



Historical performance of the Northland regional economy

**for
Northland Regional Council**

Prepared by Infometrics Ltd

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Executive summary

- Northland's GDP was \$4,470million in the year to March 2008 (in current prices) which accounted for 2.5% of New Zealand's GDP. It is among the smaller of the 16 regional economies of New Zealand.
- Northland is considerably more dependent on primary output (contributing 15.4% to GDP) than the national economy (7.1%). However, Northland is middle ranking among the regions in terms of primary industry's contribution to GDP. Secondary industry's contribution to the Northland economy (23.2%) is only slightly higher than the same measure at the national level (20.3%).
- Among broad industries manufacturing is the largest in Northland, contributing 16.6% of value added to the region's economy in the March 2008 year. Second largest is agriculture, forestry and fishing (14.7%) followed by business and property services (11.9%).
- Major industries that account for a notably larger share of the Northland economy than the same industries at the national level include agriculture, forestry & fishing, electricity, gas & water supply, government administration & defence and health & community services.
- Tourism makes a larger contribution (5.8%) to GDP in Northland than it does at the national level (5.0%). However, Northland's share of national tourism GDP is significantly lower than its share of total guest nights and total tourism expenditure due to lower average daily spend by tourists, the composition of spend and leakage of spend to other parts of the country. When compared against the 19 major industry categories tourism is in the middle in terms of contribution to GDP.
- Whangarei is by far the largest contributor to Northland's GDP, accounting for more than half (54.0%) of the region's value added (Table 3). Far North contributes slightly more than a third (34.6%) while Kaipara contributes about 11%.
- Northland's economy has grown slower (2.9%pa) than the national economy over the past ten years (3.3%) but equalled it over the past five years. If measured in terms of GDP per capita Northland's growth matches that of the national economy over the ten year period and exceeds national growth over the past five years. However, because Northland's GDP per capita growth is off a considerably smaller base than at the national level, the absolute gap between Northland's per capita GDP and national per capita GDP has widened over the ten year period. Among the three territorial authorities making up Northland, Far North was the top performer in GDP growth (3.4%pa) while Kaipara was the poorest performer (1.7%pa).
- Economic growth in Northland has been volatile; over the past ten years annual growth has varied from 5.4% in 2001 and 5.2% in 2006 to -1.4% in 2003. The contraction in 2003 was led by the agricultural sector, following floods in February.
- Industries that made the largest contribution to Northland's growth over the past ten years were other health and community services

(10.9% of the growth increment; category includes accommodation for the aged and private health services), real estate (10.6%). Together forestry and logging and wood product manufacturing contributed 17.2% of total growth. Tourism contributed 5.5% of the growth increment.

- Meat and dairy manufacturing have been strong contributors to growth in the national economy but have declined in Northland. Communication services and finance and banking have also made significantly larger contributions to growth in the national economy than to the Northland economy.
- Among industries of a reasonable size the fastest growing over the past ten years were services to finance and insurance (11.8%, which includes insurance and investment broking), local government administration (9.9%pa), wood product manufacturing (8.0%pa), other health and community services (8.0%), machinery and other equipment manufacturing (7.2%), other construction (6.7%pa, includes non-residential construction and road and bridge building) and real estate (6.7%pa).
- Retail trade is the largest employer in Northland accounting for 12.5% of total employment but only 6.5% of GDP (6.5%). Tourism accounts for 11.2% of total employment in Northland but only contributes 5.8% to total GDP.
- Other industries which make larger contributions to total employment than GDP include accommodation, cafes and restaurants (5.3% and 1.7%), other construction (8.0% and 3.6%), pre-school, primary & secondary education (6.4% and 3.1%) and other health and community services (8.8% and 5.4%).

Glossary

Gross Domestic Product

Gross domestic product (GDP) is a measure of economic output. It is equal to the sum of the value added (see below) at every stage of production (the intermediate stages) by all the industries within a region.

Nominal GDP

Nominal GDP is GDP expressed in the current prices of the period being measured.

Primary industries

The primary sector of the economy involves changing natural resources into primary products. Most products from this sector are considered raw materials for other industries. Industries in this sector include agriculture, fishing, forestry and mining and quarrying.

Productivity

Productivity measures of output from production processes, per unit of input. Labour productivity, for example, is measured as a ratio of output per labour-hour, an input.

Real GDP

Real GDP is a measure of the size of the economy adjusted for price changes and inflation. It enables measures of GDP to be meaningfully compared over time. Real GDP for a given year is the given year's nominal GDP stated in the base-year price level. In this report all GDP measures are real and are expressed in 2007/08 prices (the year to March 2008 is the base year).

Secondary Industries

The secondary sector of the economy includes those economic industries that create a finished, usable product ie manufacturing and construction. This sector generally takes the output of the primary sector and manufactures finished goods or where they are suitable for use by other businesses, for export, or sale to domestic consumers.

Tertiary Industries

The tertiary sector of economy involves the provision of services to businesses as well as final consumers. Services may involve the transport, distribution and sale of goods from producer to a consumer as may happen in wholesaling and retailing, or may involve the provision of a service, such as in banking, education and social services.

Value added

A term used to describe the contribution of an industry to gross domestic product. Value added measures the difference between total revenue of firms and the cost of raw materials, services and components.

Introduction

This report presents base line data on the size and industry composition of Northland's economy and labour market. It investigates the region's performance over the past ten years, and identifies the industries that have contributed most to the region's growth. The report is largely descriptive. The next phase of the project will investigate the drivers of growth and will provide some explanations for the findings of this report.

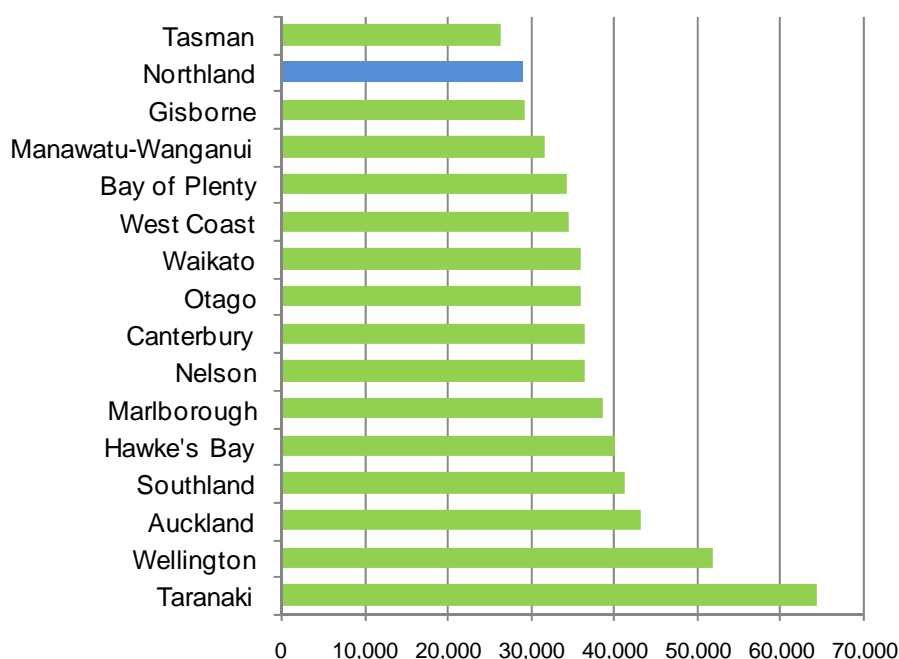
Northland's economy

This section draws on Infometrics' estimates of regional gross domestic product (GDP). The broad approach to estimating regional GDP is shown in Appendix A.

Northland's place in New Zealand

In the year to March 2008 Northland's GDP was \$4,470million in current prices or \$3,328million in 1995/96 prices¹. Northland's GDP accounted for 2.5% of New Zealand's GDP. It is among the smaller of the regional economies, although it is larger than Gisborne, Tasman, Nelson, Marlborough, West Coast and Southland. Northland GDP per capita is about a third lower than the national average and is the lowest among regions after Tasman.

Figure 1. GDP per capita by region, (year to March 2008, current prices)



Source: Infometrics and Statistics New Zealand

¹ In this report GDP levels are reported in 2007/2008 prices. However, to ensure consistency with official GDP statistics all analysis (including growth rates, industry shares etc) was conducted in constant 1995/96 prices. All official GDP statistics in New Zealand are published in 1995/96 prices.

Primary industry is important to Northland's economy, contributing 15.4% to GDP. This is significantly higher than primary industry's contribution to total New Zealand GDP (7.1%). However, Northland is middle ranking among the regions in terms of primary industry's contribution to GDP.

Regions with higher contributions include Gisborne (24.8%), Hawke's Bay (19.2%), Taranaki (24.6%), Tasman (24.2%), Marlborough (17.6%), West Coast (29.2%) and Southland (17.7%).

Secondary industry contributes 23.2% to Northland's GDP, but this is only slightly higher than the same measure at the national level (20.3%).

According to this measure Northland is again in line with the national median, well below the likes of Taranaki (40.7%) and Hawke's Bay (31.6%).

Tertiary industry is also important to Northland's economy, but less so than on a national level because of the relative importance of primary and secondary industry. Tertiary industry contributes 50.5% to Northland's GDP, compared to 63.3% for total New Zealand GDP. Once again, Northland is middle ranking among regions according to this measure, the highest being Wellington (79.5%) and Auckland (72.1%) and the lowest being Taranaki (28.3%).

Table 1. Size and structure of regional economies in New Zealand (March 2008 year)

	GDP (current prices)			Share of regional total				
	Total (\$m)	Per capita	Share of NZ total	Primary industries	Secondary industries	Tertiary industries	Other	Total
Northland	4,470	28,890	2.6%	15.4%	23.0%	50.6%	10.9%	100%
Auckland	61,001	43,120	35.4%	0.8%	17.7%	72.0%	9.5%	100%
Waikato	14,434	35,890	8.4%	13.0%	25.1%	52.3%	9.7%	100%
Bay of Plenty	9,222	34,170	5.4%	15.6%	23.4%	50.7%	10.2%	100%
Gisborne	1,345	29,250	0.8%	22.2%	20.5%	47.8%	9.5%	100%
Hawke's Bay	6,130	40,120	3.6%	19.2%	31.9%	41.0%	8.0%	100%
Taranaki	6,896	64,150	4.0%	24.5%	41.1%	28.1%	6.3%	100%
Manawatu-Wanganui	7,263	31,690	4.2%	11.4%	21.9%	57.4%	9.2%	100%
Wellington	24,569	51,860	14.3%	1.2%	11.1%	79.4%	8.3%	100%
Tasman	1,228	26,410	0.7%	24.1%	26.5%	38.5%	10.9%	100%
Nelson	1,632	36,510	0.9%	3.8%	21.5%	62.9%	11.8%	100%
Marlborough	1,713	38,490	1.0%	17.6%	30.3%	42.4%	9.6%	100%
West Coast	1,118	34,510	0.6%	29.1%	22.8%	38.9%	9.2%	100%
Canterbury	20,125	36,400	11.7%	6.9%	20.9%	62.0%	10.1%	100%
Otago	7,320	35,970	4.2%	10.2%	24.0%	56.0%	9.7%	100%
Southland	3,825	41,120	2.2%	17.7%	31.3%	43.7%	7.3%	100%
New Zealand	172,290	40,360	100.0%	7.1%	20.5%	63.2%	9.3%	100%

Source: Infometrics and Statistics New Zealand

Structure of Northland's economy

Table 2 shows value added by major industry for Northland and its three territorial authorities: Far North, Whangarei and Kaipara.

