



LEIGH FISHER ASSOCIATES  
*Consultants to Airport Management*

Addendum to Final Report

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**Economic Development Study  
Regional Reliever Airport on  
the Pickering Lands**

Prepared for  
**Greater Toronto Airports Authority**  
Toronto, Ontario

March 2004





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Prepared for

**Greater Toronto Airports Authority  
Toronto, Ontario**

Prepared by

**Leigh Fisher Associates**

**March 2004**

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## CONTENTS

<b>Chapter</b>		<b>Page</b>
1	INTRODUCTION .....	1-1
2	AVIATION ACTIVITY FORECASTS.....	2-1
	Passenger Activity .....	2-1
	General Aviation Activity .....	2-5
	Cargo Activity .....	2-5
3	ESTIMATED ECONOMIC IMPACT OF A NEW AIRPORT IN PICKERING .....	3-1
	Definition of Terms.....	3-1
	Methodology.....	3-2
	Estimated Economic Impact Related to Passenger Activity.....	3-3
	Estimated Economic Impact Related to General Aviation Activity	3-7
	Estimated Economic Impact Related to Cargo Activity.....	3-8
	Estimated Future Economic Impact of an Airport in Pickering.....	3-8
	Estimated Economic Impact of an Airport in Pickering in 2012.....	3-9
	Estimated Economic Impact of an Airport in Pickering in 2022.....	3-10
	Estimated Economic Impact of an Airport in Pickering in 2032.....	3-12
	Estimated Tax Revenue to Be Generated by an Airport in Pickering	3-14
	Provincial and Federal Tax Revenue .....	3-14
	Municipal Tax Revenue .....	3-14
	Summary of Economic Impacts and Taxes .....	3-14

## TABLES

	<b>Page</b>
1 Forecast Aviation Activity .....	2-2
2 Estimated Employment, Payroll, and Economic Impact in 2012 .....	3-9
3 Estimated Employment, Payroll, and Economic Impact in 2022 .....	3-10
4 Estimated Employment, Payroll, and Economic Impact in 2032 .....	3-12
5 Estimated Provincial and Federal Tax Revenue to be Generated .....	3-15

## FIGURES

1 Forecast Total Passengers.....	2-4
2 Economic Impacts of an Airport .....	3-2
3 Relationship Between Direct Employment and Total Passengers .....	3-5
4 Multipliers Used in Recent Passenger Airport Economic Impact Studies	3-5
5 Total Economic Impact, Employment, and Passengers.....	3-6
6 Estimated Economic Impact of an Airport in Pickering in 2022 Relative to Selected Airports.....	3-11
7 Estimated Economic Impact of an Airport in Pickering in 2032 Relative to Selected Airports.....	3-13
8 Estimated Economic Benefits of an Airport in Pickering .....	3-16

## Chapter 1

### INTRODUCTION

In January 2004, Leigh Fisher Associates, in association with Global Insight, Inc. and Skyworks, Inc., issued a report entitled *Economic Development Study for a Regional Reliever Airport on the Pickering Lands* which: (1) identified the local industry clusters in the Durham and York regions, (2) estimated the future economic impact of a new Pickering Airport, (3) recommended best practices strategies to maximize the potential economic development, and (4) provided guidelines for the consolidation of existing businesses. The report was based on forecasts prepared in November 2002 by Landrum & Brown and ArupNAPA as part of the *Pickering Financial Assessment Analysis* (FAA).

In November 2003, Moncreiff Management Limited produced updated *Pickering Annual and Peak Airport Traffic Forecasts* (Moncreiff forecasts) for passenger activity. The Greater Toronto Airports Authority (GTAA) has also updated the forecasts of general aviation activity. This addendum report:

- Presents a summary of the FAA forecasts from November 2002, the updated passenger forecasts prepared by Moncreiff in November 2003, and the updated forecasts of general aviation activity provided by GTAA. Forecasts of cargo activity are from the November 2002 FAA.
- Provides revised estimates of the future economic impact of a new Pickering Airport using the updated aviation activity forecasts.
- Identifies the relative increases in the magnitude of forecast economic impact under the various forecast scenarios by Moncreiff and Landrum & Brown.

The total economic impact of an airport is the sum of on-airport (direct) and off-airport (indirect and induced) impacts. The direct impact is that generated at the site of economic activity—in this case, the new airport in Pickering. The indirect impact occurs off-site in supplying industries that provide the services, materials, or machinery to support the initial direct economic activity. An example of a business with an indirect impact would be a food wholesaler that sells supplies to on-airport concessionaires. The induced impact is the off-airport impact above and beyond the combined direct and indirect impacts of an economic activity, where successive rounds of spending create additional income, also known as the “multiplier” effect.

Additional tax revenue would be generated for federal, provincial, and municipal governments as a result of a new airport in Pickering and associated economic activity. Provincial and federal income taxes were assumed to be paid on the estimated payroll generated by aviation-activity-related employment both on- and

off-airport. In addition, federal goods and services tax (GST) and provincial sales taxes (PST) were assumed to be paid on a portion of direct, indirect, and induced expenditures.

The estimated economic impact of a new airport in Pickering on the economy of the Greater Toronto Area (GTA) is estimated in this addendum for 2012, 2022, and 2032 and is derived from a review of more than 30 economic impact studies prepared for airports across Canada and the United States. The economic impact of an airport can be quantified in terms of employment, payroll, business expenditures, and taxes. Direct, indirect, and induced impacts are projected to increase in relation to aviation activity. Forecast enplaned passengers, general aviation operations, and cargo operations at the new airport in Pickering are expected to lead to increased employment, payroll, business expenditures, and taxes.

Metrics for economic impact per passenger or operation were derived from these studies. However, economic impact does not linearly increase with passenger, general aviation, and cargo activity at an airport. As an airport crosses certain threshold levels of activity, expansion in the types of businesses on-airport and services provided to passengers drives increases in employment, payroll, business expenditures, and taxes.

For example, one rental car company may be sufficient to serve 100,000 total annual passengers at an airport. As passengers increase to 200,000, the existing company will have to increase in size or another company would come on-airport to serve the unmet demand. Use of an economic impact and employment per passenger metric would capture this increase in rental car activity. However, at certain thresholds, additional passenger activity results not only in the expansion of existing types of businesses, but also demand for additional services to be provided on-airport. For instance, if international service were to develop at the airport in Pickering, duty free concessions providers and currency exchange businesses would locate on-airport. With the new types of businesses, the economic impact per passenger metrics would increase as well.

The levels of passenger activity in the Moncrieff and FAA forecasts place the new airport in Pickering at different threshold levels of development throughout the forecast period, resulting in different relative magnitudes of economic impact per passenger.

## Chapter 2

### AVIATION ACTIVITY FORECASTS

This section presents the updated passenger and general aviation forecasts and the FAA forecasts used in the January 2004 report. Three forecast scenarios for passenger activity were developed in the FAA and four were developed in the Moncreiff forecasts Management Limited. The Greater Toronto Airports Authority (GTAA) has also updated the forecasts of general aviation activity. The Moncreiff passenger forecasts and the GTAA general aviation forecasts are collectively referred to in this addendum as the updated forecasts. For further detail regarding the assumptions underlying the forecast scenarios, please refer to the *Pickering Annual and Peak Airport Traffic Forecasts* and *Pickering Financial Assessment Analysis*.

#### Passenger Activity

The updated and the FAA forecasts represent a range of the possible passenger activity scenarios at a new airport in Pickering.

**Moncreiff forecasts.** The Moncreiff forecast scenarios are based on different initial air service levels and annual growth rates for the total number of passengers at the airport. Four forecast scenarios of passenger activity were developed for 2012, the opening year of the new airport, with the following assumptions:

- **High/Low Marketshare.** On the basis of population, income, and ground access surveys, Moncreiff developed estimates of the proportion of the overall GTA population that would use a new airport in Pickering. An estimated 15% to 20% of aviation demand in the GTA would be accommodated at an airport in Pickering. The high end of that range (20%) represents the “high” forecast scenario used in this report. The low end (15%) represents the “low” forecast scenario.
- **Fast/Slow Development of Airline Services.** The “fast” and the “slow” forecast scenarios differ on the speed at which commercial passenger airline service is introduced at an airport in Pickering. In the “fast” scenario, airlines were assumed to offer sufficient service to accommodate the maximum demand for the airport in Pickering. In the “slow” scenario, air service would develop at a gradual rate with some unmet air service demand in the initial years.

