

Innovation Systems Research Network
City-Region Profile, 2006

Thunder Bay

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Summary and Highlights

Key Indicators	Thunder Bay	Canada
Population, 2006	122,915	31,612,890
Population Change, 2001-2006	0.8%	5.4%
% Foreign Born	10.4%	19.8%
% BA Degree or higher	14.8%	18.1%
# Employed	59,160	15,958,195
Employment Growth 1996-2006	1.6%	19.8%
Employment Rate	58.7%	62.4%
Unemployment Rate	7.4%	6.6%
% 'Creative' occupations	31.2%	33.2%
% Science & Tech. Occupations	5.2%	6.6%
'Bohemians' per 1,000 Labour Force	8.4	14.2
Number of Industrial Clusters	2	255
% Employment in Clusters	8.9%	22.1%
Average FT Employment Income	\$ 49,094	\$ 51,221
% Change Average Income 2000-2005	-1.3%	5.5%

1 - Demographics Thunder Bay

Population	2001	2006	% Change 2001-2006
Thunder Bay	121,990	122,915	0.8%
Canada	30,007,085	31,612,890	5.4%

Age Groups	Under 15	15 to 64	65 and over	% 15 to 64
Thunder Bay	30,930	66,650	19,695	56.8%
Canada	9,800,715	17,476,925	4,335,250	55.3%

Figure 1.1 - Population by age and gender, 2006

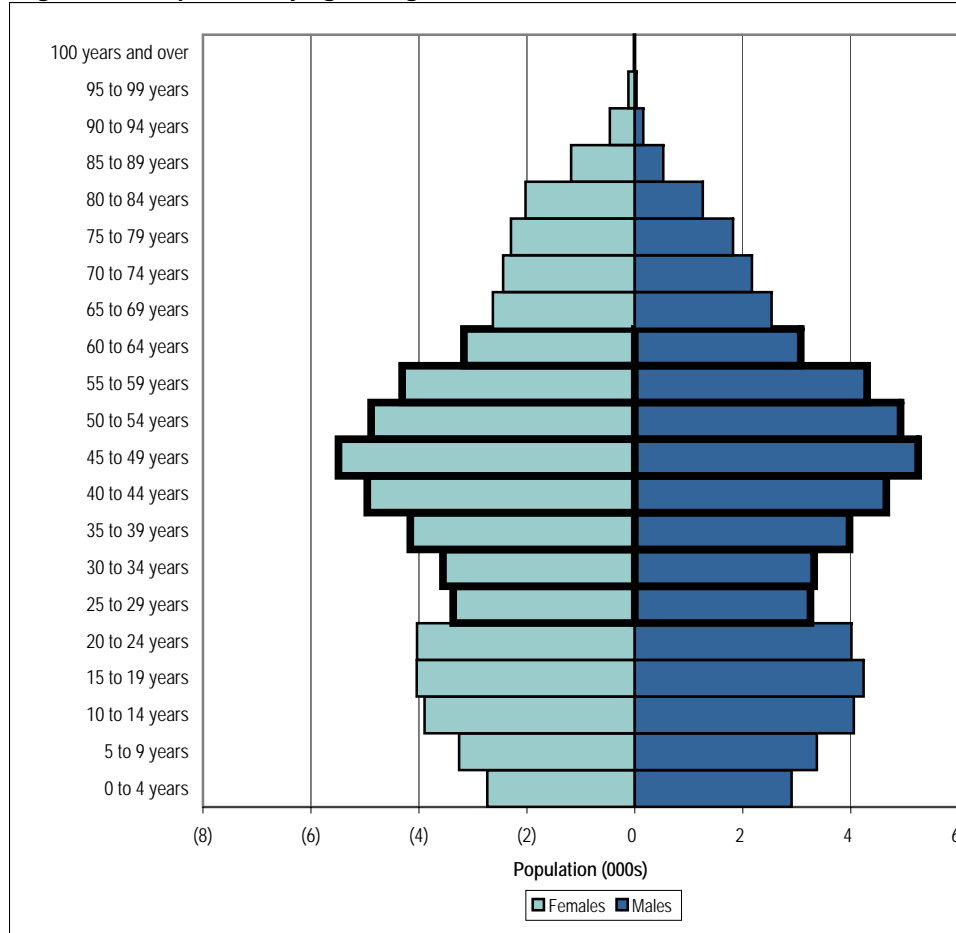


Figure 1.2 - Population by age group, 2001-2006

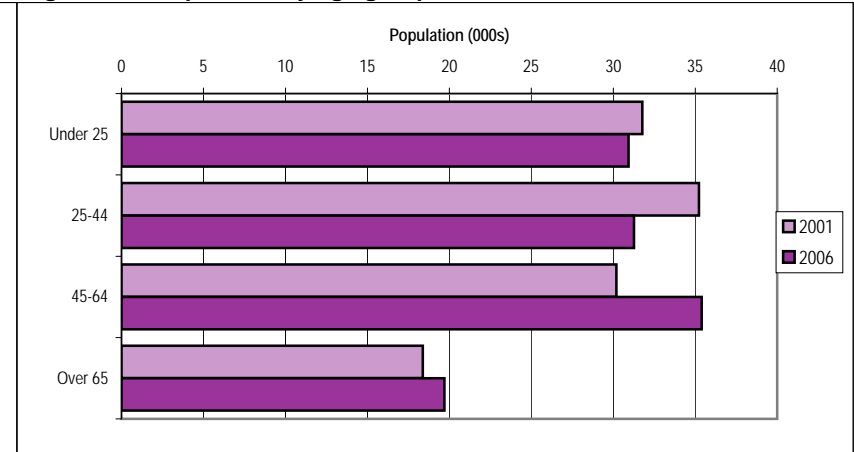
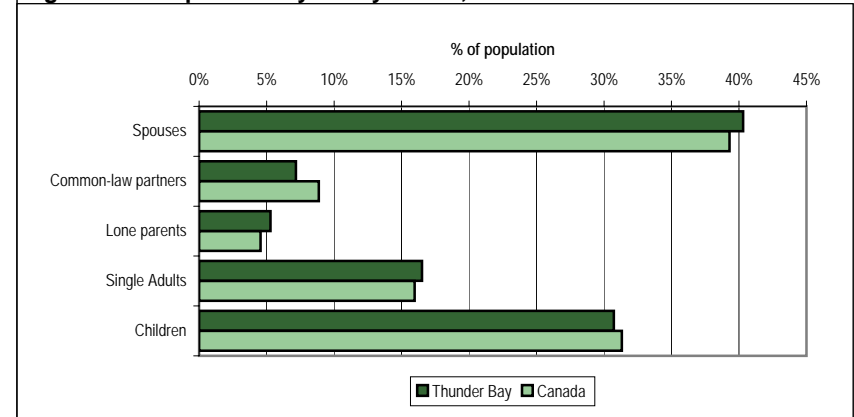


Figure 1.3 - Population by family status, 2006



2 - Migration & Population Change

Thunder Bay

Domestic Migration	Intra-provincial	Inter-provincial	Total
In-flows, 2001-2006	7,275	2,605	9,880
Out-flows, 2001-2006	5,950	4,315	10,265
Net, 2001-2006	1,325	(1,710)	(385)

	% Foreign born	Migrated post-1991	Migrated pre-1991
Thunder Bay	10.4%	1.5%	8.9%
Canada	19.8%	8.9%	10.9%

