



THUNDER BAY
International Airports Authority Inc.

2008 Economic Impact of the Thunder Bay International Airport



May 2009
www.thunderbayairport.com

Chapter I

Introduction

1.1 About this report

This report was undertaken by RP Erickson & Associates of Calgary for the Thunder Bay International Airports Authority (TBIAA). The purpose of the study is to document the economic impact of the Thunder Bay International Airport during the 2008 calendar year. Econometric Research Ltd of Hamilton was contracted to assess the 2008 tax impact of the airport. These later findings are included in the Executive Summary, with the entire tax report contained in Appendix IV.

Impact assessments are valuable in that they serve to heighten business, community and political awareness as to the economic importance of an airport within a local economy. This study can also be viewed as a base-line against which future developments may be measured.

Any questions related to this study should be directed to Mr. Ed Schmidtke, Manager Business Development, Thunder Bay International Airports Authority (807) 473-2602.

1.2 Background

The Thunder Bay International Airport (YQT) is operated and managed by the Thunder Bay International Airports Authority (TBIAA) under a long-term lease agreement with the federal government. The airport is located on the southwest reaches of the City of Thunder Bay. The airport is one of 26 National Airport System (NAS) airports in Canada.

The Thunder Bay International Airport was constructed with federal Department of Transport (DoT) assistance in 1937, replacing an earlier local flying club facility dating from 1927. The Ft. William Municipal airport opened in 1939 on 240 acres (97 hectares) of land purchased from the City of Ft. William and was initially operated and managed by the City. With the advent of War II the DoT operated and managed the airport through a lease and established the No. 2 Elementary Flying Training School under the British Commonwealth Air Training Plan. After the War, the federal government purchased the airport and bought an adjacent parcel of land to extend the runways bringing up the land base to its present 790 acres (320 hectares).

Regularly scheduled flights were initiated by Trans Canada Airlines in 1947, and since that date YQT has featured a variety of regional, transborder and transcontinental air services by a varying array of local, provincial and national operators. The airport was transferred to local management by the TBIAA on September 01, 1997.

The airfield features a significant general aviation component, with a number of on-site corporate, charter, maintenance, training and speciality aviation services companies. Some 100 fixed and rotary-wing aircraft are based at the airport, although this number rises considerably during the busy summer season, especially in support of those forestry, mining and tourism interests who are based throughout the north-western Ontario hinterland.

In 2008, scheduled air passenger activity at YQT totalled 645,164 passengers. There were roughly 95,500 aircraft movements which correlates to the 20th busiest airport in Canada. Flight training accounts for between 40 and 50 percent of aircraft movements in any given year.

The airport property generally exhibits a flat topography. The reference elevation is 653' above mean sea level. The airport operates on a 24-hour, 7-day per week basis. The main asphalt runway (07-25) is 6200 x 200'; the crosswind runway (12-30) is 5300 x 200'. The airfield has runway and approach lighting; navigation and landing aids include a certified ILS (R07) and a GPS approach. An on-site Nav Canada Tower provides local air traffic control and is operated on a 16 hr per day basis; a facility which remains a significant airport asset. YQT operates under Nav Canada's Winnipeg Area Control centre for upper level air navigation services.

The Thunder Bay International Airport is an economic engine for its community pumping hundreds of millions of dollars of economic activity into the local economy, as well as providing significant fiscal benefits to the provincial and national economies. The Thunder Bay region exhibits a range of air traffic 'attractors' such as : an entrepreneurial-minded business community which has fostered a diversified local economy; a well-educated workforce with comparatively high disposable incomes; in addition to Thunder Bay's attractive location as a convention and tourism destination. These attractors have created a stable base of demand for air travel.

Thunder Bay International AirportThe Thunder Bay International Airport is an important hub for air travel in north-western Ontario and as this report clearly depicts - the airport generates a substantial economic 'footprint' for the community and region it serves.

1.3 Methodology

The economic impact of the Thunder Bay International Airport has been measured in terms of employment [full-time equivalents or FTEs], labour income, other expenditures and total value-added GDP. These leading indicators are expressed in dollar values and person-years of employment. Direct, indirect and induced forms of activity have been considered for employment and GDP. Data was obtained for the 2008 calendar year.

