Northern Aviation- A Strategy to Strengthen the Northern Economy

Northern Air Transport Association
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Introduction

The Northern Air Transportation Association is an association representing northern air carriers. Our membership includes thirty-one operator members as well as fifty-seven associate members. Northern air carriers are the primary air service providers within the north and three of our largest northern carriers also provide service between the territorial capitals and southern gateways. Northern air carriers not only provide vital services to, from, and within the territories, but they are also an integral and important component in the northern economy. During 2009, northern air carriers transported more than 830,000 passengers and almost 150 million pounds of cargo to, from, or within the north. Additionally, northern air carriers account for almost seventeen hundred territorial jobs, more than $76 million in annual territorial payroll, more than $1 million in territorial property and business taxes, and more than $50 million in annual non-payroll spending with hundreds of local businesses in the three territories. The direct economic impact of northern aviation also provides many multiples of its value in indirect economic benefits to the territories, including payroll and income taxes.

Transportation is an integral and essential component of any economy. In the north air transportation is especially important because distances are large and alternative modes are generally not available. While it is easy to see how transportation facilitates economic growth and development, it is also easy to overlook the fact that transportation can be part of economic development. Our association believes that the role of northern aviation and northern air carriers needs to be recognized and accounted for in Federal and Territorial policies and strategies designed to strengthen the northern economy.

Northern Canada and Northern Air Carriers in Perspective

The following geographical and economic statistics put Canada's three territories into perspective with respect to the ten provinces.

Provincial/Territorial Comparison (2009 data)

	Population (000)	Size (sq km)	GDP $ millions	# Community Airports	# Paved Runways
Provinces	33,631	6,062,931	$ 1,312,831	387	253
Territories	109	3,921,739	$ 6,322	65	10
Total	33,740	9,984,670	$ 1,319,153	452	263

Provincial/Territorial Comparison (2009 data)					
	Population (000)	**Size (sq km)**	**GDP $ millions**	**# Community Airports**	**# Paved Runways**
Provinces	99.7%	60.7%	99.5%	85.6%	96.2%
Territories	0.3%	39.3%	0.5%	14.4%	3.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

The foregoing illustrates that the Yukon Territory, Northwest Territory, and Nunavut together comprise almost 4 million square kilometers, or about 40% of Canada's land mass. The combined territorial population is just over 100,000, representing about one third of one percent of Canada's population. There are approximately 65 communities in the territories that receive scheduled air service, but only eight of these are served by jet aircraft. There are only ten paved runways in all of the territories. Total real gross domestic product of all three territories combined is just over $6 billion, or about .5% of Canada's gross domestic product. Furthermore, government spending accounts for a substantial proportion of Territorial gdp.

In terms of access, many northern communities have no road access; some rely on air and seasonal sea lifts; some use air and winter roads; and some are dependent upon air only.

In terms of air traffic, territorial markets are very small in comparison with other Canadian markets, as can be seen from the following data:

Selected Canadian Airport Enplanements plus Deplanements
Source:Statistics Canada

Airport	**Enplanements + Deplanements 2009**
Abbotsford (2008)	498,359
Bagotville	73,460
Calgary	11,255,833
Cranbrook	103,071
Charlottetown	270,390
Comox	285,149
Dawson City (carrier data)	6,268
Deer Lake	247,233
Edmonton	5,787,512
Fort MacMurray	654,226
Gander	88,294
Halifax	3,318,498
Hamilton (2008)	549,805
Iqaluit (2007)	113,130
Kamloops (2008)	219,461
Kelowna	1,280,197
Kitchener/Waterloo	106,321
London	501,835

Moncton	495,108
Montreal-Trudeau	11,706,936
Old Crow (carrier data)	4,447
Ottawa	4,089,624
Prince George	369,017
Quebec City	1,154,012
Regina	997,310
Saint John	219,067
Saskatoon	1,115,397
Sept-Isles	93,801
St John's	1,166,849
Terrace (2008)	119,986
Thunder Bay	606,275
Timmins	127,093
Toronto Pearson	28,937,765
Vancouver Harbour	340,179
Vancouver	15,503,645
Victoria Harbour	283,975
Victoria	1,449,966
Whitehorse	228,693
Winnipeg	3,305,085
Yellowknife	314,528
Total	97,987,800

The foregoing data shows that in 2009, total enplanements plus deplanements in the three territorial capitals combined was just over 650,000, representing less than 1% of the entire Canadian market and about as much traffic as Fort MacMurray generated on its own. Data has also been provided for Dawson City and Old Crow, in the Yukon, to illustrate just how small some of the regional communities are in terms of traffic.

The following statistics illustrate how much northerners rely on air travel.

Northerners Fly More Often

	Northern Capitals	Largest Canadian Airports
Airport Passenger Traffic	656,351	97,987,800
Population	108,973	33,592,700
Ratio	6.02	2.92

The data shows that the ratio of air traffic to population in the north is more than twice the ratio of air traffic to population in the rest of Canada.

The significance of northern air carriers may be illustrated by observing that in Canada today, there are just six airlines providing scheduled domestic passenger service with jet equipment and three of those carriers are northern.

Canadian Air Carriers Providing Year Round
Domestic Scheduled Air Service with Jet Equipment

Carrier
Air Canada
Jazz
WestJet
First Air
Canadian North
Air North, Yukon's Airline

Air Canada, Jazz, and WestJet (the mainline carriers) are the largest carriers in Canada, and together, they account for most of Canada's domestic passenger traffic. First Air, Canadian North, and Air North, Yukon's Airline (the northern carriers) are all NATA operator members and in combination, they are still only a fraction of the size of the smallest mainline carrier. The three northern air carriers, share some common characteristics as shown below.