Table 1 presents the forecast passengers and passenger operations at a new airport in Pickering under each of the updated forecast scenarios described above. The new airport in Pickering is forecast to serve between 2.4 million and 4.1 million passengers in 2012. In the updated Moncreiff forecasts for 2012, non-stop service is forecast to be provided to 21 domestic, transborder, and international destinations.

Table 1  
**FORECAST AVIATION ACTIVITY**  
 New Airport in Pickering

Forecast Year and Scenario	Total passengers	Aircraft movements			
		Passenger	Cargo	General aviation	Total
<b>2012</b>					
Updated forecasts					
High/fast scenario	4,117,000	61,400	--	310,000	371,400
High/slow scenario	3,368,000	53,400	--	310,000	363,400
Low/fast scenario	2,579,000	37,400	--	310,000	347,400
Low/slow scenario	2,367,000	36,000	--	310,000	346,000
FAA forecasts	--	--	--	198,000	198,000
<b>2022</b>					
Updated forecasts					
High scenario	6,630,000	90,800	4,600	385,000	480,400
Low scenario	4,192,000	58,300	4,600	385,000	447,900
FAA forecasts					
Spill	2,555,000	31,000	5,400	211,000	247,400
Air service	4,566,000	54,000	4,600	211,000	269,600
Travel propensity	3,341,000	40,000	3,900	211,000	254,900
<b>2032</b>					
Updated forecasts	11,882,000	150,800	6,200	480,000	637,000
FAA forecasts					
Spill	9,705,000	117,000	7,000	224,000	348,000
Air service	7,271,000	86,000	6,200	224,000	316,200
Travel propensity	3,952,000	45,000	5,500	224,000	274,500

Sources: Passengers and passenger aircraft movements:  
 Updated forecasts—Moncreiff Management Limited, *Pickering Annual and Peak Airport Traffic Forecasts*, November 2003.  
 FAA forecasts—Landrum & Brown and ArupNAPA, *Pickering Financial Assessment Analysis*, November 2002.

Cargo movements: Landrum & Brown and ArupNAPA, *Pickering Financial Assessment Analysis*, November 2002.

General aviation movements:  
 FAA forecasts—Landrum & Brown and ArupNAPA, *Pickering Financial Assessment Analysis*, November 2002.  
 Updated forecasts—Greater Toronto Airports Authority, December 2003.

By 2022, passenger levels are forecast to be sufficient to clearly justify the establishment of air service at Pickering, so the fast/slow development scenarios are unnecessary. Additional destinations are forecast to be served from Pickering relative to 2012. The increased air service and overall forecast increase in aviation demand in the GTA results in 4.2 million to 6.6 million passengers served at a Pickering Airport in 2022.

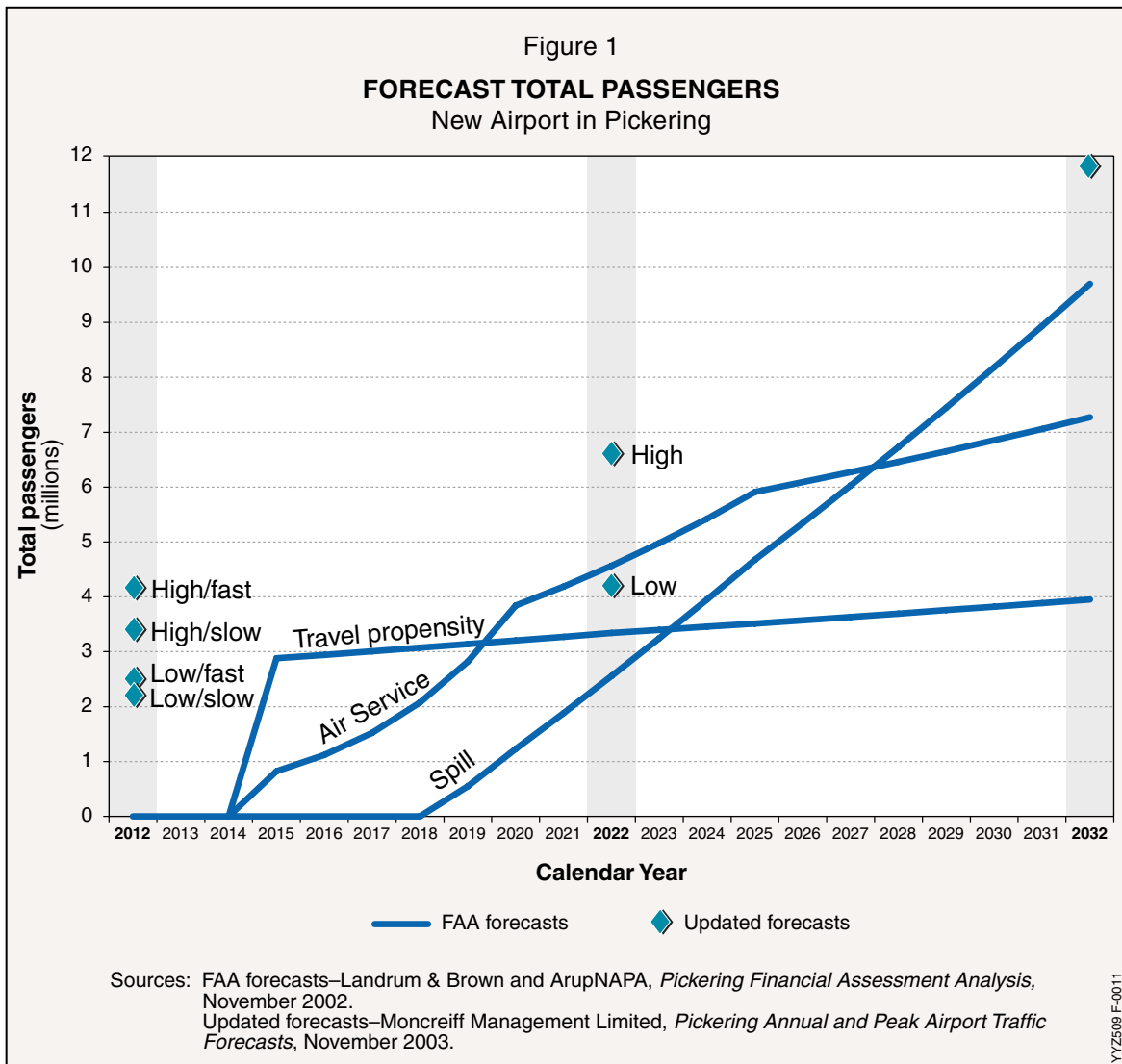
Passengers not using an airport in Pickering under the low market share scenario are assumed to use Pearson Airport. When air traffic at Pearson reaches 50.0 million annual passengers—the assumed capacity of the airport—unmet passenger demand would be diverted to the airports in Hamilton and Pickering. Since Pearson Airport is assumed to have reached capacity before 2032, the market share assumptions for an airport in Pickering are the same under both the high and low scenarios. Therefore, in both the high and low scenarios, activity is forecast to reach 11.8 million passengers at an airport in Pickering Airport in 2032. By 2032, the Moncreiff forecasts assume the airport will provide domestic, transborder, and international service from Pickering.

**FAA forecasts.** Also shown in Table 1, three forecast scenarios of aviation activity were developed for a new airport in Pickering in the *Pickering Financial Assessment Analysis*, which establish a range of future aviation activity for the airport.

