

**A TALE OF TWO CITIES: A  
COMPARISON BETWEEN  
VANCOUVER AND  
SEATTLE/TACOMA IN THE  
TRANSPORTATION SECTOR**

by

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*October, 1987*

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## INTRODUCTION

The cities of Vancouver, Seattle and Tacoma are situated on the Pacific coast of the North American mainland. Actual distances between Vancouver and its southern neighbours are about 200 to 250 kms, with Seattle and Tacoma being separated by only 48 kms. Due to their proximity, they are quite similar in climate and environment. To make a straight comparison of the three cities and their transportation base would not provide a proper comparison as Tacoma is the smallest of the three and other than its port facilities which have gained prominence in recent years, it uses the Seattle/Tacoma Airport facilities situated in the Seattle region and most of the trucking operation is again provided jointly with Seattle. To look at Seattle and Tacoma together in comparison to Vancouver would again not provide a proper comparison.

The purpose of this paper will therefore be to basically provide a comparison of the Vancouver region comprising the Greater Vancouver Regional District (GVRD) and the Seattle region comprising King County, note their Ports, Airports and other transportation networks and review deficiencies, if any, as far as Vancouver is concerned and the importance of the region as a whole in the development of Pacific Rim trade and commerce. Where applicable, the importance of Tacoma, particularly as a port in the region, will be highlighted.

The two regions, Vancouver and Seattle compare reasonably well, though King County covers a larger land area 5,512 sq.km. to 2,158 sq. km. for the GVRD. The population differential is not too large, 1,346,400 (1985) for King County and 1,380,729 (1986) for the GVRD. The labour force in King County in 1981 was 672,900, while during the same period, the GVRD labour force was 635,320. While it is understandable that these numbers have changed since then, the differences between the regions will have been marginal at best. Both regions have large

port complexes and international airports. Being centres of trade and commerce, a large network of trucking services are available in both regions, also both are connected with railway networks which provide access to almost all areas of the Continent.

To better understand the two regions, this paper will focus on the following:

- A. Ports
- B. Airports
- C. Role of Highway Transportation and Freight Forwarding
- D. Effect of Legislation and other agreements on Transportation
- E. Conclusions

A. PORTS

Situated on the Pacific coast, the ports of Vancouver, Seattle and Tacoma are ideally suited geographically to be gateways to the Orient. While there are other ports on the coast, particularly in California, which can compete as potential gateways, Seattle, Tacoma and Vancouver have the distinct advantage of being approximately 280 nautical miles closer to Asian ports on the direct route, thereby offering a saving of  $1\frac{1}{2}$  days sailing time to the Orient, when compared to ports on the Californian coast. This advantage, however, is negated partially because all three ports are situated in areas with low population density and limited industrial activity, making it difficult for them to become large Trade Centres.

In spite of this formidable barrier, the ports have proven to be successful. To better understand how this has been achieved, it is essential to understand the hinterland concept and its evolution in the last two decades.

A general definition of hinterland is the geographical area from which a port receives or dispatches commodities. In the past, this area was limited to a few hundred miles and therefore successful ports were those that either had large populations or a large industrial base like the eastern ports of Montreal and New York. With the advent of the railways, the hinterland was extended to include areas that had been inaccessible earlier. The construction of highways and the improvement of viable trucking operations further promoted the enlargement of the hinterland. Introduction of Piggy backing or TOFC arrangements (Trailer on Flat Car) permitted the coordination of truck and rail transport, thereby enlarging further the port hinterland.

The start of the container revolution in the mid 60's changed earlier concepts of intermodal transportation and offered limitless opportunities for the improvement of port hinterlands. Initially, the beneficiaries were the large ports of the East coast which were

able to build upon their traditional base and extended their hinterlands farther afield. However, new innovations were on the way which would change altogether the concept of hinterlands and intermodal carriage in containers. The catalyst for the new innovations was the carriage of general cargo.

Since containerisation was in its infancy, the only commodity suitable for containers was general cargo which, while representing only 3% of the total worldwide cargo market, represented 41% in total value. It was therefore natural that all carriers geared themselves to maximise profits by targeting the general cargo market. This resulted in the construction and introduction of ships of all types and sizes with the container in mind.

Introduction of new equipment and the quest for high rate of return on investment further enhanced competition which resulted in the introduction of the "Bridge Concept" which today functions as "Land Bridges", "Air Bridges", "Mini Bridges" and "Micro Bridges".

The "Bridge concept" is basically the utilisation of the versatility of the container by offering transportation service and rates under one bill of lading, using both sea and land transportational modes (Sea and Air in "Air Bridge").