Northern Air Carriers
Primary routes are north-south rather than east-west
Integrated jet and turboprop routes from Territorial capitals to southern gateways and northern communities
Integrated passenger and freight services using combi aircraft
Gravel/northern operations capable aircraft
Northern based/northern employment
Northern infrastructure
Northern ownership, including First Nations

In general, the primary routes for the northern carriers, in terms of both traffic and revenue, are the north-south extra-territorial jet routes between the territorial capitals and the southern gateway cities. These routes are integrated with turboprop routes serving communities within the territories. Freight is an important component of both route networks, particularly the turboprop routes. Most turboprop operations and some of the jet operations use combi-configured aircraft. All of the turboprops operate onto gravel runways and some jet operations are conducted onto gravel runways as well. All three northern airlines need to be well equipped to meet the unique seasonal weather and economic challenges that are found in the north. Additionally, all three northern carriers provide significant employment in the north and have made significant investments in northern infrastructure. Finally, all three northern air carriers are owned by northerners, and their shareholders include more than four different First Nations.

Northern Ownership

The northern ownership aspect may be illustrated using Air North, Yukon's Airline as an example. The following data shows that one in fifteen Yukon residents has an equity stake or an employment stake in Air North.

Air North, Yukon's Airline- Stakeholders	
Class A and B shareholders (inc Vuntut Gwitchin beneficial shareholders)	801
Class C and D Shareholders	1,248
Yukon Employees	200
Total	2,249
Yukon Population	33,928
% Equity or Employee Interest	6.6%

Northern Air Transportation Infrastructure Hubs

In the past, most northern communities were served as part of a traditional airline "hub and spoke" route network with the hub located in the south. In this situation, economic benefits accruing to the north were very limited as the entire transportation infrastructure and most of the employees were based in the southern hubs. By establishing transportation infrastructure hubs in the north, northern air carriers have helped northern economies to grow by providing employment and establishing infrastructure in the north. The net effect of this has been to cause cash to stay in the north and to flow into the north rather than flowing out of the north or bypassing the north. These efforts by northern air carriers provide significant economic benefits to the territories.

The economic benefits that accrue from a transportation infrastructure hub are significant and indisputable and may be illustrated using the Yukon market as an example. The establishment of a transportation infrastructure hub in Whitehorse by Air North, Yukon's Airline in 2002 led to more than a 2 percent increase in private sector jobs in the Yukon. Air North employees now represent almost 2.5 percent of the private sector Yukon workforce. Air North has 75% of its employees located in, and 85 percent of its payroll dollars earned in the Yukon. This includes pilots, flight attendants, maintenance personnel, cargo, catering, ramp, and passenger services personnel, along with call center, marketing, administrative and management personnel. Were Air North to locate its operations hub to a southern city, it would then have only have about 60 Yukon employees, or 25% of the total number, and only about 15% of its payroll dollars would be earned by Yukon employees.

Air North has also had an impact on Yukon Gross Domestic Product (gdp). In 2009, the Yukon real gdp was about $1.5 billion and the government accounted for about 40% of this. It is estimated that Air North now accounts for more than 1.5% of Yukon gdp, depending upon how one quantifies secondary economic impacts.

Regional Economic Development-Good for Canada and Northern Canada

The recognition of the regional economic benefits provided by aviation is not confined to northern markets. It is interesting to note that the National Airlines Council of Canada, which is a trade association comprised of Canadian mainline and other large air carriers, has recently had an economic study produced on its behalf by Dr Fred Lazar of the Schulich School of Business. This study, entitled "The Economic Impacts of the Member Carriers of the National Airlines Council of Canada" outlines, among other things, the tremendous contribution that Canada's aviation industry makes to the Canadian economy. The study details the primary benefits that aviation provides to the economy through direct and indirect employment as well as the secondary contribution resulting from the economic activities of those traveling on aircraft.

One of the goals of the National Airlines Council study was to make a case for protecting the interest of Canadian air carriers with respect to requests for increased access to Canadian markets from international carriers, most notably Air Emirates. It is interesting to note that the economic arguments that apply to northern air carriers trying to protect their markets in the north, apply equally well to Canadian mainline carriers trying to protect their interests in the international marketplace.

The National Airlines Council study estimates that in 2009 its member carriers transported more than 48 million passengers and directly employed almost 40,000 people. NAC member carrier revenue exceeded $14 billion and member carrier expenses in Canada were just under $11 billion. Dr Lazar's study estimates that the NAC carrier total economic output impact in 2009 was $19.6 billion and that NAC member carriers accounted for more than 84,800 jobs in Canada. Secondary and catalytic economic impacts add to these totals.

One interesting statistic noted in the NAC study is the Canadian "travel account" deficit. In 2009, air travel expenditure exports (mainly airfare purchases by non-Canadians on Canadian airlines) totaled $2.1 billion, while air travel expenditure imports (mainly airfare purchases by Canadians on foreign airlines) totaled $6.4 billion. This resulted in a deficit of $4.4 billion, which represents an increase from a deficit of $2.8 billion in 2005. The study describes the deficit as "an opportunity for Canadian carriers, as long as they can offer competitive services at competitive prices."

Historically, when northern communities were served as "northern outposts" at the end of a southern-based route network, the north had no travel expenditure exports and relied

only on travel expenditure imports. Northern air carriers have pretty much eliminated the northern travel deficit and have, in some cases, helped to create a travel account surplus, which greatly benefits the northern economy.