Figure 2.1 - Domestic migration flows between 2001 and 2006 by age

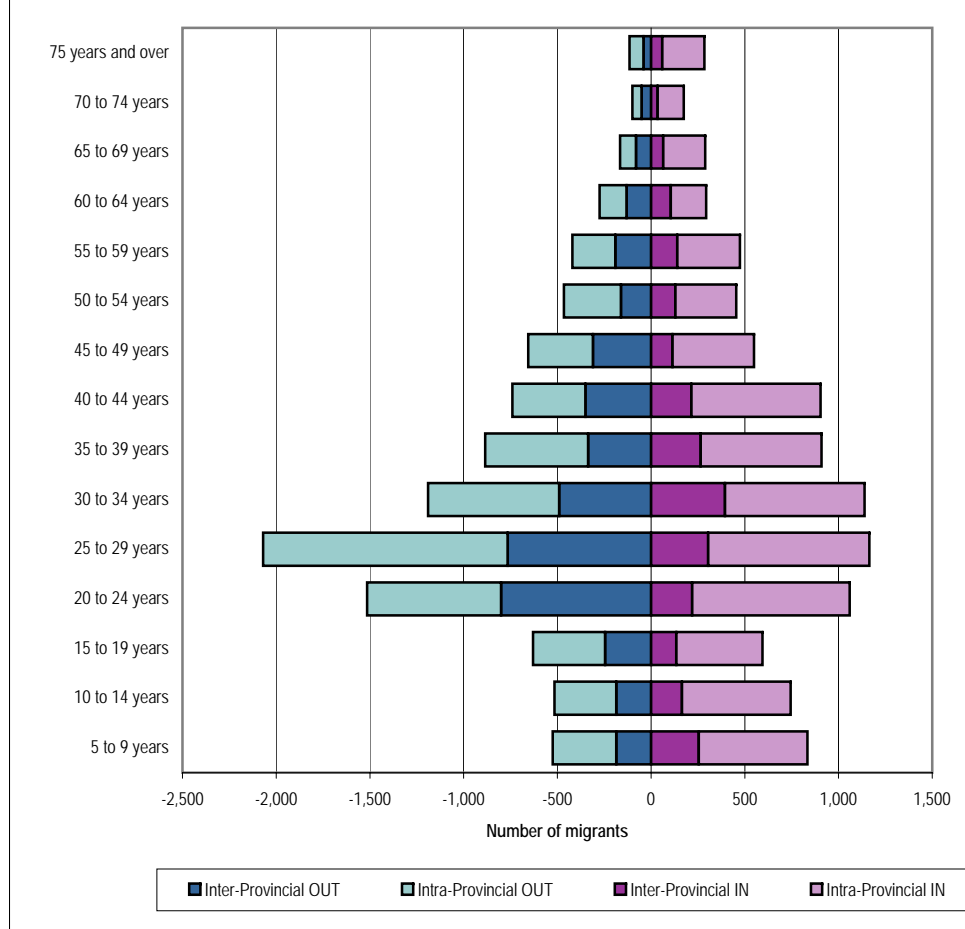


Figure 2.2 - Population by place of birth, 2006

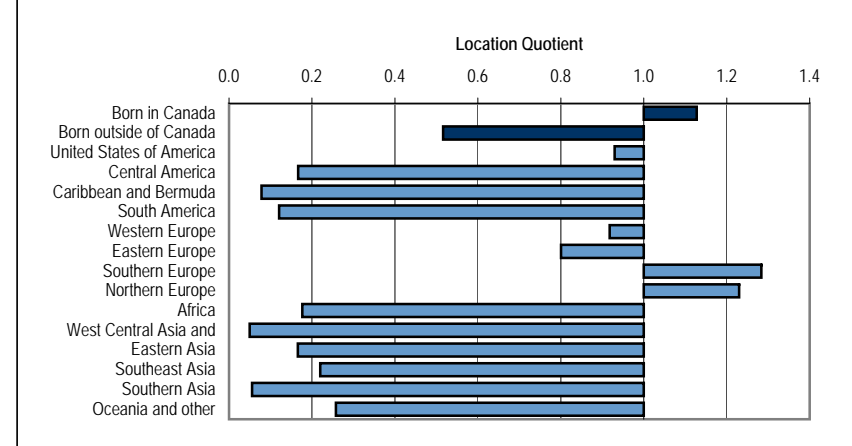
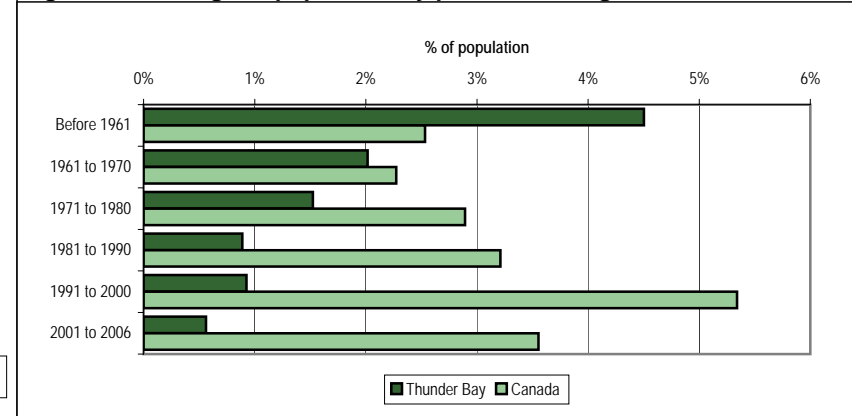


Figure 2.3 - Immigrant population by period of immigration, 2006



3 - Education Thunder Bay

	% College degree or higher ¹	% BA degree or higher ¹	% MA degree or higher ¹	PhDs per 1,000 ¹
Thunder Bay	38.1%	14.8%	3.0%	5.8
Canada	39.8%	18.1%	4.6%	6.9