The data compiled in the 2008 study was obtained via a questionnaire circulated amongst the 59 firms that operate from the Thunder Bay International Airport. It is noted that a number of firms, particularly airport terminal building (ATB) concessionaires, often include subsidiary businesses operating separate venues. In all cases, data was sought for an entire operation even though a commercial entity may have several on-airport outlets.

The survey population was separated into 8 sub-categories; those impacts associated with :

- the air carriers & their support services;
- the airport terminal building concessionaires;
- the general and corporate aviation communities;
- the air cargo sector;
- airport support & government agencies;
- on-airport, non-aviation firms;
- the impact associated with the spending activities of non-resident air passengers visiting the Thunder Bay area via the airport; and,
- the 'one-time' economic impacts of new construction projects on the Thunder Bay International Airport.

Each of the above categories is described in more detail in Chapter II (Sections 2.1 through 2.8). Section 2.9 displays the aggregate economic impact of the Thunder Bay International Airport for 2008.

In conducting the interview/questionnaire process, key principals at each targeted firm were visited by the consultants, where : the underlying rationale for undertaking the study was explained; the objectives of the study could be examined; the value of their participation could be fully explored; and, the confidentiality of their data assured. This approach resulted in an exceptional 100 percent response rate for all data fields from the 59 firms canvassed.

The impact of off-airport passenger spending was undertaken by utilizing the Conference Board of Canada's TEAM econometric model, as explained in Section 2.7.

One last important consideration is worth imparting : this report represents a 'snap-shot' of economic activity in time. The data herein represents the economic activity for the Thunder Bay International Airport for calendar year 2008.

1.4 The economic impact modelling process

Economic impact analysis is based on the premise that operations within various industries in an economy are closely related or linked to each other; that is, an increase in the activity levels in one industry will produce a positive 'domino' or rippling effect on other industries. Economists discuss the impact that one sector has on another in terms of indirect and induced effects. The total economic impact is the sum of the direct, indirect and induced effects.

In this report :

Direct economic effects are the economic activities related to employment, labour income, and expenditures emanating from on-airport firms or from

passenger spending or new construction linked to the presence of the Thunder Bay International Airport.

Indirect economic effects are those related to the economic impact associated with parallel co-activities which support activities at the Thunder Bay International Airport. Broad examples would include : the inputs required to find, process and ship refined oil products used aboard aircraft or the office supply industry which supports aviation administration functions, etc. This economic activity is accounted for by multipliers which attempt to quantify the interactive linkages within the local economy impacted by direct economic activity at the Thunder Bay International Airport.

Induced economic effects are those due to the overall increase in the goods and services produced within an economy, arising from the spending power of direct and indirect employees. For example, the auto mechanic whose services are in demand by an employee of an airport firm who requires the use of his/her car to get to/from the airport, or the movie theatre operation which benefits from the disposable income of airport workers, etc. As in the case in calculating the indirect benefits, multipliers are used to identify induced activity.

The aviation industry is a good example of a highly integrated sectoral activity which has significant linkages throughout a domestic economy. The multipliers associated with aviation are higher than most primary sectors and, as such, the potential impact to an economy linked to an increase or expansion in aviation activity is significant.

The most common economic measures used in economic impact surveys are : employment and value-added gross domestic product [GDP]. For this study, the consultants have chosen to display labour income as a separate category of value-added GDP in addition to total value-added GDP.

In this report :

Employment is measured by FTEs and by annual income plus benefits of the employees required to mount an airport presence. FTEs are expressed in person-years and labour income by dollar value. Employment multipliers are used to generate the associated indirect and induced impacts. We also report employment in terms of jobs – both full and part-time as collected in our survey and reported in Section 2.10 (no multiplier effort has been extended to this total).

Labour income is the total payroll expense of the canvassed firms, including wages, salaries and all employee benefits. Labour income multipliers are used to generate the associated indirect and induced impacts.

Other Expenditures is defined as the annual operating expenditures for goods and services of the canvassed firms, excluding labour income.

Total Value-added GDP is an aggregate of labour income and other expenditure totals. No multiplier has been applied to this category.