The first of the "Bridge" concepts was the basic "Land Bridge" which was conceived as a result of the closure of the Suez Canal to assist in the transportation of shipments from the Far East to Europe via North America by utilising marine transportation across the Pacific and Atlantic Oceans and transportation across North America by rail. Later, other land bridges were established, e.g. Siberian, Mexican, etc.

Though the North American Land Bridge did not prove extremely successful, it created the idea for a "Mini Bridge" which provided all water through transport rates to North American ports yet permitting utilisation of land transportation between East and West

Coasts. This novel idea immediately took root and was improved upon with the "Micro Bridge" concept which provided service and rates to interior cities, avoiding double port transits of Mini Bridge systems by using only one port.

The creation of the Bridge concept, coupled with the importance of Pacific Rim trade, permitted Western ports for the first time to compete effectively with Eastern ports by funnelling cargoes through their facilities to hinterlands covering the Mid West and even areas on the East Coast.

Though the West Coast ports were now competitive with their East Coast cousins having extended their hinterlands eastward, there was also some North to South extension as well, resulting in the overlapping of hinterlands thereby creating competition between West Coast ports for each other's cargo.

With the West Coast ports in this situation, it is worthwhile to view the ports of Vancouver, Seattle and Tacoma and see how they fared in the competitive environment.

The statistical data for the three ports in 1986 provides a puzzling picture. In total tonnage, Vancouver handled 57 million tonnes while Seattle could only manage 8.9 million tonnes and Tacoma 8.5 million tonnes. However, in the handling of containers, the results were totally different. Seattle handled 851,000 TEU's, Tacoma 666,000 TEU's while Vancouver managed only 223,000 TEU's. In fact, it is interesting to note that while in 1984, Vancouver and Tacoma were almost level at 151,000 TEU's apiece, in 1986 Tacoma handled 437,000 TEU's more than Vancouver.

To understand the immense disparities and difference in direction, it may be recalled that the three ports suffered from the paucity of population and industrial capacity, however Vancouver had a

substantial advantage over Seattle and Tacoma because it was a terminal for the export of grain and other resources from the Western provinces. Operating with this disadvantage, Seattle and Tacoma decided that their future lay in containerised cargo and therefore they took the necessary steps by modernising facilities, providing incentives and ensuring necessary transportation and distribution networks were established to service freight traffic to their extended hinterlands. The Port of Vancouver on the other hand focused on "generating new bulk business, particularly at Roberts Bank" and "the general cargo (container) sector seemed to be ignored".<sup>1</sup>

The focus by the Port of Vancouver on generating bulk business is understandable since the transportation of bulk commodities is essential for the survival of the British Columbia and Prairie Provinces economies; however, to "ignore" the general cargo sector is not easily understood.

It is possible that the National Harbours Board, the forerunner of the Port Corporation, the then agency responsible for the administration of the Port, took a very conservative view and continued to exploit the sector where their true strength lay, or this attitude could have been as a result of a misconception of the everchanging hinterland concept. By ignoring to exploit its container traffic, Vancouver seems to have played into the hands of its neighbouring ports of Seattle and Tacoma who have benefited from substantial diversion of traffic.

To fully understand the diversion factor, it is essential to view the level of diversion.

Two different sets of figures, one from Canadian sources and the other from U.S. sources provide an assessment of the magnitude of the diversion. The period covered is for 1985 and 1986.

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1 Weiler Commission Report

TABLE I

Canadian Container Traffic moved via U.S. West Coast Ports in TEU's \*

(Source: Weiler Commission Report - Tables IV & V, Pages 30, 31)

		<u>Canadian Source</u>	<u>U.S. Source</u>
1985	Import:	59,955	103,200
	Export:	<u>26,373</u>	<u>33,900</u>
	Total:	86,328	137,100
1986	Import:	70,647 (Est.)	97,900
	Export:	<u>24,663 (Est.)</u>	<u>48,600</u>
	Total:	95,310 (Est.)	146,500

Using the two sets of figures with actual Port of Vancouver statistics for foreign origin/destination containers handled at Vancouver during 1985 and 1986, the percentage of Canadian diversion is as follows:

TABLE II

Foreign origin/destination containers in TEU's handled at Vancouver

(Source: Vancouver Port Corporation Statistics 1986)