Table 2. GDP by major industries (March 2008 year)

	GDP (\$m, current prices)				New Zealand
	Far North	Whangarei	Kaipara	Northland	
Agriculture, Forestry and Fishing	306	205	184	696	12,996
Mining	11	5	7	23	1,693
Total primary industries	317	210	191	718	14,689
Manufacturing	150	502	69	721	22,533
Electricity, Gas and Water Supply	50	84	0	134	4,235
Construction	63	127	15	206	8,466
Total secondary industries	263	713	84	1,061	35,234
Wholesale Trade	23	73	11	107	11,014
Retail Trade	101	152	25	279	10,764
Accommodation, Cafes and Restaurants	47	35	7	89	3,208
Transport and Storage	34	49	5	87	6,007
Communication Services	19	18	4	42	3,969
Finance and Insurance	36	104	9	149	11,259
Property and Business Services	205	326	49	580	27,309
Government Administration and Defence	67	138	15	220	8,272
Education	75	91	17	183	6,617
Health and Community Services	93	216	15	324	9,414
Cultural and Recreational Services	17	24	4	44	4,304
Personal and Other Services	38	54	6	98	3,429
Total tertiary industries	754	1,279	168	2,201	105,567
Ownership of owner-occupied dwellings	42	68	14	124	5,729
Not Elsewhere Included	125	201	40	365	11,070
Total	1,502	2,471	497	4,470	172,290
Tourism	109	128	23	260	8,555

Source: Infometrics and Statistics New Zealand

Whangarei is by far the largest contributor to Northland's GDP, accounting for more than half (54.0%) of the region's value added (Table 3). Far North contributes slightly more than a third (34.6%) while Kaipara contributes about 11%. Whangarei is the largest contributor to Northland's GDP in most major industries. However, Far North is the largest contributor in agriculture, forestry & fishing, mining, accommodation, cafes & restaurants and communication services.

Table 3. Distribution of value added across industries and selected areas (March 2008 year)

	Share of Northland industry GDP				Share of area GDP				
	Far North	Whangarei	Kaipara	Northland	Far North	Whangarei	Kaipara	Northland	New Zealand
Agriculture, Forestry and Fishing	44.0%	29.5%	26.5%	100%	20.0%	8.0%	33.0%	14.8%	5.9%
Mining	48.5%	21.2%	30.3%	100%	0.9%	0.2%	1.7%	0.6%	1.2%
Total primary industries	44.2%	29.2%	26.6%	100%	20.9%	8.2%	34.7%	15.4%	7.1%
Manufacturing	20.9%	69.6%	9.5%	100%	11.1%	19.5%	15.8%	16.2%	14.0%
Electricity, Gas and Water Supply	37.1%	62.7%	0.3%	100%	2.4%	2.5%	0.1%	2.2%	1.7%
Construction	30.7%	61.8%	7.4%	100%	4.1%	5.2%	3.1%	4.6%	4.6%
Total secondary industries	24.8%	67.2%	8.0%	100%	17.6%	27.2%	19.0%	23.0%	20.3%
Wholesale Trade	21.7%	68.3%	10.1%	100%	2.0%	3.8%	2.8%	3.1%	7.8%
Retail Trade	36.4%	54.6%	9.0%	100%	7.0%	6.5%	5.4%	6.5%	6.2%
Accommodation, Cafes and Restaurants	52.2%	39.6%	8.1%	100%	2.7%	1.3%	1.3%	1.7%	1.5%
Transport and Storage	38.7%	55.8%	5.4%	100%	3.2%	2.8%	1.4%	2.8%	4.7%
Communication Services	45.5%	43.9%	10.6%	100%	3.4%	2.1%	2.5%	2.6%	6.0%
Finance and Insurance	24.0%	69.8%	6.2%	100%	2.6%	4.7%	2.1%	3.7%	6.8%
Property and Business Services	35.3%	56.1%	8.5%	100%	11.9%	12.2%	8.9%	11.7%	13.9%
Government Administration and Defence	30.4%	62.6%	6.9%	100%	4.5%	5.7%	3.2%	5.0%	4.6%
Education	40.9%	49.6%	9.5%	100%	4.5%	3.4%	3.3%	3.7%	3.3%
Health and Community Services	28.7%	66.7%	4.6%	100%	6.1%	8.9%	3.1%	7.3%	5.2%
Cultural and Recreational Services	37.8%	53.7%	8.5%	100%	0.9%	0.8%	0.6%	0.8%	1.9%
Personal and Other Services	39.3%	54.9%	5.8%	100%	1.9%	1.6%	0.9%	1.7%	1.4%
Total tertiary industries	34.3%	58.1%	7.6%	100%	50.6%	53.7%	35.4%	50.6%	63.3%
Ownership of owner-occupied dwellings	34.1%	55.0%	10.9%	100%	3.1%	3.1%	3.1%	3.1%	3.5%
Not Elsewhere Included	34.1%	54.9%	10.9%	100%	7.9%	7.9%	7.9%	7.9%	5.8%
Total	33.6%	55.3%	11.1%	100%	100%	100%	100%	100%	100%
Tourism	42.1%	49.2%	8.7%	100.0%	7.1%	5.2%	4.6%	5.8%	5.0%

Using a high level of classification, manufacturing is the largest of Northland's industries, contributing 16.2% of value added to the region's economy in the March 2008 year. The petrol refinery contributed \$245 million (in current prices) to the region's GDP in the year to March 2008, which is about one-third of total manufacturing in Northland.

The second largest major industry is agriculture, forestry and fishing (14.8%) followed by business and property Services (11.7%).

Major industries that account for a notably larger share of the Northland economy than at the national level include agriculture, forestry & fishing, electricity, gas & water supply, government administration & defence and health & community Services. Among the three territorial authorities making up Northland Whangarei is the most diversified and also most closely resembles the composition of the national economy. Kaipara and Far North are heavily dependent on agriculture which accounts for nearly a third of the former and a fifth of the latter's economic output.

Tourism makes a larger contribution (5.8%) to GDP in Northland than it does at the national level (5.0%). However, Northland's share of national tourism GDP is somewhat lower than its share of guest nights and expenditure. For instance in 2006 Northland's share of total national guest nights was 5.4% and while its share of total tourism expenditure was 4.7%. This indicates that expenditure per guest night in Northland was lower than the national average. In the same period Northland's share of national tourism GDP was 3.4%. Northland share of national tourism GDP is relatively small due to:

- Expenditure patterns of tourists in Northland are different to patterns in the rest of the country with Northland tourists spending a higher proportion on low value adding activities. For instance

there is very little expenditure on air travel in Northland while air transport is a relatively large (high value adding) contributor to tourism GDP in the national economy.

- Imports from other regions by tourism related businesses which results in leakage out of the Northland economy. For instance coach operators in Northland may be based in Auckland where they purchase their vehicles and most of their fuel and conduct their maintenance.

When compared against the 19 major industry categories, tourism is in the middle in terms of contribution to GDP.

Agriculture, forestry & fishing, manufacturing, property & business services and health and community services all make considerably larger contributions to GDP than tourism. Among the three territorial authorities tourism makes the largest contribution to Far North's GDP (7.1%) and the smallest to Kaipara (4.6%).

Table 4 shows GDP by detailed industry² for Northland and the three territorial authorities making up Northland while Table 5 shows the distribution of GDP across detailed industries for each of the same areas.

² The industry categories used in the detailed tables differ from the categories in the Australia - New Zealand Standard Industrial Classification. The 55 industry categories used in the detailed tables are aggregations of industry categories at level 5 on the ANZSIC classification. The 55 industries cannot be aggregated up to the 19 broad (level 1) ANZSIC industry categories as some of the 55 industries contain level 5 categories from different level 1 industries. For instance the 'Oil and Gas' category contains oil and gas extraction (part of mining) and petrol refining (part of manufacturing). The 55 industries are those used in the Northland input-output table. Data confidentiality at Statistics New Zealand influenced the construction of the 55 categories.

Table 4. GDP by detailed industry (year to March 2008, \$million current prices)