1.5 A word about the multipliers used in this report

Multipliers are used to *infer* indirect and induced economic activity from a measure of direct economic activity. Multipliers cannot be directly observed; they are inferred from an economic model. By far the direct measure is the most accurate. Readers are advised that multiplier analysis remains an imprecise econometric technique and that caution be used in interpreting the indirect and induced impacts contained in this report. However, multipliers are virtually the only cost-effective tool available to identify the overall impact of a sectoral activity within an economy.

The consultants note that the Ontario Department of Finance does not create Ontario-specific economic multipliers, unlike their counterpart agencies in most other provinces. The consultants contracted Statistics Canada to produce an Ontario-specific set of indirect and induced multipliers for three separate categories used in this study : Air Transportation (used for aviation activities); Retail Trade (used for ATB Concessionaires); and, Other Professional, Scientific and Technical Services (used for Airport Support & Government Services and Non-Aviation, On-airport Firms).

Chapter II

The 2008 Economic Impact of the Thunder Bay International Airport

2.1 Economic Impact of the Air Carrier & Support Services Sector at the Thunder Bay International Airport : 2008

As could be expected, the air carrier sector is a dominant contributor to the economic activity generated by the Thunder Bay International International AAirport. The major firms operating within this category include scheduled and charter airlines, ground and passenger handling firms, airport security screening, food catering, aircraft grooming, line maintenance firms and re-fuelling companies.

Table 1 depicts the economic impact activity undertaken by the Air Carrier & Support Services sector in 2008.

Table 1.

Air Carrier & Support Services Sector :
2008 Economic Impact
 (in 000s, except FTEs)

<i>Direct Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
512	\$26.425	\$33.844	\$60.269
<i>Total Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
1413	\$73.462	\$96.455	\$169.917

For calendar year 2008, a total of 512 annual full-time equivalent employees can be attributed to the Air Carrier & Support sector operating at the Thunder Bay International Airport. Their aggregate labour income was identified at \$26.425 million. Other Expenditures for this sector were \$33.844 million. Total direct value-added GDP was \$60.269 million.

When the indirect and induced multipliers are applied to the above direct economic activity, the considerable impact of Thunder Bay's air carrier sector can be realized. This category creates 1413 full-time jobs, generating an annual labour income of \$73.462 million. Other Expenditures in this sector were \$96.455 million. In 2008, the total value-added GDP benefit created by air carriers and their support activities at the Thunder Bay International AirportThunder Bay International Airport was \$169.917 million.

2.2 Economic Impact of the Airport Terminal Building Concessionaire Sector : 2008

Within the Airport Terminal Building (ATB), 9 firms were identified as providing services to passengers, visitors, meeters & greeters and employees of the airport. The number of firms canvassed in this grouping does not correlate with the number of outlets offering on-site services since a number of firms operate subsidiary or satellite venues. The totals within this sector are dominated by the car rental firms.

Table 2 depicts the economic impact activity undertaken by the ATB concessionaire sector in 2008.

Table 2.

Airport Terminal Building Concessionaire Sector : 2008 Economic Impact (in 000s, except FTEs)

<i>Direct Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
69	\$1.995	\$7.053	\$9.048
<i>Total Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
97	\$2.833	\$9.945	\$12.778

For calendar year 2008, a total of 69 annual full-time equivalent employees can be attributed to the concessionaires operating within the ATB. Their aggregate labour

income was identified at \$1.995 million, lower on average than most other airport workers and reflecting the minimum wage earnings of many workers in this sector. Other Expenditure activities were \$7.053 million. Total direct value-added GDP was \$9.048 million.

When the indirect and induced multipliers are applied to the above direct economic activity, the overall economic impact of the ATB concessionaires can be realized. This category creates 97 full-time jobs, generating an annual labour income of \$2.833 million. Other Expenditure activities were \$9.945 million. In 2008, the total value-added GDP activity created by ATB activities was \$12.778 million.

2.3 Economic Impact of the General & Corporate Aviation Sectors at the Thunder Bay International Airport : 2008

The Thunder Bay International Airport supports a diverse, on-site general aviation (GA) community alongside an active corporate aviation presence.