The primary economic impact arguments make complete sense, whether expressed on a regional level in the north, or on a national level in the international marketplace, but the press, the blogs and the talk on the street all illustrate that there is another side to the argument. It seems that there are a lot of airline consumers who don't particularly care about whose economy their travel purchase is benefiting- they just care about how much the trip costs, if the times suit them, and if they receive good service. This should not be particularly surprising but it does put things into perspective. The direct or primary economic development points don't count for anything if you can't deliver a competitive product.

The aforementioned consumer feedback represents an intuitive acknowledgement of the secondary economic benefits that can accrue to a region from the increased economic activity that can result from lower transportation costs and improved transportation access. It is conceivable that these secondary benefits could outweigh the direct benefits provided by employment and infrastructure in a local hub. This is really the crux of the current debate with respect to international air access and it is a factor that must be weighed in northern markets also as mainline carriers seek to expand their services to the north. With particular respect to the north, it is interesting to note that Transport Canada has just commissioned a study to "provide an assessment of the implications of competition in Canada's northern air transportation system". Inter Vistas consulting was the successful bidder on this RFP and while I am confident that their study will confirm the vital role that northern air carriers play in providing safe and affordable air transportation throughout the north, I also expect that the study will confirm the need for northern regions to have a cost effective and efficient air transportation network in order to achieve their full potential for economic growth.

Secondary Economic Benefits through Price Stimulated Market Growth

More affordable air access to and within a region produces significant secondary economic benefits to that region by allowing more people to travel and people to travel more often. The Yukon market experience provides an excellent example of market growth through price stimulation.

Prior to 2002, airfares in and out of the Yukon were considerably higher than those found on comparable southern routes. Air North felt that it could operate profitably at fares that were 20% to 25% lower than existing fares and establish market share through price stimulated market growth.

The following statistics show that during 2009, based upon Air North average yields, the average airfare in or out of the Yukon was more than 25% lower than it was in 2001. Yukon airfares, including those within the Yukon, now compare very well with those

found on similar routes in the south. Furthermore, since 2002, domestic traffic has grown by 65%. Almost all of the growth in traffic was as a result of price stimulation as people can afford to travel more often, and more people can afford to travel. More affordable air transportation has allowed Yukon residents to have more money in their pockets to spend on other goods and services, and has allowed visitors to arrive in the Yukon with more money to spend on goods and services while they are in the territory. This has been good for Air North, and good for the Yukon economy.

Yukon Market Air Travel Growth

Passengers (#)	2002	2010	Increase #	Increase %
Air North	23,041	116,206	93,165	404%
Mainline competitor (est)	104,951	110,041	5,090	5%
Other	23,699	24,491	792	3%
Total	151,691	250,738	99,047	65%
			2001-2010*	2001-2010
Ave Airfare	$ 222	$ 221	$ (90.00)	-29%
Ave Fuel cost/litre	$ 0.55	$ 0.80	$ 0.25	45%

*Ave Airfare 2001- $312

From the foregoing data, it is interesting to note that the in 2001, with the market all to themselves, the mainline competitor transported about the same number of passengers in the Yukon market as they did in 2010 when they had less than half of the total market.

Airfares-Separating Fact from Fiction

Any assessment of the suitability or adequacy of air service in a particular region is usually based primarily upon price. We know that affordable air travel facilitates economic growth and keeps consumers happy but what constitutes affordable travel? I have recently read two studies dealing with air travel pricing in Canada. The Frontier Centre for Public Policy published a study entitled “Canada’s Not-So Friendly Skies”, and LPS Avia Consulting published a study entitled the “High Arctic Transportation Cost Study”. I’m not sure whether LPS is referring to costs in the high arctic, or high costs in the arctic, but certainly their study is cleverly titled.

The Frontier study evaluates travel costs in Canada in comparison with those in the United States and in Europe and the LPS study evaluates travel costs in the central and eastern arctic regions. The Frontier study presents data to suggest that it costs $.31/mi to fly in Canada, $.24/mi to fly in the US, and $.08/mi to fly in Europe, before fees and taxes, and the LPS study (supplement) presents data to suggests that it costs $3.97/mi to

fly in the High Arctic. While both studies make some good points, I feel that the airfare data is somewhat inaccurate and misleading.

In order the gain insight into Canadian airfares, including northern Canada, it is useful to look at airfares in various Canadian markets. Air North, Yukon's Airline routinely samples the best available airfares in selected Canadian air travel markets. Data is sampled in each market on a weekly basis for travel purchased three days in advance of travel (short purchase), and thirty days in advance of travel (long purchase). Data is then summarized in accordance with market area. The market areas used are each of the three northern capitals for both turboprop and jet routes (Whitehorse, Yellowknife, and Iqaluit), southern regional short jet routes (<500 mi), southern regional medium jet routes (>500 and <1000 mi), southern transcontinental jet routes (>1000 mi), and regional turboprop routes (yvr market). Summary results for survey data collected on Feb 15, 2011 are shown below.

Air North, Yukon's Airline
Best Fare Survey Data Summary

Survey Date Feb 15/11	**Best Fare Yield/mi**	**Best Fare Yield/mi**
Jet Routes	**3 day advance**	**30 day advance**
YXY market-4N	$ 0.29	$ 0.21
YXY market-average	$ 0.49	$ 0.22
YZF market-7F/5T	$ 0.30	$ 0.26
YZF market -average	$ 0.45	$ 0.36
YFB market	$ 0.55	$ 0.55
South Regional<500 mi	$ 0.96	$ 0.37
South Regional >500 mi	$ 0.43	$ 0.21
South Transcontinental	$ 0.26	$ 0.12
Turboprop Routes		
YXY mkt	$ 0.50	$ 0.50
YVR mkt	$ 0.98	$ 0.43
YZF mkt	$1.48	$1.48
YFB mkt	$1.31	$1.24

