



Catalogue no. 11-621-MIE — No. 044

ISSN: 1707-0503

ISBN: 0-662-43457-9

Analytical Paper

Analysis in Brief

An Analysis of the Transportation Industry in 2005

by Joseph Dunlavy, Augustine Akuoko-Asibey,
Robert Masse and Denis Pilon,

Transportation Division
Main Building, room 1302, Ottawa, K1A 0T6

Telephone: 1 800 263-1136



Statistics
Canada

Statistique
Canada

Canada



An Analysis of the Transportation Industry in 2005

**Joseph Dunlavy, Augustine Akuoko-Asibey,
Robert Masse and Denis Pilon**

Review Committee: Gord Baldwin, Kathie Davidson, Vincent Dubé, John Flanders, Penny Hope-Ross, Harold Kohn, François Mainville, Bruce Meyer and Francesca Teggart

Special contribution: Trever Bova, Johanne Caron-Dorion and Yukman Chueng

Editor: Christian Houle

Managing Editor: Yvan Gervais

Production: Debi Soucy

June 2006

Catalogue No: 11-621-MIE2006044

ISSN: 1707-0503

ISBN: 0-662-43457-9

Frequency: Occasional

Ottawa

How to obtain more information:

National inquiries line: 1 800 263-1136

E-Mail inquiries: analysisinbrief-analyseebref@statcan.ca

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2006

All rights reserved. The content of this electronic publication may be reproduced, in whole or in part, and by any means, without further permission from Statistics Canada, subject to the following conditions: that it be done solely for the purposes of private study, research, criticism, review or newspaper summary, and/or for non-commercial purposes; and that Statistics Canada be fully acknowledged as follows: Source (or "Adapted from", if appropriate): Statistics Canada, year of publication, name of product, catalogue number, volume and issue numbers, reference period and page(s). Otherwise, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form, by any means—electronic, mechanical or photocopy—or for any purposes without prior written permission of Licensing Services, Client Services Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

An Analysis of the Transportation Industry in 2005

**Joseph Dunlavy, Augustine Akuoko-Asibey, Robert Masse and Denis Pilon,
Transportation Division**

Summary

Whether you're a traveller or not, transportation companies inevitably play a major role in your life. Railways, trucks, ships and airplanes transport everything from the food you eat to the automobiles you drive. They serve just about every segment of the economy, from consumers to manufacturers, retailers, wholesalers, importers and exporters.

Last year, the transportation sector contributed about 4.2% of Canada's total economic output as measured by gross domestic product (GDP). To put that into perspective, the huge mining and oil and gas extraction sector contributed 3.7% to GDP.

The transportation sector posted strong growth in 2005 for the second consecutive year as the major modes of the industry increased their economic activity.

This study examines developments during 2005 in three major transportation sectors: trucking, rail and aviation.

The economic clout of the trucking sector within the transportation industry cannot be denied. More than one-third (35%) of the GDP generated by the transportation sector in 2005 came from trucking. Air, water and rail transportation combined contributed another 25%. The remainder was generated by transit, pipeline, and scenic and support activities for the industry.

The trucking industry, the largest mode of commercial transportation in terms of contribution to GDP, did well last year. For-hire¹ trucking companies increased their profit margins in spite of rising fuel costs. The growth in trucking was largely due to increased trade within Canada.

The rail industry experienced its second consecutive year of gains in freight cargo as shipments of three of five principal commodities grew significantly. The western region of Canada increased the amount of containerized cargo shipped by rail more than the region to the east of Manitoba in 2005, further closing the gap between them.

The air industry continued to recover in 2005 after further re-structuring in the wake of adverse shocks experienced in recent years. In one key element of re-structuring, the industry has replaced its larger aircraft with smaller ones in the domestic market in an effort to deliver services more efficiently.

1. "For-hire" transportation firms use transportation equipment, such as aircraft, trains, vessels, trucks, buses and taxis, as well as labour and energy, to offer transportation services to users for a fee in the market place.

Industry overview

GDP in the transportation sector grew at a strong pace in 2005 for the second straight year. The 4.5% gain in 2005 followed a 4.6% increase in 2004.

