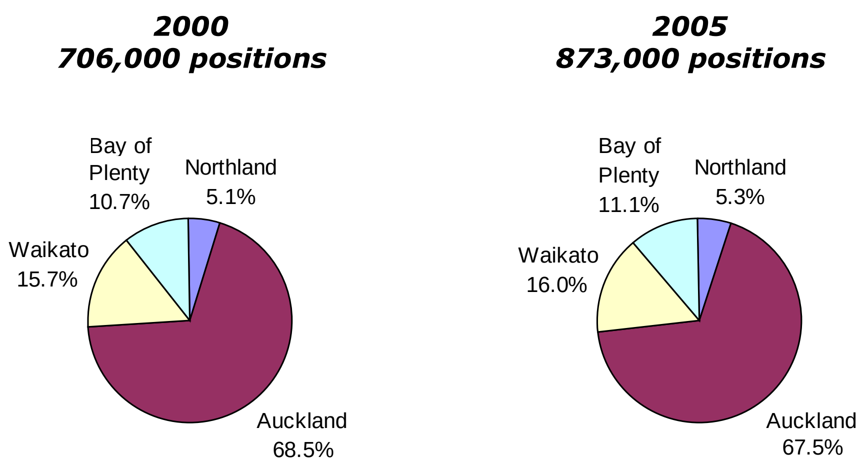
The last two categories are typically the more resilient, capable of surviving fluctuations in the fortunes of individual sectors and business cycles. The question for the NNI, then, becomes one of whether the components are complementary or competitive?

Is this simply a collection of different regions and urban centres with competitive relationships among them, or an assembly of complementary functions and centres? The import of this question comes to the fore when consideration is being given to new investments, whether internally or externally funded, in residential capacity, in production, and in services. Do the individual regions and cities compete among themselves for growth? Or, do they collaborate to ensure that investment outcomes are the most appropriate for building collective productivity and enhancing the quality of life?

4.1 Diversity

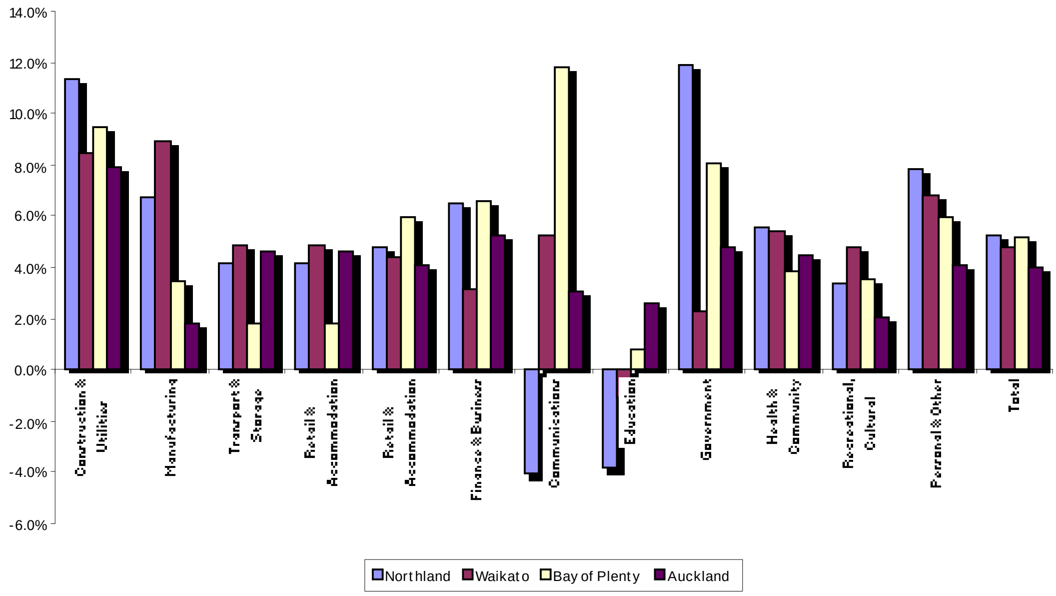
There is no doubt that Auckland remains the dominant economic centre in the NNI region (Figure 14), just as it is the primary population centre (Tables 1 and 3).