1985	Import:	51,042		51,042
	Export:	<u>85,528</u>		<u>85,528</u>
	Total:	136,570	Div. U.S.	136,570
Diversion Can. Source:		86,328	Source:	137,100
Total:		<u>222,898</u>		<u>273,670</u>
Percentage (CAN) 61.3%		(U.S.) 38.7%	(CAN) 49.9%	(U.S.) 50.1%
1986	Import:	75,184		75,184
	Export:	<u>102,896</u>		<u>102,896</u>
	Total:	178,080		178,080
Diversion Can. Source:		95,310		146,500
Total:		<u>273,390</u>		<u>324,580</u>
Percentage (CAN) 65.1%		(U.S.) 34.9%	(CAN) 54.9%	(U.S.) 45.1%

\* TEU's: Twenty foot equivalent unit. A standard measurement for containers

As can be seen during 1985, the diversion percentage varies from a high of 50.1% to a low of 38.7% while in 1986 from a high of 45.1% to a low of 34.9%. Since it is almost impossible to determine which set of figures are correct (sources in the Port of Vancouver tend to support U.S. figures), one can safely infer that approximately 40% of container traffic is being diverted to either Seattle or Tacoma.

A breakdown of the diversion for imports and exports provided by the two sources show the trend of the diversions:

	<u>Canadian Source</u>	<u>U.S. Source</u>
1985		
Import:	59,955 TEU's	103,200 TEU's
Export:	<u>26,373</u> TEU's	<u>33,900</u> TEU's
Total:	86,328 TEU's	137,100 TEU's
<u>Percentage:</u>	Import 69.5%    Export 30.5%	Import 66.8%    Export 33.2%
1986		
Import:	70,647 TEU's (Est.)	97,900 TEU's
Export:	<u>24,663</u> (Est.)	<u>48,600</u> TEU's
Total:	95,310 TEU's (Est.)	146,500 TEU's
<u>Percentage:</u>	Import 74.1%    Export 25.9%	Import 66.8%    Export 33.2%

From these figures, it is abundantly clear that the maximum diversion occurs in imports (supported by both sources). However, while the Canadian source estimates similar trends were followed in 1986 as were in 1985 and that the import percentage increased from 69.5% to 74.1%, U.S. sources provide actual data of a decrease in import diversion from 75.3% to 66.8%, however an increase in export diversion from 24.7% to 33.2%. While again, there is no independent source to refute one or other of the statistics presented, certain indications provide legitimacy towards the U.S. source. The supporting factors hinge on the import/export ratio of trade through U.S. West Coast ports at 4 to 1 in favour of imports. The necessity to provide return loads for optimum revenue for carriers makes it essential to compete for export cargo. This is being achieved by providing large discounts

to shippers to export their cargo via West Coast ports in the U.S. Naturally, Canadian export traffic is vulnerable and, while most of the diversion is occurring in Eastern and Central Canada for destinations in the Far East, some movement, particularly in previously considered non-containerised cargo is currently being diverted from Vancouver; particular commodities involved are pulpwood chips, hay cubes and grain. Transportation to the ports of Seattle and Tacoma is by truck or barge.

Having quantified the diversion of Canadian traffic via U.S. West Coast ports, it is essential to view the three ports as if no diversion had occurred and then review their performance. In order to accomplish this, certain assumptions will have to be made, particularly the level of diversions via Seattle and Tacoma. Assuming that current diversion stands at 70% for Seattle and 30% for Tacoma, the new figures for the three ports in 1986 would be as follows:

	<u>Vancouver</u>	<u>Seattle</u>	<u>Tacoma</u>
Actual	222,781 TEU's	851,000	660,000
Diversion (U.S. Source)	146,500 TEU's	105,550 (less diversion 70%)	43,950 (less diversion 30%)
Total:	<u>369,281</u>	<u>748,450</u>	<u>616,050</u>

Having negated the effects of diversion, even after using U.S. diversion figures representing an extra 51,190 TEU's, the question still remains - why is there a vast disparity between Vancouver, Seattle and Tacoma in the handling of container traffic?

Numerous factors contribute to the greater performance by the ports of Seattle and Tacoma versus the Port of Vancouver, some of the most important being:

1. Larger Market
2. Infrastructure
3. Labour Costs

1. LARGER MARKET

The United States, with a population of 250 million and enjoying a high per capita income, is an extremely important consumer market. During the last decade, the importation of goods from Pacific Rim countries, in particular from Japan, Taiwan, Hong Kong and South Korea, have spiralled. While trade between Canada and the Pacific Rim has also increased substantially, with a population of 25 million, the difference is immense. It is therefore understandable that the movement of goods through American ports will be far greater than those through Canadian ports.

In the past, shipping lines tended to service numerous ports on either side of the North American continent, however as a result of higher costs, in particular fuel costs, the improvement of intermodal transportation, introduction of Bridge concepts and the effect of increased competition as a result of deregulation in the U.S., particularly between Conference and Non-Conference carriers, resulted in carriers resorting to Rationalisation, Centre Loading and Space Charter Pacts.