Employment in this sector as a whole also showed some growth in 2005, although not every mode increased its number of employees, according to the Survey of Employment, Payrolls and Hours (SEPH). The total was up 1.2% from 2004. However, between 2001 and 2004, growth was sluggish, and in fact, employment in transportation declined during two years of that four-year period. In total, the transportation industry in 2005 employed roughly 547,000, accounting for about 4% of the nation's entire workforce.

The strong showing in 2005 contrasts with slow growth years between 2001 and 2003 due to many contributing factors. The Canadian economy experienced slower growth in 2001, even before the terrorist attacks against the United States in September. The outbreak of Severe Acute Respiratory Syndrome (SARS), as well as the beginning of war in Iraq in 2003 had negative effects on the transportation sector.

The transportation industry recovered in 2004 and 2005, thanks to a strong economy that drove the three transportation modes: trucking, rail and air.

Air transportation experienced the fastest growth in economic output in years during 2005, as its GDP jumped 11.8% on the heels of a 7.9% gain in 2004. These back-to-back increases halted three years of decline in economic output in the air transportation industry. Even so, output in the industry in 2005 amounted to nearly \$4.2 billion, just below the peak output of just over \$4.3 billion in 2000.

Over the last decade, trucking experienced an average annual growth of 5.2%, a faster rate than the 3.4% gain for the overall economy. In 2005, output in trucking increased 4.4%, a slight slowdown from the year before. Trucking is a large consumer of energy, so rising fuel prices have created some concern, although overall profitability for the industry has remained positive. The number of jobs in the trucking industry has shown steady growth over the past several years.

The rail sector posted strong growth in GDP for the second consecutive year in 2005. The 5.0% increase in 2005 was a slightly faster pace than the 4.3% gain in 2004. Since the turn of the millennium, GDP from the rail sector has grown at an annual average rate of 2.3%, about half the increase in the trucking industry.

Employment in trucking reached about 277,300 in 2005, or the biggest part of the total in transportation. Employment in trucking has been on the rise steadily for a number of years. On the other hand, rail companies employed about 35,500 in 2004 according to the Annual Railway Transport Survey, and this level has been declining since the beginning of the decade.

Gross domestic product, transport industries, Canada, 2005

Industry	Share of transportation GDP	Growth rate from 2004
	%	
Air transportation	9	11.8
Rail transportation	13	5.0
Water transportation	3	2.7
Truck transportation	35	4.4
Transit and ground passenger transportation	12	3.2
Pipeline transportation	11	2.7
Scenic and sightseeing transportation and support activities for transportation	17	3.1
Total	100	4.5

Source: Statistics Canada, CANSIM, table 379-0017.

Trucking: Growth driven by the domestic market

Revenues for trucking enterprises continued to gain ground in 2005. As revenues for trans-border activities have been stable since 2004, the growth in trucking revenues was mainly due to the domestic market. Moreover, profit margins increased despite higher prices for fuel, an important cost item for this industry.

In 2005, the approximately 3,360 for-hire trucking companies generated \$27.1 billion in revenues, up 7.9% from 2004. There were about 277,300 truckers in Canada in 2005, according to Statistics Canada's Labour Force Survey. Of this number, about 80% were salaried employees (company or agency drivers), and the others self-employed (independent drivers).

Both general economic conditions and the growth in wholesale and retail sales have been driving forces behind the demand for cargo services. More specifically, increases in goods produced and consumed translate into higher demand for transportation of goods.

This connection is apparent when growth rates across related industries are compared. Between 2002 and 2005, for-hire trucking companies headquartered in Canada saw their revenues increase on average by 9.8% a year. During the same period, manufacturing output increased 3.6%, wholesale trade 4.7%, and retail trade 4.8%.

An important shift has occurred in the source of growth for the trucking industry since 2002, as domestic traffic increased three times faster than international traffic. As a result, the share of revenues from domestic traffic rose from 62.9% in 2002 to 67.0% in 2005.