Detailed industry	Far North	Whangarei	Kaipara	Northland	New Zealand
Horticulture and fruit growing	77.4	30.3	39.5	147.2	2,474
Livestock and cropping farming	57.6	20.5	23.8	101.9	2,848
Dairy and cattle farming	53.7	74.7	80.0	208.4	2,911
Other farming	8.3	11.2	2.3	21.9	684
Services to agriculture, hunting and trapping	42.2	32.6	20.5	95.4	2,904
Forestry and logging	50.7	29.1	16.6	96.4	835
Fishing	16.4	6.3	1.7	24.4	340
Mining and quarrying	11.0	4.8	6.9	22.6	1,344
Oil and gas (including petroleum refining)	0.0	245.3	0.0	245.3	653
Meat and Dairy Manufacturing	25.8	37.1	31.4	94.3	4,174
Other food manufacturing	9.9	7.3	3.1	20.4	3,109
Beverage, malt and tobacco manufacturing	3.1	0.7	0.2	3.9	697
Textiles and apparel manufacturing	0.9	3.6	1.6	6.1	836
Wood product manufacturing	38.4	57.8	9.9	106.1	1,856
Paper and paper product manufacturing	0.0	1.0	0.1	1.0	407
Printing, publishing and recorded media	5.9	13.8	1.3	20.9	1,802
Chemicals incl fertiliser, ind chem and personal chem	22.6	0.0	9.0	31.7	319
Rubber, plastic and other chemical product man.	19.3	22.2	0.8	42.2	2,038
Non-metallic mineral product manufacturing	4.3	29.9	2.1	36.3	888
Basic metal manufacturing	0.0	0.1	0.0	0.1	384
Structural, sheet & fabricated metal product man.	5.8	24.7	1.2	31.7	1,886
Transport Equipment manufacturing	4.1	29.1	0.1	33.4	997
Machinery and other equipment manufacturing	7.8	25.2	2.0	35.0	2,350
Furniture and other manufacturing	2.5	4.8	6.0	13.3	717
Electricity generation, transmission and distribution	47.4	61.4	0.0	108.8	3,001
Water supply	2.1	5.3	0.4	7.8	649
Sewerage, drainage and waste disposal services	5.1	18.8	1.4	25.3	560
Residential Construction	13.7	20.1	3.2	37.0	1,435
Other Construction	49.5	107.1	12.1	168.6	7,031
Wholesale trade to non trade sectors	19.1	54.9	7.9	81.9	6,491
Wholesale trade to trade sector	4.1	18.4	2.9	25.5	4,523
Retail Trade	101.4	152.3	25.2	278.9	10,764
Accommodation, restaurants and bars	46.7	35.4	7.3	89.3	3,208
Road freight transport	14.5	26.7	2.3	43.6	1,979
Road passenger transport	10.0	7.7	1.9	19.6	931
Rail, water & Air Transport and Transport services	9.2	14.3	0.5	24.0	3,096
Communication services	18.9	18.2	4.4	41.5	3,969
Finance and Banking	23.4	59.1	6.0	88.6	5,775
Insurance	0.0	9.0	0.0	9.0	1,827
Services to Finance & Insurance	12.3	35.7	3.2	51.1	3,657
Real estate	124.7	132.5	36.3	293.5	8,702
Equipment hire and investors in other property	20.4	25.9	3.1	49.5	2,894
Scientific research and computer services	0.0	0.0	0.0	0.0	0
Other business services	11.7	33.1	1.0	45.7	3,804
Central government administration and defence	48.2	134.2	9.1	191.4	11,909
Local government administration	41.4	117.2	5.8	164.5	6,999
Pre-school, primary and secondary education	40.6	33.1	10.5	84.3	2,182
Other education	66.7	68.3	15.2	150.3	4,371
Hospitals and nursing homes	8.0	22.2	2.2	32.4	2,246
Other health and community services	12.3	67.1	3.1	82.5	2,860
Cultural and recreational services	80.5	149.1	11.7	241.3	6,554
Personal and other community services	16.7	23.7	3.8	44.1	4,304
Imputed rent	18.2	38.7	3.2	60.0	2,313
Unallocated	124.8	200.7	39.9	365.4	11,070
	1,502.0	2,470.8	497.1	4,469.9	172,290
Other industries					
Aquaculture	9.5	0.6	0.2	10.3	101
Tourism	109.5	127.9	22.7	260.1	8555
Marine industries	4.2	26.8	0.3	31.3	382
Information technology	1.2	3.1	0.1	4.5	1652

Source: Infometrics and Statistics New Zealand

Table 5. Distribution of GDP by detailed industry (year to March 2008, 95/96 prices)

	Far North	Whangarei	Kaipara	Northland	New Zealand
Horticulture and fruit growing	5.2%	1.2%	8.0%	3.3%	1.4%
Livestock and cropping farming	3.8%	0.8%	4.8%	2.3%	1.7%
Dairy and cattle farming	3.6%	3.0%	16.1%	4.7%	1.7%
Other farming	0.6%	0.5%	0.5%	0.5%	0.4%
Services to agriculture, hunting and trapping	2.8%	1.3%	4.1%	2.1%	1.7%
Forestry and logging	3.4%	1.2%	3.3%	2.2%	0.5%
Fishing	1.1%	0.3%	0.3%	0.5%	0.2%
Mining and quarrying	0.7%	0.2%	1.4%	0.5%	0.8%
Oil and gas (including petroleum refining)	0.0%	9.9%	0.0%	5.5%	0.4%
Meat and Dairy Manufacturing	1.7%	1.5%	6.3%	2.1%	2.4%
Other food manufacturing	0.7%	0.3%	0.6%	0.5%	1.8%
Beverage, malt and tobacco manufacturing	0.2%	0.0%	0.0%	0.1%	0.4%
Textiles and apparel manufacturing	0.1%	0.1%	0.3%	0.1%	0.5%
Wood product manufacturing	2.6%	2.3%	2.0%	2.4%	1.1%
Paper and paper product manufacturing	0.0%	0.0%	0.0%	0.0%	0.2%
Printing, publishing and recorded media	0.4%	0.6%	0.3%	0.5%	1.0%
Chemicals incl fertiliser, ind chem and personal chem	1.5%	0.0%	1.8%	0.7%	0.2%
Rubber, plastic and other chemical product man.	1.3%	0.9%	0.2%	0.9%	1.2%
Non-metallic mineral product manufacturing	0.3%	1.2%	0.4%	0.8%	0.5%
Basic metal manufacturing	0.0%	0.0%	0.0%	0.0%	0.2%
Structural, sheet & fabricated metal product man.	0.4%	1.0%	0.2%	0.7%	1.1%
Transport Equipment manufacturing	0.3%	1.2%	0.0%	0.7%	0.6%
Machinery and other equipment manufacturing	0.5%	1.0%	0.4%	0.8%	1.4%
Furniture and other manufacturing	0.2%	0.2%	1.2%	0.3%	0.4%
Electricity generation, transmission and distribution	3.2%	2.5%	0.0%	2.4%	1.7%
Water supply	0.1%	0.2%	0.1%	0.2%	0.4%
Sewerage, drainage and waste disposal services	0.3%	0.8%	0.3%	0.6%	0.3%
Residential Construction	0.9%	0.8%	0.6%	0.8%	0.8%
Other Construction	3.3%	4.3%	2.4%	3.8%	4.1%
Wholesale trade to non trade sectors	1.3%	2.2%	1.6%	1.8%	3.8%
Wholesale trade to trade sector	0.3%	0.7%	0.6%	0.6%	2.6%
Retail Trade	6.8%	6.2%	5.1%	6.2%	6.2%
Accommodation, restaurants and bars	3.1%	1.4%	1.5%	2.0%	1.9%
Road freight transport	1.0%	1.1%	0.5%	1.0%	1.1%
Road passenger transport	0.7%	0.3%	0.4%	0.4%	0.5%
Rail, water & Air Transport and Transport services	0.6%	0.6%	0.1%	0.5%	1.8%
Communication services	1.3%	0.7%	0.9%	0.9%	2.3%
Finance and Banking	1.6%	2.4%	1.2%	2.0%	3.4%
Insurance	0.0%	0.4%	0.0%	0.2%	1.1%
Services to Finance & Insurance	0.8%	1.4%	0.6%	1.1%	2.1%
Real estate	8.3%	5.4%	7.3%	6.6%	5.1%
Equipment hire and investors in other property	1.4%	1.0%	0.6%	1.1%	1.7%
Scientific research and computer services	0.0%	0.0%	0.0%	0.0%	0.0%
Other business services	0.8%	1.3%	0.2%	1.0%	2.2%
Central government administration and defence	3.2%	5.4%	1.8%	4.3%	6.9%
Local government administration	2.8%	4.7%	1.2%	3.7%	4.1%
Pre-school, primary and secondary education	2.7%	1.3%	2.1%	1.9%	1.3%
Other education	4.4%	2.8%	3.1%	3.4%	2.5%
Hospitals and nursing homes	0.5%	0.9%	0.4%	0.7%	1.3%
Other health and community services	0.8%	2.7%	0.6%	1.8%	1.7%
Cultural and recreational services	5.4%	6.0%	2.4%	5.4%	3.8%
Personal and other community services	1.1%	1.0%	0.8%	1.0%	2.5%
Imputed rent	1.2%	1.6%	0.6%	1.3%	1.3%
Unallocated	8.3%	8.1%	8.0%	8.2%	6.4%
	100.0%	100.0%	100.0%	100.0%	100.0%
Other industries					
Aquaculture	0.6%	0.0%	0.0%	0.2%	0.1%
Tourism	7.1%	5.2%	4.6%	5.8%	5.0%
Marine industries	0.3%	1.1%	0.1%	0.7%	0.2%
Information technology	0.1%	0.1%	0.0%	0.1%	1.0%

Source: Infometrics and Statistics New Zealand

Some notable points from the above tables are:

- Together forestry and logging and wood product manufacturing contribute more than 8% of Northland's GDP and more than 11% of Far North's GDP.
- Dairy and cattle farming together with meat and dairy manufacturing contribute almost 6% of Northland's GDP, and almost 20% of Kaipara's GDP.
- Other health and community services (which includes accommodation for the aged and private health services) is a major industry in Whangarei, contributing 6.1% of the territorial authority's GDP.
- The real estate industry is relatively larger in Northland (contributing 5.6% to GDP) than in the national economy (4.0%). The industry is important in each of the three territorial authorities, especially Far North (contributing 6.9% to GDP).
- Other business services (which includes legal, accounting and business management services) is an important industry in Whangarei compared to the rest of Northland, contributing 5.4% to Whangarei's GDP. However, this contribution is still smaller than that industry's contribution to the national economy.
- The non-metallic mineral product manufacturing (which includes cement and concrete product manufacturing) makes a sizeable contribution (1.6%) to Whangarei's economy.
- The marine industries³ are concentrated in Whangarei and contribute 1.2% of its GDP and contribute 0.8% to Northland's GDP.
- Aquaculture is relatively small, contributing 0.5% to Far North's GDP and 0.2% of Northland's GDP.
- Information technology is also small contributing only 0.1% to Northland's GDP.

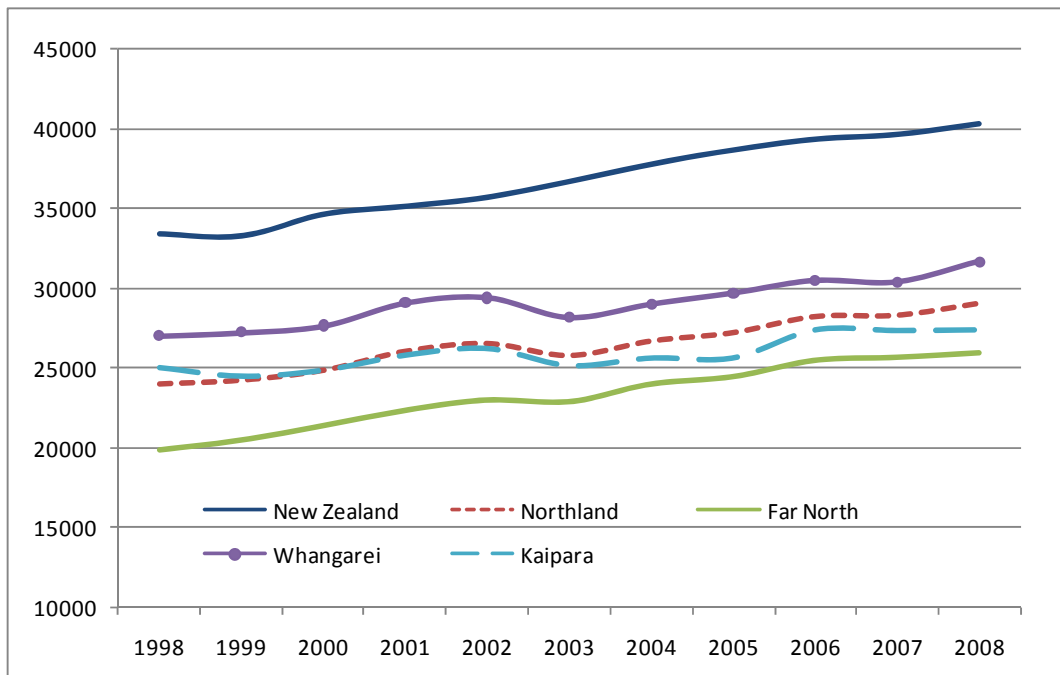
Northland's economic growth performance

Northland's economy has grown slower (2.9%pa) than the national economy over the past ten years (3.3%). However, over the past five years Northland's economic growth has matched the national economy. If economic growth is adjusted for the difference in population growth then Northlands' GDP growth matches that of the national economy over the ten year period and exceeds national growth over the past five years (Table 6).