Figure 14: NNI Employment by Region 2000 and 2005



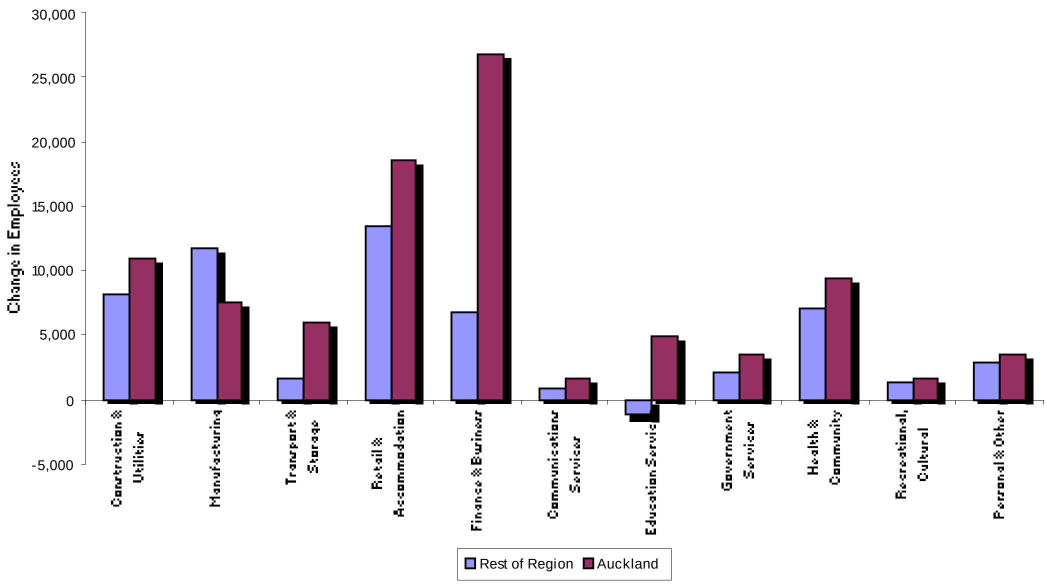
This is despite evidence that Auckland's growth rates, at least, are now being more than matched by other parts of the Region (Figure 15). Manufacturing, in particular, is growing more rapidly elsewhere (particularly in the Waikato Region and Hamilton). Auckland led growth only in the education sector, which centralised over the five years to 2005, both nationally and within the NNI region.