- **Spill Scenario.** In this scenario, air traffic at Pearson would continue to increase based on historical growth trends. In 2019, when air traffic at Pearson is forecast to reach 50.0 million annual passengers, which is assumed to be the capacity of the airport, the “spill” passengers, representing unmet passenger demand for Pearson, would be diverted to Hamilton and/or to the new airport in Pickering.
- **Air Service Scenario.** Under the air service scenario, Landrum & Brown developed representative airline schedules on an average annual daily basis and, using representative load factors and aircraft types, derived the annual numbers of passengers and aircraft movements. In this scenario, commercial passenger service at a new Pickering airport would begin in 2015.
- **Travel Propensity Scenario.** In this scenario, commercial passenger service at a new Pickering airport would also begin in 2015. The level of annual passengers was determined by estimating the travel propensity, i.e., the average annual trips per capita, of the population within a 60-minute drive of the proposed airport in Pickering during the forecast horizon.

The FAA forecasts assume that a new airport in Pickering would primarily be a regional reliever airport with domestic and some transborder service. International service is assumed to be accommodated at Pearson throughout the forecast period.

As shown on Figure 1, the updated forecasts assume that passenger activity at an airport in Pickering would commence upon opening, 2012, and increase at a faster rate than in the FAA forecasts. For the updated forecast scenarios for 2012 and 2022 and the FAA forecasts for 2022, the new airport would still primarily serve domestic and transborder service. The economic impact per passenger is assumed to be consistent in all the 2012 and 2022 passenger forecast scenarios as the airport is forecast provide similar types of air service throughout that period. However, by 2032, the updated forecasts assume significant transcontinental and international service at the airport in Pickering. The level of international service in the updated forecasts indicates that additional types of businesses would develop beyond those assumed in the FAA forecasts.



## **General Aviation Activity**

General aviation (GA) activity includes all flight operations other than commercial passenger, commercial cargo, and military operations. Corporate aviation, recreational flying, and flight training schools account for the majority of general aviation traffic.

GTAA has updated the general aviation forecasts for the new airport in Pickering. GA activity would commence upon opening in 2012 with 310,000 aircraft movements 2012. GA activity is forecast to increase an average of 2.2% per year to 480,000 aircraft movements by 2032.

Under all three forecast scenarios developed in the *Pickering Financial Assessment Analysis*, the new airport in Pickering would serve only GA activity for the first few years after opening in 2012—until 2019 under the spill scenario and until 2015 under the air service and travel propensity scenarios. In 2012, 198,000 GA aircraft movements are forecast at the new airport in Pickering. GA activity is forecast to increase an average of 0.62% per year to 224,000 aircraft movements by 2032.

## **Cargo Activity**

In each of the three forecast scenarios in the FAA, cargo activity at the new airport would begin at the same time as passenger activity: in 2019, under the spill scenario, and in 2015 under the air service and travel propensity scenarios. As with passenger activity, each of the three forecast scenarios provides different initial levels of cargo aircraft movements and tonnes of cargo processed at the airport.

While initial levels of cargo activity vary, the average annual growth in cargo aircraft movements is forecast to be similar under all three scenarios, at around 3% per year. (Please note that the levels of cargo processed are expressed in kilograms in the *Pickering Financial Assessment Analysis* and were converted to tonnes for consistency in this report.)

The forecasts of cargo activity have not been updated from the forecasts presented in the FAA. The Air Service forecast scenario, which was the medium growth scenario, is used in this report in the updated forecast scenarios for cargo activity.

## Chapter 3

### ESTIMATED ECONOMIC IMPACT OF A NEW AIRPORT IN PICKERING

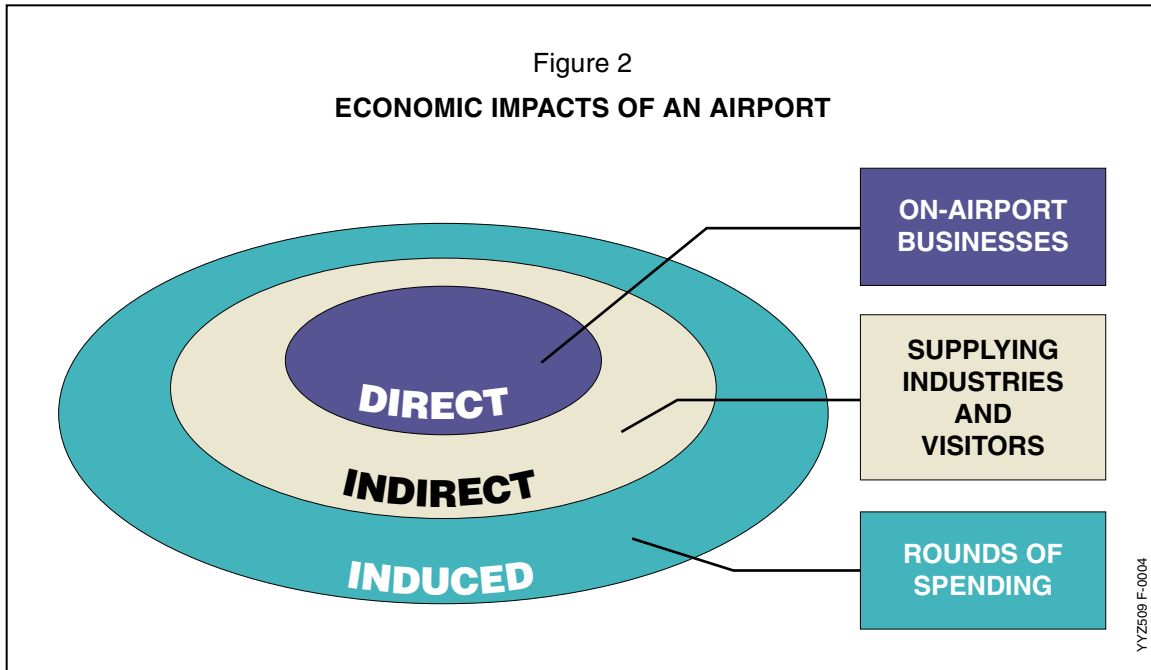
This chapter presents the estimated economic impact of a new airport in Pickering on the economy of the Greater Toronto Area (GTA) in 2012, 2022, and 2032. The economic impact of an airport can be measured in terms of the direct, indirect, and induced impacts of airport activity on the overall GTA economy in terms of employment, payroll, business expenditures, and taxes.

The estimated economic impact of the airport in Pickering was derived from a review of more than 30 economic impact studies prepared for airports across Canada and the United States during the last decade, and the forecasts of aviation activity described in Chapter 2.

#### DEFINITION OF TERMS

The total economic impact of an airport is the sum of related direct, indirect, and induced impacts. Indirect and induced impacts are derived from direct impacts through the “multiplier” effect.

- **Direct economic impact.** The direct economic impact of an airport is the impact generated on-site, including the employment, payroll, local expenditures, and taxes of all enterprises located at the airport—airlines, terminal concessionaires, general aviation businesses, ground transportation providers, government agencies, and other businesses. These enterprises have a direct impact on the economy of the region served by the airport.
- **Indirect economic impact.** The indirect economic impact of an airport is the impact resulting off-site, and includes the employment, payroll, expenditures, and taxes of (1) supplying industries that provide the services, materials, or machinery to support on-airport businesses, such as wholesale food distributors, office supply firms, and jet fuel suppliers and (2) businesses serving visitors arriving at the airport, such as hotels, restaurants, rental car companies, travel agencies, and taxicab operators.
- **Induced economic impact.** The induced economic impact of an airport is the off-airport impact above and beyond the combined direct and indirect impacts of an economic activity, where successive rounds of spending, known as the “multiplier” effect, create additional income. The relationship between direct, indirect, and induced impacts is illustrated on Figure 2.



- Multiplier effect.** The “multiplier” effect is the process by which the re-spending of income from direct and indirect activities results in additional income within the region. A majority of the take-home income earned by employees is spent on local goods and services. This spending becomes new income for others in the regional economy, who, in turn, re-spend some portion of what they earn. Successive rounds of spending create more jobs and increase business sales, income, and tax revenue.

The direct, indirect, induced, and total economic impacts of an airport are measured in terms of total expenditures, payroll, employment, and taxes. The results of this study are intended to be estimates of the economic impact that would be related to operations at the new airport. They should not be interpreted as benefits of forecast airport operations in the sense that such expenditures or employment would not occur if the airport did not exist; they simply represent dollar flows and jobs in the economy related to forecast activity at the airport.