Although per capita GDP growth in Northland has matched national growth the absolute gap between Northland and the national economy has widened as Northland's growth was off a lower base. The absolute gap in GDP per capita between Northland and the national economy rose from about \$9,300 in 1998 to \$11,500 in 2008.

³ The category 'marine industries' includes boat building, ship building and marine equipment retailing.

Figure 2. GDP per capita (2008 prices)



Source: Infometrics and Statistics New Zealand

Among the three territorial authorities making up Northland, Far North has been the top performer in GDP growth. Far North grew by 3.5%pa over the past ten years compared with 2.8% in Whangarei and 1.6% in Kaipara. In GDP per capita terms Far North's performance is even more impressive, growing by 3.2% compared with 1.6% in Whangarei, 1.2% in Kaipara and 2.1% at the national level.

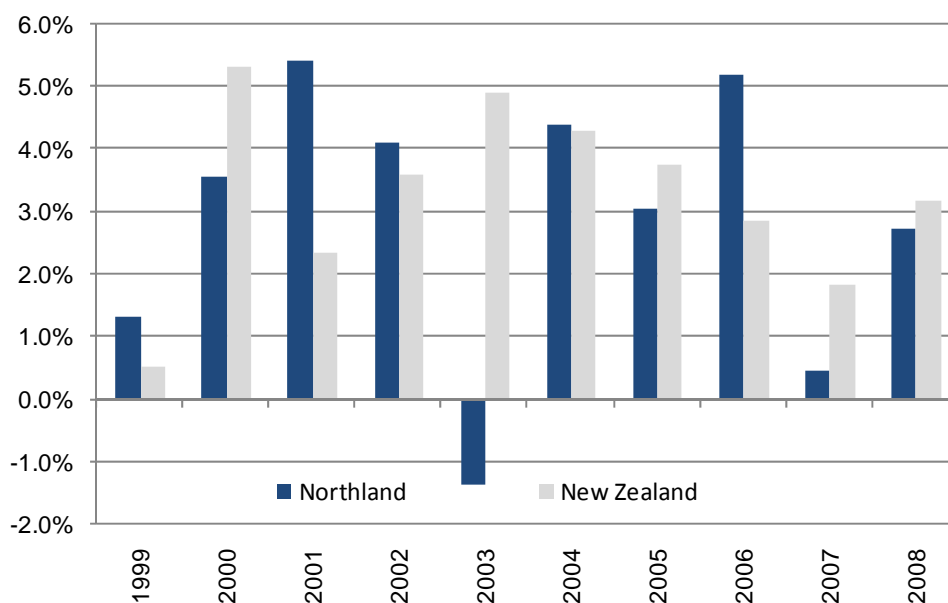
Table 6. GDP growth and GDP per capita growth by region, 1998-2008

	GDP growth			GDP per capita growth		
	98-03	03-08	98-08	98-03	03-08	98-08
Northland	2.6%	3.2%	2.9%	2.0%	2.3%	2.1%
Far North	4.0%	3.1%	3.5%	3.6%	2.7%	3.2%
Whangarei	2.1%	3.5%	2.8%	1.2%	2.0%	1.6%
Kaipara	1.4%	1.9%	1.6%	0.9%	1.5%	1.2%
Auckland	4.4%	3.4%	3.9%	2.3%	1.6%	1.9%
Waikato	3.2%	3.2%	3.2%	2.4%	2.1%	2.3%
Bay of Plenty	2.0%	3.8%	2.9%	0.8%	2.7%	1.7%
Gisborne	1.6%	1.5%	1.5%	1.9%	1.4%	1.7%
Hawke's Bay	2.5%	3.7%	3.1%	2.3%	3.3%	2.8%
Taranaki	0.6%	3.4%	2.0%	0.8%	3.3%	2.0%
Manawatu/Wanganui	1.5%	2.6%	2.1%	1.9%	2.5%	2.2%
Wellington	3.2%	2.9%	3.0%	2.4%	1.9%	2.2%
Tasman	5.1%	0.8%	2.9%	3.2%	-0.2%	1.5%
Nelson	2.8%	1.9%	2.3%	2.0%	1.4%	1.7%
Marlborough	4.7%	3.4%	4.0%	3.8%	2.1%	3.0%
West Coast	0.6%	2.2%	1.4%	1.2%	1.6%	1.4%
Canterbury	3.4%	3.7%	3.5%	2.3%	2.3%	2.3%
Otago	3.3%	3.1%	3.2%	2.9%	2.0%	2.4%
Southland	2.6%	0.7%	1.7%	3.0%	1.0%	2.0%
New Zealand	3.3%	3.2%	3.3%	2.2%	2.0%	2.1%

Source: Infometrics and Statistics New Zealand

Economic growth in Northland has been volatile; over the past ten years annual growth has varied from 5.4% in 2001 and 5.2% in 2006 to -1.4% in 2003. The latter decline in GDP occurred in a year in which the national economy grew by 4.9%. The poor performance in 2003 was related to the flooding at the end of summer. Agricultural output and related industries such as food processing, wholesale trade and transport all showed sharp declines.

Figure 3. GDP growth, Northland and New Zealand (1999-2008)



Source: Infometrics and Statistics New Zealand

Table 7. Annual GDP growth by territorial authority, 1999-2008

	Far North	Whangarei	Kaipara	Northland	New Zealand
1999	3.6%	0.5%	-1.2%	1.3%	0.5%
2000	5.9%	2.3%	2.8%	3.6%	5.3%
2001	3.4%	6.1%	8.1%	5.4%	2.4%
2002	4.9%	4.5%	0.3%	4.1%	3.6%
2003	0.1%	-2.5%	-0.6%	-1.4%	4.9%
2004	4.9%	4.5%	2.4%	4.4%	4.3%
2005	3.2%	3.5%	0.8%	3.1%	3.8%
2006	4.0%	5.4%	7.5%	5.2%	2.9%
2007	1.6%	0.0%	-0.6%	0.5%	1.8%
2008	1.9%	4.3%	-2.2%	2.7%	3.2%

Source: Infometrics and Statistics New Zealand

Table 8 shows economic growth by detailed industry and the contribution each industry has made to the region's total growth between 1998 and 2008.

Contribution to growth is a useful measure as it takes into account both the size of the industry and the rate at which it grew.

Table 8. Growth and contribution to growth by detailed industry, Northland and New Zealand (1998-2008)