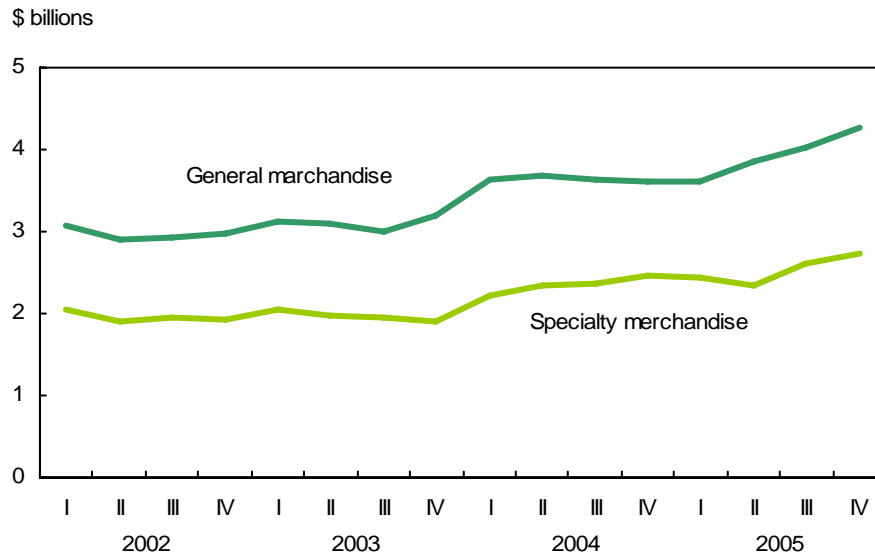
Moreover, most of the recent growth came from the increase in traffic within individual provinces rather than among them. In fact, intra-provincial trucking contributed more than two-thirds of the growth in domestic trucking, and more than half (54%) of the total growth in the trucking industry since 2002.

Labour costs comprised the biggest expense for trucking companies, representing almost half the total. However, fuel expenses accounted for a rising portion, and by 2005, fuel had risen to 11.6% of total operating expenditures.

This increase did not compromise the profitability of the trucking industry as the industry's profit margin reached 8.1% in 2005, up from 7.2% in 2004.²

In 2005, about 58% of operating revenues were derived from the transportation of general merchandise, and about 37% from specialty merchandise. Although this ratio has not changed much since 2002, there are variations from region to region.

Transportation value of specialty merchandise follows the same trend as general merchandise



Source: Statistics Canada, special tabulation, Transportation Division.

In the Atlantic provinces, Quebec and Ontario, transportation of general merchandise accounted two third (66%) of total operating revenues. On the other hand, in the Prairies, British Columbia and the territories, specialty cargo accounted for more than half of total operating revenues.

Rail transport: Heaviest freight loads since 2000

Canadian railways carried their heaviest freight load so far this decade in 2005, thanks to the pressing demand for primary goods from China and other Asian nations.

At the beginning of the decade and, for three consecutive years, rail freight movements were sluggish and lagged behind the trucking industry. However, the rail industry has turned around, and freight movements have picked up for two years in a row.

In 2005, railways reported total loadings of more than 288.6 million tonnes of goods, up 3.6% or 10.1 million tonnes over the year before. This came on the heels of a 6.5% increase in 2004.

2. The profit margin measures the percentage of net benefit for each revenue dollar. It is calculated by dividing the net operating benefits after tax by the total revenue, and then multiplied by 100.

The recent growth trends in rail carloadings and international merchandise trade are interrelated. Canada's merchandise trade showed considerable resilience in 2005, as the loonie soared from an average 77 cents US to 83 cents US.

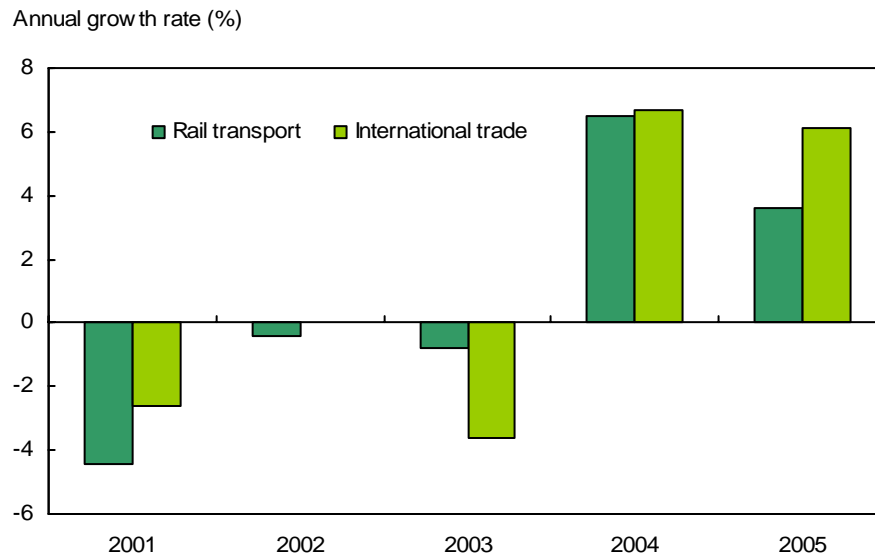
Total trade (imports plus exports) increased by 6.1% in 2005 while rail traffic tonnage advanced by 3.7%. Merchandise imports reached a new record in 2005, rising 6.6% while exports advanced by 5.7%.