Rationalisation occurs when, as a result of competition, a group of carriers decide to coordinate their operations for better efficiency, resulting in coordination of rates, schedules, ports of call and types of ships operated.

Centre Loading. As a result of the container revolution, the tendency of having complete cellular operations created the demand for larger container ships for maximum profits. The use of larger ships naturally increased operational costs which in turn made economic sense for carriers to call at fewer ports, relying on the cheaper road/rail transportation to service omitted ports and their hinterlands. To illustrate this in the Canadian context, an extra call at Vancouver

would cost approximately \$40,000 U.S. while interport container drayage cost would involve approximately \$350 U.S. per TEU. Carriers involved in carriage of less than 116 TEU's would justifiably omit Vancouver for Seattle or Tacoma.

Space Charter Pacts. To further improve their economies, carriers resorted to space charter agreements whereby carriers jointly used vessels operating to selected ports, while still retaining the advantage of competing against each other.

As can be seen with the utilisation of Rationalisation, Centre Loading and Space Charter pacts, the tendency becomes to concentrate on ports with heavier volume. As discussed earlier, there is more cargo volume for American ports, therefore, not only are fewer ships calling at Vancouver but more Canadian cargo is loaded on ships destined for U.S. West Coast ports from where they are trucked into Canada. This therefore is one of the reasons for the diversion of Canadian cargo via U.S. ports.

## 2. INFRASTRUCTURE

We have already noted the natural tendency of shipping moving to areas which have considerable cargo. However, volume of cargo cannot be the only factor. Maximum cost efficiency is the most important consideration and, in order to achieve such efficiencies, it is important that ports interested in competing for freight have to be price competitive and have the necessary infrastructure. This means that not only does the port have to provide modern, large facilities for the handling of containers and an excellent road/rail facility for the intermodal movement of containers to the hinterlands but should also be prepared to aggressively sell their facilities to carriers and shippers on their major markets.

Looking into the facilities available at the three ports, Vancouver leads in the number of operational terminals with 21, followed by Seattle with 13 and Tacoma with 10. Of these terminals, Seattle has 7 container terminals, Tacoma 3 and Vancouver 2. These facilities are utilised by 39 container shipping lines calling at Seattle, 21 at Tacoma and 14 at Vancouver. It must be noted, however, that most of the calls made at Vancouver are by dual call carriers, while there are carriers calling at Seattle and Tacoma who are exclusively catering to the U.S. market. Unless this trend can be changed, Canadian cargo will continue to be moved by carriers calling only at U.S. ports and then transshipped overland to Canada.

While it is obvious that the facilities available at Seattle and Tacoma provide for better handling of container cargo, it would be incorrect to assume that Vancouver has insufficient or outdated facilities. The container terminals of Vanterm and Centerm in Vancouver are modern facilities with sufficient capacity to cater to increased volumes over the next few years.

The advantages for Seattle and Tacoma stem from the direction that was taken by the Ports over a decade ago. Seattle in particular took great pains to ensure that its facilities were modernized, ensured the establishment of a sound transportation/distribution network and then aggressively sold its facilities as a gateway to its vast hinterland extending to the East Coast. The marketing component in this effort was considered so important that, today, Seattle has by far the largest marketing budget of any comparable port in the U.S. and this effort has paid enormous dividends with increased business. The introduction of double stack container train service with Burlington Northern and Union Pacific has further provided Seattle with opportunities to improve its position as a genuine gateway to the Pacific Rim.

Success however can cause complacency. Like Vancouver which ignored the fast changing world of intermodal transportation, Seattle was slow in adapting to the need for on dock rail loading of containers. Since this innovation saves time and, more importantly, eliminates intra dock drayage costs, Seattle lost a large volume of its container traffic to the Port of Tacoma 48 kms. away.

Tacoma, unlike Seattle, was a small port mainly involved in the handling of wood products and grain. Realising the importance of container traffic, it built new facilities using this flexibility to provide new facilities sometimes tailor-made for important carriers with long term contracts (difficult for an established port like Seattle) and being able to provide on dock ship to train facilities, Tacoma was able to lure away a number of shipping lines including "Sealand", one of the large container lines, thereby boosting in two years their container handling from 150,000 TEU's to 660,000 TEU's. Like Seattle, Tacoma is linked to the Eastern Coast with rail networks provided by Burlington Northern and Union Pacific who operate double stack trains from dockside to Chicago and New York.