	Northland					New Zealand				
	Share of total GDP 2008	Annual average % change 98-03	Annual average % change 03-08	Annual average % change 98-08	Contribution to growth 98-08	Share of total GDP 2008	Annual average % change 98-03	Annual average % change 03-08	Annual average % change 98-08	Contribution to growth 98-08
Horticulture and fruit growing	2.4%	-1.2%	0.1%	-0.5%	-0.5%	1.0%	-1.7%	3.0%	0.6%	0.2%
Livestock and cropping farming	1.7%	-4.4%	-2.8%	-3.6%	-3.0%	1.1%	-1.8%	-0.5%	-1.2%	-0.5%
Dairy and cattle farming	3.4%	3.9%	-1.0%	1.4%	1.8%	1.2%	6.3%	0.6%	3.5%	1.2%
Other farming	0.4%	-8.2%	7.1%	-0.8%	-0.1%	0.3%	-1.1%	-1.4%	-1.2%	-0.1%
Services to agriculture, hunting and trapping	1.5%	-5.3%	8.5%	1.4%	0.8%	1.2%	-2.1%	12.1%	4.8%	1.6%
Forestry and logging	5.1%	13.1%	-2.1%	5.2%	8.1%	1.1%	5.0%	-1.3%	1.8%	0.6%
Fishing	0.4%	-13.1%	-0.3%	-6.9%	-1.8%	0.1%	-3.9%	-2.5%	-3.2%	-0.2%
Mining and quarrying	0.6%	1.0%	-5.9%	-2.5%	-0.7%	0.9%	-0.9%	2.9%	1.0%	0.3%
Oil and gas (including petroleum refining)	3.9%	-2.3%	-1.8%	-2.0%	-3.6%	0.4%	-5.6%	4.6%	-0.6%	-0.1%
Meat and Dairy Manufacturing	2.4%	-4.6%	1.1%	-1.8%	-1.9%	2.6%	4.8%	2.2%	3.5%	2.7%
Other food manufacturing	0.5%	-1.4%	-0.7%	-1.0%	-0.2%	1.9%	1.1%	1.1%	1.1%	0.7%
Beverage, malt and tobacco manufacturing	0.1%	11.8%	15.8%	13.8%	0.3%	0.4%	10.8%	3.0%	6.8%	0.8%
Textiles and apparel manufacturing	0.2%	-12.6%	7.5%	-3.0%	-0.2%	0.5%	-2.7%	-2.4%	-2.5%	-0.6%
Wood product manufacturing	3.2%	15.4%	5.4%	10.3%	8.1%	1.4%	5.1%	1.3%	3.2%	1.3%
Paper and paper product manufacturing	0.0%	4.4%	14.9%	9.5%	0.1%	0.3%	-2.3%	-4.8%	-3.5%	-0.5%
Printing, publishing and recorded media	0.5%	-0.4%	6.2%	2.8%	0.5%	1.0%	-0.9%	0.9%	0.0%	0.0%
Chemicals incl fertiliser, ind chem and personal chem	0.6%	1.3%	8.6%	4.9%	1.0%	0.2%	3.7%	-10.5%	-3.6%	-0.3%
Rubber, plastic and other chemical product man.	0.9%	38.0%	17.6%	27.4%	3.2%	1.0%	1.2%	-0.4%	0.4%	0.1%
Non-metallic mineral product manufacturing	1.1%	-0.8%	11.9%	5.3%	1.8%	0.6%	2.1%	4.5%	3.3%	0.6%
Basic metal manufacturing	0.0%	48.2%	-27.6%	3.6%	0.0%	0.3%	2.2%	-3.3%	-0.6%	-0.1%
Structural, sheet & fabricated metal product man.	0.9%	6.4%	4.3%	5.4%	1.5%	1.3%	4.9%	0.9%	2.8%	1.2%
Transport Equipment Manufacturing	0.8%	5.7%	2.9%	4.3%	1.1%	0.6%	2.7%	0.3%	1.5%	0.3%
Machinery and other equipment manufacturing	0.9%	12.7%	3.6%	8.0%	1.9%	1.4%	2.7%	1.5%	2.1%	1.0%
Furniture and other manufacturing	0.3%	11.7%	-1.8%	4.7%	0.4%	0.4%	3.1%	-1.5%	0.8%	0.1%
Electricity generation, transmission and distribution	1.8%	1.5%	3.5%	2.5%	1.6%	1.2%	-0.2%	0.6%	0.2%	0.1%
Water supply	0.1%	21.2%	2.6%	11.5%	0.3%	0.3%	8.5%	-0.4%	3.9%	0.3%
Sewerage, drainage and waste disposal services	0.4%	10.1%	13.9%	12.0%	1.1%	0.2%	6.0%	-1.6%	2.1%	0.2%
Residential Construction	0.8%	0.5%	9.0%	4.7%	1.2%	0.8%	3.6%	8.5%	6.0%	1.3%
Other Construction	3.8%	5.9%	4.8%	5.3%	6.2%	3.8%	3.7%	3.3%	3.5%	4.1%
Wholesale trade to non trade sectors	2.4%	0.8%	4.8%	2.8%	2.3%	4.6%	2.9%	4.2%	3.5%	4.9%
Wholesale trade to trade sector	0.7%	0.4%	-3.3%	-1.5%	-0.5%	3.2%	4.1%	2.0%	3.0%	3.0%
Retail Trade	6.5%	2.3%	3.8%	3.0%	6.9%	6.2%	3.4%	5.1%	4.3%	7.7%
Accommodation, restaurants and bars	1.7%	5.1%	0.2%	2.6%	1.6%	1.5%	2.8%	2.3%	2.6%	1.3%
Road freight transport	1.4%	9.3%	1.8%	5.5%	2.3%	1.6%	4.8%	2.5%	3.7%	1.7%
Road passenger transport	0.6%	2.3%	-2.5%	-0.1%	0.0%	0.7%	4.1%	2.4%	3.3%	0.7%
Rail, water & Air Transport and Transport services	0.8%	1.9%	-0.9%	0.5%	0.2%	2.4%	2.1%	3.8%	2.9%	2.2%
Communication services	2.6%	1.3%	3.1%	2.2%	2.0%	6.0%	11.1%	5.3%	8.1%	11.9%
Finance and Banking	2.2%	-5.9%	12.5%	2.9%	2.2%	3.5%	2.1%	6.1%	4.1%	4.2%
Insurance	0.2%	0.7%	5.0%	2.8%	0.2%	1.1%	3.1%	3.6%	3.4%	1.1%
Services to Finance & Insurance	1.3%	20.8%	3.2%	11.6%	3.4%	2.2%	11.4%	5.6%	8.5%	4.5%
Real estate	5.6%	5.3%	9.4%	7.3%	11.4%	4.0%	7.3%	3.3%	5.3%	5.9%
Equipment hire and investors in other property	0.9%	-5.0%	1.2%	-1.9%	-0.8%	1.3%	0.0%	2.1%	1.0%	0.5%
Scientific research and computer services	1.0%	5.6%	10.9%	8.2%	2.2%	2.1%	7.7%	6.3%	7.0%	3.7%
Other business services	4.2%	6.1%	7.6%	6.8%	8.3%	6.4%	4.2%	4.5%	4.3%	8.1%
Central government administration and defence	3.5%	-1.0%	9.8%	4.3%	4.9%	3.7%	2.0%	5.9%	3.9%	4.3%
Local government administration	1.9%	3.1%	7.3%	5.2%	3.1%	1.2%	0.9%	5.7%	3.3%	1.2%
Pre-school, primary and secondary education	3.1%	1.1%	-0.4%	0.3%	0.4%	2.2%	3.5%	1.4%	2.5%	1.7%
Other education	0.7%	1.0%	2.8%	1.9%	0.5%	1.1%	3.2%	-1.0%	1.1%	0.4%
Hospitals and nursing homes	1.9%	-0.2%	6.0%	2.8%	1.8%	1.6%	0.1%	2.9%	1.5%	0.8%
Other health and community services	5.4%	11.6%	3.7%	7.6%	11.5%	3.6%	5.9%	4.9%	5.4%	5.4%
Cultural and recreational services	0.8%	5.0%	5.0%	5.0%	1.2%	1.9%	4.7%	3.8%	4.2%	2.4%
Personal and other community services	1.0%	6.1%	3.5%	4.8%	1.5%	1.0%	5.1%	3.1%	4.1%	1.1%
Ownership of owner-occupied dwellings	7.9%	0.2%	1.4%	0.8%	2.4%	5.8%	0.2%	1.9%	1.0%	2.1%
Unallocated	3.1%	2.7%	1.5%	2.1%	2.3%	3.5%	2.9%	1.8%	2.4%	2.6%
Total	100.0%	2.6%	3.2%	2.9%	100.0%	100.0%	3.3%	3.2%	3.3%	100.0%
Other industries										
Aquaculture	0.2%	-5.3%	-4.5%	-4.9%	-0.5%	0.0%	-4.8%	-0.1%	-2.5%	0.0%
Tourism	5.8%	2.4%	2.3%	2.3%	4.8%	4.1%	2.9%	2.9%	2.9%	3.7%
Marine industries	0.8%	7.9%	2.1%	5.0%	1.2%	0.2%	9.4%	0.1%	4.7%	0.3%
Information technology	0.1%	27.5%	7.8%	17.2%	0.3%	0.9%	15.4%	6.1%	10.7%	2.1%

Source: Infometrics and Statistics New Zealand

Looking at the industries that have contributed to the total growth in Northland over the past ten years a number of points arise:

- Other health and community services (which includes accommodation for the aged and private health services) was the single largest contributor (11.5%) to total growth in Northland over the past ten years. This was closely followed by real estate (11.4%).
- Together forestry and logging and wood product manufacturing contributed 16.2% of total growth. Tourism contributed 4.8%.
- Other major contributors to growth included retail trade (6.9%) other construction (6.2%, which includes non-residential construction, road and bridge building and various services to construction such as electrical and plumbing services), other business services (which includes legal, accounting and business management services).
- Tourism contributed 4.8% to total growth.
- The industries that made the largest negative contribution to growth were livestock and cropping farming (-3.0%) and meat and dairy manufacturing (-1.9%). A negative contribution to growth means that the overall impact of the industry was to drag down the region's economy. All industries that declined over the period under review made a negative contribution to growth.

Looking at the annual growth of individual industries the following points arise:

- Among industries of a reasonable size (ie account for more than 1% of the region's GDP) the fastest growing industries (measured using trend growth) over the past ten years were services to finance and insurance (13.8%, which includes insurance and investment broking), wood product manufacturing (10.3%pa), other health and community services (7.6%), machinery and other equipment manufacturing (8.0%), real estate (7.3%pa) and other business services (6.8%).
- Relatively few industries of any significance in Northland declined over the ten year period. Industries showing the largest decline were livestock and cropping farming (-3.6%), oil and gas (-2.0%), meat and dairy manufacturing (-1.8%pa), and horticulture and fruit growing (-0.5%).

Comparing industry performance in Northland and the economy as a whole the following points arise:

- Meat and dairy manufacturing have been strong contributors to growth in the national economy but have declined in Northland. Communication services and finance and banking have also made significantly larger contributions to growth in the national economy than to the Northland economy.
- Industries that have made substantially larger contributions to Northland than to the national economy include forestry and

logging (8.1% to Northland, 0.6% to New Zealand), wood product manufacturing (8.1% and 1.3%), real estate (11.4% and 5.5%), local government administration (3.1% and 1.2%) and other health and community services (11.5% and 4.7%).

Table 9 shows estimates of growth and contribution to growth by detailed industry for the three territorial authorities making up Northland.

Table 9. Growth and contribution to growth by detailed industry by territorial authority (1998-2008)

