

New Export Industries Depend Heavily On Air Freight Services

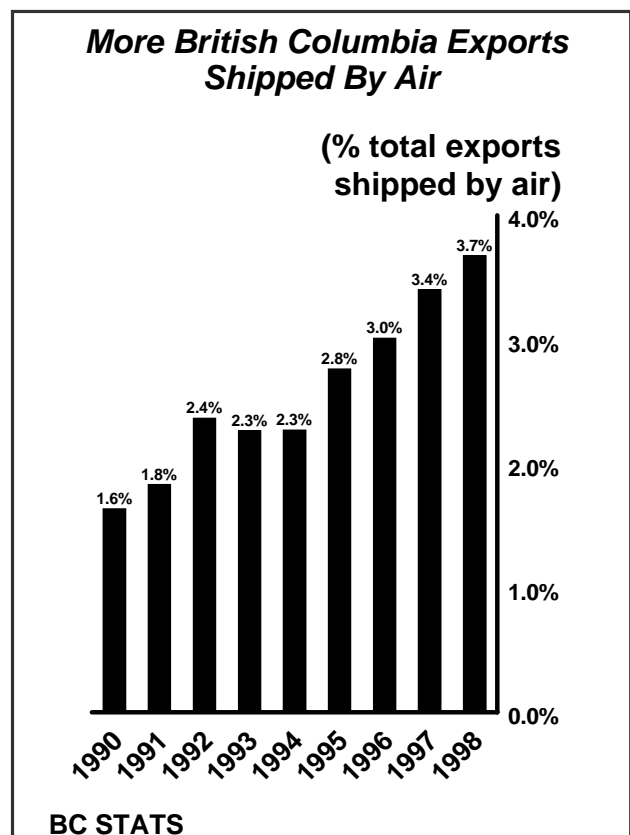
As British Columbia's economy has moved steadily beyond production of bulk resource commodities its transport needs have become more varied. While lumber, pulp, newsprint, ores and coal still move by road and rail to U.S. markets and by sea to overseas markets, fast growing export categories such as specialised electronic gear and expensive perishable food products rely increasingly on air transport.

Most are shipped out through the lower mainland. Air cargo capacity at Vancouver International has climbed rapidly during the 1990s partly as a by product of fast growing passenger traffic through the airport. An estimated half of world air freight is carried in the bellies of passenger aircraft, so that more passenger flights generally bring more air cargo capacity. Authorities at Vancouver International Airport have encouraged the expansion of air freight services by expanding ground facilities. This, in turn, has increased demand for air freight services by encouraging further development of those export industries for which reliable and frequent air freight services are essential.

Air cargo has been British Columbia's fastest growing mode of export transport in the 1990s, and is likely to grow still more important in the next century. The value of British Columbia exports shipped by air increased 251 per cent between 1990 and 1998, twice as fast as air freighted exports from the rest of Canada. Exports shipped from British Columbia by other means (sea, road, rail, etc.) grew 53 per cent during the same period. In dollar terms, the value of air freighted exports rose from

\$273 million in 1990, to \$958 million in 1998.

These figures were dwarfed by the value of goods imported into British Columbia by air freight. Air freighted goods entering Canada through customs ports in British Columbia (although not necessarily consumed in the province) were valued at \$3,052 million in 1998, 12 per cent of the value of all imports clearing customs in British Columbia. The 1998 value was up 178 per cent from 1990.



Air Cargo the Up and Coming Transport For International Trade

Increasing use of air freight for international trade is by no means a uniquely British Columbia trend. Changes in aviation technology have been reducing the cost of air freight services in many parts of the world. Demand for air freight services has increased with the general shift to more highly value added products, and with the development of a more liberalised world trading environment.

Vancouver based aviation consulting and transportation specialists InterVISTAS Consulting Inc. have studied the economics of air freight in British Columbia and further afield. They list the three main factors determining whether a good can be economically shipped by air as value, perishability and distance shipped. A shipment of expensive fresh seafood products going to Asia, for example, would be a strong candidate for air freight, as would be a special order of custom made electronic equipment going to Europe.

Behind the strong long term growth trend for air freight InterVISTAS sees consumer demand for a much wider range of goods. Many are delivered in smaller quantities through sophisticated supply chain systems offering just-in-time delivery systems designed to minimise inventory carrying costs. They identify the urgency and relatively small loads associated with this style of inventory management as factors calling for the greater use of air freight.

These developments and others have made air freight the fastest growing mode of transport throughout most parts of the world.

The International Air Transport Association (IATA) has projected annual world tonnage shipped by air to grow 5.3 per cent annually between 1998 and 2002. They predict the strongest growth (6.3 per cent) to take place in 2000. Their optimism is based partly on the 1998 ratification of an international agreement that IATA hopes will eliminate obstacles to electronic waybills, allowing air cargo to 'finally realise its full potential.'