The Port of Vancouver with its earlier philosophy of "Bulk Cargo First" was slow in getting off the mark in the container race. Facilities were marginally developed, contracts with terminal operators was short term, whereby it was difficult for them to plan improvements themselves; furthermore, no marketing was undertaken. It is only in the last few years, with the formation of the new Ports Corporation, that attempts have been made to revitalise the container terminals. Long term contracts have recently been awarded and further upgrading of facilities is continuing. A marketing effort has been launched with visits to the Pacific Rim markets and inducing new lines to service Vancouver.

To achieve the goal of a top grade container port will involve time and effort. Basic infrastructure is in place. Vancouver already

has dock loading rail facilities with Canadian National and Canadian Pacific, also each of these railways have subsidiary U.S. lines in the Grand Trunk and Soo lines with the capability to service the important markets in Central and Eastern U.S. Both railways have already tested double stack trains but are unable to put them into operation due to poor loads.

To ensure that a start is made, an overall strategy involving the Port, Railways and other interested parties needs to be formulated to induce a large shipping line to exclusively service Vancouver with the aim of using the facilities to provide direct access for that line to the Chicago market using the CP/CN and their connections. This would make the Vancouver/Chicago connection operational and provide an alternative to Seattle and Tacoma.

### 3. LABOUR COSTS

While markets and infrastructure play an important role in success of ports, labour costs or labour related impediments causing higher costs can create situations which could be advantageous to other ports.

Article 26.5 of the collective agreement of 1970 between the BCMEA and the ILWU in Vancouver, commonly known as the "Container Clause" is one such impediment and has resulted in a considerable volume of diverted containers to Seattle and Tacoma. Ironically, on the East Coast, diversion takes place in the reverse direction as the ports of Montreal and Halifax benefit considerably from the "Guaranteed Annual Income Provision" in the collective agreement of the Port of New York.

In both cases, the extra costs incurred in the handling of containers has prompted shippers to divert their cargoes to other ports where the impediments do not exist. To illustrate the high level of costs involved in Vancouver during 1986, the mandatory stuffing/destuffing of containers by longshoremen dockside involved 103,658 STEH hours\*, representing 10.6% of total STEH hours worked on containers.

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\* STEH: Straight Time Equivalent Hour - Unit of work content and allowance for work done during premium shifts

To delve into the pros and cons of the container clause would be too large an exercise and outside the scope of this paper. It is sufficient to say that this clause has been the subject of numerous studies and government appointed commissions without any definitive result. The latest action in this area after the 1986 lockout was the passing of the Maintenance of Ports Act 1986 which reopened the Port pending the findings of an Industrial Enquiry Commission under Commissioner Joseph M. Weiler.

In June 1987, the Commission submitted its findings and recommendations, however on August 28, 1987, the Federal Court of Appeal accepted a challenge of the Commission Report sending it back for reconsideration. The ruling of the court was that ILWU officials were not provided with an opportunity to comment on certain documents that formed part of the Commission's decision for the removal of the clause by September 1, 1987. A reasonable time has been given to union officials to offer their comments before the Commission renders its decision once again.

The effect of this labour unrest in Vancouver, including labour related costs, have naturally benefited the ports of Seattle and Tacoma who do not have such costs. In fact, the Port of Tacoma has the advantage of the best labour relations and productivity of the three ports and this has helped the port in becoming the fastest growing port on the West Coast.

As has been noticed, all the factors, namely size of market, lack of infrastructure compounded by lack of policy and labour problems have contributed to Vancouver's poor performance as a container port.

Having observed the performance of the three ports in the carriage of bulk cargo and container cargo, a third area needs to be scrutinised, that of cruise ship handling. During the year 1986, Vancouver was visited by 223 ship calls while Seattle managed only

48 and Tacoma none whatsoever. Here again, an immense difference can be noticed in favour of Vancouver. The major contributing factor is the Jones Act. Since most of the cruise ship passengers board at ports on the Californian coast destined for Alaska and the majority of the cruise ship lines are foreign flagged vessels, in accordance with the Jones Act, no intra U.S. carriage may be performed unless the ship calls to or from an intermediate foreign port. Vancouver is ideally located and offers excellent facilities thereby benefiting from this lucrative business.

Noting the future benefits, the construction of a modern cruise ship terminal in 1986 is a step in the right direction. More and more Alaska bound passengers are discovering the tourist attractions of British Columbia so that with or without the benefit of the Jones Act, Vancouver will be successful in retaining its prominence in cruise ship business.

Having discussed the three basic activities performed by ports, it is worthwhile to note how each port has fared financially and the impact it has had on its community.