	% BA degree or higher	
	2001	2006
Thunder Bay	12.7%	14.8%
Canada	15.4%	18.1%

Figure 3.1 - Educational attainment for the population 15 years and over, 2006

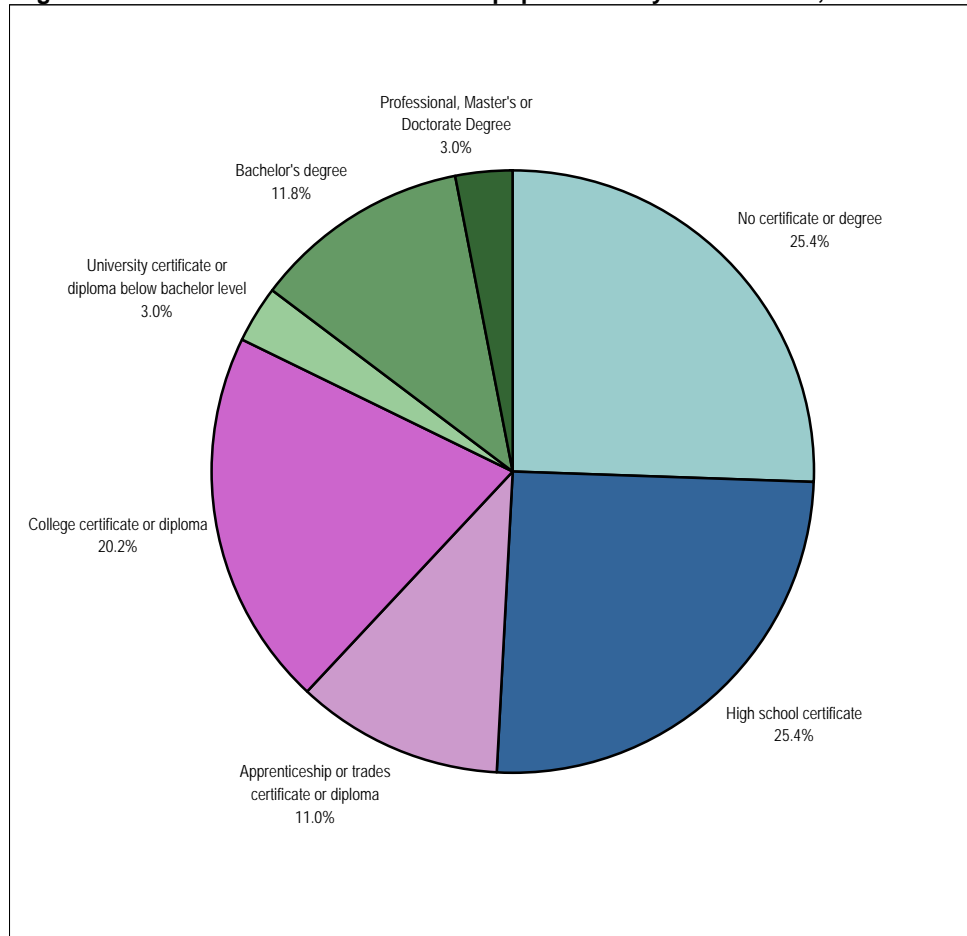


Figure 3.2 - Location of study for highest qualification, 2006

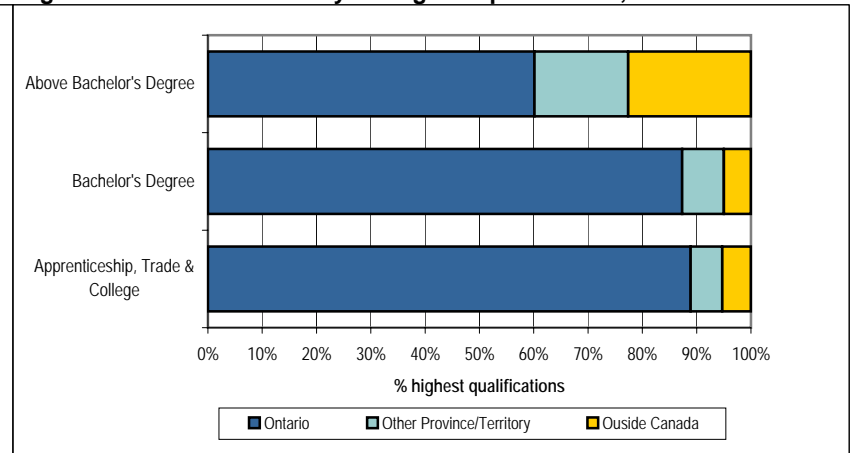
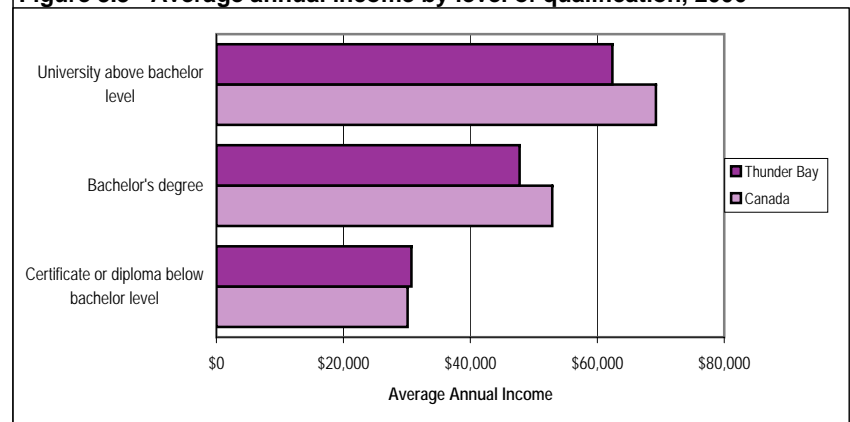


Figure 3.3 - Average annual income by level of qualification, 2006



4 - Employment

Thunder Bay

	Employment Rate		
	1996	2001	2006
Thunder Bay	57.9%	58.2%	58.7%
Canada	58.9%	61.5%	62.4%

	Unemployment Rate		
	1996	2001	2006
Thunder Bay	10.7%	8.8%	7.4%
Canada	10.1%	7.4%	6.6%

Figure 4.1 - Labour force status of the population 15 and over, 1996 & 2006

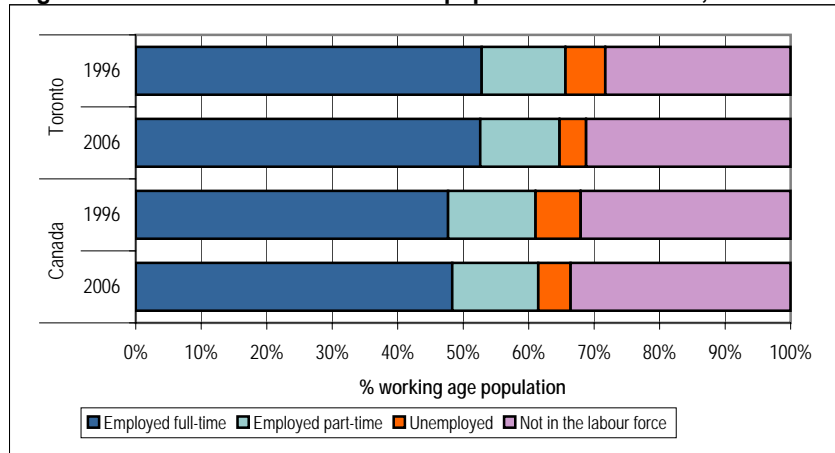


Figure 4.2 - Employment Rate by Educational Attainment, 2006

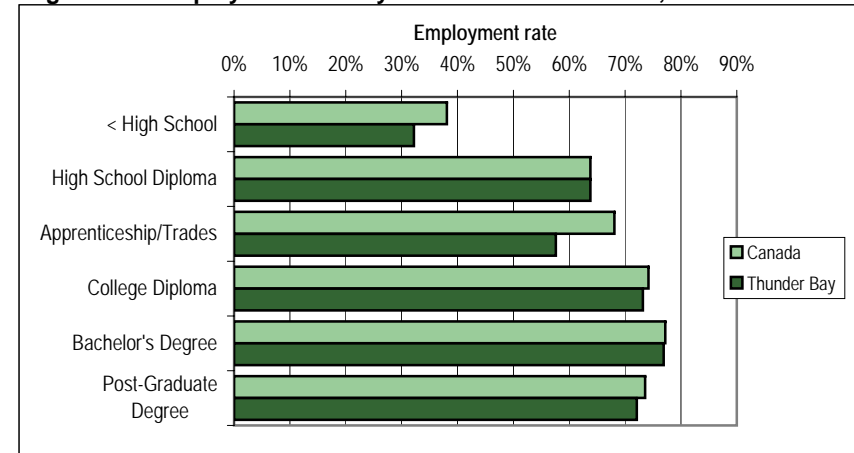


Figure 4.3 - Employment rate² by age, 2006

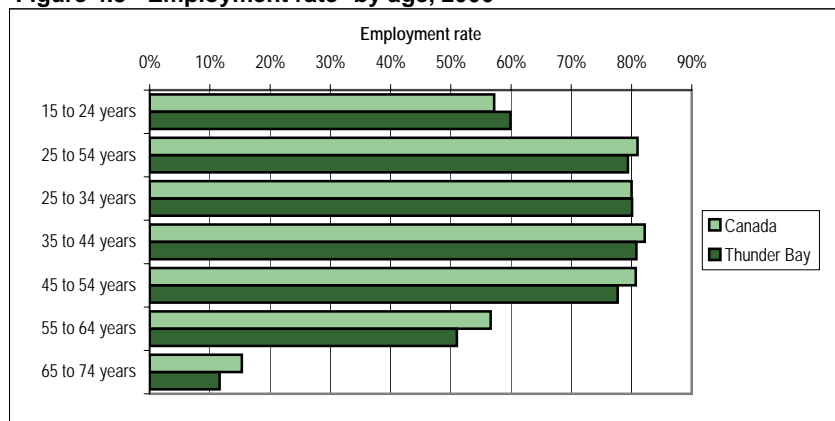
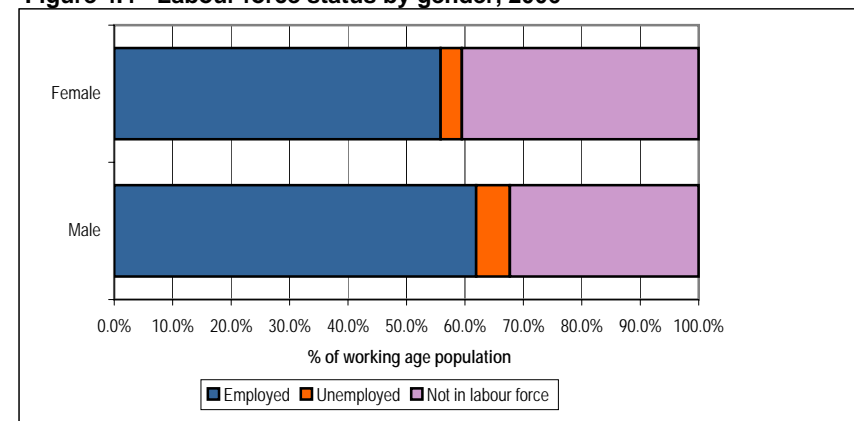