Thunder Bay's GA firms undertake a variety of aviation-related activities, including : aircraft charter, sales and leasing; maintenance/overhaul/repair services; and, a variety of specialized support services. The airport is home to several large government flight departments and a number of rotary-wing operations. There are two Fix Base Operators (FBOs) on airport which handle itinerant corporate air traffic.

Table 3 depicts the economic impact activity undertaken by the GA and corporate sector in 2008.

Table 3.

General & Corporate Aviation Sector : 2008 Economic Impact
(in 000s, except FTEs)

<i>Direct Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
144	\$9.312	\$22.773	\$32.085
<i>Total Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
397	\$25.887	\$64.903	\$90.790

For calendar year 2008, a total of 144 annual full-time equivalent employees can be attributed to the general and corporate aviation sector operating on the Thunder Bay International Airport. Their aggregate labour income was identified at \$9.312 million. Other Expenditure activities were \$22.773 million. Total direct value-added GDP was \$32.085 million.

When the indirect and induced multipliers are applied to the above direct economic activity, the significant impact of Thunder Bay's GA and corporate sectors can be realized. This category creates 397 full-time jobs, generating an annual labour income of \$25.887 million. Other Expenditures activity was \$64.903 million. In 2008, the total value-added GDP activity created by general and corporate aviation at the Thunder Bay International AirportThunder Bay International Airport was \$90.790 million.

2.4 Economic Impact of the Air Cargo Sector at the Thunder Bay International Airport : 2008

Thunder Bay's current air freight industry is dominated by the express courier & mail segment. The airport is also home to several national freight firms, although their interests are largely in support of Thunder Bay's trucking industry.

Table 4 depicts the economic impact activity undertaken by the Air Cargo sector in 2008.

Table 4.

Air Cargo Sector : 2008 Economic Impact
(in 000s, except FTEs)

<i>Direct Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
31	\$1.145	\$2.507	\$3.652
<i>Total Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
86	\$3.183	\$7.145	\$10.328

For calendar year 2008, a total of 31 annual full-time equivalent employees work on-airport in the air cargo sector. Their aggregate labour income was identified at \$1.145 million. Other Expenditure activities were \$2.507 million. Total value-added GDP was \$3.652 million.

When the indirect and induced multipliers are applied to the above direct economic activity, the overall impact of Thunder Bay's air freight sector can be realized. This

category creates 86 full-time jobs, generating an annual labour income of \$3.183 million. Other Expenditures activity was \$7.145 million. In 2008, the total value-added GDP benefit created by air cargo, courier and airmail activities at the Thunder Bay International AirportThunder Bay International Airport was \$10.328 million.

2.5 Economic Impact of the Airport Support & Government Services Sector at the Thunder Bay International Airport : 2008

The third largest on-site contributor to the economic impact of the Thunder Bay International AirportThunder Bay International airport is the Airport Support & Government Services group. This sector includes the Thunder Bay International AirportThunder Bay International Airports Authority, its third-party contractors, and all of the federal or provincial government agencies operating on the airport.

In total, 10 companies or agencies were canvassed. Table 5 depicts the economic impact activity undertaken by the Airport Support and Government Services sector in 2008.

Table 5.

Airport Support & Government Services Sector :
2008 Economic Impact
 (in 000s, except FTEs)

<i>Direct Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
223	\$14.548	\$11.838	\$26.386
<i>Total Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
604	\$39.716	\$33.146	\$72.862

For calendar year 2008, a total of 223 annual full-time equivalent employees can be attributed to this sector. Their aggregate labour income was identified at \$14.548 million. Other Expenditure activities were \$11.838 million. Total direct value-added GDP was \$26.386 million.

When the indirect and induced multipliers are applied to the above direct economic activity, the significant impact of the airport & government support sector can be realized. This category creates 604 full-time jobs, generating an annual labour income of \$39.716 million. Other Expenditure activity was \$33.146 million. In 2008, the total value-added GDP activity created by the airport support and government services sector was \$72.862 million.