Revenues (in million U.S. dollars)

	<u>Vancouver</u>	<u>Seattle</u>	<u>Tacoma</u>
1985	U.S.\$ 78.5 m	U.S.\$ 56.1 m	U.S.\$ 34.2 m
1986	U.S.\$ 58.8 m	U.S.\$ 58.3 m	U.S.\$ 39.8 m

(Vancouver revenues converted at Can.\$1.00 = U.S.\$0.75)

As can be seen, Vancouver earned more than Seattle and Tacoma in 1985 and 1986. (Sources in the Port of Vancouver state that 1986 revenues were more than in 1985, however, as part of efforts to expand facilities by terminal operators, considerable revenues have been deferred to enable the construction and updating of facilities).

Insofar as impact on the respective communities is concerned, the last proper impact study by the Port of Vancouver was conducted in 1976. A not so comprehensive study was commissioned in 1982/83, however the methodology was not fully acceptable to the Port. In any case, for lack of any other data, the impact shown by that study provides for 57,000 port related jobs.

The last impact study conducted by the port of Seattle was in 1982 which establishes the impact of port related jobs at 45,600. Tacoma on the other hand has not conducted any impact studies but estimates that their 1986 port related jobs impact was in the 12,000/13,000 range.

While it is unfortunate that updated data is unavailable, the figures presented do however provide a measure of the economic importance the ports have to their communities.

In concluding, while it is evident that the Port of Vancouver is successful and compares reasonably with the Ports of Seattle and Tacoma, it is necessary to once again delve on the disparity of container cargo to Vancouver's disadvantage for two reasons. Firstly, handling of bulk cargo is highly mechanised and current facilities will not require expansion, therefore limiting job creation. Container cargo on the other hand is not that labour intensive and will continue to provide additional job opportunities as business grows. Secondly, due to the proximity of Vancouver to Seattle and Tacoma, there will always be some diversion in either direction, however the current level of diversion, coupled with new container innovations resulting in more and more resources based commodities being containerised, may eventually erode into Vancouver's currently secure export bulk market. A serious trend in that direction would be catastrophic to Vancouver's future as a major Pacific Coast port.

B. AIRPORTS

The two most important factors for the success of any airport are location and population. While there is little doubt that without passengers one cannot operate air services, location is given more importance because modern day air transportation is not confined to city pairs but numerous cities, sometimes encompassing continents on one flight. This has resulted in the formation of the Hub and Spokes philosophy wherein airlines use a particular airport as a centre for the operation of services in all directions. This has led to such famous hubs as Chicago, New York and Los Angeles and the importance of London. Naturally, a large population does help to further consolidate the position of airports as the large centres referred to earlier illustrate. However, smaller centres that are successful do not have such large populations but survive on location alone. Some of these centres are Hong Kong, Singapore and Honolulu.

Both Vancouver and Seattle are not large population centres. However, as "Seatac" (Seattle/Tacoma International Airport) caters not only to King County but all other counties surrounding it, while Vancouver is confined to a less populated area, the advantage rests with Seattle. Both airports are situated in the same area, hence there are no major advantages from location. Vancouver however has a minor advantage because Canadian Airlines International has its main hub at Vancouver which creates benefits for the Airport. Seattle, on the other hand, does not have a major air carrier with a base of operations.

During the year 1986, the performance of the two airports were as follows: Seattle/Tacoma - 13.6 million passengers and 223,000 tonnes of cargo; Vancouver - 8.3 million passengers and 99,000 tonnes of cargo. As can be noted, Seattle handled 5.3 million passengers and

124,000 tonnes more than Vancouver. Some of the more important reasons for this difference are:

1. Larger market
2. Infrastructure
3. Effect of Regulations

1. LARGER MARKET

Since Seattle is in a more populous area than Vancouver, the opportunity to draw on traffic from those areas is far greater than for Vancouver. This can be illustrated from a breakdown of traffic figures available for both airports for 1985.

Passenger Traffic 1985

	<u>Seattle</u>		<u>Vancouver</u>	
Domestic	10,436,000	91%	Domestic	4,695,000 67%
Transborder	289,000	2.5%	Transborder	1,491,000 21%
Internatl.	<u>741,000</u>	6.5%	Internatl.	<u>819,000</u> 11.7%
Total:	11,466,000			7,005,000

The figures for 1985 have been chosen for two reasons. Firstly, they are readily available and correct. Secondly, 1986 being the year of Expo '86, passenger figures for Vancouver and Seattle would portray abnormal levels, with Vancouver benefitting more than Seattle. Scrutinizing the figures, the larger U.S. Market is clearly manifested in the number of domestic passengers serviced at Seattle which account for 91% of the total Seattle traffic. In the case of Vancouver, the level is much lower at 67%. The interesting figures are for transborder and international traffic which, in the case of Seattle, represents 2.5% and 6.5% respectively while, in the case of Vancouver, represents 21.3% and 11.7%.