Figure 15: Employment Growth Rates, Northern Regions, 2000-2005



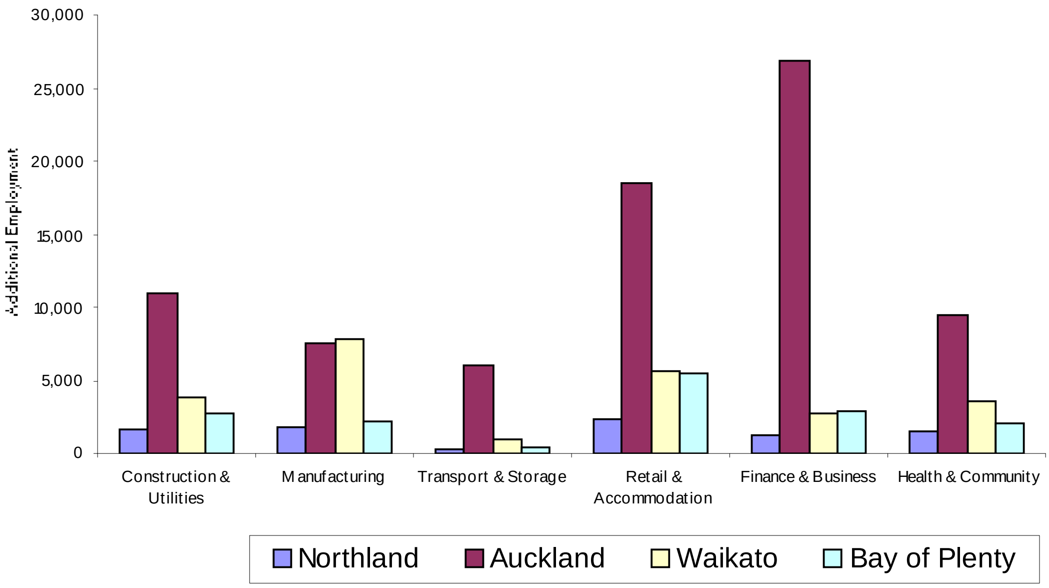
Despite lagging in growth rates, Auckland still dominates absolute employment gains (Figure 16). The biggest gains were in business and financial services and retailing, accommodation, cafes and restaurants, all reasonably distributed across the region. Finance and business services, on the other hand, concentrated further within Auckland. Manufacturing experienced greater absolute gains outside it.

Figure 16: Employment Growth, Auckland and Rest of NNI, 2000-2005



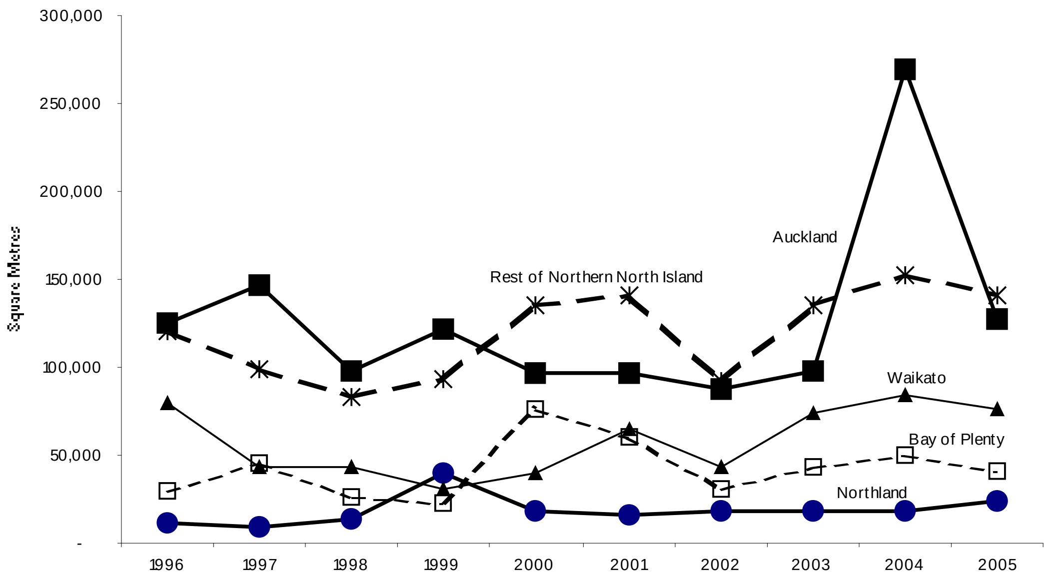
Consideration of growth among sectors within the NNI recording more than 5,000 additional positions confirms Auckland's dominance (Figure 17), but nevertheless, indicates substantial gains in the other regions, especially the Waikato. Collectively, the other three regions added 61,000 positions to Auckland's 105,000. This was a significant increase in jobs available outside Auckland, including 29,000i n the Waikato and 21,0900 in the Western Bay of Plenty.