2.6 Economic Impact of the On-Airport, Non-Aviation Sector at the Thunder Bay International Airport : 2008

The attractiveness of the industrial lands located on the Thunder Bay International Airport Thunder Bay International Airport is reflected in the growing importance of the On-Airport, Non-Aviation sector. Currently 7 firms are included in this sub-group, and airport management is actively promoting further development opportunities.

Table 6 depicts the economic impact activity identified in the On-Airport, Non-Aviation sector in 2008.

Table 6.

On-Airport, Non-Aviation Sector : 2008 Economic Impact (in 000s, except FTEs)

<i>Direct Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
162	\$3.510	\$5.246	\$8.756
<i>Total Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
439	\$9.582	\$14.689	\$24.271

For calendar year 2008, a total of 162 annual full-time equivalent employees can be attributed to the On-Airport, Non-Aviation sector. Their aggregate labour income was identified at \$3.510 million. Other Expenditure activities were \$5.246 million. Total direct value-added GDP was \$8.756 million.

When the indirect and induced multipliers are applied to the above direct economic activity, the significant impact of the On-Airport, Non-Aviation sector can be realized. This category creates 439 full-time jobs, generating an annual labour income of \$9.582 million. Other value-added GDP activity was \$14.689 million. In 2008, the total value-added GDP activity created by the sector at the Thunder Bay International AirportThunder Bay International Airport was \$24.271 million.

2.7 Economic Impact generated by Airport Visitor Spending : 2008

Spending by visitors travelling by air to the Thunder Bay area is an important contribution to the overall economic impact of the airport. Visitors by air are defined as domestic, transborder or international in nature depending upon their point of origin. A smaller sub-set of visitor spending are the expenditures made by cockpit and cabin crews of air carriers who overnight or 'lay-over' at hotels within the Thunder Bay area for operational or crew rest reasons; additionally, passengers who have been delayed and require overnight accommodation have also been considered in the 'overnight expenses' category. An additional source of non-resident spending is attached to those non-resident students attracted to the Thunder Bay area by the local community college which has a significant on-site, aviation-oriented campus.

In attempting to capture the impact attributable to this sector, the consultants have selected the Conference Board of Canada's Tourism Economic Assessment Model [TEAM]. The TEAM model is a sophisticated, computer-based econometric tool designed to assess the impact of non-resident spending upon a local or provincial economy. The TEAM model output is presented and integrated into the overall study results.

From Table 7 an input total of \$70.642 million of non-resident visitor spending was entered into the TEAM model. The model produced the results displayed in Table 8.

Table 7.

Spending by Non-Resident Visitors : 2008

	<u>Totals</u>
Non-resident visitors arriving by air [†]	\$67,742,000
Aviation student spending ^{††}	\$1,350,000
Flightcrew overnight expenses ^{††}	<u>\$1,550,000</u>
Total	\$70,642,000

[†] Thunder Bay International Airports Authority and Thunder Bay Tourism.

^{††} RP Erickson & Associates.

Table 8 depicts the economic impact attributable to non-resident visitor spending in the Thunder Bay area in 2008.

Table 8.

Spending by Non-Resident Visitors arriving by Air : 2008 Economic Impact (in 000s, except FTEs)

Direct Impact

<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
896	\$19.040	\$26.730	\$45.770

Total Impact

<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
1410	\$40.680	\$68.950	\$109.630

For calendar year 2008 within the Thunder Bay area, a total of 896 annual full-time equivalent employee job positions can be attributed to non-resident visitor spending. The aggregate labour income of this workforce was identified at \$19.040 million. Other Expenditure activities undertaken by firms benefiting from such spending were \$26.730 million. The total direct value-added GDP for this segment was \$45.770 million.

When the TEAM-generated multipliers are applied to the above direct economic activity, the significant impact of non-resident visitor spending upon the Thunder Bay area can be realized. This spending generated 1410 full-time jobs, creating an annual labour income of \$40.680 million. Other Expenditure activity was \$68.950 million. In 2008, the total value-added GDP activity created by this sector on primarily the Thunder Bay economy was \$109.630 million.

2.8 The 'One-Time' Economic Impact of New Construction at the Thunder Bay International Airport : 2008

The 'one-time' impact of the economic contribution accompanying capital spending on the airport is consequential. Capital spending arises from the Airport Authority's capital program alongside a range of tenant facility new construction and/or expansion projects. This capital investment has provided work for the local construction industry and Ontario's construction materials sector.