Of the five principal commodities carried by the rail sector, three recorded sizeable gains in 2005. Shipments of lumber jumped 22.2%, while iron ore concentrates rose 15.9%, followed by coal at 5.2%. In contrast, wheat shipments fell 6.2%, and potash shipments were down 2.2%.

For the second consecutive year, the increase in total tonnage of rail carloadings in the West exceeded those east of Manitoba. The West ended 2005 with a 4.5% increase, compared with 2.6% for the area east of Manitoba. The growth in the West was due in part to increased shipments to and from Asia via ports in British Columbia.

Canada's exports carried by train are mostly bulk commodities, for example coal, iron and steel and fertilizers. In turn, it imports large quantities of manufactured goods from Asia, primarily machinery and equipment and consumer goods.

Growth in total rail traffic tonnage is closely related to growth of international trade



Source: Statistics Canada, CANSIM, tables 228-0001 and 404-0002.

Intermodal traffic versus non-intermodal

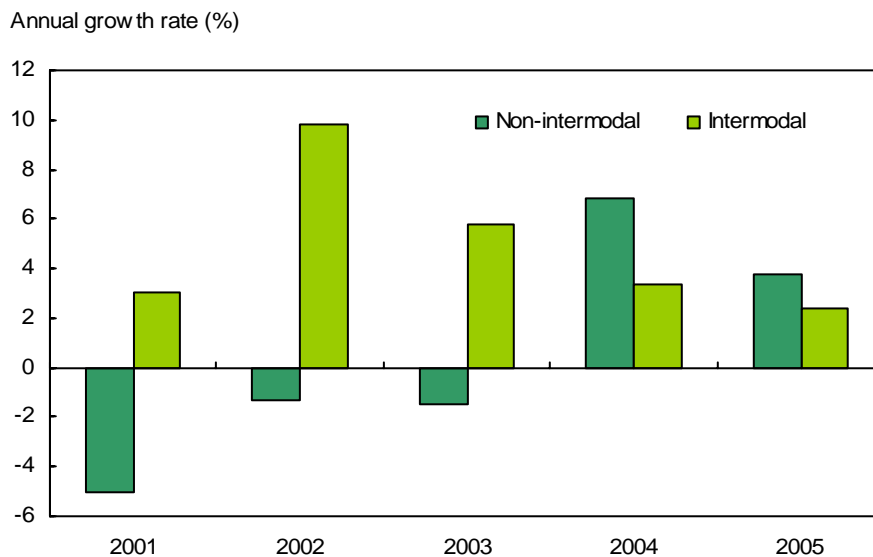
Rail carriers move cargo using two main transportation systems: intermodal and non-intermodal. The intermodal transport system involves moving goods in one loading unit or road vehicle, using two or more modes of transport without handling the goods themselves, for example containers or trailers on flat cars.

Commodities that cannot be handled this way are moved via non-intermodal traffic. They include products such as lumber, coal and iron ore.

Non-intermodal traffic accounts for the vast majority, about 90%, of total railway freight. In 2005, the non-intermodal portion of loadings totalled 260.8 million tonnes, up 3.8%. This was somewhat slower than the 6.9% gain in 2004.

The major source of growth for non-intermodal traffic came from gains in lumber, iron ore and coal. These three commodities constitute over one-third of the total non-intermodal loadings. However, since the beginning of the decade, the non-intermodal system of moving goods has been fairly stagnant, growing at an annual average pace of about 0.5% between 2000 and 2005.