## **METHODOLOGY**

Leigh Fisher Associates reviewed economic impact studies completed in the last decade for airports across Canada and the United States. Airports were selected across a broad spectrum of sizes and roles to mirror the forecast progression of aviation activity in an airport in Pickering. To estimate the economic impact of a new airport in Pickering, information in these studies was used to indicate the average direct employment, payroll, expenditures, and taxes for the corresponding levels of general aviation, cargo, and passenger activity.

The multipliers used in those economic impact studies to calculate indirect and induced impacts were used to approximate multipliers that would be applicable to an airport in Pickering. Multipliers are derived from economic and statistical models of the general economy of an area and are sensitive to the distribution of employment, payroll, and economic impact among industries. For instance, cargo companies could represent 20% of employment at an airport, but only 15% of total direct economic impact. Since multiplier analysis is tied to specific industries, the multiplier used for employment would differ slightly from the multiplier used for economic impact. For purposes of this study, a common multiplier was assumed for employment, payroll, and economic impact.

A general annual inflation rate of 3.0% was assumed for the North American economy for the period covered by this study. Inflation was not assumed to influence the levels of employment generated by aviation activity, but to reflect increases in payroll and expenditures that are assumed to occur. All dollar amounts presented in this chapter are in Canadian dollars, based on 2003 exchange rates.

### **Estimated Economic Impact Related to Passenger Activity**

Commercial passenger service is forecast to begin at a new airport in Pickering in 2012 in the updated forecasts and between 2015 and 2019 in the FAA forecasts. About 25 economic impact studies for airports providing commercial passenger service were used to estimate levels of direct employment, payroll, and economic impact. Data for airports with a similar level of total annual passengers to the forecast activity at a new airport in Pickering (2.4 million to 11.9 million passengers) were used to calculate average economic impact per passenger.

Economic impact is estimated to increase in proportion to total annual passengers and inflation. However, increases in economic impact can also be seen when airports reach certain threshold levels of activity. A substantial increase is often seen in economic impact as numbers of passengers increase from 1.0 million to 2.0 million annually due to increased levels of supporting industries on-airport, such as the introduction of rental car companies and developed concession programs. For all time periods for which economic impact is estimated on the basis of commercial passenger service, the new airport in Pickering is forecast to have more than 2.0 million total annual passengers.

A large increase in economic impact is also often seen when international passengers start to compose a significant portion of passenger traffic. Again, international visitors bring even more businesses on-airport, including foreign exchange providers, tourism agencies, and duty free stores. During the forecast period, the airport at Pickering is forecast to have approximately 10 to 35 daily international operations (approximately 9% of total daily operations). As international passenger service develops beyond the forecast period, the economic impact of the airport would increase.

For 2012 and 2022, the number of passengers at the airport in Pickering is forecast under all scenarios to be between these two thresholds, i.e., (1) more than 2.0 million annual passengers, but (2) still primarily serving domestic travellers with limited international and transborder service. In 2032, the updated forecasts assume significant international service whereas the FAA forecasts assumed that international service would continue to be accommodated at Lester B. Pearson International Airport.

**Direct Employment.** On a per passenger basis, approximately one job could be generated per 1,000 passengers using the airport in a given year. It is important to remember that these jobs are not only generated by passenger airlines, but also by rental car companies, terminal concessionaires, and other businesses on airport property. Figure 3 shows the relationship between total passengers and direct employment at selected airports. As shown on the figure, there is a strong relationship between the number of passengers using an airport and the level of on-airport employment. Of the five airports shown on Figure 3 with a high level of employment per passenger—YUL, YYC, YVR, BOS, and YYZ, four are large international gateways, not including Calgary International Airport (YYC). (Please see Appendix A for airport codes.) In 2032, under the updated forecasts, the new airport in Pickering is assumed to generate slightly more employment on a per passenger basis than for other time periods and forecast scenarios.

**Direct Payroll.** The average wage per employee at passenger airports was \$54,000 in the economic impact studies reviewed. This wage, subject to inflation, was assumed to be supported at the new airport under all forecast scenarios.

**Direct Economic Impact.** The direct economic impact per passenger averaged \$190 for studies completed between 1996 and 2002. Proportional to the increase in direct employment per passenger, the direct economic impact per passenger was also forecast to be higher in 2032 under the updated forecasts.

**Multiplier Selection.** The range of economic impact multipliers used for passenger airports of similar size to a new airport in Pickering is shown on Figure 4. A multiplier for an airport is tied to the structure of the economy in the region, in this case, the GTA. The re-spending of income from direct and indirect activities results in additional income in the region. Employment, payroll, and expenditures related to a new airport in Pickering would generate similar economic impacts as those at other airports in the region because the new airport would function in the same economic climate. For instance, Pearson and Hamilton are located in the GTA and had multipliers of 1.80 and 1.83, respectively, in their most recent economic impact studies. A conservative estimate of 1.75 was used to determine the indirect and induced impacts of passenger activity for a new airport in Pickering.