Figure 4.4 - Labour force status by gender, 2006



5 - Occupational Structure Thunder Bay

	A-B Management, business & finance occupations			C-F Natural/social science, health, education & artistic occupations			G-J Sales/service, trades & manual labour occupations		
	1996	2001	2006	1996	2001	2006	1996	2001	2006
Thunder Bay	24.7%	24.0%	24.7%	21.2%	22.2%	24.1%	54.1%	53.8%	51.1%
Canada	27.8%	28.2%	27.6%	19.8%	21.3%	22.6%	52.4%	50.5%	49.8%

Figure 5.1 - Occupational structure, 2006

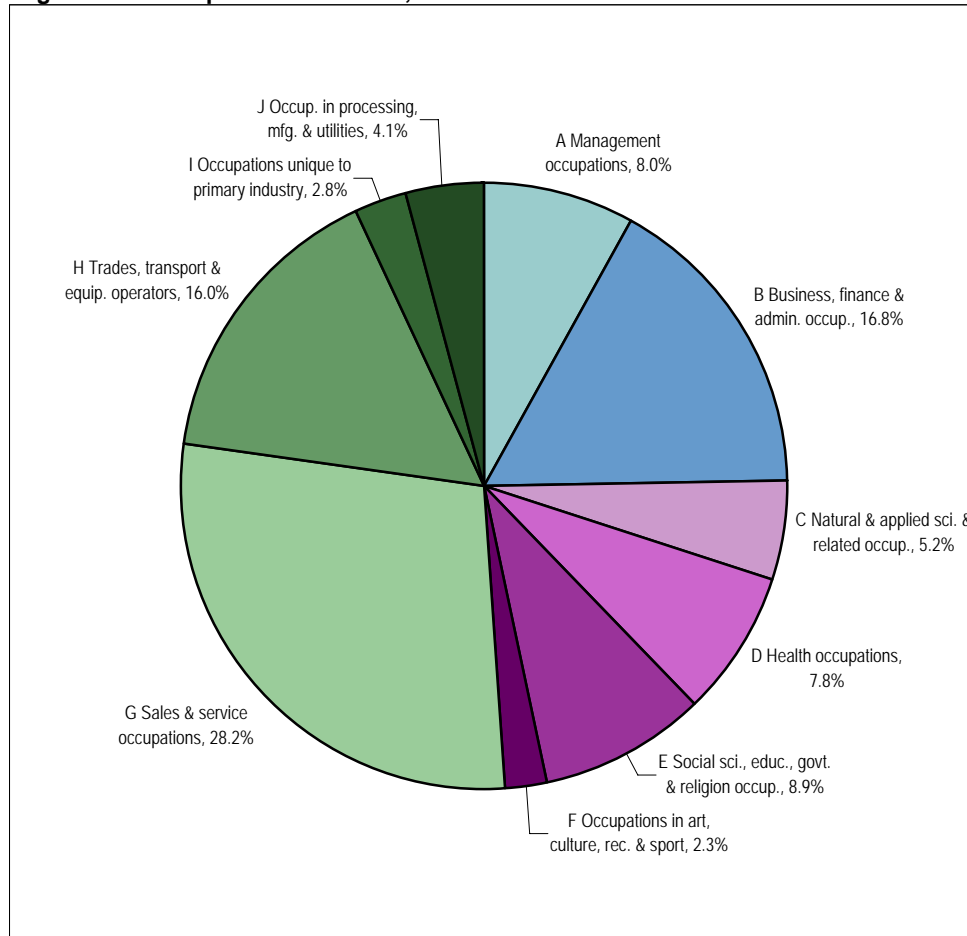
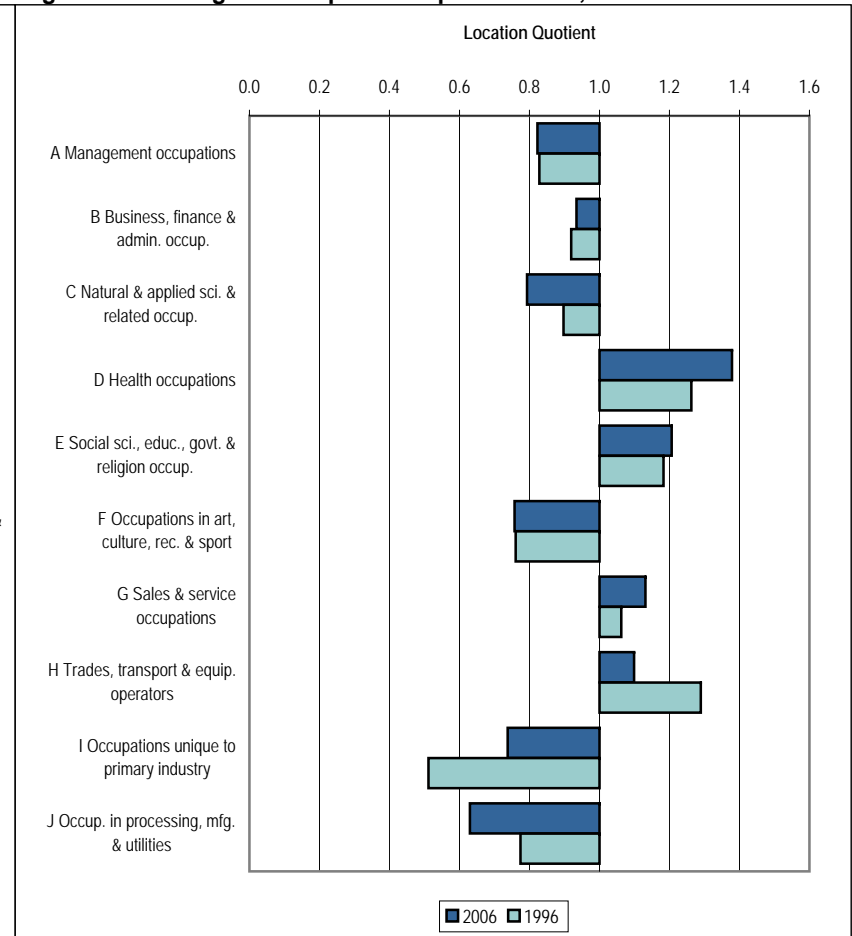


Figure 5.2 - Change in occupational specialization, 1996-2006



6 - Creative Occupations

Thunder Bay

	Bohemians	Bohemians per 1000 ⁵	S&T Workers	% S&T Workers ⁶
Thunder Bay	530	8.4	3,280	5.2%
Canada	240,170	14.2	1,108,050	6.6%

Occupational Groups ⁷	Creative	Service	Trades & Manual	Agricultural & Resources
Thunder Bay	31.2%	45.9%	21.1%	1.8%
Canada	33.2%	41.9%	21.9%	2.9%