Growth in non intermodal traffic not performing well this decade



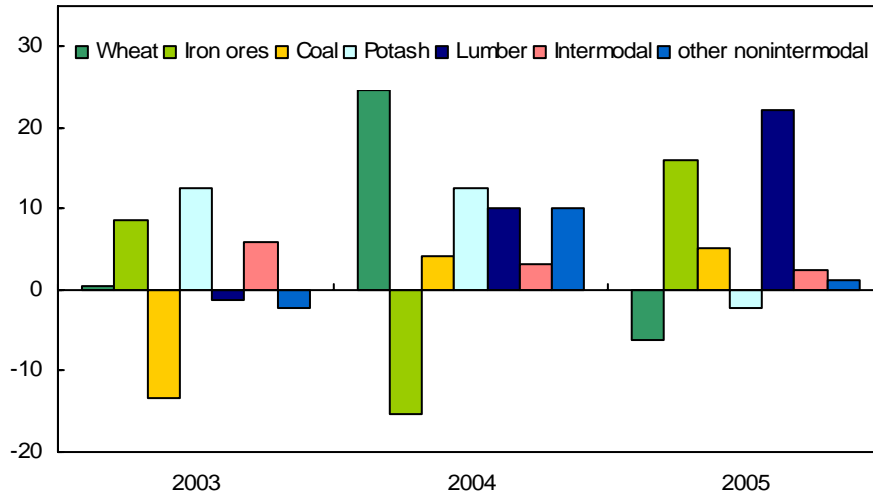
Source: Statistics Canada, CANSIM, table 404-0002.

On the other hand, intermodal rail traffic grew at an average annual rate of 4.9% between 2000 and 2005, from 21.9 million tonnes to 27.8 million. In 2005 alone, the tonnage for intermodal cargo rose 2.4%, on the heels of a 3.3% increase in 2004. Intermodal traffic represents about 10% of total rail traffic.

Containers on flat cars have become an important component for rail intermodal transportation. Among other things, containers save time and costs in terms of transfers between rail, truck and marine modes of handling and transporting commodities. For the year 2000, containers on flat cars represented a little over 92 % of the tonnage of intermodal traffic. By 2005, the figure had reached close to 96 %. Containerized cargo consists mostly of finished manufactured goods ready for retail purchase, most of which come from Asian countries and the United States.

Only intermodal traffic has shown consistent positive growth over the last three years

Annual growth rate (%)

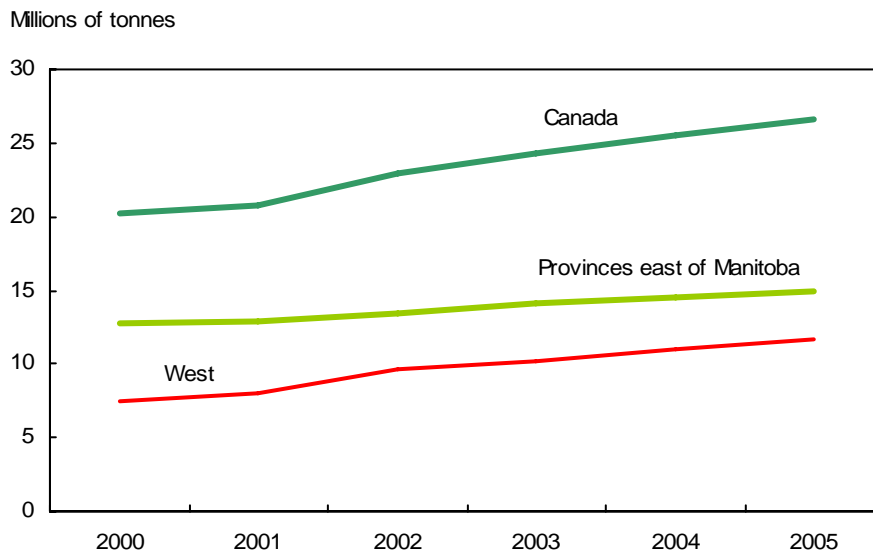


Source: Statistics Canada, CANSIM, table 404-0002.

Most of the growth in containerized cargo occurred in the western provinces. Between 2000 and 2005, the tonnage of containerized cargo for the West grew by 11.6% a year on average, compared with 3.2% east of Manitoba.

Tonnage for containers on flat cars has traditionally been higher in the provinces east of Manitoba. However, by the end of 2005, the gap between these two broad areas (provinces east of Manitoba and the West) had narrowed.

West narrowing gap in container traffic movement



Source: Statistics Canada, CANSIM, table 404-0002.