	Carrier Code	**Market Code**	
4N	Air North, Yukon's Airline	YXY	Whitehorse
AC	Air Canada	YZF	Yellowknife
5T	Canadian North	YFB	Iqaluit
7F	First Air	YVR	Vancouver
WS	WestJet		

The data summary produces the following general observations:

i) Best fare yields for jet routes in both the YXY and the YZF markets compare very well with those found on similar routes in southern Canada. In fact, jet

route yields in the YXY and YZF markets are actually lower than yields in many larger markets in southern Canada. It should also be noted that in both the YXY and YZF markets, the fares offered by the northern carriers are below the average of the best fares in that market;

ii) In all markets, mainline carriers tend to more than double their airfares for short notice travel while northern carriers do not. This is perhaps indicative of the closer, and often personal, relationship between the northern carrier and the customer in small northern markets. In the case of the YFB jet market and the YFB and YZF turboprop markets this factor could also indicate the absence of lower fares which could perhaps be used to stimulate increased travel;

iii) Fares for turboprop travel in the YXY market compare very well with those in the YVR market. Fares for turboprop routes in both the YZF and the YFB markets are significantly higher than those in the YXY and YVR markets, but operating costs for these routes are likely also significantly higher as well;

iv) In southern Canada, air travel cost/mi tends to double when comparing transcontinental routes to medium (between 500 mi and 1000 mi) regional routes, and to double again when comparing medium regional routes to short (less than 500 mi) regional routes. This cost differential likely reflects the relationship between the direct fixed, departure related costs of operating a flight such as check-in agents, baggage handlers, airport fees, terminal fees, and the direct variable operating costs such as fuel, maintenance, crew, and enroute navigational charges. A quick rule of thumb to put one in the ballpark for the best available fare on a narrow body jet route might be $70/departure plus $.07/mile;

v) The average of three-day advance purchase and thirty-day advance purchase best fare data does not necessarily represent average fares in any market. Most people purchase their travel more than three days ahead of travel, thus the average fare would likely be much closer to the thirty-day advance purchase figure;

vi) The “average cost of travel” indicated in both the Frontier and the LPS studies does not reconcile with data gathered in the Air North Best Fare Survey. Both of the aforementioned studies appear to overstate the representative travel costs in their respective regions.

Survey detail showing data gathered on Feb 15, 2011 is shown below.

Air North, Yukon's Airline
Best Fare Survey Data Detail

Survey Date- Feb 15, 2011

Best Fare Survey-Turboprop Routes

Route	Dist(sm)	Short (3 day) Best Fare	Purchase Yield	Long (30 day) Best Fare	Purchase Yield	Carrier
YXY-YDA	264	$ 130	$ 0.49	$ 130	$ 0.49	4N
YXY-YOC	495	$ 260	$ 0.53	$ 260	$ 0.53	4N
YXY-YEV	526	$ 260	$ 0.49	$ 260	$ 0.49	4N
YVR-YZP	466	$ 445	$ 0.95	$ 169	$ 0.36	AC
YVR-YXC	334	$ 249	$ 0.75	$ 104	$ 0.31	AC
YVR-YPR	469	$ 440	$ 0.94	$ 221	$ 0.47	AC
YVR-YXT	431	$ 440	$ 1.02	$ 221	$ 0.51	AC
YVR-YYD	424	$ 440	$ 1.04	$ 221	$ 0.52	AC
YVR-YCG	250	$ 292	$ 1.17	$ 104	$ 0.42	AC
YZF-YCB	528	$ 709	$ 1.34	$ 709	$ 1.34	5T
YZF-YCO	370	$ 514	$ 1.39	$ 514	$ 1.39	5T
YFB-YUX	493	$ 539	$ 1.09	$ 539	$ 1.09	5T
YFB-YGT	529	$ 539	$ 1.02	$ 539	$ 1.02	5T
YFB-YXP	185	$ 215	$ 1.16	$ 215	$ 1.16	5T
YZF-YCB	528	$ 689	$ 1.30	$ 689	$ 1.30	7F
YZF-YCO	370	$ 494	$ 1.34	$ 494	$ 1.34	7F
YZF-YHI	579	$1,163	$ 2.01	$1,163	$ 2.01	7F
YFB-YAB	758	$1,288	$ 1.70	$1,163	$ 1.53	7F
YFB-YRB	978	$1,531	$ 1.57	$1,354	$ 1.38	7F

Air North, Yukon's Airline

Best Fare Survey-Jet Routes

Route	Dist(sm)	Short (3 day) Best Fare	Purchase Yield	Long (30 day) Best Fare	Purchase Yield	Carrier
YXY-YVR	921	$ 263	$ 0.29	$ 193	$ 0.21	4N
YXY-YVR	921	$ 637	$ 0.69	$ 217	$ 0.24	AC
YZF-YEG	633	$ 169	$ 0.27	$ 149	$ 0.24	7F
YZF-YEG	633	$ 209	$ 0.33	$ 179	$ 0.28	5T
YZF-YEG	633	$ 526	$ 0.83	$ 526	$ 0.83	AC
YZF-YEG	633	$ 231	$ 0.36	$ 144	$ 0.23	WS
YVR-YXS	325	$ 171	$ 0.53	$ 124	$ 0.38	WS
YVR-YXS	325	$ 211	$ 0.65	$ 124	$ 0.38	AC
YVR-YLW	178	$ 209	$ 1.17	$ 84	$ 0.47	WS
YVR-YLW	178	$ 552	$ 3.10	$ 84	$ 0.47	AC
YEG-YQU	250	$ 149	$ 0.60	$ 104	$ 0.42	AC
YEG-YQU	250	$ 164	$ 0.66	$ 104	$ 0.42	WS
YEG-YMM	249	$ 159	$ 0.64	$ 139	$ 0.56	AC
YEG-YMM	249	$ 149	$ 0.60	$ 139	$ 0.56	WS
YEG-YYZ	1670	$ 1,063	$ 0.64	$ 209	$ 0.13	AC
YEG-YYZ	1670	$ 519	$ 0.31	$ 209	$ 0.13	WS