Figure 6.1 - Specialization in creative occupations

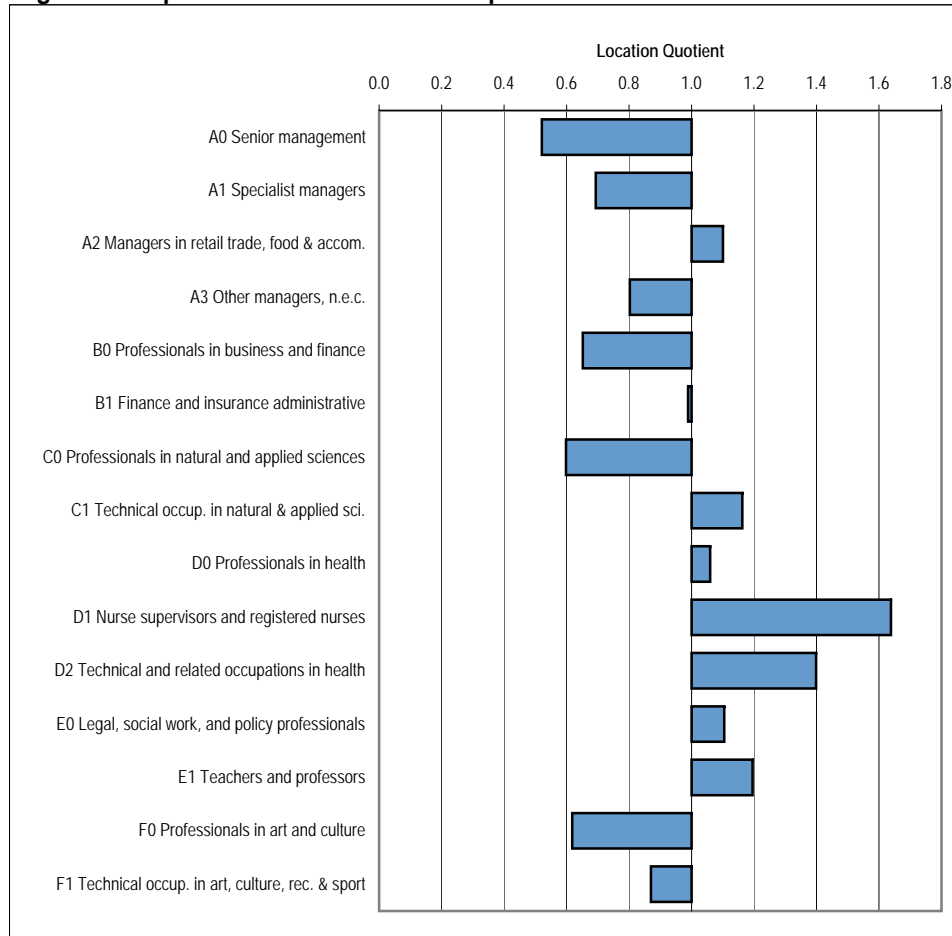


Figure 6.2 - Change in share of labour force, 1996-2006

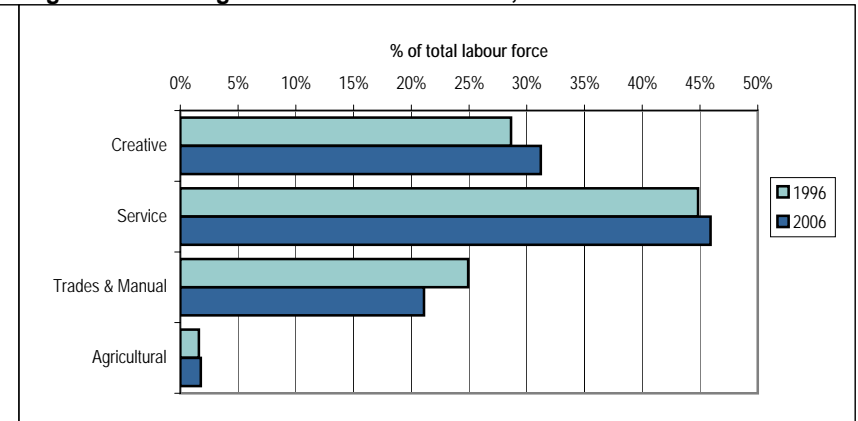
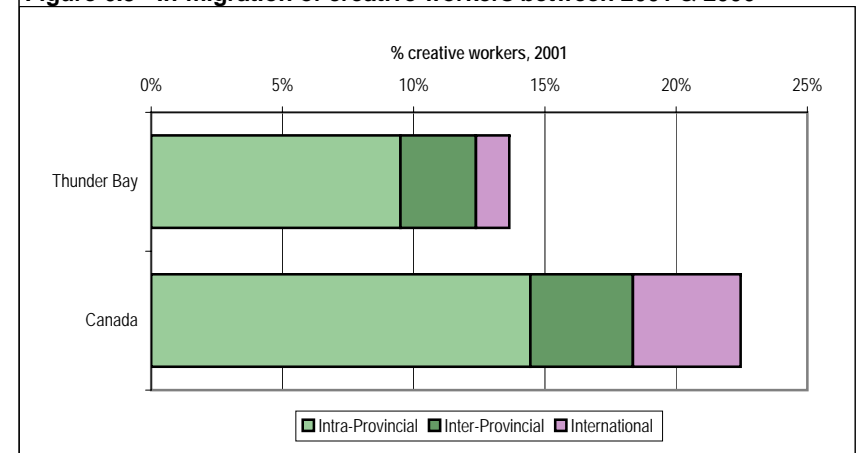