Air transportation: Airlines still in restructuring mode

The Canadian air transportation industry continued in a restructuring pattern in 2004 and 2005.

Gross domestic product in the air transportation industry increased 7.9% in 2004 and 11.8% in 2005, reversing three consecutive years of decline following the September 11 attacks. Employment followed roughly the same pattern.

Without a doubt, the industry has evolved in a rapidly changing environment over the last 10 years. Legislation, including the signing of the Canada-US Open Skies Agreement in 1995, moved it toward a less regulated, more competitive environment.

Likewise, the rapid development of the low-cost carrier business model, in Canada and worldwide, has significantly changed the way air carriers are competing in domestic and international markets. In addition, Canadian air carriers also faced significant external shocks over the last five years, such as September 11, the war in Iraq and the outbreak of SARS.

In this context, Canadian air carriers have adapted the way they are operating their businesses, notably by increasing the number of commercial flights on domestic markets, while at the same time lowering their seating capacity.

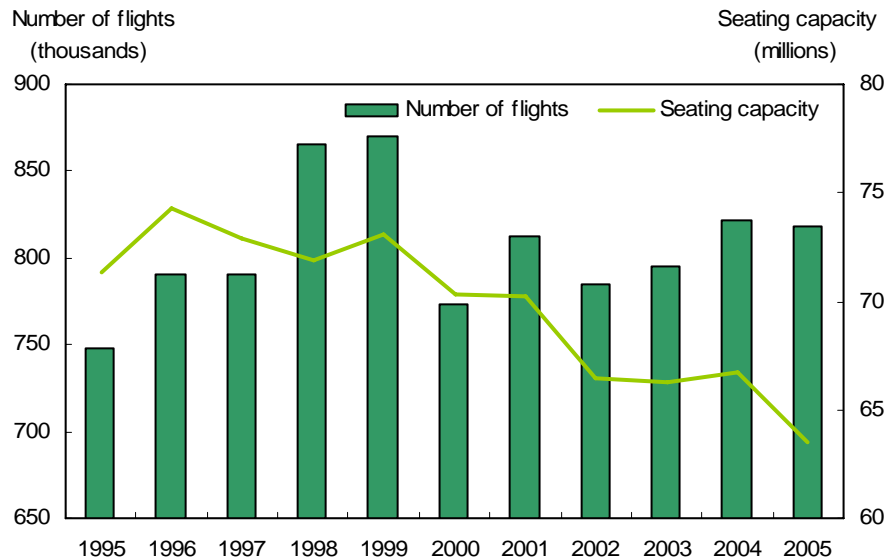
Seating capacity down, big aircraft out

While the number of commercial domestic flights in Canada fell slightly in 2005 from 2004, it is still reported on the high end, compared with the past five years. An increased number of flights offers more flexibility to the travelling public.

However, more flights has not resulted in more seats available to the public. In fact, the number of seats available has fallen steadily during the past 10 years.

In 2005, airlines offered around 63.5 million seats to the travelling public in Canada, down substantially from 71.4 million in 1995. The drop in 2005 was particularly strong as two airlines ceased activities in late 2004 and early 2005. In the medium term, this decrease in seating capacity could become a contributing factor leading to upward pressure on air fares.

Seating capacity down, while number of domestic flights stays high



Source: Statistics Canada, special tabulation, Transportation Division.

The increase in flights and decline in seats are the result of drastic changes in aircraft fleets. In brief, big aircraft with large seating capacities are being replaced by smaller, more fuel-efficient planes.³