Figure 17: Employment Growth, Key Sectors Within the NNI, 2000-2005



Manufacturing in the region showed tendency to decentralise. This is confirmed by the pattern of building consents issues for new factories over the past ten years. For much of the period a greater area has been consented outside Auckland than within it (2004 is a notable exception according to the data available).

Figure 18: Area of New Factories Consented within the Northern North Island, 1996-2005



Waikato, in particular, has attracted significant factory investment, especially since 2002.

4.2 Population Movement

The level of investment in new factory capacity and the job growth generally outside Auckland should be reflected in a reduction of the traditional movement of people away from hinterland centres to Auckland for employment.

A reconciliation of regional migration statistics suggests this may have already been the case in the five years to 2001 (Table 9). While Auckland clearly dominates the international migrant arrivals (and departures), there has been a net loss from the region due to internal migration from Auckland, presumably to the Waikato and, especially, the Bay of Plenty.

Table 10: Migration Movements Within the NNI, 1996-2001

	Domestic Migration			International Migration			Total Migration		
	Inward	Outward	Net	Inward	Outward	Net	Inward	Outward	Net
Northland	17,487	18,102	-615	4,668	6,080	-1,412	22,155	24,182	-2,027
Auckland	65,601	67,956	-2,355	131,220	99,407	31,813	196,821	167,363	29,458
Waikato	44,046	42,573	1,473	15,450	24,965	-9,515	59,496	67,538	-8,042
Bay of Plenty	34,827	26,250	8,577	9,603	12,719	-3,116	44,430	38,969	5,461

This shift does not quite reflect the order of labour market growth, indicating that while job availability is a driver of migration, within the Auckland Region lifestyle opportunities (associated with the Western Bay of Plenty and Tauranga's sunbelt and coastal character), remains a key.

Within the NNI Auckland dominates international gains. In the Waikato a net loss overseas more than offsets a domestic gain. The implication is that the demographic character of Auckland is changing more rapidly, towards a greater ethnic diversity, at least, than those of the other regions in the Northern North Island.

4.3 Comment

Brief consideration of functional differences within the NNI suggests a degree of complementarity among component regions, underpinned by some decentralisation.[7] Auckland is reinforcing its role as the higher order business centre for the region, and retains its position as the principal import and distribution centre.

However, Waikato and to a lesser extent the Bay of Plenty remain strong production centres, with the Waikato in particular assuming a higher manufacturing profile. The Port of Tauranga is increasing its regional presence and role (supported by the provision of an inland port in Auckland).

In terms of residential roles, the Bay of Plenty has long been a destination for retirees for lifestyle reasons. While the evidence has not been fully explored in this paper, there is reason to suggest that this role is increasing. Lifestyle-based residential choices will further increase the part played by the Bay of Plenty and, increasingly,

[7] Time constraints have prevented this exploratory study from pushing to the next, and potentially more meaningful, level of contrasts and complementarity among individual centres in the Region.

Northland and Waikato, in housing decisions, and see some decentralisation in population – if only through increased growth rates outside Auckland. There are signs of a tertiary education presence that will support this for younger people and families, as well as for retirees.

At the same time, Auckland is likely to remain the centre of international population gains, raising the spectre that the large centre becomes the melting pot while the smaller centres retain a stronger bicultural and European New Zealand character. Whether or not this is desirable, a more integrated view of the region and how it functions might see settlement in Auckland as potentially a preliminary step by the migrant community, towards possible relocation elsewhere in the NNI. [8]

More generally, if it can be argued that the NNI is functioning in an increasingly integrated manner through the location and investment decisions of households and organisations, the question follows regarding the capacity of its different places within it to effectively cater for different elements of its development.

Do some of the long-term infrastructure issues facing the individual regions, for example, need to be readdressed with reference to growth patterns and prospects across them? And, do some of the constraints and costs impinging on the productivity of Auckland's producers change when viewed from the perspective of opportunities in this wider region?

[8] This possibility differs from a policy which favours migrants prepared to first settle outside Auckland