Much International Trade In Electronics Moves By Air

Overall, electronics products constitute one of the most important export groups driving the growth of air freight services. American transportation industry consultants MergeGlobal have estimated that electronics and computers accounted for '15 per cent of total tonnage in 1992, 18 per cent in 1997, and a projected 20 per cent in 2002.'

From the perspective of British Columbia's electronics manufacturers, air freight services have become extremely important for international trade. The portion of electrical and electronic product exports from British Columbia shipped by air was 45 per cent in 1998. For shipments to some particular markets it rose much higher – reaching 88 per cent for exports to the European Union and 70 per cent for exports to Asia.

Some types of electronic exports rely more on air transport than others. For example, 95 per cent of British Columbia exports of semiconductors, integrated circuits and microassemblies were transported by air. This commerce was valued at \$29 million in 1998.

Heavier or bulkier electronic products were somewhat less likely to be shipped by air. The \$109 million of radio transmission apparatus exports shipped by air in 1998 amounted to 58 per cent of all exports of these products from British Columbia. Forty four per cent of British Columbia exports of computer equipment were shipped by air. The value of these goods was \$49 million.

Electronics manufacturers also relied heavily on air transport to bring in imported components. Eighty-five per cent of semiconductor devices imported through Customs offices in British Columbia were brought in by air in 1998, as were 73 per cent of integrated circuits and microassemblies.

B.C. Exporters of High Value, Perishable Food Products Depend Heavily On Air Freight

Air freight services have long been essential for export of high end fisheries products. Many of these are shipped very fresh or actually alive, so that a premium is placed on prompt delivery from producer to consumer. British Columbia's fisheries industries accounted for 10 per cent by value of all British Columbia exports shipped by air in 1998.

Even with most of Asia still suffering from the effects of Asian flu, the region has remained a key market for British Columbia fishery products. Over a third by value (35 per cent) of British Columbia fisheries exports were shipped to Asia in 1998, amounting to \$280 million. Sixty-eight million dollars of this (24 per cent) moved by air.

The proportion of provincial seafood exports shipped by air could conceivably go much higher in future. Estimates of the potential capacity of British Columbia aquaculture industries suggest that production could be sustained at levels well above present output, and that export markets in Asia, the United States, and elsewhere could absorb larger volumes than they are now importing. If environmental and other concerns can be addressed, the industry has the potential to produce a much greater demand for air freight services.

The most valuable category of seafood exports regularly air freighted to Asia is among the least familiar to most British Columbians. Air shipments to Asia of geoducks (a large type of clam) amounted to \$34 million in 1998. Most went to Hong Kong and other parts of China. The volume of cargo handled amounted to 1.4 million kilograms.

Sea urchins were another exotic fisheries export destined mainly for Asia and shipped almost entirely by air. Eleven million dollars of sea urchin products were exported from British Columbia in 1998. Ninety-seven per cent was moved by air, mainly to Japan, Taiwan and Hong Kong.

Although not primarily destined for Asia, crab exports also relied heavily on air transport. Twelve million dollars, or 73 per cent of the total was shipped air freight in 1998. Of this, \$9 million was destined for the United States, and \$3 million to China and other Asian destinations.

A far smaller portion of the \$201 million of farmed atlantic salmon exported from British Columbia in 1998 was shipped by air. Eight per cent, amounting to \$16 million, was sent air freight. This represented a

very considerable 1.9 million kilograms of air cargo shipping business, almost all destined for Taiwan and Japan.

Although most British Columbia high value food exports shipped by air are seafood products, there are also a growing number of land farmed export products that rely to some extent on air transport.

For example, mushroom exports valued at \$11 million were shipped by air in 1998. This included \$9 million to Japan and \$1 million to France. A significant part (27 per cent) of the province's ginseng exports were moved by air, mainly to Hong Kong or other parts of China.

Fast growing greenhouse and nursery industries have as yet produced relatively little demand for air freight services, but could become important customers in the not too distant future.

Air Freight Services As Industrial Infrastructure

The expansion of airfreight services at Vancouver International Airport has stimulated a considerable amount of industrial growth. New business opportunities have been created as fast reliable air cargo services have become available, and the freight services themselves have brought new investment and created new jobs. Not surprisingly, most of the economic benefit from this has been concentrated in the lower mainland.

But what has worked for the greater Vancouver area might also work for other regions of the province.

One such prospect has been explored in an Air Cargo Feasibility Study Report for the Comox Valley Airport on Vancouver Island. This study concluded that improved air cargo facilities would strongly encourage development of the region's seafood and agricultural industries.

The report explored the commercial feasibility of establishing direct air freight services for the Comox Valley. The authors were able to state that 'in the catchment area of the Comox Valley airport there are several export ready products which have values near, at, or above the median air cargo value in end consumer markets', and that the Comox Valley Airport region 'has a critical mass of products which could move by air freight.'