YEG-YWG	738	$	231	$	0.31	$	144	$	0.20 AC
YEG-YWG	738	$	264	$	0.36	$	144	$	0.20 WS
YVR-YEG	502	$	221	$	0.44	$	134	$	0.27 AC
YVR-YEG	502	$	181	$	0.36	$	134	$	0.27 WS
YVR-YYC	426	$	211	$	0.50	$	124	$	0.29 AC
YVR-YYC	426	$	171	$	0.40	$	124	$	0.29 WS
YVR-YQR	828	$	825	$	1.00	$	181	$	0.22 AC
YVR-YQR	828	$	264	$	0.32	$	144	$	0.17 WS
YVR-YYZ	2077	$	399	$	0.19	$	229	$	0.11 AC
YVR-YYZ	2077	$	339	$	0.16	$	229	$	0.11 WS
YVR-YHZ	2750	$	459	$	0.17	$	389	$	0.14 AC
YVR-YHZ	2750	$	459	$	0.17	$	289	$	0.11 WS
YQM-YYZ	749	$	416	$	0.56	$	144	$	0.19 AC
YQM-YYZ	749	$	291	$	0.39	$	144	$	0.19 WS
YVR-YOW	2206	$	572	$	0.26	$	239	$	0.11 AC
YVR-YOW	2206	$	349	$	0.16	$	239	$	0.11 WS
YQR-YWG	330	$	802	$	2.43	$	181	$	0.55 AC
YQR-YWG	330	$	331	$	1.00	$	144	$	0.44 WS
YEG-YXE	298	$	149	$	0.50	$	104	$	0.35 AC
YEG-YXE	298	$	164	$	0.55	$	104	$	0.35 WS
YVR-YXE	748	$	231	$	0.31	$	161	$	0.22 AC
YVR-YXE	748	$	231	$	0.31	$	144	$	0.19 WS
YYC-YQQ	488	$	784	$	1.61	$	144	$	0.30 AC
YYC-YQQ	488	$	331	$	0.68	$	144	$	0.30 WS
YFB-YOW	1303	$	699	$	0.54	$	699	$	0.54 7F
YFB-YOW	1303	$	719	$	0.55	$	719	$	0.55 5T
YFB-YOW	1303	$	719	$	0.55	$	719	$	0.55 AC
YVR-YZF	975	$	556	$	0.57	$	321	$	0.33 AC
YVR-YZF	975	$	321	$	0.33	$	234	$	0.24 WS
YYZ-YUL	315	$	289	$	0.92	$	119	$	0.38 AC
YYZ-YUL	315	$	199	$	0.63	$	29	$	0.09 WS
YYZ-YOW	226	$	299	$	1.32	$	59	$	0.26 AC
YYZ-YOW	226	$	159	$	0.70	$	39	$	0.17 WS

City/Town Key

Arctic Bay	YAB	Kugluktuk	YCO
Calgary	YYC	Moncton	YQM
Cambridge Bay	YCB	Montreal	YUL
Castlegar	YCG	Old Crow	YOC
Comox	YQQ	Ottawa	YOW
Cranbrook	YXC	Prince George	YXS
Dawson City	YDA	Prince Rupert	YPR
Edmonton	YEG	Regina	YQR
Ft McMurray	YMM	Resolute Bay	YRB
Grande Prairie	YQU	Sandspit	YZP
Halifax	YHZ	Saskatoon	YXE
Hall Beach	YUX	Smithers	YYD
Holman Island	YHI	Terrace	YXT

Igloolik	YGT	Toronto	YYZ
Inuvik	YEV	Vancouver	YVR
Iqaluit	YFB	Whitehorse	YXY
Kelowna	YLW	Yellowknife	YZF

Understanding Differences in Airfares

The foregoing fare survey data indicates that northern airfares, in general, are very competitive with those found in similar markets in southern Canada, with the exception of turboprop routes in the high arctic. Even in southern Canada though, there are significant differences in airfares between markets and it is useful to try to gain some insight into why this is so.

In general, it is probably pretty safe to say that in most markets airfares are determined by the cost of operation of at least one of the carriers in the market. In the aviation industry today, all around the world, airlines are operating the same types of aircraft, all of which require fuel, aircrews, maintenance, ground support, and aviation infrastructure in order to operate. One might expect then, that airfare differences may be explained by differences in cost that might be as a result of differences in one or more of the foregoing cost factors.

Following is financial and operating data from selected North American air carriers.