Figure 6.3 - In-migration of creative workers between 2001 & 2006

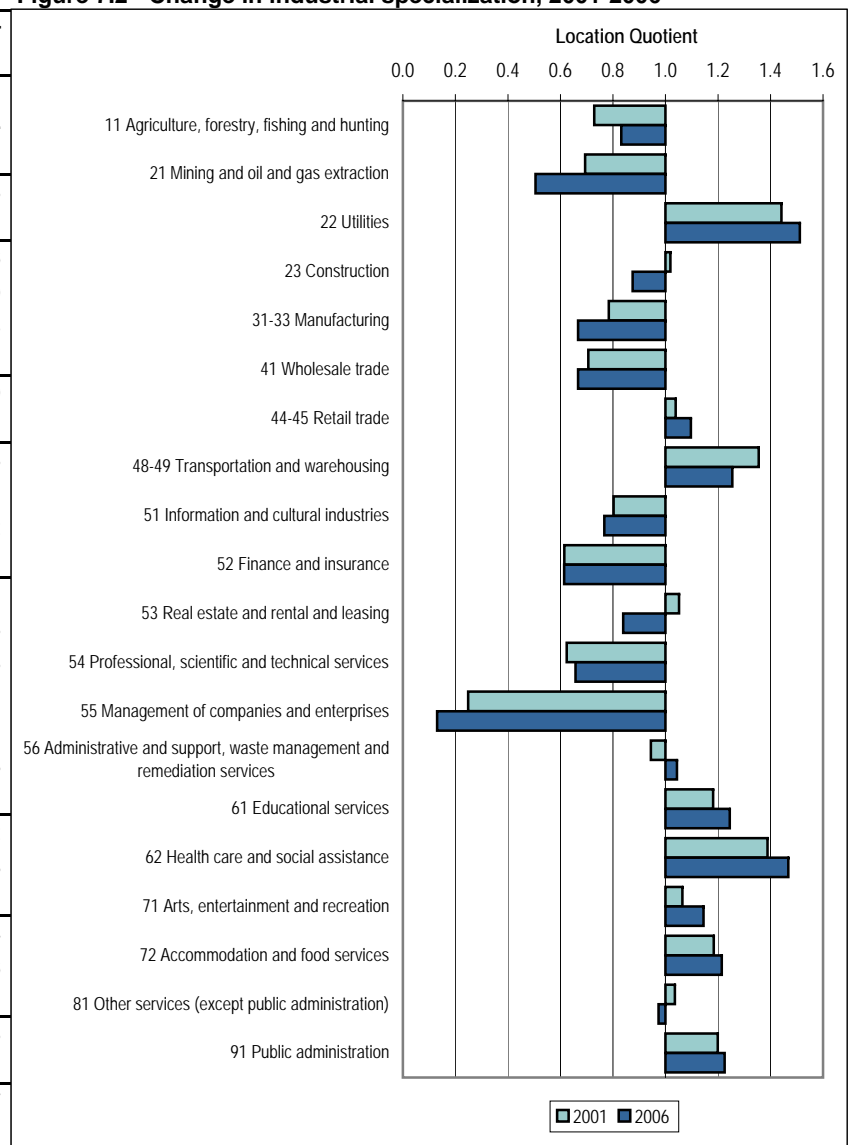


7 - Industrial Structure Thunder Bay

Figure 7.1 - Industry characteristics

	# Labour force	% Labour force	% Change 2001-2006	% BA or higher	Average FT income
All industries	62,925	100.0%	2.5%	18.5%	\$ 49,094
11 Agr., forestry, fish. & hunt.	1,625	2.6%	-0.3%	12.3%	\$ 57,898
21 Mining & oil/gas extraction	450	0.7%	-3.2%	19.8%	\$ 70,086
22 Utilities	750	1.2%	11.1%	12.0%	\$ 75,999
23 Construction	3,490	5.5%	-1.1%	3.4%	\$ 53,555
31-33 Manufacturing	4,995	7.9%	-25.7%	10.5%	\$ 60,569
41 Wholesale trade	1,840	2.9%	-3.7%	11.4%	\$ 52,468
44-45 Retail trade	7,845	12.5%	9.2%	7.4%	\$ 35,071
48-49 Transport & warehousing	3,840	6.1%	-7.1%	4.4%	\$ 47,972
51 Information & cultural ind.	1,195	1.9%	-9.5%	23.3%	\$ 52,351
52 Finance and insurance	1,580	2.5%	2.6%	24.3%	\$ 50,378
53 Real estate/rental & leasing	950	1.5%	-11.6%	13.2%	\$ 44,618
54 Prof., sci. & tech. services	2,755	4.4%	14.1%	34.7%	\$ 50,051
55 Mgmt. of companies	10	0.0%	-33.3%	#DIV/0!	N/A
56 Admin./support, & wst. mgt.	2,815	4.5%	24.8%	8.2%	\$ 26,543
61 Educational services	5,345	8.5%	12.4%	59.8%	\$ 56,542
62 Health care & soc. assist.	9,400	14.9%	13.7%	25.9%	\$ 50,653
71 Arts, entertainment & rec.	1,480	2.4%	16.1%	13.2%	\$ 35,294
72 Accom. & food services	5,105	8.1%	4.6%	6.8%	\$ 22,506
81 Other services (except public administration)	2,980	4.7%	-2.5%	10.7%	\$ 37,628
91 Public administration	4,475	7.1%	4.7%	27.2%	\$ 58,987

Figure 7.2 - Change in industrial specialization, 2001-2006



8 - Clusters Thunder Bay

Number of clusters⁸ 2
 % employment in clusters⁸ 8.9%

Figure 8.1 - Cluster characteristics, 2006⁸

	# Labour force	Labour force LQ	% Industry LQs > 1	% Growth 2001-2006	Cluster (yes/no)
<i>Resource-based</i>					
Agriculture	1,005	0.38	6.7%	3.1%	NO
Mining	1,355	1.20	62.5%	-12.6%	YES
Oil and Gas	435	0.47	22.2%	6.1%	NO
Wood & Wood Products	4,250	3.58	70.0%	-17.7%	YES
Maritime	300	0.55	33.3%	9.1%	NO
<i>Manufacturing</i>					
Textiles & Apparel	65	0.13	8.3%	116.7%	NO
Food	910	0.52	16.7%	-23.2%	NO
Steel	890	0.73	16.7%	-8.2%	NO
Automotive	170	0.10	0.0%	-24.4%	NO
Plastics & Rubber	260	0.17	0.0%	-23.5%	NO
Biomedical	280	0.49	33.3%	9.8%	NO
ICT Manufacturing	190	0.25	0.0%	18.8%	NO
<i>Service-based</i>					
ICT Services	2,445	0.82	30.0%	6.3%	NO
Finance	2,630	0.67	12.5%	-6.2%	NO
Business Services	5,505	0.91	29.4%	14.8%	NO
Creative & Cultural	1,565	0.65	5.9%	-0.6%	NO
Higher Education	2,045	0.99	33.3%	11.4%	NO
<i>Other</i>					
Construction	4,510	0.86	16.7%	-1.1%	NO
Logistics	2,270	0.74	19.2%	-5.6%	NO

Figure 8.2 - Employment by industry category, 2006⁹

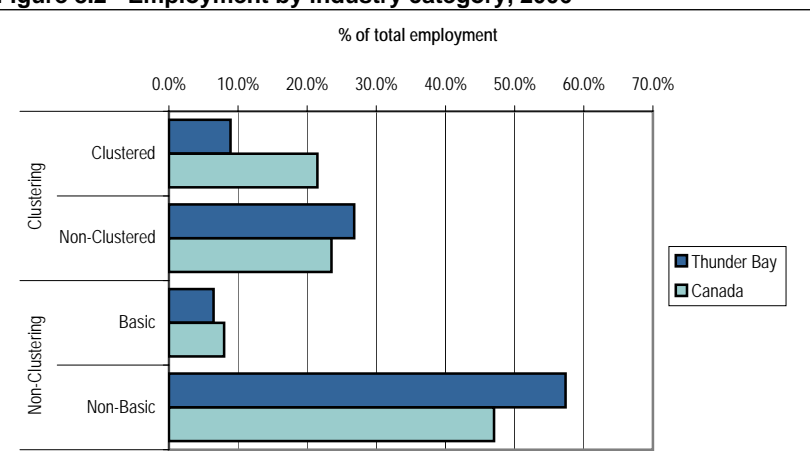
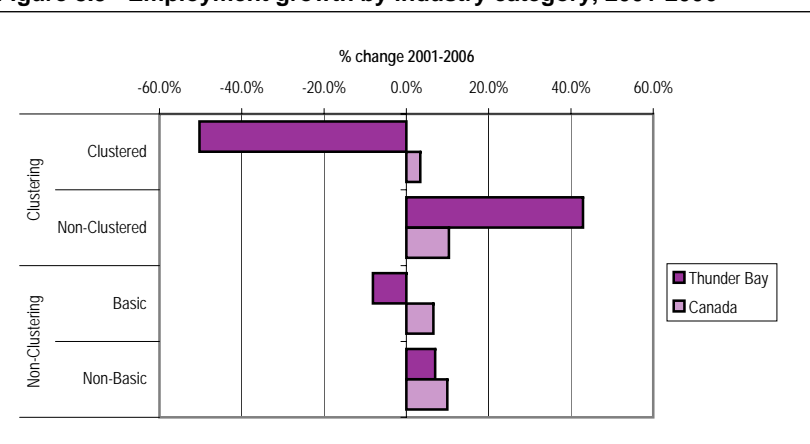


Figure 8.3 - Employment growth by industry category, 2001-2006^{9,10}



9 - Establishments

Thunder Bay

	% of establishments by number of employees							
	1-4	5-9	10-19	20-49	50-99	100-199	200-299	500+
Thunder Bay	46.8%	24.1%	14.8%	8.9%	3.1%	1.3%	0.6%	0.4%
Canada	55.0%	20.2%	12.1%	7.8%	2.7%	1.2%	0.6%	0.3%