It is here that Vancouver's advantage as a hub for traffic, particularly the impact of Canadian Airlines International, is felt. While Seattle services just over 1 million international passengers inclusive of transborder passengers, Vancouver serviced 2.3 million passengers.

The two airports were almost at par in international passengers with Vancouver servicing 819,000 international passengers other than transborder, and Seattle 741,000. The main difference lies in Seattle being a gateway only to Vancouver, hence servicing 289,000 passengers while Vancouver provided a gateway to numerous U.S. cities and thus raised its traffic to 1.5 million.

The strong trade and tourism ties with the countries of the Pacific Rim translate into airline activity between all West Coast airports and those countries. Here Vancouver competes with Seattle as well as with larger airports like Los Angeles and San Francisco which service the bulk of the Transpacific traffic, leaving Vancouver's share of the market to approximately 6%. Furthermore, one third of the passengers destined for Canada use a U.S. gateway, which could account for the larger transborder traffic into Vancouver.

Currently, approximately 17 airlines provide over 300 flights a week to and from Pacific Rim countries via the TransPacific route, six airlines operate over 30 weekly flights from Vancouver, offering a total of nearly 19,000 seats a week. Seattle has fewer airlines on the route and offer considerably fewer number of seats, approximately 10,000 a week.

While it is clearly evident that Vancouver is holding its own against Seattle in the TransPacific Pacific Rim markets, considerable diversion does occur, though not to the detriment of the Airport but to the Airlines operating to Vancouver, particularly to Canadian Airlines,

who have to accept short haul over long haul transportation. This, of course, is caused by numerous factors, some of which are related to the effect of regulations. On the other hand, the possibility of Vancouver improving on Seattle's domestic traffic is almost unattainable, therefore Seattle will continue to service more passengers.

The carriage of cargo is a little different from passengers, because not all airlines are cargo carriers in the real sense of the word. Prior to the advent of wide bodied aircraft, due to limited cargo space, most airlines resorted to all cargo operations. However, with the introduction of wide bodied equipment, sufficient cargo capability was available on passenger aircraft, changing the all cargo trend. Some all cargo services, however, are maintained, mainly with some U.S. international carriers, with the major all cargo capability going to all cargo airlines. In the context of Seattle and Vancouver, while Vancouver secures some all cargo service from Air Canada to Inter-Canadian and European destinations, Seattle is serviced by three all cargo airlines.

As in the case of ports, cargo volumes for the U.S. is plentiful in comparison to Canada and will continue to do so. It is therefore up to Canadian Airlines to try and ensure that they have a better penetration in the markets and the Airport authorities to provide the necessary facilities conducive to greater cargo movement.

## 2. INFRASTRUCTURE

It is normal economic philosophy that good infrastructure in any venture is one of the ingredients necessary for attracting business, more so when the product is a service. It is therefore necessary that airports should have more than adequate facilities if they are to attract more business.

In comparing Seattle and Vancouver, the difference is immense. Aesthetically, Seatac Airport is a pleasure to visit, yet, more importantly, it functions very efficiently. Vancouver, on the other hand, can be termed as a functionally adequate airport. The main reason for the difference seems to be that Seattle was built initially for twice its projected traffic and is now coming into its own. This is not to say that other airports should follow Seattle's example and build beyond their requirements. What is important is that Seattle Airport is constructed in a manner that enables the authorities to expand its facilities as part of an overall plan. In that aspect, it is worthwhile to follow its example. The current facilities at Seattle provide for servicing of over 15 million passengers. Having attained 13.6 million in 1986, plans for providing additional capacity is underway over a long term which would provide the needed capacity by the time the present capacity is saturated.

Vancouver, on the other hand, has already reached its capacity and it will be obliged to use innovative methods at very high costs to provide additional capacity. To understand the difference between Vancouver and Seattle, it is worth noting that the International Airline Passengers Association in its 1984/85 survey of the world top airports rated Seattle No. 9 and Vancouver 23. To look at some other details, Seattle has two parallel runways while Vancouver has one, with one crosswind runway not suitable for large aircraft. Seattle has 66 passenger gates while Vancouver has 26. For international passengers, Seattle has an automated underground system which moves 5,000 passengers every five minutes between the terminal building and its two satellites; Vancouver has a tunnel to bring its international passengers from the gates, which has recently been upgraded with mirrors to make it aesthetically acceptable from its earlier eerie look. Plans for expansion at Vancouver are underway. However, considerable opposition is expected from the adjacent

community for the construction of another runway which will become a necessity if traffic continues to grow. Part of the problem stems from the administrative authority of the Airport. Unlike Seattle and the other West Coast ports which are operated by independent municipal corporations and therefore receive support from their communities, Vancouver International Airport is a Federal owned and operated airport and though run efficiently and profitably, its link with the local community is more of an employer/employee relationship rather than that of a community with its major asset. Therefore, even though approximately one in four people in the community are dependent on the Airport, their attitude towards airport issues is tempered more towards an alien force based in Ottawa than on the issue itself.