Putting Airlines into Perspective
Selected Major Carrier Financial and Operating Data

Carrier (reporting period)	Total Rev $ millions	Total Exp $ millions	Inc before Taxes $ millions	Inc/Rev%	Fuel Cost $/Litre
Air Canada (2010)	$ 10,786	$ 10,631	$ 155	1.4%	$ 0.70
WestJet (2010)	$ 2,609	$ 2,413	$ 197	7.5%	$ 0.71
Porter (2009)	$ 151	$ 156	$ (5)	-3.0%	n/a
Jazz (2010)	$ 1,486	$ 1,436	$ 51	3.4%	$ 0.70
Delta (2010)	$ 31,755	$ 31,147	$ 608	1.9%	$ 0.61
Southwest (2010)	$ 12,104	$ 11,359	$ 745	6.2%	$ 0.66
United/Continental (2010)	$ 23,229	$ 22,979	$ 250	1.1%	$ 0.62
American (2010)	$ 22,170	$ 22,676	$ (506)	-2.3%	$ 0.61
Alaska (2010)	$ 3,832	$ 3,426	$ 406	10.6%	$ 0.62
Jet Blue (2010)	$ 3,779	$ 3,618	$ 161	4.3%	$ 0.60
US Airways (2010)	$ 11,908	$ 11,406	$ 502	4.2%	$ 0.59
Air Tran (2010)	$ 2,619	$ 2,559	$ 60	2.3%	$ 0.61
Horizon Air*(2010)	$ 680	$ 672	$ 8	1.1%	$ 0.64

Carrier (reporting period)	Total ASM's millions	Total RPM's millions	Load Factor%	Total Rev/RPM	Total Exp/ASM
Air Canada (2010)	63,496	51,875	81.7%	$ 0.208	$ 0.167
WestJet (2010)	19,535	15,613	79.9%	$ 0.167	$ 0.123
Porter (2010)	655	314	47.9%	$ 0.481	$ 0.238
Jazz (2010)	5,501	n/a	n/a	n/a	$ 0.261
Delta (2010)	232,684	193,169	83.0%	$ 0.164	$ 0.134
Southwest (2010)	98,437	78,047	79.3%	$ 0.155	$ 0.115
United/Continental (2010)	169,565	140,857	83.1%	$ 0.165	$ 0.136
American (2010)	165,420	134,298	81.2%	$ 0.165	$ 0.137
Alaska (2010)	27,669	22,800	82.4%	$ 0.168	$ 0.124
Jet Blue (2010)	34,744	28,279	81.4%	$ 0.134	$ 0.104
US Airways (2010)	85,818	69,593	81.1%	$ 0.171	$ 0.133
Air Tran (2010)	24,062	19,578	81.4%	$ 0.134	$ 0.106
Horizon Air*(2010)	3,235	2,450	75.7%	$ 0.278	$ 0.208

*Also included in Alaska consolidated results

From the foregoing data, it is possible to make the following observations:

i) All of the US carriers have a 10%-15% fuel cost advantage over the Canadian carriers;

ii) The network US carriers (Delta, United/Continental, American, Alaska, and US Airways) have about a 20% cost advantage over Air Canada;

iii) The low cost US carriers (Southwest, Jet Blue and Air Tran) have about a 10% cost advantage over WestJet;

iv) While some of the US carriers are much larger than the Canadian carriers, the cost differentials do not appear to be size related, as in the US, the smaller carriers are cost competitive with the larger carriers;

v) It should be noted that the cost differentials between low cost carriers (WestJet, Southwest, Jet Blue, and Air Tran) and network carriers with regional affiliates (Air Canada, Delta, United/Continental, American, Alaska, and US Airways) are somewhat overstated as the impact of regional affiliate operations is shown in the consolidated data. This has the effect of producing consolidated costs that are higher than mainline costs by a factor of about 10%, in most cases;

vi) The much higher unit costs of regional carriers (Jazz, Porter, and Horizon) illustrates the significant (as much as double) unit cost penalties of regional jets and turboprops relative to narrow and wide body jet equipment;

vii) It should be noted that costs of about $.14/asm and a load factor of about 80% will produce a break-even yield of about $.175/rpm. This figure reconciles well with the thirty day advance purchase best fare data for transcontinental and medium regional routes as well as the total revenue/rpm statistics for Air Canada and WestJet;

viii) With the exception of Porter, all of the above carriers had load factors of 80% or better.

The foregoing data tends to confirm one of the key points in the NAC study referred to earlier, and that is that Canada is a higher cost environment for aviation operations than is the US largely due to differing policies with respect to taxation and infrastructure costs. A higher cost environment leads to a higher fare environment and as Canadian mainline carriers must compete in the global marketplace, there is a good case to be made for policymakers to take steps to level the playing field with respect to the aviation cost environment in Canada.

While the cost differences between Canadian and US carriers may not seem huge (10%-20%), consumers will often make their choice based upon a $5 fare difference. Additionally, the US has, perhaps unintentionally, but possibly intentionally, created a cross border travel tax structure that is, by some accounts, driving up to 4.5 million travel segments out of Canadian airports and away from Canadian airlines in favour of US carriers and US cross border airports. With US arrival and departure taxes, Sept 11 fees, XY taxes, APIS fees, and Canadian HST, the tax burden on a $300 round trip is close to 30%, and much of this tax goes to the US government. The tax factor, in combination with a small fare difference, is more than enough to entice more than 6% of Canada's travel market (after allowing for the double counting of domestic segments in our airport statistics) to spend their travel dollars in the US instead of Canada. This is a win-win situation for the Americans as they either directly collect taxes from the travelers who elect to start and finish their air travel in Canada, or they indirectly collect taxes from the airlines who benefit from the Canadian travelers who drive across the border to fly on US carriers.

Cost Environment Issues for Northern Air Carriers

While Canadian air carriers are challenged to compete in the global marketplace due to the higher cost environment for aviation in Canada, northern air carriers also find it challenging to compete in the domestic marketplace and to meet the expectations of northern consumers because of cost environment challenges that are particular to northern operations. It should come as no surprise to observe that northern air carriers operate in a high cost environment relative to the rest of Canada but it should be noted that many of the cost environment issues are completely beyond the control of the air carriers.