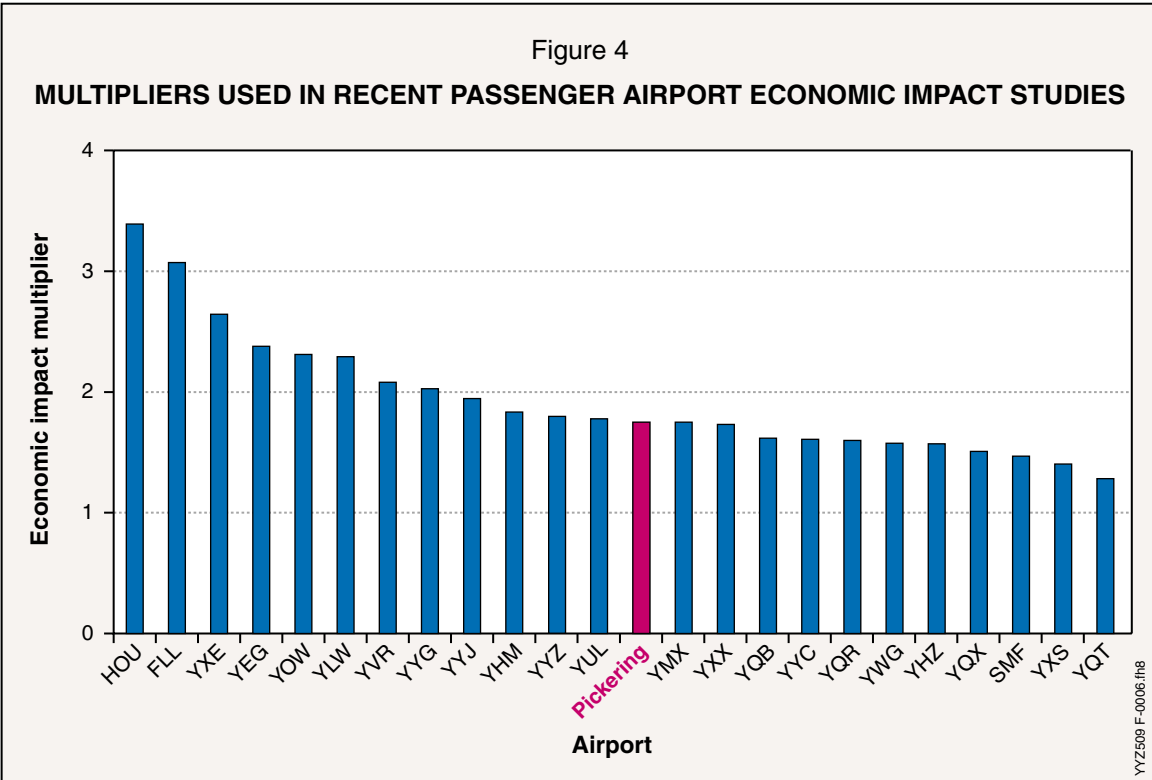
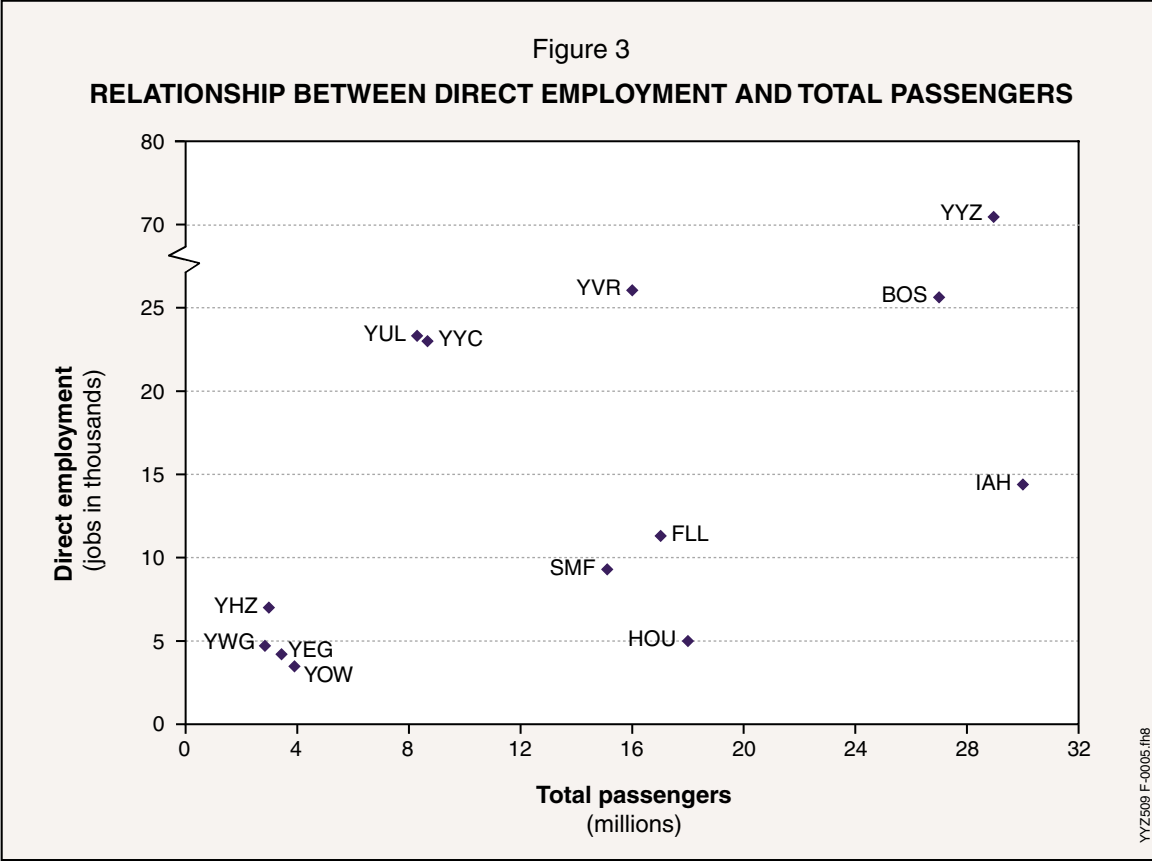
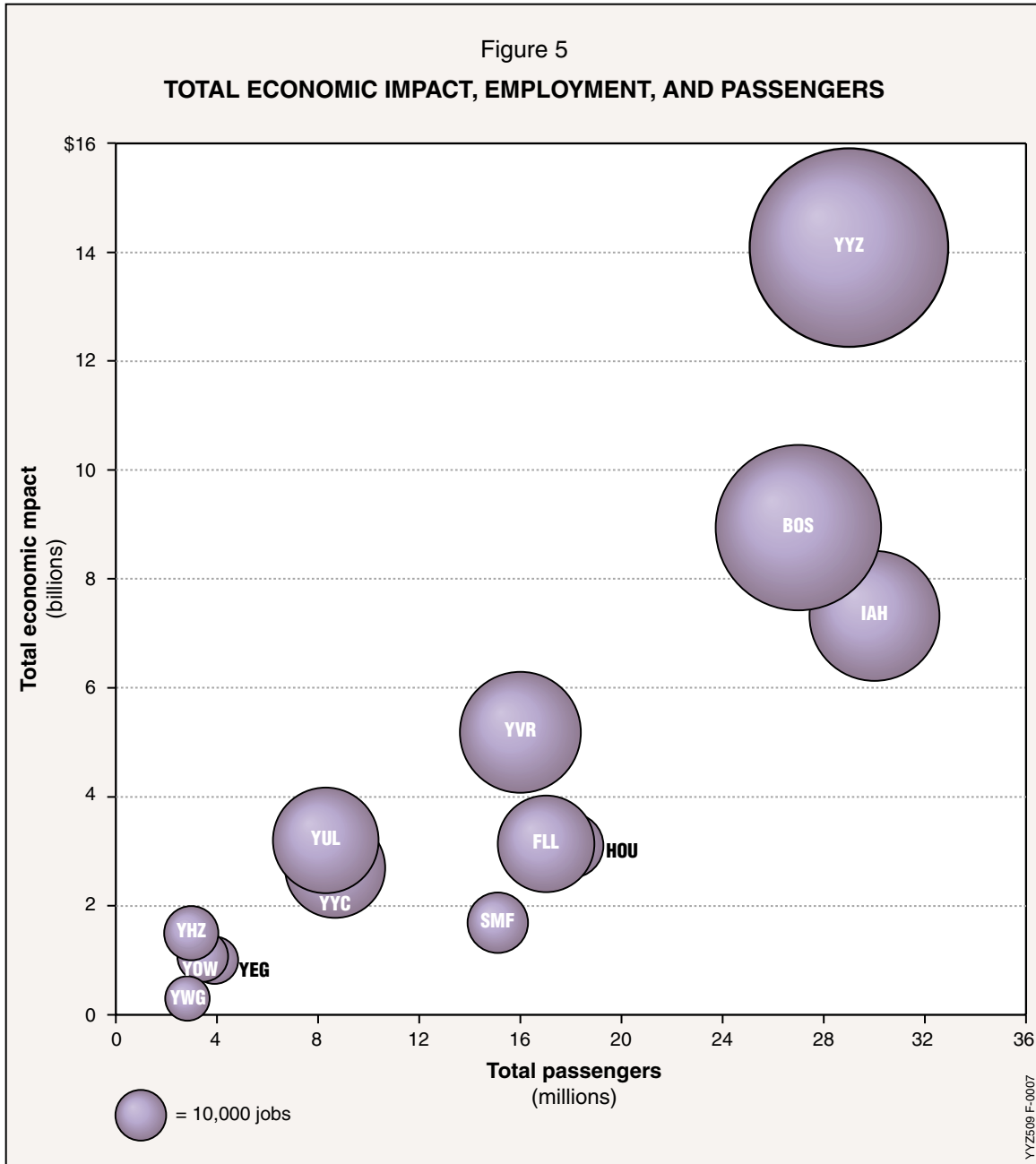


Figure 5 illustrates the linear relationship between total passengers, total employment, and total economic impact. The straight-line trend apparent in the data on Figure 5 validates the use of per passenger metrics to estimate employment, payroll, and economic impacts for passenger activity in this study.



## **Estimated Economic Impact Related to General Aviation Activity**

Under all scenarios presented in Chapter 2, the new airport in Pickering is forecast to serve general aviation (GA) activity when opened in 2012. General aviation activity includes flight operations other than commercial passenger, commercial cargo, and military operations. Corporate aviation, recreational flying, and flight training schools compose the majority of GA traffic. For example, the economic impact of GA activity would include direct employment by fixed base operators (FBOs) and flight schools operating at the airport.

To estimate the economic impact of GA activity at a new airport in Pickering, economic impact studies were reviewed for several general aviation reliever airports in North America. Average economic impact, employment, and payroll were calculated per GA aircraft movement. While the updated and FAA forecasts differ on the level of GA activity, both assume a significant level of GA activity at the Airport. The normal spectrum of general aviation functions is assumed to be provided at the airport under both the updated and FAA forecasts. The increase in economic impact is expected to be related to the increase in GA activity under the GA forecasts, not due to additional types of businesses on-airport.