From the questionnaire survey, in 2008 \$5.994 million of new capital construction on the Thunder Bay International AirportThunder Bay International Airport was identified. The TBIAA's on-going capital program accounted for nearly 30 percent of this total.

Table 9 depicts the 'one-time' economic impact activity associated with capital spending on the Thunder Bay International AirportThunder Bay International Airport in 2008.

Table 9.

**One-Time, New Construction on the Thunder Bay International Airport :
2008 Economic Impact**
(in 000s, except FTEs)

<i>Direct Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
49	\$3.230	\$1.130	\$4.360
<i>Total Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
69	\$4.160	\$1.884	\$6.004

For calendar year 2008, a total of 49 annual full-time equivalent construction and support service jobs can be attributed to on-airport capital construction spending. The aggregate labour income was identified at \$3.230 million. Other Expenditure activities were \$1.130 million. Total direct value-added GDP was \$4.360 million.

When the indirect and induced multipliers are applied, 'new' on-airport construction spending generated 69 full-time jobs, creating an annual labour income of \$4.160 million. Other Expenditure activity was \$1.884 million. In 2008, the total value-added GDP activity created by new construction on the Thunder Bay International AirportThunder Bay International Airport was \$6.004 million.

2.9 The Aggregate Economic Impact of the Thunder Bay International Airport : 2008

At the Thunder Bay International Airport, some 59 commercial firms or government agencies were interviewed and their 2008 economic activities assessed. Additionally, the impact of non-resident visitor spending in the Thunder Bay area and the economic benefits associated with 'one-time' capital construction expenditures for 2008 have been combined with the data in Sections 2.1 through 2.8 to produce Table 10.

Table 10 depicts the aggregate economic impact of the Thunder Bay International Airport for 2008.

Table 10.

Aggregate Economic Impact of the Thunder Bay International Airport : 2008 (in 000s, except FTEs)

<i>Direct Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
2,086	\$79.205	\$111.121	\$190.326
<i>Total Impact</i>			
<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
4,515	\$199.503	\$297.077	\$496.580

For calendar year 2008, a total of 2,086 annual full-time equivalent employees can be attributed to the Thunder Bay International Airport; it is noted that within this total – 1143

full time jobs are located on the airport. The aggregate labour income of this workforce was identified at \$79.205 million. Other Expenditure activity was \$111.121 million. Total direct value-added GDP located on the Thunder Bay International Airport was \$190.326 million.

When the indirect and induced multipliers are applied to the above direct economic activity, the consequential impact of the airport is realized. The airport creates some 4,515 full-time jobs, generating an annual labour income of \$199.503 million. Other Expenditure activity was \$297.077 million. In 2008, the total value-added GDP activity created by the Thunder Bay International AirportThunder Bay International Airport was \$496.580 million.

2.10 Discussion

In addition to providing over 4500 full-time jobs, the Thunder Bay International Airport's contribution to the GDP of Thunder Bay was \$496 million. This amounted to nearly 9 percent of Thunder Bay's 2008 GDP of \$5.601 billion¹.

The distribution of the Economic Impacts by sub-category is presented in Table 11. This distribution has been calculated on the basis of on-airport activities and does not include those totals created by non-resident visitor spending and the one-time impact associated with new construction activities.

Table 11.

Distribution of Economic Impacts

The economic benefits of the on-airport firms are distributed :

	<u>FTEs</u>	<u>Labour Income</u>	<u>Other Expenditures</u>	<u>Total Value added GDP</u>
Air Carriers	45%	46%	40%	43%
ATB Concessionaires	6%	4%	9%	7%
General & Corporate Av	13%	16%	27%	23%
Air Cargo	3%	2%	3%	3%
Airport & Gov't Services	20%	26%	14%	19%
On-Airport, Non-Aviation	14%	6%	6%	6%

¹ Thunder Bay Community Economic Development Commission.

Table 12 reviews the major employers in terms of direct jobs in the immediate Thunder Bay area; it is noted that the airport is the third largest centre of employment in the region.