	Far North					Whangarei					Kaipara				
	Share of total GDP 2008	Annual average % change			Contribution to growth 98-08	Share of total GDP 2008	Annual average % change			Contribution to growth 98-08	Share of total GDP 2008	Annual average % change			Contribution to growth 98-08
		98-03	03-08	98-08		98-03	03-08	98-08		98-03	03-08	98-08		98-08	
Horticulture and fruit growing	3.7%	0.9%	-0.4%	0.2%	0.3%	0.9%	-4.8%	0.4%	-2.2%	-1.0%	5.9%	-2.2%	1.1%	-0.6%	-2.1%
Livestock and cropping farming	2.7%	-1.4%	-4.4%	-2.9%	-3.1%	0.6%	-10.6%	-0.8%	-5.8%	-2.2%	3.5%	-5.8%	-0.2%	-3.0%	-8.1%
Dairy and cattle farming	2.6%	6.0%	-0.7%	2.6%	1.9%	2.2%	5.3%	-2.0%	1.6%	1.4%	11.9%	1.3%	-0.3%	0.5%	3.6%
Other farming	0.4%	-7.9%	4.2%	-2.1%	-0.3%	0.3%	-6.0%	13.6%	3.3%	0.4%	0.3%	-12.6%	-3.6%	-8.2%	-2.9%
Services to agriculture, hunting and trapping	2.0%	-1.2%	6.8%	2.7%	1.6%	1.0%	-9.1%	6.3%	-1.7%	-0.8%	3.1%	-6.1%	17.9%	5.2%	7.7%
Forestry and logging	7.8%	11.5%	0.4%	5.8%	11.1%	2.8%	18.6%	-3.5%	7.0%	5.9%	8.0%	9.6%	-6.2%	1.4%	6.4%
Fishing	0.8%	-9.1%	2.5%	-3%	-1.2%	0.2%	-21.1%	-1.0%	-12%	-2.1%	0.3%	-5.6%	-14.5%	-10%	-3.2%
Mining and quarrying	0.9%	0.5%	-7.8%	-3.7%	-1.4%	0.2%	-6.0%	-4.5%	-5.3%	-0.8%	1.7%	10.9%	-3.3%	3.5%	3.3%
Oil and gas (including petroleum refining)	0.0%	-	-	-	0.0%	7.1%	-2.3%	-1.8%	-2.0%	-7.1%	0.0%	-	-	-	0.0%
Meat and Dairy Manufacturing	1.9%	-2.7%	2.2%	-0.3%	-0.2%	1.7%	-8.8%	2.5%	-3.3%	-3.0%	7.2%	-0.7%	-1.1%	-0.9%	-4.5%
Other food manufacturing	0.7%	-5.4%	12.9%	3.3%	0.7%	0.3%	0.4%	-12.6%	-6.3%	-1.3%	0.7%	-1.5%	19.1%	8.3%	2.5%
Beverage, malt and tobacco manufacturing	0.2%	21.3%	17.7%	19.5%	0.6%	0.0%	-10.1%	15.4%	1.8%	0.0%	0.0%	-	-2.2%	-	0.3%
Textiles and apparel manufacturing	0.1%	-2.1%	2.3%	0.1%	0.0%	0.2%	-14.9%	5.7%	-5.1%	-0.5%	0.4%	-11.2%	17.0%	1.9%	0.4%
Wood product manufacturing	3.4%	12.9%	1.2%	6.9%	5.5%	3.2%	18.4%	8.4%	13.3%	9.8%	2.7%	13.9%	7.5%	10.6%	11.0%
Paper and paper product manufacturing	0.0%	-	-	-	0.0%	0.1%	-3.7%	22.8%	8.7%	0.1%	0.0%	0.0%	-16.3%	-	0.1%
Printing, publishing and recorded media	0.4%	13.4%	-8.2%	2.0%	0.2%	0.6%	-10.7%	17.1%	2.3%	0.5%	0.3%	33.1%	39.0%	36.0%	1.6%
Chemicals incl fertiliser, ind chem and personal chem	1.4%	34.4%	2.6%	17.4%	3.6%	0.0%	2.4%	-12.0%	-5.0%	0.0%	1.7%	-42.0%	55.6%	-5.0%	-7.2%
Rubber, plastic and other chemical product man.	1.2%	100.1%	6.7%	46.1%	3.7%	0.8%	20.7%	35.4%	27.8%	3.3%	0.2%	-62.4%	137.2%	-5.5%	-0.7%
Non-metallic mineral product manufacturing	0.4%	-1.9%	11.6%	4.6%	0.5%	1.6%	-0.9%	12.6%	5.6%	2.9%	0.6%	2.4%	4.5%	3.5%	1.0%
Basic metal manufacturing	0.0%	19.6%	-100%	-100%	0.0%	0.0%	62.6%	-25.0%	10.5%	0.0%	0.0%	-	-	-	0.0%
Structural, sheet & fabricated metal product man.	0.5%	10.8%	5.1%	7.9%	0.8%	1.3%	5.6%	4.7%	5.1%	2.1%	0.3%	5.8%	-4.0%	0.7%	0.1%
Transport Equipment manufacturing	0.3%	2.2%	-4.2%	-1.1%	-0.1%	1.3%	6.1%	4.7%	5.4%	2.3%	0.0%	43.8%	-29.6%	0.6%	0.0%
Machinery and other equipment manufacturing	0.6%	11.0%	5.4%	8.1%	1.0%	1.1%	13.2%	3.1%	8.0%	2.6%	0.5%	11.8%	3.6%	7.6%	1.5%
Furniture and other manufacturing	0.2%	17.3%	-2.4%	7.0%	0.3%	0.2%	7.5%	-6.3%	0.4%	0.0%	1.2%	15.5%	3.3%	9.2%	4.5%
Electricity generation, transmission and distribution	2.3%	5.2%	8.2%	6.7%	3.6%	1.8%	3.8%	1.3%	2.6%	1.8%	0.0%	-31.3%	-100%	-100%	-11.9%
Water supply	0.1%	36.5%	14.5%	25.0%	0.3%	0.2%	21.4%	-0.3%	10.0%	0.4%	0.1%	1.4%	-0.3%	0.5%	0.0%
Sewerage, drainage and waste disposal services	0.3%	24.4%	5.2%	14.4%	0.6%	0.6%	5.9%	16.1%	10.9%	1.6%	0.2%	14.5%	39.1%	26.2%	1.2%
Residential Construction	0.9%	0.7%	10.8%	5.6%	1.2%	0.8%	1.0%	7.8%	4.3%	1.2%	0.7%	-2.9%	9.4%	3.1%	1.1%
Other Construction	3.2%	2.0%	6.8%	4.4%	3.7%	4.4%	6.8%	4.2%	5.5%	7.8%	2.5%	14.6%	2.2%	8.2%	8.6%
Wholesale trade to non trade sectors	1.6%	1.8%	4.7%	3.2%	1.5%	2.9%	0.9%	4.0%	2.4%	2.6%	2.1%	-3.5%	12.5%	4.2%	4.4%
Wholesale trade to trade sector	0.3%	2.8%	3.1%	3.0%	0.3%	1.0%	-0.2%	-3.9%	-2.0%	-1.0%	0.8%	1.3%	-6.6%	-2.8%	-1.6%
Retail Trade	7.0%	3.2%	4.7%	4.0%	7.4%	6.5%	1.8%	3.3%	2.6%	6.3%	5.4%	2.4%	2.7%	2.5%	7.6%
Accommodation, restaurants and bars	2.7%	5.1%	-0.2%	2.4%	1.9%	1.3%	5.0%	1.2%	3.1%	1.4%	1.3%	6.0%	-1.4%	2.2%	1.6%
Road freight transport	1.4%	13.3%	6.7%	10.0%	2.8%	1.6%	8.4%	0.0%	4.1%	2.2%	0.7%	4.3%	-2.2%	1.0%	0.4%
Road passenger transport	0.9%	0.3%	1.0%	0.6%	0.2%	0.4%	7.0%	-7.2%	-0.3%	-0.1%	0.6%	-8.6%	3.5%	-2.7%	-1.1%
Rail, water & Air Transport and Transport services	0.9%	13.1%	-0.6%	6.0%	1.3%	0.8%	-1.7%	-1.5%	-1.6%	-0.6%	0.1%	-24.6%	18.0%	-5.7%	-0.7%
Communication services	3.4%	18.8%	19.1%	18.9%	9.3%	2.1%	-2.4%	-7.0%	-4.7%	-5.5%	2.5%	23.2%	24.6%	23.9%	14.0%
Finance and Banking	1.7%	-8.1%	10.3%	0.7%	0.4%	2.7%	-4.6%	13.3%	4.0%	3.7%	1.4%	-7.2%	14.1%	2.9%	2.1%
Insurance	0.0%	-9.6%	-100%	-100%	-0.1%	0.4%	1.0%	5.4%	3.2%	0.5%	0.0%	-	-	-	0.0%
Services to Finance & Insurance	0.9%	22.6%	13.4%	17.9%	2.4%	1.6%	21.0%	1.5%	10.8%	4.5%	0.7%	16.6%	-4.6%	5.4%	1.9%
Real estate	6.9%	5.2%	6.3%	5.8%	9.8%	4.6%	1.9%	12.9%	7.3%	10.0%	6.3%	24.4%	9.2%	16.6%	31.3%
Equipment hire and investors in other property	1.1%	-5.4%	-2.5%	-4.0%	-1.9%	0.9%	-6.8%	5.1%	-1.0%	-0.4%	0.5%	30.5%	0.4%	14.5%	2.6%
Scientific research and computer services	0.8%	5.4%	15.9%	10.5%	1.6%	1.3%	6.5%	9.6%	8.0%	3.1%	0.2%	-8.3%	5.3%	-1.8%	-0.2%
Other business services	3.1%	5.0%	5.4%	5.2%	4.1%	5.4%	6.4%	8.2%	7.3%	11.8%	1.8%	8.0%	13.1%	10.6%	7.4%
Central government administration and defence	2.5%	1.2%	11.8%	6.4%	3.8%	4.7%	-1.7%	9.5%	3.8%	6.3%	1.1%	0.6%	4.3%	2.4%	1.6%
Local government administration	2.7%	2.1%	10.9%	6.4%	4.2%	1.4%	2.7%	3.4%	3.0%	1.5%	2.2%	9.2%	8.5%	8.8%	8.0%
Pre-school, primary and secondary education	4.0%	-0.5%	-0.6%	-0.5%	-0.7%	2.5%	2.7%	0.5%	1.6%	1.6%	2.8%	1.5%	-3.3%	-0.9%	-1.8%
Other education	0.5%	0.0%	0.5%	0.3%	0.0%	0.8%	1.9%	2.4%	2.2%	0.7%	0.4%	-8.8%	23.3%	6.0%	1.1%
Hospitals and nursing homes	0.8%	-9.1%	7.1%	-1.4%	-0.4%	2.8%	2.6%	6.0%	4.3%	4.1%	0.6%	-7.9%	1.7%	-3.3%	-1.6%
Other health and community services	5.3%	13.2%	2.6%	7.8%	9.3%	6.1%	11.1%	4.7%	7.8%	14.0%	2.4%	8.6%	0.7%	4.6%	5.6%
Cultural and recreational services	0.9%	2.9%	3.2%	3.0%	0.8%	0.8%	5.7%	6.5%	6.1%	1.5%	0.6%	13.3%	5.0%	9.0%	2.3%
Personal and other community services	0.9%	8.7%	0.4%	4.5%	1.1%	1.2%	5.4%	4.8%	5.1%	2.0%	0.5%	-1.5%	7.9%	3.1%	0.8%
Imputed rent	7.9%	1.6%	1.6%	1.6%	3.8%	7.9%	-0.4%	1.6%	0.6%	1.9%	7.9%	-0.9%	0.3%	-0.3%	-1.7%
Unallocated	3.1%	4.1%	1.6%	2.8%	2.5%	3.1%	2.0%	1.7%	1.8%	2.2%	3.1%	1.6%	0.2%	0.9%	1.7%
Total	100%	4.0%	3.3%	3.7%	100.0%	100%	2.0%	3.3%	2.7%	100.0%	100%	1.5%	2.0%	1.7%	100.0%
Other industry groupings															
Aquaculture	0.5%	-5.8%	-2.2%	-4.0%	-0.8%	0.0%	-3.8%	26.4%	10.2%	0.0%	0.0%	-2.6%	-38.3%	-22.5%	-2.3%
Tourism	7.1%	3.4%	1.7%	2.6%	5.3%	5.2%	1.5%	2.7%	2.1%	4.2%	4.6%	2.0%	1.9%	1.9%	5.0%
Marine industries	0.3%	4.6%	-6.7%	-1.2%	-0.1%	1.2%	8.7%	4.0%	6.3%	2.4%	0.1%	-	10.7%	-	0.3%
Information technology	0.1%	40.1%	4.1%	20.8%	0.2%	0.1%	25.5%	10.3%	17.7%	0.4%	0.0%	8.0%	-6.2%	0.7%	0.0%

Source: Infometrics and Statistics New Zealand

Gross output (turnover)

This section gives estimates of gross output or turnover by industry to give an indication of the scale of economic activity as opposed to the

scale of value adding which GDP provides. Table 10 shows estimates of gross output and GDP expressed as a percentage of gross output. Speaking generally, the service industries have higher GDP as percentage of gross output than primary and secondary industries.