Figure 9.1 - Number of establishments by industry and # of employees, 2008

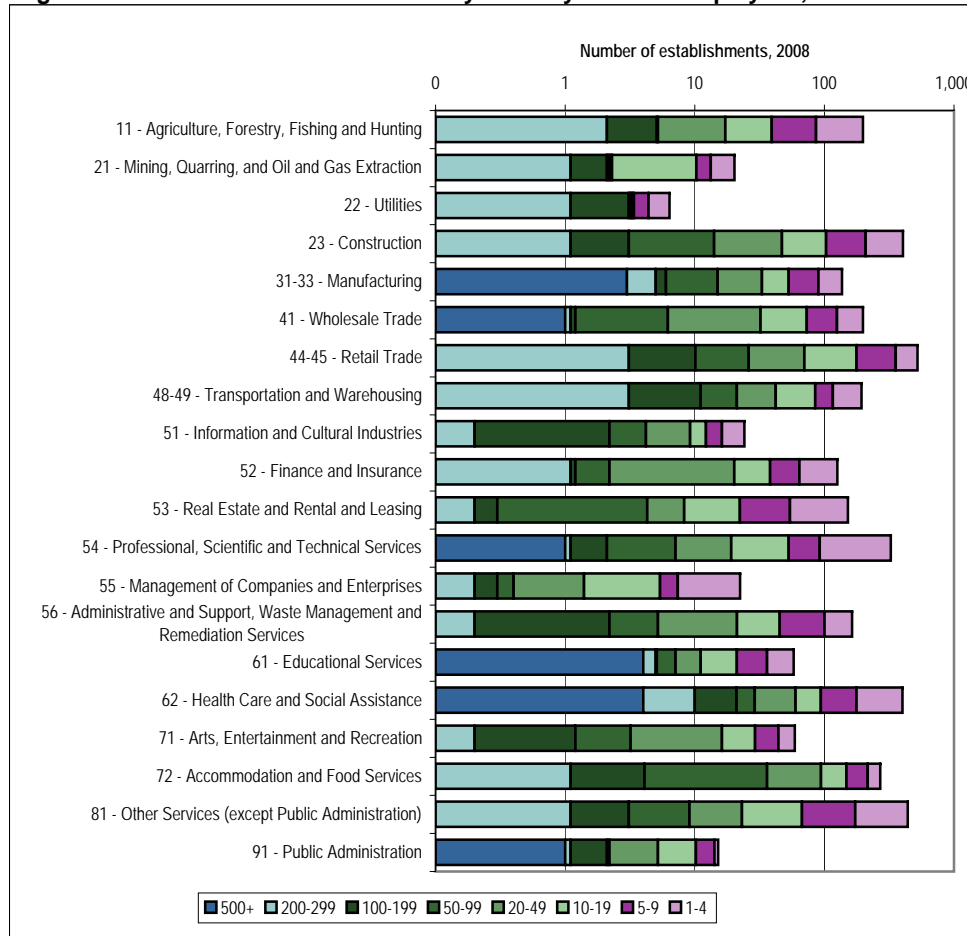
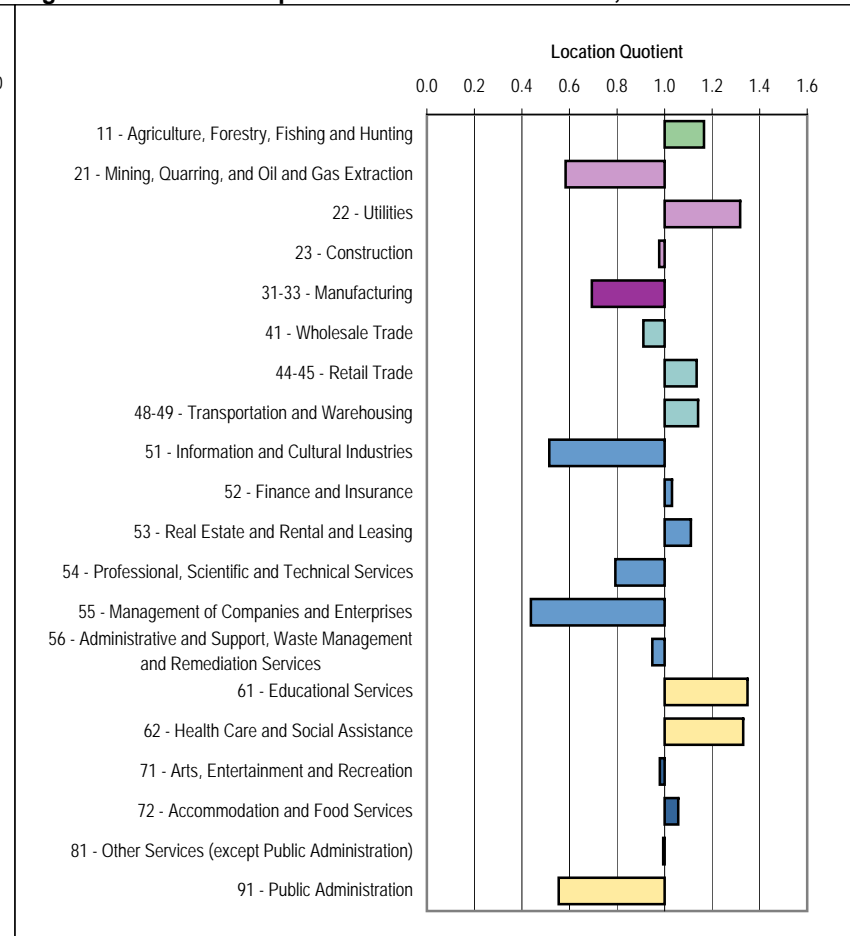


Figure 9.2 - Industrial specialization - Establishments, 2008



10 - Income Thunder Bay

Full Time Employment Income, 2005	Average	Median
Thunder Bay \$	49,094	\$ 44,234
Canada \$	51,221	\$ 41,401

% Change in FT Emp. Income 2000-2005 ¹¹	Average	Median
Thunder Bay	-1.3%	-1.4%
Canada	5.5%	2.4%

*Constant dollars (2005)