It should be noted that relatively few economic impact studies for GA airports are available. The studies obtained for this analysis were from GA airports that operate as part of a larger airport system. Multiple factors contribute to the lack of economic impact studies for GA airports, primarily the cost associated with completing such studies, which may be prohibitive for small GA airports.

**Direct Employment.** For the GA airports evaluated, approximately three jobs were generated at the airport per 1,000 aircraft movements.

**Direct Payroll.** The wage per employee at the GA airports averaged \$52,000 for studies completed in 1999 and 2001. This average wage is estimated to increase with inflation to approximately \$62,000 by 2012.

**Direct Economic Impact.** The direct economic impact per GA aircraft movement averaged \$320 in studies completed in 1999 and 2001 and is estimated to increase with inflation.

**Multiplier Selection.** In the economic impact studies for the GA airports, an average multiplier of 1.55 was used to determine indirect and induced impacts. The multipliers for GA activity are lower than those for passenger and cargo activity because of the smaller number of passengers per aircraft movement and the lower levels of direct employment per operation at GA airports.

## **Estimated Economic Impact Related to Cargo Activity**

Cargo operations are forecast to begin at a new airport in Pickering in 2015 carrying between 8,600 to 57,600 tonnes of cargo annually. Several airports that focus almost exclusively on cargo activity were selected for evaluation in this study, including Mather Airport in Sacramento, Rickenbacker International Airport in Columbus, and Ellington Field in Houston.

The forecasts of aviation activity prepared as part of the *Pickering Financial Assessment Analysis* provide levels of total cargo processed and did not differentiate belly cargo (cargo carried in passenger aircraft) from cargo carried by all-cargo airlines. Average economic impact, employment, and payroll were calculated per cargo aircraft movement rather than per tonne of cargo carried to ensure that economic impact was estimated for the all-cargo airlines.

As indicated in Chapter 2, no updated forecasts of cargo activity have been prepared since the FAA forecasts. Economic impact due to cargo operations is estimated to increase in proportion to the increase in cargo activity at the new airport in Pickering during the time periods covered in this addendum.

**Direct Employment.** Cargo activity outperforms general aviation activity in terms of employment per aircraft movement. Seven jobs on average were generated per 1,000 cargo aircraft movements.

**Direct Payroll.** The average wage per employee at the cargo airports was \$53,000 in the economic impact studies reviewed.

**Direct Economic Impact.** The direct economic impact per cargo aircraft movement averaged \$420 for studies completed between 1998 and 2001.

**Multiplier Selection.** In economic impact studies for the cargo airports, an average multiplier of 1.61 was used to determine indirect and induced economic impacts.

## **ESTIMATED FUTURE ECONOMIC IMPACT OF AN AIRPORT IN PICKERING**

Using the direct employment, payroll, and economic impact metrics and multipliers described in the previous section, the future economic impact of an airport in Pickering was estimated for 2012, 2022, and 2032 under each of the aviation activity forecast scenarios presented in Chapter 2. For comparison purposes, the estimated economic impact is also presented for the FAA forecast scenarios.

## Estimated Economic Impact of an Airport in Pickering in 2012

Upon opening in 2012, the updated forecasts assume that the new airport in Pickering will serve approximately 310,000 general aviation operations and 2.4 million to 4.1 million passengers. Table 2 summarizes the estimated employment (3,800 to 5,400 jobs), payroll (\$277.2 million to \$408.4 million), and economic impact (\$710.4 million to \$1.1 billion) to be generated by a new airport in Pickering.

In the FAA forecasts, only GA operations were forecast to be served at the airport in Pickering in 2012. As seen in Table 2, the forecast passenger service and higher levels of general aviation activity result in substantially higher estimates of economic impact under the updated forecasts.

Table 2  
**ESTIMATED EMPLOYMENT, PAYROLL, AND ECONOMIC IMPACT IN 2012**  
New Airport in Pickering

<u>Forecast activity scenario</u>	<u>Employment</u>	<u>Payroll</u>	<u>Economic impact</u>
<b>Updated forecasts</b>			
High/fast scenario			
Direct	3,200	\$240,730,000	\$ 636,100,000
Indirect and induced	<u>2,200</u>	<u>167,670,000</u>	<u>451,200,000</u>
Total	5,400	\$408,400,000	\$1,087,300,000
High/slow scenario			
Direct	2,800	\$208,640,000	\$ 543,910,000
Indirect and induced	<u>1,900</u>	<u>143,610,000</u>	<u>382,060,000</u>
Total	4,700	\$352,250,000	\$ 925,970,000
Low/fast scenario			
Direct	2,400	\$174,850,000	\$ 446,800,000
Indirect and induced	<u>1,600</u>	<u>118,260,000</u>	<u>309,220,000</u>
Total	4,000	\$293,110,000	\$ 756,020,000
Low/slow scenario			
Direct	2,300	\$165,760,000	\$ 420,710,000
Indirect and induced	<u>1,500</u>	<u>111,450,000</u>	<u>289,660,000</u>
Total	3,800	\$277,210,000	\$ 710,370,000
<b>FAA forecasts</b>			
Direct	600	\$ 42,400,000	\$ 85,100,000
Indirect and induced	<u>400</u>	<u>23,300,000</u>	<u>46,800,000</u>
Total	1,000	\$ 65,700,000	\$ 131,900,000

Source: Leigh Fisher Associates, March 2004.

## Estimated Economic Impact of an Airport in Pickering in 2022

By 2022, the updated forecasts for the airport in Pickering assume well-established commercial passenger service and on-going cargo and general aviation activity. The estimated economic impact of a new airport in Pickering is summarized in Table 3 and is shown relative to other passenger airports on Figure 6. Under the High forecast scenario, 6.6 million passengers would use the new airport in 2022, resulting in an economic impact of \$2.3 billion, supporting 8,600 jobs and \$840.8 million in payroll. Under the Low forecast scenario, 4.2 million passengers would use the new airport in 2022, resulting in an economic impact of \$1.6 billion, supporting 6,400 jobs and \$595.2 million in payroll. The airport is assumed to serve a similar mix of aviation activity in 2022 under both the updated and FAA forecasts.

Table 3

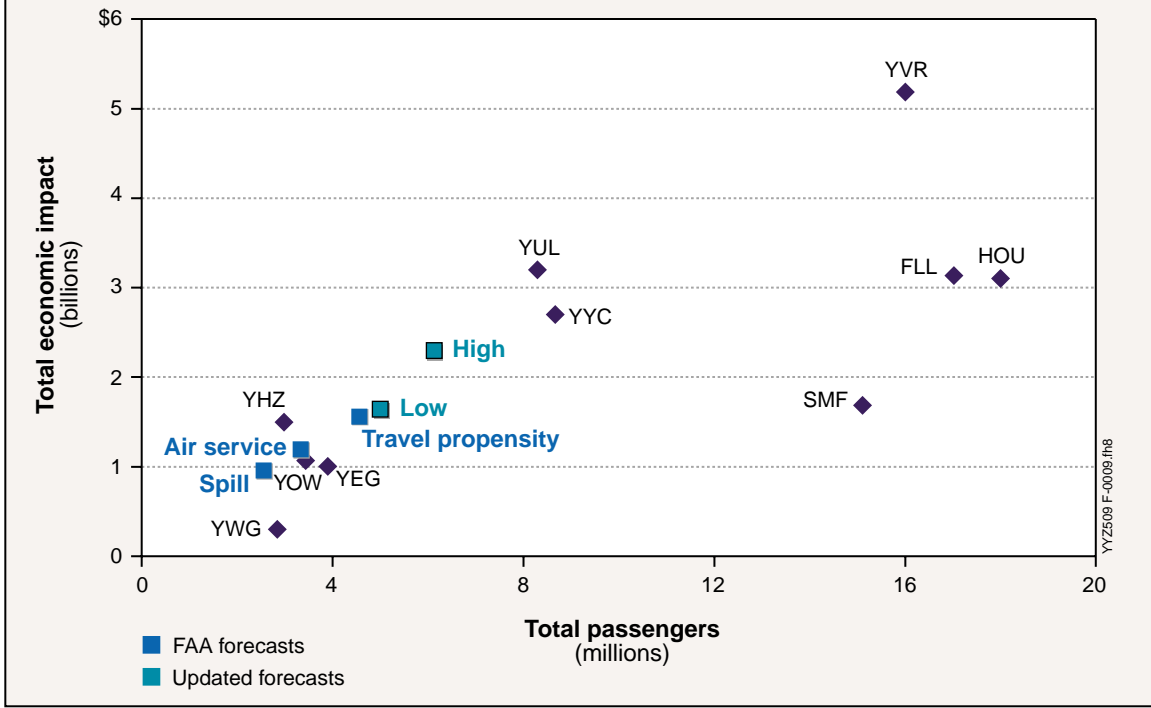
### ESTIMATED EMPLOYMENT, PAYROLL, AND ECONOMIC IMPACT IN 2022 New Airport in Pickering