Some of the most significant cost environment challenges faced by northern air carriers are as follows:

i) **Gravel Runways**- There are only ten paved runways in all three territories. The B737-200 was one of the last jet aircraft certified for use on gravel runways and this type is still in use by the three largest northern air carriers. Air North, Yukon's Airline has recently added a B737-400 and a B737-500 to its fleet; Canadian North has added a B737-300 to its fleet and First Air has added a B767 to its fleet. All of these aircraft offer operating cost savings of 25% or more relative to the B737-200, but none of these aircraft can operate on gravel and so their use is limited to the gateway routes only. Northern air carriers are ready, willing, and able to modernize their fleets and must do so in order to provide cost effective and efficient services, but paved runways are required for further modernization;

ii) **Inadequate Runways**- Many northern runways were built to a 3000 ft length, which was sufficient to accommodate a DC-3 aircraft. Most modern turboprop and jet aircraft require runways that are at least 5000 ft long. Again, further fleet modernization will be impeded unless longer runways are provided;

iii) **Weather Reporting**- Because of its size, weather data in the north is very sparse. Many locations rely on Community Airport Radio Stations (CARS) to provide this service. Most CARS stations operate for limited hours only and many have staffing problems that further reduce their operational hours. This has resulted in numerous cancelled flights or diversions, both of which add to the end cost of the transportation product. Weather reporting in the north would be greatly improved by the installation of more automated weather reporting systems (AWOS) with video capability. These systems would provide uninterrupted weather reporting coverage on a 24 hr/day, 7 day/wk basis;

iv) **Fuel**- In general, the farther that one has to transport fuel from the refinery, the higher the transportation costs are and so it should be expected that fuel costs would be high in the north. In addition, in recent years, there have been numerous fuel shortages, particularly in eastern arctic communities. This has resulted in flight cancellations, flight diversions, and expensive fuel tankering, all of which add to the cost of air transportation in those regions;

v) **Other airport infrastructure**-Many northern airports are faced with ramp and terminal congestion issues which add to the cost of providing service to those airports;

vi) **Transport Canada level of service**-There appears to be staff shortages within the Transport Canada organization which are causing unreasonable delays in such routine tasks as manual approvals, new aircraft type additions, gps approach approvals and others, all of which result in increased costs to air carriers.

In addition to the existing cost environment challenges shown above, we are aware of several more potential challenges that could adversely impact northern aviation. Some of these potential challenges are:

i) **Combi operations**- In order to operate the largest and most cost effective aircraft on a route while still maintaining an acceptable level of frequency, northern carriers rely on their capability to transport passengers and cargo on the same aircraft. Any restrictions placed upon the ability to conduct combi operations in the north would tend to increase the cost of both passengers and freight to consumers;

ii) **RESA requirements**- The potential for RESA (Runway End Safety Area) requirements at northern airports without concurrent runway extensions would effectively shorten most northern runways to the point where safety would be degraded and costs increased by either limiting payloads or precluding the use of large aircraft on the shorter runway;

iii) **Flight and Duty Time regulatory changes**- The current Flight and Duty Time regulatory structure is now under review. NATA is participating in this review and notes that there is some pressure to develop rules that match those in other countries. We feel that Flight and Duty Time regulations should be based upon science and they should recognize the unique aspects of the northern operating environment in order to ensure that regulatory changes produce legitimate safety gains rather than needless cost increases.

Northern air carriers recognize that northern aviation infrastructure improvements are expensive and that there are other priorities in Federal and Territorial budgets. We are somewhat prepared to "live with what we have" until infrastructure improvements can be planned for in accordance with the normal budgetary process, but in order to preserve the status quo, it will, in some cases, be necessary to delay new regulatory initiatives in the north until such time as infrastructure improvements can be made. It should be recognized though, that it is very difficult for northern carriers to make cost and efficiency improvements on their northern route networks until such time as infrastructure improvements are made. It should also be noted that enhancements to northern aviation infrastructure will provide short term economic benefits to the north through the construction phase, and long term economic benefits to the north by strengthening the northern air transportation network. Both of these outcomes support a northern sovereignty strategy.

Large aircraft/Small aircraft/Passenger/Freight Considerations

It is useful to provide an illustration of the operating efficiencies afforded by the use of larger aircraft and combi aircraft on northern regional routes. The following provides an illustration of scheduled air service options for a typical northern community with a 5000 ft gravel runway.

Regional Route Passenger/Freight/ Large/Small Aircraft Comparison

Pro Forma weekly Traffic		
Passengers (#)	90	Equally distributed north/south
Cargo (# lb)	20,000	100% northbound
Weekly northbound payload	31,250	
Weekly southbound payload	11,250	

Aircraft Type	**Combi Jet**	**Combi Turboprop**	**Small Turboprop- No Combi**
Payload (# lb)	22,000	9,500	3,500
Configuration	60 pax/10000#	20 pax/5000#	15 pax or 3500#
CASM (full pax)	$.17/asm (120 pax)	$.39/asm (40 pax)	$.55/asm (15 pax)
Cost/flight (500 mi each way)	$ 20,400	$15,600	$ 8,250
Service Frequency	2/wk	4/wk	9/wk
Weekly cost	$ 40,800	$ 62,400	$ 74,250
Cargo Adjusted Load Factor	35%	53%	63%
Pro Forma Tariff (10% margin)			
Pax cost/pax	$ 264.00	$ 403.76	$ 480.44
Pax cost/rpm	$ 0.53	$ 0.81	$ 0.96
Cargo cost/#	$ 1.06	$ 1.62	$ 1.92