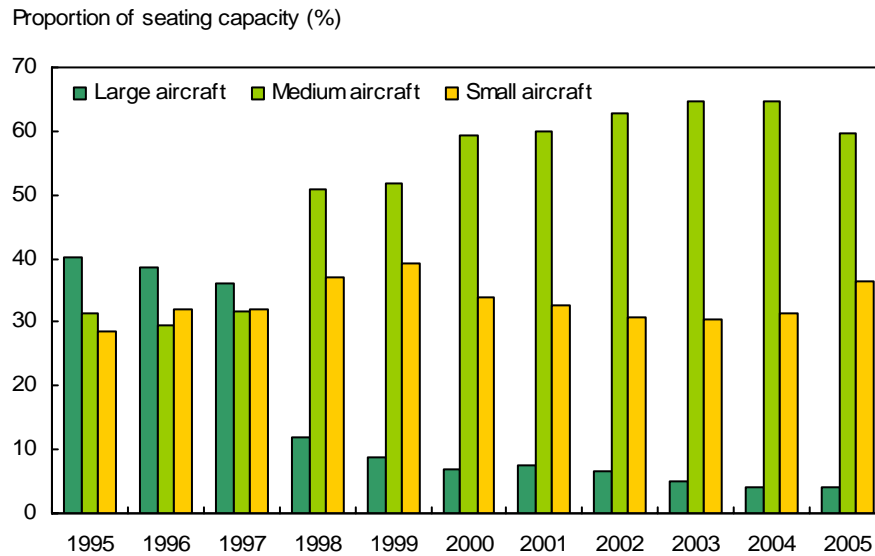
In 1996, large aircraft, such as Boeing 747 jumbo jets, accounted for 38.7% of the air fleet, medium-sized planes 29.4%, and small 31.9%.

By 2005, however, the complexion of the industry had changed. Jumbo jets accounted for only 4.1% of the fleet. The proportion of medium-size planes such as the Airbus 320 had jumped to 59.6%, while small aircraft such as the DASH-8 had edged up to 36.3%.

In 2005, the proportion of medium-sized planes actually fell in favour of smaller planes. It was the first time in several years that this occurred, although medium-sized planes remain in high use.

3. Large aircraft are defined as those that provide more than 300 seats, while medium aircraft provide between 151 and 300 seats. Small aircraft are defined as those that provide less than 151 seats.

Medium sized aircraft have replaced larger aircraft



Source: Statistics Canada, special tabulation, Transportation Division.

Western Canada increases its share of domestic seating capacity

Domestic seating capacity is based on the number of departing flights from any given region.

Seating capacity continued to grow in Western Canada last year, while it declined in Atlantic and Central Canada, reflecting the shift in economic growth within the country.

During the past decade, seating capacity on a regional basis has shifted considerably. In 1995, Atlantic Canada accounted for 10% of capacity, central Canada 46%, the West 41% and the territories 3%.

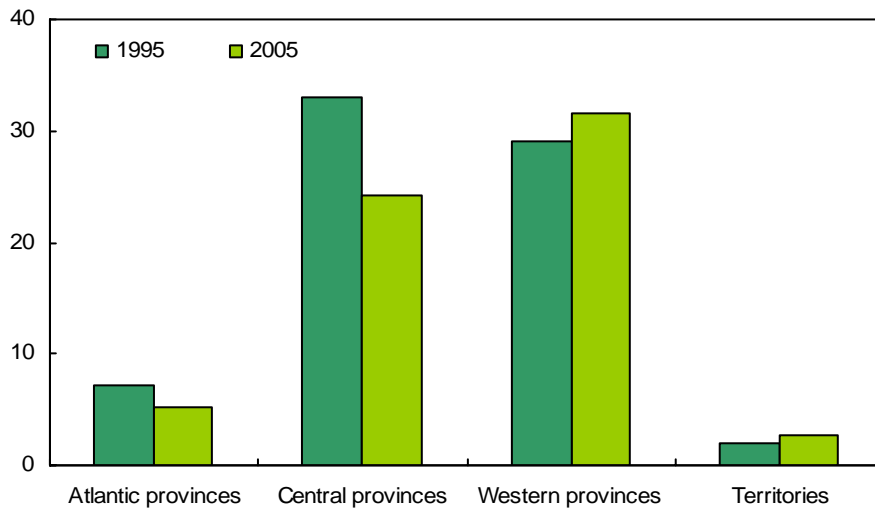
By 2005, Atlantic Canada's share had edged down to 8%, while central Canada's had slipped to 38%. Central Canada's loss was picked up by the West, which controlled 50% of all domestic seating capacity last year. The territories held steady at 4%.

In terms of absolute numbers, Atlantic Canada experienced a decline in seating capacity of 2.1 million seats, while Central Canada lost about 8.8 million. At the same time, the West picked up 2.5 million.

This gain by Western Canada reflects the huge increase in economic growth in the region, spurred by the oil and gas industry.

Seating capacity up in Western provinces and territories

Seating capacity (millions)



Source: Statistics Canada, special tabulation, Transportation Division.