Forecast activity scenario	Employment	Payroll	Economic impact
<b>Updated forecasts</b>			
High scenario			
Direct	5,100	\$493,040,000	\$1,316,060,000
Indirect and induced	<u>3,500</u>	<u>347,740,000</u>	<u>943,370,000</u>
Total	8,600	\$840,780,000	\$2,259,430,000
Low scenario			
Direct	3,800	\$352,700,000	\$ 912,800,000
Indirect and induced	<u>2,600</u>	<u>242,480,000</u>	<u>640,920,000</u>
Total	6,400	\$595,180,000	\$1,553,720,000
<b>FAA forecasts</b>			
Spill scenario			
Direct	2,400	\$216,900,000	\$ 561,400,000
Indirect and induced	<u>1,700</u>	<u>149,900,000</u>	<u>396,100,000</u>
Total	4,100	\$366,800,000	\$ 957,500,000
Air service scenario			
Direct	3,400	\$335,400,000	\$ 903,400,000
Indirect and induced	<u>2,400</u>	<u>238,900,000</u>	<u>652,700,000</u>
Total	5,800	\$574,300,000	\$1,556,100,000
Travel propensity scenario			
Direct	2,700	\$262,200,000	\$ 694,100,000
Indirect and induced	<u>1,900</u>	<u>184,000,000</u>	<u>495,800,000</u>
Total	4,600	\$446,200,000	\$1,189,900,000

Source: Leigh Fisher Associates, March 2004.

Figure 6

**ESTIMATED ECONOMIC IMPACT OF AN AIRPORT IN PICKERING IN 2022 RELATIVE TO SELECTED AIRPORTS**



## Estimated Economic Impact of an Airport in Pickering in 2032

By 2032 under the forecast activity scenarios, the airport in Pickering would be an established reliever airport for Pearson, accommodating 11.9 million total annual passengers. The economic impact of an airport in Pickering is estimated to increase in proportion to the increase in passenger, cargo, and general aviation activity. A summary of the estimated economic impact of a new airport in Pickering in 2032 is provided in Table 4 and is shown relative to other passenger airports on Figure 7.

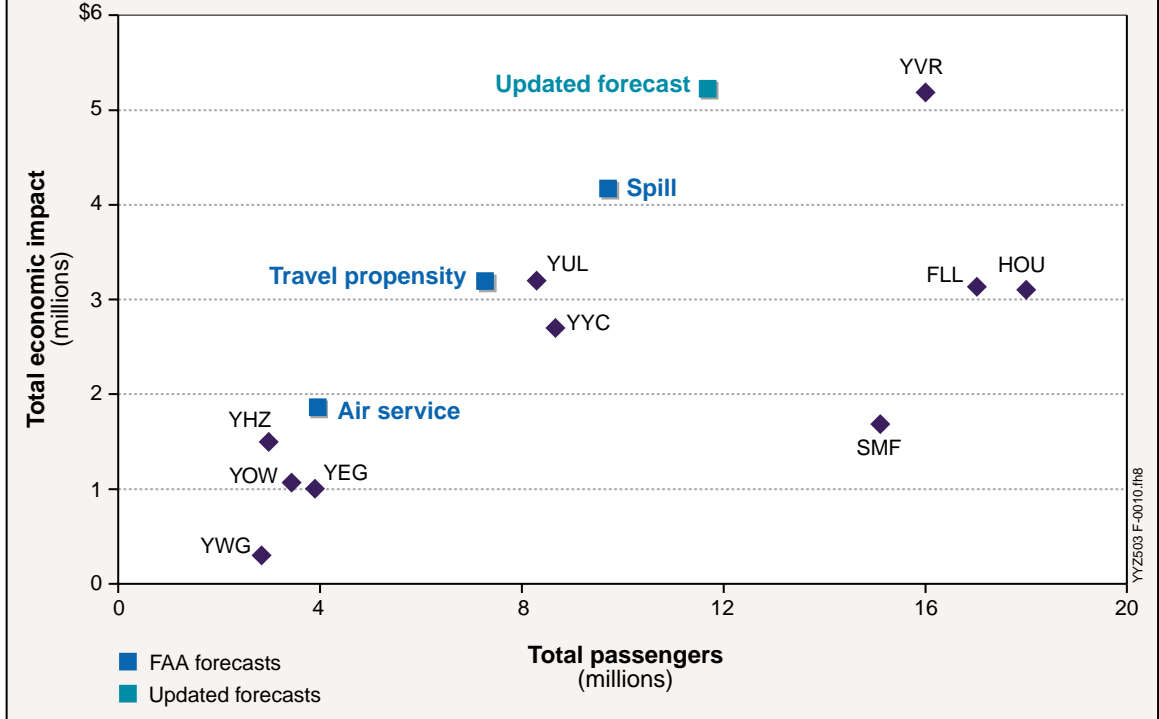
The airport in Pickering is forecast to have crossed certain development thresholds under the updated forecasts by 2032. In the updated forecasts compared to the FAA forecasts, the economic impact has increased due to both higher levels of passengers and general aviation operations as well as the development of international service. An increase of 20% in passengers in the updated forecasts versus the FAA forecast spill scenario translates to an estimated 30% increase in the economic impact of the airport in Pickering.

Table 4  
**ESTIMATED EMPLOYMENT, PAYROLL, AND ECONOMIC IMPACT IN 2032**  
New Airport in Pickering

	Employment	Payroll	Economic impact
<b>Updated forecasts</b>			
Direct	8,300	\$1,106,390,000	\$3,009,390,000
Indirect and induced	<u>5,900</u>	<u>792,790,000</u>	<u>2,356,790,000</u>
Total	14,200	\$1,899,180,000	\$5,366,180,000
<b>FAA forecasts</b>			
Spill scenario			
Direct	6,400	\$ 868,200,000	\$2,403,300,000
Indirect and induced	<u>4,600</u>	<u>632,700,000</u>	<u>1,766,700,000</u>
Total	11,000	\$1,500,900,000	\$4,170,000,000
Air service scenario			
Direct	5,000	\$ 673,300,000	\$1,845,200,000
Indirect and induced	<u>3,600</u>	<u>486,600,000</u>	<u>1,348,200,000</u>
Total	8,600	\$1,159,900,000	\$3,193,400,000
Travel propensity scenario			
Direct	3,200	\$ 408,000,000	\$1,084,500,000
Indirect and induced	<u>2,200</u>	<u>287,800,000</u>	<u>777,800,000</u>
Total	5,400	\$ 695,800,000	\$1,862,300,000

Source: Leigh Fisher Associates, March 2004.

Figure 7  
**ESTIMATED ECONOMIC IMPACT OF AN AIRPORT IN PICKERING IN 2032 RELATIVE TO SELECTED AIRPORTS**



## **ESTIMATED TAX REVENUE TO BE GENERATED BY AN AIRPORT IN PICKERING**

Additional tax revenue would be generated for federal, provincial, and municipal governments as a result of a new airport in Pickering and associated economic activity.