The proposed service would operate pure freighter aircraft, as opposed to using only belly cargo space on passenger aircraft. Routes would include domestic stops initially, but it is hoped that, over time, enough shipping volume could be generated to support a direct overseas flights. Scheduling would be adjusted to accommodate the seasonal demands of local industry.

Before an air freight operator committed to initiate service for the Comox Valley, it is likely that prospective industrial customers would be asked to commit to using the service to ship a certain percentage of their production for a fixed period of time.

The Comox region is fortunate in having been granted the use of existing facilities at a military airfield. Other communities looking to establish air freight services as part of their economic development plans could be obliged to commit to larger investments from their own resources.

B.C. Catching Up to Other Provinces As An Air Freight Exporter

British Columbia's strong Asian trade has greatly increased the volume of air cargo exports from the province, but still not to anything like the volumes shipped from Ontario or Quebec. The large secondary manufacturing industries of central Canada produce substantial volumes of air cargo traffic. The value of Ontario's exports shipped by air amounted to \$10,278 million in 1998. Quebec's air exports amounted to \$6,815 million.

British Columbia's \$958 million of air exports in 1998 was small by comparison. Nevertheless it was up 251 per cent over the figure for 1990, a rate of increase almost twice the Canadian average and faster than any province except Alberta and Prince Edward Island.

Rapid increases in British Columbia air exports can be expected to continue in future, driven largely by the growth of high technology industries.

Air was the mode of transport for an estimated 38 per cent of British Columbia high technology exports in 1998. High technology exports to Asia were shipped 78 per cent by air. Those to Europe were shipped 81 per cent by air. High technology exports to the United States went mainly by land, but included 29 per cent shipped air freight.

In other provinces air freight export traffic features slightly different mixes of products.

Total Quebec exports by air amounted to \$6.8 billion in 1998, 12 per cent of all exports from the province. This was easily the highest percentage for any province.

Exports By Province - 1998						
	Exports By Air		Total Exports		Exports By Air As Per Cent of Total Exports	% Change Exports By Air 1990 to 1998
	(\$ millions)	(%)	(\$ millions)	(%)		
BC	958	4.9%	26,062	8.8%	3.7%	250.9%
Alta	925	4.8%	31,123	10.5%	3.0%	285.4%
Sask	33	0.2%	10,011	3.4%	0.3%	94.1%
Man	152	0.8%	7,976	2.7%	1.9%	171.4%
Ont	10,278	52.8%	154,772	52.0%	6.6%	94.7%
Que	6,815	35.0%	55,357	18.6%	12.3%	175.7%
NB	28	0.1%	5,455	1.8%	0.5%	86.7%
NS	204	1.0%	3,440	1.2%	5.9%	172.0%
PEI	25	0.1%	465	0.2%	5.4%	316.7%
Nfld	30	0.2%	2,645	0.9%	1.1%	150.0%
Canada	19,449	100.0%	297,590	100.0%	6.5%	129.4%
BC STATS						

The most important air exports from Quebec were aircraft themselves. With Bombardier and other important aviation industry manufacturers located in the province, it is not surprising that 64 per cent of Quebec's exports by air in 1998 were aircraft or aircraft parts and equipment.

Aircraft flown from Quebec to their export destinations were valued at \$3,370 million. Other aviation industry exports included \$170 million of aircraft parts, and \$826 million of turbo-jet or turbo-prop engines. Other Quebec exports shipped air freight were mainly electronic equipment and medical products.

Ontario's exports by air were more widely varied. They constituted 7 per cent of all provincial exports, the second highest ratio in Canada. In dollar terms this amounted to \$10,278 million out of \$154,772 million exports by all modes of transport.

Computers and computer equipment were Ontario's largest single category of air freighted exports. The \$2,607 million of products in this category that were shipped by air amounted to 25 per cent of all air exports from Ontario. Other large categories included \$1,253 of aircraft products,

\$857 million in telephone equipment, and \$198 million in medicines.

Nova Scotia and Prince Edward Island also shipped relatively large portions of their exports by air. Atlantic Canada as a whole shipped \$287 million by air in 1998.

Much of this was seafood. Lobster exports made up over a third of the total, amounting to \$108 million. Shrimps and prawns accounted for \$15 million, and tuna fish accounted for another \$5 million.

Alberta's exports by air amounted to \$925 million in 1998, somewhat less than British Columbia's \$958 million, and representing a smaller portion of total provincial exports. However, the value of Alberta's air freighted exports has been rising very fast during this decade. At 285 per cent, the 1990 to 1998 increase was the sharpest in Canada.

It was achieved largely through fast rising shipments of communications equipment and aircraft equipment. Medical equipment and horsemeat were smaller but still significant categories.