The foregoing data illustrates the following:

i) The pro forma traffic volumes shown above are representative of our volumes in and out of Old Crow YT and are likely fairly representative of other northern communities as well. While passenger volumes are fairly well balanced over time, cargo volumes are entirely directional. Northbound flights often depart with more cargo than passengers on board and they are almost always full while southbound flights haul only passengers and at a very low load factor. The high proportion of cargo and its directional nature means that overall cargo adjusted load factors on northern regional routes will be sub-optimal, generally in the 65%-70% range;

ii) Neither passenger volumes, nor cargo volumes will, on their own, support the use of a large aircraft with an acceptable level of frequency. Together they do justify the use of larger aircraft with lower unit operating costs and they allow a frequency of service that is acceptable to the community;

iii) Despite the fact that the B737-200 is a relatively old aircraft, and despite the fact that it is payload limited on a 5000 ft long runway, it still provides better overall unit operating costs than pretty much any large turboprop aircraft. Similarly, even an older large turboprop, like the HS748, provides better unit operating economics than most smaller, and even more modern, turboprops;

iv) Northern communities are challenging northern air carriers to provide them with lower cost air transportation and the foregoing data shows that the best way to do this is to ensure that the transportation infrastructure is suitable to support the use of larger aircraft. This means that lengthening runways, or at least preserving existing runway lengths, should be a priority.

How do Northern Air Carriers fit into the Canadian Aviation Landscape?

It should be recognized that by establishing transportation infrastructure hubs in the north, northern air carriers are not only limiting their opportunities for growth but they are also making a significant and substantial commitment to a very small market. As a result, this makes them very sensitive to any increase in the level of competition in the market. Stated another way, we have put "all of our eggs into one basket" and it is a pretty small basket so we have to defend our turf aggressively.

With three northern air carriers sharing less than one percent of the entire Canadian air travel "pie", market share is extremely important to all of us. In order for us to deliver a cost effective product on both our regional turboprop routes as well as on our gateway jet routes, we all need to fly sufficient ASM's for efficient allocation of all of the fixed costs associated with our northern transportation infrastructure hubs. We can find most of the ASM's that we require right in our own back yards but we need to maintain a major share of the traffic in our markets in order to do so.

The impact of increased competition and decreased market share on costs may be illustrated by looking at our own (Air North Yukon's Airline's) operational experience in the summer peak season as compared with the winter low season.

The Yukon air travel market, like other northern markets, is tremendously seasonal. Last year, the Whitehorse Airport generated 35% of its annual traffic during the three peak summer months (June, July, and August), Traffic volumes during a peak month are double those of a low month, and as a result, we, like other northern carriers, make seasonal adjustments to our scheduled network by adding capacity in the summer (3 months) and removing it in the low season (9 months). Additionally, demand for our charter services also increases during the three summer months, and as a result, for our B737 operations, our peak summer flying typically generates about a 44% increase in ASM's relative to a low month. The relative impact of this incremental flying on our total monthly costs and on our CASM in each month is as shown below.

Air North, Yukon's Airline
Seasonal Flying Volume/Cost Impact Illustration

B737 Operation	**Low/Peak % Change**
Sched. service frequency	28%
Sched. & Charter ASM's	44%
Total Costs	25%
Cost/ASM	-24%

The foregoing data indicates that, during the peak months, a 28% increase in scheduled service capacity along with an increase in charter flying resulted in a 44% increase in ASM's, a 25% increase in total costs, and a 24% decrease in our CASM. These figures

illustrate how difficult it would be for us to deliver a competitive product in our market if our market share became diluted through increased competition. In this situation, the only way for us to remain competitive would be to replace lost ASM's in the northern market with new ASM's in southern markets and that would likely be at the expense of our northern infrastructure hub.

The primary focus of northern air carriers is on northern markets and it is this northern focus that tends to make us somewhat unique competitors with respect to mainline carriers. By establishing ourselves in the north, we are better positioned to provide feed traffic to mainline carriers than we are to grow and take traffic from them. This should make us ideal candidates for alliances with mainline carriers and I believe that such alliances would be an all round win situation, benefiting northern carriers, mainline carriers, northern economies, northern consumers, and Canada in general.

Strategies to Optimize Northern Regional Benefits

The foregoing data has illustrated the direct economic benefits that accrue to a region through the establishment of local transportation hubs as well as the indirect or secondary benefits that will result from more affordable airfares and improved access. Stated another way, clearly it is far better to be the hub of a route network rather than the spoke, provided that the cost and quality of the transportation product is the same in either case. This statement applies both regionally, in the case of northern Canada, and nationally, with reference to the global marketplace. It is certainly quite possible to have the best of all worlds, that is local hubs, low fares, and network access. The foregoing data illustrates how northern air carriers have been successful in helping to strengthen the northern economy by establishing transportation infrastructure hubs in the north, reducing airfares and stimulating travel.

One might argue that optimal results will be achieved by simply letting market forces prevail and letting the strongest survive, but the simple reality is that on both a regional and a global scale, the playing field is not level in terms of the size and scope of the players in the game and in terms of the operating environment. In the international marketplace the interests of Canadian air carriers are protected through bilateral air services agreements. In the domestic marketplace, while northern air carriers neither have, nor want, any type of protection from competition, we feel that there is a good case made for the development of Federal and Territorial strategies and policies that recognize the role that northern air carriers play in providing an efficient and affordable air transportation network to, from, and within Canada's vast northern regions. These strategies and policies should encourage and support the establishment of air transportation infrastructure hubs in the north. Some key elements in a northern aviation strategy might include the measurement of northern travel imports and exports, a strategy to ensure that northern marketing initiatives feature northern air carriers as the gateway carriers to the north, a strategy to ensure that government travel purchases are used to support northern carriers, subject to competitive pricing, a strategy to encourage and facilitate alliances between mainline carriers and northern carriers, and a strategy to make

the modernization of northern aviation infrastructure a priority. These strategies and policies would benefit all northerners.