### **Provincial and Federal Tax Revenue**

Provincial and federal income taxes were assumed to be paid on the estimated payroll generated by aviation-activity-related employment both on- and off-airport. In addition, federal goods and services tax (GST) and provincial sales taxes (PST) were assumed to be paid on a portion of direct, indirect, and induced expenditures. Table 5 summarizes the federal and provincial tax revenue generated under the updated forecast activity scenarios in 2012, 2022, and 2032.

### **Municipal Tax Revenue**

Any lands leased on-airport to tenants are subject to real property tax to be paid to municipalities. Additional property tax revenue could also benefit surrounding municipalities as employees of businesses on the new Pickering airport purchase homes in the area. As real property taxes are dependent upon the value of the property, and no forecasts of property value are available for 2012, 2022, or 2032, estimated real property tax revenues were not quantified in this report.

In addition to the real property taxes paid by airport tenants, provincial regulations establish payments in lieu of taxes (PILT) to be paid to municipalities by airport authorities. PILT is paid on a per passenger basis for passengers exceeding 2 million. The per passenger amounts vary by airport in Ontario. For instance, \$0.94 per passenger is paid at Pearson, \$1.07 at Ottawa, \$0.55 at Thunder Bay, and \$1.67 at London. The per passenger PILT amounts for a new airport in Pickering have not yet been established by the Minister of Finance.

### **Summary of Economic Impacts and Taxes**

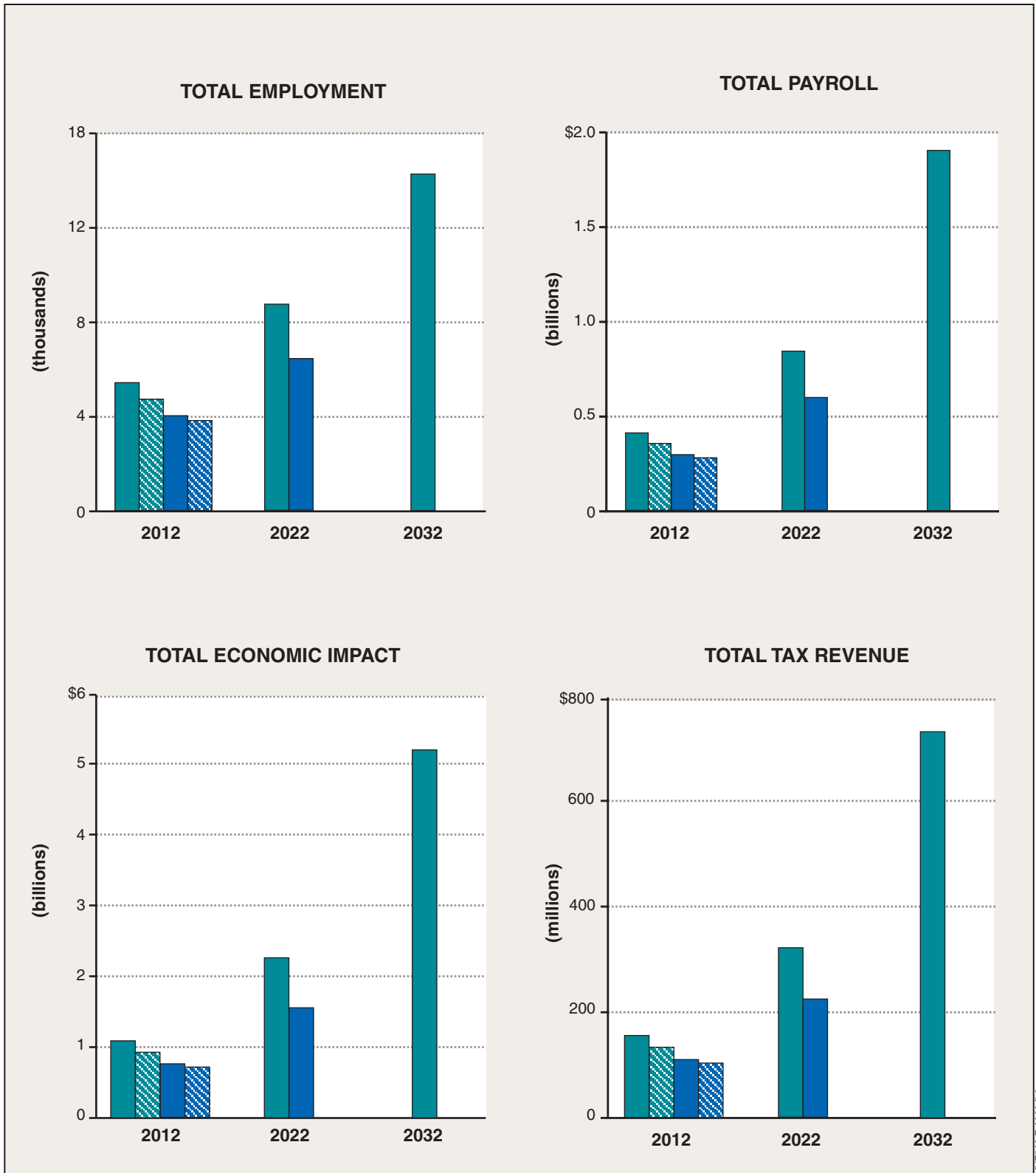
Figure 8 shows total employment, payroll, economic impact, and taxes under the updated forecast scenarios for 2012, 2022, and 2032.

Table 5

**ESTIMATED PROVINCIAL AND FEDERAL TAX REVENUE TO BE GENERATED**  
New Airport in Pickering

Year and forecast activity scenario	Provincial taxes	Federal taxes	Total
<b>2012</b>			
High/fast scenario			
Direct	\$ 33,400,000	\$ 58,100,000	\$ 91,500,000
Indirect and induced	<u>23,600,000</u>	<u>40,800,000</u>	<u>64,400,000</u>
Total	\$ 57,000,000	\$ 98,900,000	\$155,900,000
High/slow scenario			
Direct	\$ 28,600,000	\$ 50,100,000	\$ 78,700,000
Indirect and induced	<u>20,000,000</u>	<u>34,800,000</u>	<u>54,800,000</u>
Total	\$ 48,600,000	\$ 84,900,000	\$133,500,000
Low/fast scenario			
Direct	\$ 23,600,000	\$ 41,700,000	\$ 65,300,000
Indirect and induced	<u>16,300,000</u>	<u>28,400,000</u>	<u>44,700,000</u>
Total	\$ 39,900,000	\$ 70,100,000	\$110,000,000
Low/slow scenario			
Direct	\$ 22,300,000	\$ 39,400,000	\$ 61,700,000
Indirect and induced	<u>15,300,000</u>	<u>26,700,000</u>	<u>42,000,000</u>
Total	\$ 37,600,000	\$ 66,100,000	\$103,700,000
<b>2022</b>			
High scenario			
Direct	\$ 68,900,000	\$119,500,000	\$188,400,000
Indirect and induced	<u>49,200,000</u>	<u>84,800,000</u>	<u>134,000,000</u>
Total	\$118,100,000	\$204,300,000	\$322,400,000
Low scenario			
Direct	\$ 48,200,000	\$ 84,500,000	\$132,700,000
Indirect and induced	<u>33,600,000</u>	<u>58,600,000</u>	<u>92,200,000</u>
Total	\$ 81,800,000	\$143,100,000	\$224,900,000
<b>2032</b>			
Direct	\$156,900,000	\$270,200,000	\$427,100,000
Indirect and induced	<u>113,500,000</u>	<u>194,600,000</u>	<u>308,100,000</u>
Total	\$270,400,000	\$464,800,000	\$735,200,000

Source: Leigh Fisher Associates, March 2004.



- LEGEND**
- High/fast scenario
  - High/slow scenario
  - Low/fast scenario
  - Low/slow scenario

Figure 8  
**ESTIMATED ECONOMIC BENEFITS OF AN AIRPORT  
 IN PICKERING UNDER UPDATED FORECASTS**

March 2004

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