Table 12.

TOP 12 EMPLOYERS IN THUNDER BAY

City of Thunder Bay	3,378
TB Regional Health Sciences Centre	2,500
Thunder Bay International Airport †	2,401
Lakehead District School Board	2,100
Government of Ontario	1,849
St Joseph's Care Group	1,700
TB Catholic District School Board	1,521
Abbitibi-Bowater Forest Products Inc	1,300
Lakehead University	1,000
Confederation College	690
Bombardier Transportation	685
Government of Canada	653

† Direct jobs included part-time and full-time employment.

(Source : Thunder Bay Economic Development
Commission and RP Erickson & Associates)

Data Generalities – 2008

When the economic impact totals are compared against Thunder Bay’s 2008 enplaned and deplaned [E&D] passenger movement data (645,164), the results provide some interesting generalities.

Within the Thunder Bay area ² :

Each 1000 E&D passengers supports 6.9 full time jobs.

Each 1000 E&D passengers supports \$309,000 of annual labour income.

Each 1000 E&D passengers supports \$770,000 of total GDP activity.

* * * * *

Each time a B737 lands and takes off, it supports 1.79 FTEs;
\$80,000 of annual labour income; and \$200,000 of GDP activity.

* * * * *

Each time a Bombardier CRA lands and takes off, it supports 1.04 FTEs;
\$46,000 of annual labour income; and \$116,000 of GDP activity.

* * * * *

A new daily 19-seat regional service linking Thunder Bay to a northwest Ontario community would support annual benefits of :

A new daily 19-seat regional service linking Thunder Bay to a northwest Ontario community would support annual benefits of :
33 FTEs; \$1.50 million of labour income; and, \$3.73 million of total GDP activity

* * * * *

² See Appendix IV for a methodology for the above data.

In addition to the quantifiable economic benefits displayed in this report, the Thunder Bay International Airport provides a wide range of ancillary, qualitative benefits to residents of the Thunder Bay area and the province as a whole. These range from societal advantages attached to the travel, tourism and transportation functions of the airport, through expansive career and hobby development possibilities to opportunities for volunteerism.

Volunteerism - 2008

Airports provide local residents with a number of volunteer opportunities, where local residents can pursue their recreational interests in like company at no cost to any level government. By example, the NOW Air Search & Rescue organization has some 88 active members who, by the Club's estimate, completed roughly 4480 hrs of volunteer activities in 2008 - this group undertake critical search & rescue missions in northwest Ontario. As well, the Nor'Western Flying Club estimates that it generated some 1000 hrs of volunteerism from its 30 members.

A number of airport firms and agencies host school visits throughout the year. These services are undertaken on a 'no-charge, volunteer basis' and have the significant ancillary benefit of passing Thunder Bay and the province's rich aviation heritage on to future generations - not to mention those student visitors who may be attracted to a career in aviation.

2.11 Conclusions

In 2008, the Thunder Bay International Airport supported a considerable level of economic activity, primarily in the Thunder Bay area but also throughout the province and, to a lesser extent, the national economy.

In direct terms, the airport :

- contributed over 2000 full-time jobs;
- generated nearly \$80 million in labour income; and,
- created over \$190 million in total value-added GDP activity.

When indirect and induced forms of economic activity are included, the airport generates :

- over 4500 full-time jobs;
- 200 million dollars in annual labour income; and,
- ½ billion dollars of total GDP activity.

In the 21st Century virtually everyone in Canada travels any distance beyond 500 kms almost exclusively by air, especially to and from communities such as Thunder Bay which do not feature train service and/or long distances over two-lane highways. Nor can sustainable community or regional economic development plans be based upon unreliable surface links. The air transport mode has evolved into an indispensable, if not critical, piece of transportation infrastructure for Thunder Bay - a lifeline linking the City and its northwest Ontario catchment area to centres of national and international commerce. In this day and age the lack of a suitable airport facility will imperil the development goals of any city, and lessen both the economic and social attributes which commercial aviation can enable within a community or region.

Clearly – the Thunder Bay International Airport is an important economic and social contributor to the City of Thunder Bay and northwest Ontario.