Figure 10.1 - Distribution of FT Employment Income

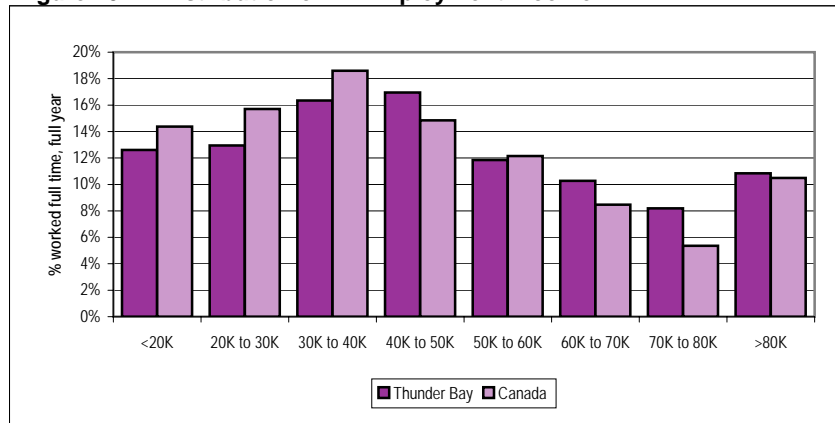
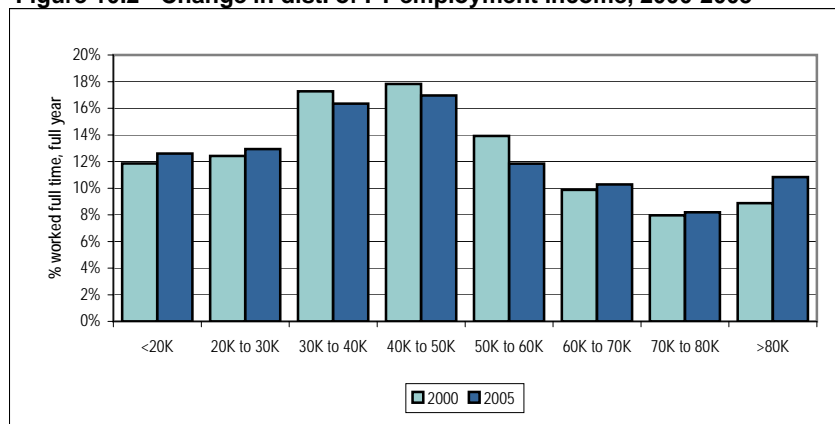
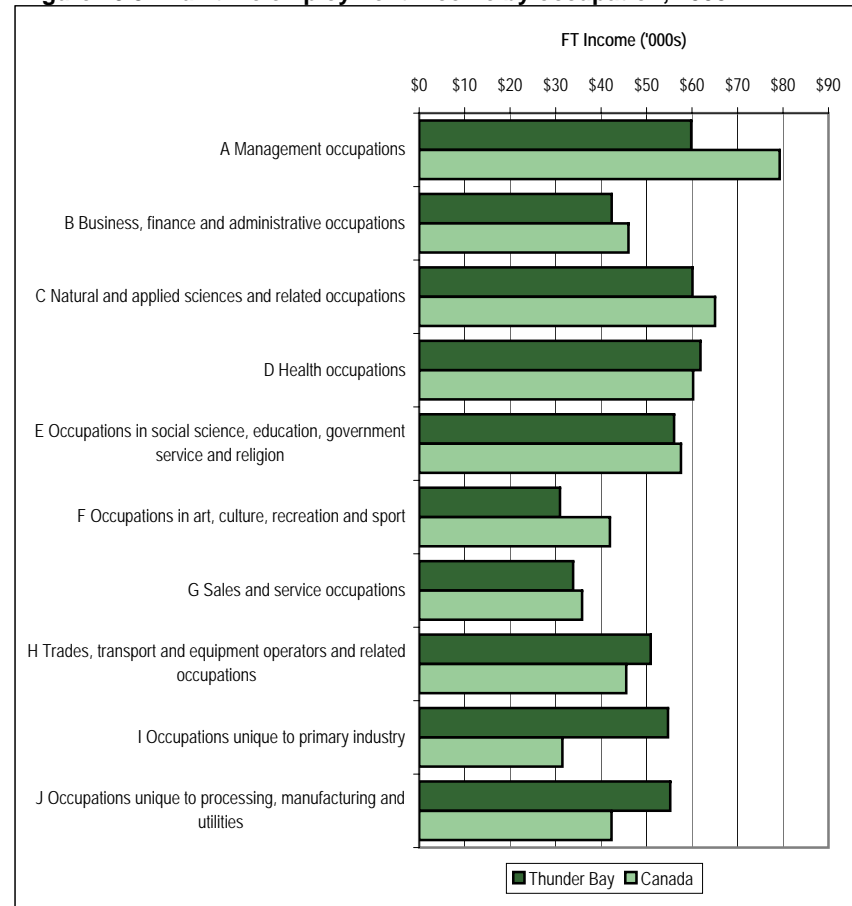


Figure 10.2 - Change in dist. of FT employment income, 2000-2005



*Constant dollars (2005)

Figure 10.3 - Full time employment income by occupation, 2005



Notes

¹ All educational attainment statistics are calculated for the population 15 years and over.

² The employment rate refers to the number of persons employed expressed as a percentage of the total population 15 years of age and over (excluding institutional residents).

³ The unemployment rate refers to the number of unemployed persons expressed as a percentage of the total labour force 15 years of age and over.

⁴ Self-employment is defined as persons 15 years of age and over for whom the job reported consisted mainly of operating a business, farm or professional practice, alone or in partnership. Examples include: operating a farm; working on a freelance or contract basis to do a job (e.g. architects, private duty nurses); or operating a direct distributorship selling and delivering products (e.g. cosmetics, newspapers). Respondents were asked to specify if their business was incorporated or unincorporated, as well as if they had paid help or no paid help.

⁵ Bohemians are defined as artistic occupations and include the following occupational categories: F021 Authors and writers; F031 Producers, directors, choreographers and related occupations; F032 Conductors, composers and arrangers; F033 Musicians and singers; F034 Dancers; F035 Actors and comedians; F036 Painters, sculptors and other visual artists; F121 Photographers; F141 Graphic designers and illustrators; F142 Interior designers; F143 Theatre, fashion, exhibit and other creative designers; F144 Artisans and craftspersons; and F145 Patternmakers, textile, leather and fur products. See Florida (2002) and Gertler et al. (2002).

⁶ Science and technology workers include the following occupational categories: C0 Professional occupations in natural and applied sciences; and C1 Technical occupations related to natural and applied sciences. See Feinstein and McAlinden (2002).

⁷ Following the method outlined in Florida (2002), we have divided the Canadian occupational structure into four broad categories: creative occupations; service occupations; trade and manual labour occupations; and agricultural and related occupations. These are defined using the National Occupational Classification for Statistics (NOCS) at the 2-digit level.

- *Creative occupations* include: A0 Senior management occupations; A1 Specialist managers; A2 Managers in retail trade, food and accommodation services; A3 Other managers, n.e.c.; B0 Professional occupations in business and finance; B1 Finance and insurance administrative occupations; C0 Professional occupations in natural and applied sciences; C1 Technical occupations related to natural and applied sciences; D0 Professional occupations in health; D1 Nurse supervisors and registered nurses; D2 Technical and related occupations in health; E0 Judges, lawyers, psychologists, social workers, ministers of religion, and policy and program officers; E1 Teachers and professors; F0 Professional occupations in art and culture; and F1 Technical occupations in art, culture, recreation and sport.

- *Service occupations* include: B2 Secretaries; B3 Administrative and regulatory occupations; B4 Clerical supervisors; B5 Clerical occupations; D3 Assisting occupations in support of health services; E2 Paralegals, social services workers and occupations in education and religion, n.e.c.; and G Sales and Service Occupations.

- *Trades and manual labour occupations* include: H Trades, Transport and Equipment Operators and Related Occupations; I2 Primary production labourers; and J Occupations Unique to Processing, Manufacturing and Utilities.

- *Agriculture and related occupations* include: I0 Occupations unique to agriculture, excluding labourers; and I1 Occupations unique to forestry operations, mining, oil and gas extraction and fishing, excluding labourers.

⁸ The method for identifying and defining cluster is based on previous ISRN work (see Spencer and Vinodrai 2005). Clusters are defined as constellations of industries defined using the North American Industrial Classification Systems (NAICS) at the 4-digit level based on patterns of location and co-location within the Canadian space economy. Constellations of industries must meet three criteria within a particular place to be defined as a cluster: 1) there must be 1,000 or more employees; 2) the overall employment LQ must be greater than or equal to 1; and 3) at least half of the industries that comprise a particular cluster in a particular place must have an individual employment LQ greater than or equal to 1.

⁹ The method for identifying and defining cluster is based on previous ISRN work (see Spencer, Vinodrai, Gertler and Wolfe 2010). We divide industries and employment into four categories: Non-basic, basic, non-clustered, and clustered. Non-Basic industries are those industries which do not demonstrate a pattern of geographic concentration in particular places. Basic industries are those industries which are geographically concentrated in particular places but do not exhibit patterns of systematic co-location with other industries. The remaining industries have the potential to cluster but do not always do so. Therefore, non-clustered employment is in those industries which do co-locate with other industries, but do not exhibit cluster characteristics in a particular location (see above). Clustered employment is that employment in industries which co-locate with other industries and exhibit cluster characteristics (see above).

¹⁰ Growth is calculated as % change in total employment between 2001 and 2006.

¹¹ Canadian censuses were conducted in 2001 and 2006. Income data relate to the calendar year prior to the census year, i.e. 1995 and 2000 respectively.

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