Table 10. GDP and gross output by industry, 2008 (current prices)

Detailed industry	GDP (\$m, current prices)	Gross output (\$m, current prices)	Share of total gross output	GDP as % of gross output
Horticulture and fruit growing	147.2	331.0	3.5%	44%
Livestock and cropping farming	101.9	290.5	3.1%	35%
Dairy and cattle farming	208.4	480.3	5.1%	43%
Other farming	21.9	79.3	0.8%	28%
Services to agriculture, hunting and trapping	95.4	205.3	2.2%	46%
Forestry and logging	96.4	307.8	3.2%	31%
Fishing	24.4	91.6	1.0%	27%
Mining and quarrying	22.6	53.2	0.6%	43%
Oil and gas	245.3	489.5	5.2%	50%
Meat and Dairy Manufacturing	94.3	450.9	4.8%	21%
Other food manufacturing	20.4	69.1	0.7%	29%
Beverage, malt and tobacco manufacturing	3.9	7.0	0.1%	56%
Textiles and apparel manufacturing	6.1	17.4	0.2%	35%
Wood product manufacturing	106.1	341.0	3.6%	31%
Paper and paper product manufacturing	1.0	3.0	0.0%	34%
Printing, publishing and recorded media	20.9	48.9	0.5%	43%
Chemicals incl fertiliser, ind chem and personal chem	31.7	105.0	1.1%	30%
Rubber, plastic and other chemical product man.	42.2	130.4	1.4%	32%
Non-metallic mineral product manufacturing	36.3	90.6	1.0%	40%
Basic metal manufacturing	0.1	0.2	0.0%	47%
Structural, sheet & fabricated metal product man.	31.7	89.6	0.9%	35%
Transport Equipment manufacturing	33.4	81.7	0.9%	41%
Machinery and other equipment manufacturing	35.0	93.6	1.0%	37%
Furniture and other manufacturing	13.3	34.6	0.4%	38%
Electricity generation, transmission and distribution	108.8	372.2	3.9%	29%
Water supply	7.8	15.2	0.2%	51%
Sewerage, drainage and waste disposal services	25.3	49.3	0.5%	51%
Residential Construction	37.0	196.5	2.1%	19%
Other Construction	168.6	508.0	5.4%	33%
Wholesale trade to non trade sectors	81.9	212.3	2.2%	39%
Wholesale trade to trade sector	25.5	67.1	0.7%	38%
Retail Trade	278.9	535.5	5.7%	52%
Accommodation, restaurants and bars	89.3	194.9	2.1%	46%
Road freight transport	43.6	93.5	1.0%	47%
Road passenger transport	19.6	43.6	0.5%	45%
Rail, water & Air Transport and Transport services	24.0	68.9	0.7%	35%
Communication services	41.5	70.9	0.7%	59%
Finance and Banking	88.6	139.1	1.5%	64%
Insurance	9.0	23.0	0.2%	39%
Services to Finance & Insurance	51.1	95.8	1.0%	53%
Real estate	293.5	424.1	4.5%	69%
Equipment hire and investors in other property	49.5	96.7	1.0%	51%
Scientific research and computer services	45.7	81.7	0.9%	56%
Other business services	191.4	364.8	3.9%	52%
Central government administration and defence	164.5	310.1	3.3%	53%
Local government administration	84.3	180.8	1.9%	47%
Pre-school, primary and secondary education	150.3	193.3	2.0%	78%
Other education	32.4	52.6	0.6%	61%
Hospitals and nursing homes	82.5	120.6	1.3%	68%
Other health and community services	241.3	408.9	4.3%	59%
Cultural and recreational services	44.1	93.3	1.0%	47%
Personal and other community services	60.0	113.7	1.2%	53%
Imputed rent	365.4	455.2	4.8%	80%
Total	4,469.9	9,473.3	100.0%	47%
Tourism	260.1	671.8	7.1%	39%

Source: Infometrics and Statistics New Zealand

Employment in Northland

This sections draws on employment estimates from Infometrics' Regional Industry Employment Model which differ from official estimates. A description of the Regional Industry Employment Model is given in Appendix A.

Table 11 shows the number of jobs by detailed industry in Northland, its constituent territorial authorities and in the national economy. Table 12 shows the distribution of employment across industries in each jurisdiction and compares it with share of GDP.

Table 11. Number of jobs by detailed industry (Average, March 2008 year)

Detailed industry	Far North	Whangarei	Kaipara	Northland	New Zealand
Horticulture and fruit growing	869	340	438	1,647	25,309
Livestock and cropping farming	643	230	266	1,139	28,928
Dairy and cattle farming	599	832	891	2,322	29,602
Other farming	92	124	26	241	6,950
Services to agriculture, hunting and trapping	488	377	236	1,101	30,480
Forestry and logging	390	224	128	742	7,024
Fishing	128	49	13	190	2,952
Mining and quarrying	93	41	58	191	3,960
Oil and gas (including petroleum refining)	0	274	0	274	2,044
Meat and Dairy Manufacturing	302	433	367	1,103	34,952
Other food manufacturing	116	86	36	238	26,045
Beverage, malt and tobacco manufacturing	36	8	2	46	5,850
Textiles and apparel manufacturing	26	108	49	183	17,368
Wood product manufacturing	622	936	160	1,718	21,592
Paper and paper product manufacturing	0	15	1	17	4,732
Printing, publishing and recorded media	114	268	25	407	24,086
Chemicals incl fertiliser, ind chem and personal chem	1	65	2	68	2,811
Rubber, plastic and other chemical product man.	90	126	19	236	17,920
Non-metallic mineral product manufacturing	59	407	28	495	8,512
Basic metal manufacturing	0	2	0	2	5,416
Structural, sheet & fabricated metal product man.	135	577	28	740	26,666
Transport Equipment manufacturing	83	585	2	670	13,971
Machinery and other equipment manufacturing	157	506	41	703	32,937
Furniture and other manufacturing	76	145	180	400	14,844
Electricity generation, transmission and distribution	128	166	0	294	4,943
Water supply	6	14	1	21	1,071
Sewerage, drainage and waste disposal services	139	104	37	281	5,442
Residential Construction	411	600	96	1,107	29,796
Other Construction	1,481	3,204	361	5,046	146,057
Wholesale trade to non trade sectors	403	1,154	166	1,723	76,697
Wholesale trade to trade sector	87	387	61	535	53,438
Retail Trade	2,882	4,329	717	7,928	260,323
Accommodation, restaurants and bars	1,759	1,334	274	3,368	115,003
Road freight transport	307	565	50	922	28,358
Road passenger transport	212	162	40	415	13,342
Rail, water & Air Transport and Transport services	195	303	11	508	44,360
Communication services	199	192	46	438	27,053
Finance and Banking	176	445	45	667	30,220
Insurance	0	68	0	68	9,570
Services to Finance & Insurance	92	269	24	385	19,146
Real estate	590	627	172	1,388	30,176
Equipment hire and investors in other property	97	123	15	234	10,039
Scientific research and computer services	266	754	22	1,041	69,722
Other business services	1,098	3,056	206	4,360	218,337
Central government administration and defence	604	1,100	65	1,769	73,111
Local government administration	272	222	71	565	16,505
Pre-school, primary and secondary education	1,810	1,853	413	4,076	106,086
Other education	217	602	58	877	54,497
Hospitals and nursing homes	283	1,544	72	1,899	59,471
Other health and community services	1,853	3,430	270	5,553	136,294
Cultural and recreational services	495	702	111	1,308	60,068
Personal and other community services	497	1,057	86	1,639	54,271
Total	21,677	35,126	6,485	63,288	2,148,350
Other industries					
Aquaculture	17	26	4	47	278
Tourism	3,590	3,034	496	7,121	138,070
Marine industries	55	135	12	202	8,581
Information technology	110	468	16	593	27,228

Source: Infometrics and Statistics New Zealand

Table 12. Industry share of employment and GDP (March 2008 year)

Detailed industry	Far North		Whangarei		Kaipara		Northland		New Zealand	
	Employment	GDP	Employment	GDP	Employment	GDP	Employment	GDP	Employment	GDP
Horticulture and fruit growing	4.0%	5.2%	1.0%	1.2%	6.7%	8.0%	2.6%	3.3%	1.2%	1.4%
Livestock and cropping farming	3.0%	3.8%	0.7%	0.8%	4.1%	4.8%	1.8%	2.3%	1.3%	1.7%
Dairy and cattle farming	2.8%	3.6%	2.4%	3.0%	13.7%	16.1%	3.7%	4.7%	1.4%	1.7%
Other farming	0.4%	0.6%	0.4%	0.5%	0.4%	0.5%	0.4%	0.5%	0.3%	0.4%
Services to agriculture, hunting and trapping	2.3%	2.8%	1.1%	1.3%	3.6%	4.1%	1.7%	2.1%	1.4%	1.7%
Forestry and logging	1.8%	3.4%	0.6%	1.2%	2.0%	3.3%	1.2%	2.2%	0.3%	0.5%
Fishing	0.6%	1.1%	0.1%	0.3%	0.2%	0.3%	0.3%	0.5%	0.1%	0.2%
Mining and quarrying	0.4%	0.7%	0.1%	0.2%	0.9%	1.4%	0.3%	0.5%	0.2%	0.8%
Oil and gas (including petroleum refining)	0.0%	0.0%	0.8%	9.9%	0.0%	0.0%	0.4%	5.5%	0.1%	0.4%
Meat and Dairy Manufacturing	1.4%	1.7%	1.2%	1.5%	5.7%	6.3%	1.7%	2.1%	1.6%	2.4%
Other food manufacturing	0.5%	0.7%	0.2%	0.3%	0.6%	0.6%	0.4%	0.5%	1.2%	1.8%
Beverage, malt and tobacco manufacturing	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.3%	0.4%
Textiles and apparel manufacturing	0.1%	0.1%	0.3%	0.1%	0.8%	0.3%	0.3%	0.1%	0.8%	0.5%
Wood product manufacturing	2.9%	2.6%	2.7%	2.3%	2.5%	2.0%	2.7%	2.4%	1.0%	1.1%
Paper and paper product manufacturing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
Printing, publishing and recorded media	0.5%	0.4%	0.8%	0.6%	0.4%	0.3%	0.6%	0.5%	1.1%	1.0%
Chemicals incl fertiliser, ind chem and personal chem	0.0%	1.5%	0.2%	0.0%	0.0%	1.8%	0.1%	0.7%	0.1%	0.2%
Rubber, plastic and other chemical product man.	0.4%	1.3%	0.4%	0.9%	0.3%	0.2%	0.4%	0.9%	0.8%	1.2%
Non-metallic mineral product manufacturing	0.3%	0.3%	1.2%	1.2%	0.4%	0.4%	0.8%	0.8%	0.4%	0.5%
Basic metal manufacturing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%
Structural, sheet & fabricated metal product man.	0.6%	0.4%	1.6%	1.0%	0.4%	0.2%	1.2%	0.7%	1.2%	1.1%
Transport Equipment manufacturing	0.4%	0.3%	1.7%	1.2%	0.0%	0.0%	1.1%	0.7%	0.7%	0.6%
Machinery and other equipment manufacturing	0.7%	0.5%	1.4%	1.0%	0.6%	0.4%	1.1%	0.8%	1.5%	1.4%
Furniture and other manufacturing	0.3%	0.2%	0.4%	0.2%	2.8%	1.2%	0.6%	0.3%	0.7%	0.4%
Electricity generation, transmission and distribution	0.6%	3.2%	0.5%	2.5%	0.0%	0.0%	0.5%	2.4%	0.2%	1.7%
Water supply	0.0%	0.1%	0.0%	0.2%	0.0%	0.1%	0.0%	0.2%	0.0%	0.4%
Sewerage, drainage and waste disposal services	0.6%	0.3%	0.3%	0.8%	0.6%	0.3%	0.4%	0.6%	0.3%	0.3%
Residential Construction	1.9%	0.9%	1.7%	0.8%	1.5%	0.6%	1.7%	0.8%	1.4%	0.8%
Other Construction	6.8%	3.3%	9.1%	4.3%	5.6%	2.4%	8.0%	3.8%	6.8%	4.1%
Wholesale trade to non trade sectors	1.9%	1.3%	3.3%	2.2%	2.6%	1.6%	2.7%	1.8%	3.6%	3.8%
Wholesale trade to trade sector	0.4%	0.3%	1.1%	0.7%	0.9%	0.6%	0.8%	0.6%	2.5%	2.6%
Retail Trade	13.3%	6.8%	12.3%	6.2%	11.1%	5.1%	12.5%	6.2%	12.1%	6.2%
Accommodation, restaurants and bars	8.1%	3.1%	3.8%	1.4%	4.2%	1.5%	5.3%	2.0%	5.4%	1.9%
Road freight transport	1.4%	1.0%	1.6%	1.1%	0.8%	0.5%	1.5%	1.0%	1.3%	1.1%
Road passenger transport	1.0%	0.7%	0.5%	0.3%	0.6%	0.4%	0.7%	0.4%	0.6%	0.5%
Rail, water & Air Transport and Transport services	0.9%	0.6%	0.9%	0.6%	0.2%	0.1%	0.8%	0.5%	2.1%	1.8%
Communication services	0.9%	1.3%	0.5%	0.7%	0.7%	0.9%	0.7%	0.9%	1.3%	2.3%
Finance and Banking	0.8%	1.6%	1.3%	2.4%	0.7%	1.2%	1.1%	2.0%	1.4%	3.4%
Insurance	0.0%	0.0%	0.2%	0.4%	0.0%	0.0%	0.1%	0.2%	0.4%	1.1%
Services to Finance & Insurance	0.4%	0.8%	0.8%	1.4%	0.4%	0.6%	0.6%	1.1%	0.9%	2.1%
Real estate	2.7%	8.3%	1.8%	5.4%	2.6%	7.3%	2.2%	6.6%	1.4%	5.1%
Equipment hire and investors in other property	0.4%	1.4%	0.3%	1.0%	0.2%	0.6%	0.4%	1.1%	0.5%	1.7%
Scientific research and computer services	1.2%	0.0%	2.1%	0.0%	0.3%	0.0%	1.6%	0.0%	3.2%	0.0%
Other business services	5.1%	0.8%	8.7%	1.3%	3.2%	0.2%	6.9%	1.0%	10.2%	2.2%
Central government administration and defence	2.8%	3.2%	3.1%	5.4%	1.0%	1.8%	2.8%	4.3%	3.4%	6.9%
Local government administration	1.3%	2.8%	0.6%	4.7%	1.1%	1.2%	0.9%	3.7%	0.8%	4.1%
Pre-school, primary and secondary education	8.4%	2.7%	5.3%	1.3%	6.4%	2.1%	6.4%	1.9%	4.9%	1.3%
Other education	1.0%	4.4%	1.7%	2.8%	0.9%	3.1%	1.4%	3.4%	2.5%	2.5%
Hospitals and nursing homes	1.3%	0.5%	4.4%	0.9%	1.1%	0.4%	3.0%	0.7%	2.8%	1.3%
Other health and community services	8.5%	0.8%	9.8%	2.7%	4.2%	0.6%	8.8%	1.8%	6.3%	1.7%
Cultural and recreational services	2.3%	5.4%	2.0%	6.0%	1.7%	2.4%	2.1%	5.4%	2.8%	3.8%
Personal and other community services	2.3%	1.1%	3.0%	1.0%	1.3%	0.8%	2.6%	1.0%	2.5%	2.5%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<i>Other industries</i>										
Aquaculture	0.1%	0.6%	0.1%	0.0%	0.1%	0.0%	0.1%	0.2%	0.0%	0.1%
Tourism	16.6%	7.1%	8.6%	5.2%	7.7%	4.6%	11.3%	5.8%	6.4%	5.0%
Marine industries	0.3%	0.3%	0.4%	1.1%	0.2%	0.1%	0.3%	0.7%	0.4%	0.2%
Information technology	0.5%	0.1%	1.3%	0.1%	0.2%	0.0%	0.9%	0.1%	1.3%	1.0%

Source: Infometrics and Statistics New Zealand

A number of points emerge from the above tables:

- Retail trade is a large employer in Northland accounting for 12.5% of total employment. However, its employment contribution is considerably higher than its contribution to GDP (6.5%). The difference between employment share and GDP share is even

more pronounced in accommodation, cafes and restaurants which accounts for 5.3% of employment but only 1.7% of GDP. The difference between contribution to total employment and total GDP is explained by both the prevalence of part time workers as well as the low value added per employee.

- Tourism accounts for 11.2% of total employment in Northland but only contributes 5.8% to total GDP. Other industries which make larger contributions to total employment than GDP include other construction (8.0% to employment and 3.6% to GDP), pre-school, primary & secondary education (6.4% and 3.1%) and other health and community services (8.8% and 5.4%).
- In contrast, a number of manufacturing industries make sizeably larger contributions to GDP than total employment. These industries include meat and dairy manufacturing (1.7% to employment and 3.4% to GDP) and wood product manufacturing (2.5% and 3.7%). The marine industries account for only 0.3% of employment but contribute 1.1% of GDP.
- Other industries with substantially higher contributions to GDP than total employment include forestry and logging (1.2% and 5.0%), real estate (2.2% and 5.6%), communication services (0.7% and 2.6%) contribution to Northland's GDP (5.0%) is substantially higher than its contribution to the region's employment (1.2%).

Appendix A. Methodology

Historical GDP estimates

Infometrics follows a top down approach in estimating regional GDP. National industrial production (sourced from production based GDP measures) is broken down to regional level using the following sources.

- Estimates of the number of people employed in each industry in each region from the Regional Infometrics Industry Employment Model. The method to estimate regional employment is described below.
- Estimates of hours worked per employed person in each industry in each region from the Quarterly Employment Survey.
- Estimates of value added per employed person in each industry in each region from historical regional GDP estimates from Statistics New Zealand.
- Historical regional GDP estimates from Statistics New Zealand provide a benchmark for the period 2000-2003.

Estimating tourism contribution to GDP in Northland

The following steps were taken to estimate tourism value added in Northland:

- The value of exports from Northland for the following tourism related industries were obtained from the Northland industry output table compiled by Butcher Partners: accommodation, restaurants and bars, road passenger transport, rail, water & air transport and transport services, equipment hire and investors in other property, cultural and recreational services. Exports from these industries were used as estimates of tourism gross output for these industries.
- Exports from retail trade and all other non-tourism related industries were not regarded as adequate measures of tourism gross output for those industries. Consequently a different approach was used to measure tourism gross output for these industries.
- Northland's share of total New Zealand guest nights for the year to March 2006 was estimated from data published by Ministry of Tourism. This proportion was applied to national tourism gross output from retail and other non-tourism related industries to arrive at an estimate of tourism gross output for those industries.
- The estimates of tourism gross output for all industries were added to arrive at a Northland economy wide estimate of tourism gross output. This estimate (\$629million) should be comparable with total tourism expenditure in Northland as published by the Ministry of Tourism (\$619million).

- Our estimates of tourism gross output for each industry were increased pro-rata to be consistent with the Ministry of Tourism estimate of tourism expenditure.
- Our final estimates of tourism gross output by industry were expressed as a percentage of value added as published in the industry-output table to arrive at a tourism ratio for each industry.
- The tourism industry ratios were applied to Infometrics' estimates of value added by industry to arrive at final estimates of tourism value added. Total tourism value added was estimated by summing across all industries.

Historical employment estimates

This study draws heavily on Infometrics' Regional Industry Employment Model (RIEM). This model provides more robust and up-to-date information than Business Demography statistics, the source used by most economic analysts for estimates of regional employment. The RIEM draws on the industry and geographical detail of the Business Demography statistics, the statistical robustness of the Linked Employer-Employee Data (LEED) and the currency of the Quarterly Employment Survey. The RIEM provides estimates of the number of people employed in 480 industries in each region and territorial authority for each quarter since March 1997.

Data from the RIEM has the following advantages over data from Business Demography.

- The RIEM includes self-employment whereas it is excluded from Business Demography. The exclusion of self employment leads to a significant undercount of employment in certain industries such as agriculture and construction. Infometrics utilises LEED and census to provide estimates of self employment by industry.
- The RIEM is benchmarked on industry employment totals from LEED, which is statistically more robust than Business Demography. LEED is designed to measure employment whereas Business Demography is designed to measure the number of establishments etc. and only measures employment as a spin off.
- The RIEM measures employment in each quarter of the year whereas Business Demography provides only a single snapshot (February) each year. Providing only a single snapshot is inadequate for industries such as horticulture and hospitality which are highly seasonal.
- The RIEM is significantly more up-to-date than Business Demography. The latest data available from the Business Demography is from February 2006 whereas the RIEM has data up to the September quarter in 2007. The RIEM uses the QES to provide up-to-date employment estimates.