Seattle, mindful of the Pacific Rim as an important market, provides international symbols, foreign language information and even has multilingual staff with the capacity to interpret 21 languages. Vancouver does not provide any such facility.

Air cargo is an important ingredient in the success of any airport. Seattle has ensured that facilities are available for the optimum movement of cargo through its airport. Seattle's new transi-plex warehouse complex with 150,000 sq.ft. capacity and a parking area for six Boeing 747 cargo aircraft provides for excellent cargo handling. Seattle also handles a considerable amount of "Sea Air" freight, i.e. cargo brought in from the Pacific Rim for destinations in Europe. Trucked from the Port 20 minutes away, they are stored in a duty-free zone and transshipped by air. This "Sea Air" cargo has proved extremely successful with over 14,000 tonnes transported in 1985. With good volumes of cargo, a number of European cargo airlines like Martinair and Cargolux service Seattle on a regular basis. Mindful of lack of substantial return loads from Europe destined for Seattle, the Airport has launched a "Sea-Land" program

to provide European shippers cost effective rates for transportation to points in the U.S. by truck, via Seattle, when transportation Europe/Seattle is by air. With this program in place, Seattle is confident of creating additional freight from Europe, bypassing the East Coast Airports.

Finally, the Airport has an Airport owned main deck cargo loader with a 27,216 kg. capacity that can be provided to Airlines who need the service. It is facilities such as this that show the difference between Seattle and Vancouver. It may be mentioned that during Expo 86, Jacques Cousteau's famous amphibious car was transported by air for exhibition at the Italian Pavilion, not to Vancouver but to Seattle from where it was trucked to Vancouver. Vancouver has little to show as far as cargo facilities are concerned. Some "Sea Air" traffic is handled by Air Canada, however figures are not available.

Since air cargo, unlike passengers, can be routed in any direction using a through rate between two points, it is much easier to divert cargo traffic than passengers. It is in this area that facilities can play an important part in the improvement of cargo traffic. Vancouver needs therefore to take steps to improve its cargo facilities to become more competitive with Seattle.

### 3. EFFECT OF REGULATIONS

The third reason for the difference in traffic between Seattle and Vancouver is the result of regulations. The 1978 deregulation of the airline industry in the U.S. created an atmosphere for the lowering of domestic fares which in turn created an additional travel market in the United States. Airports therefore that had marginal traffic suddenly experience a surge in passengers.

In the case of Seattle, domestic traffic moved from 7.6 million in 1978 to 10.4 million in 1985. The effect has been so pronounced that while in 1978, Seattle was serviced by 12 airlines, today the number of carriers has tripled to 36. Canada's recent experience with deregulation has not had the same effect, the main reason being the lack of population. Other than the improvement in some commuter airlines, no large change has resulted. In fact, the main Canadian carriers have decreased with the main opposition being provided to Air Canada by the merged CP Air/PWA, now Canadian Airlines International.

Though the results of deregulation have been particularly impressive within the U.S., the effects have not been the same in the international arena. The reason for this is the absence of the open skies formula outside the U.S. boundaries.

International aviation, being governed by Bilateral Air Service Agreements specifying number of carriers, types of aircraft and, most importantly, the capacity offered, creates an atmosphere of protectionism and therefore not conducive to the fare cutting wars which heralded the Deregulation era and prompted the creation of additional traffic. Operating under those conditions, the playing field for both U.S. and Canadian carriers has been at par and thus no impressive benefits were available to Seattle in international traffic. However, a slight benefit has accrued to other competing airports due to an indirect result of deregulation.

As we have noted earlier, deregulation created an atmosphere for very low fares within the U.S. Since the majority of traffic is for pleasure, (group travel in the case of international travel), the inducement of low domestic fares has increased opportunities for international travellers to see more of the U.S. Since comparable benefits are not available in Canada, there is a tendency for international passengers to arrange their itineraries to maximise U.S. travel and therefore minimise their Canadian travel.

In a situation like the present, very little can be done by Canadian Airlines or airports to reverse the trend. Though there are benefits to be situated adjacent to a powerful nation like the U.S., it is extremely difficult to be competitive with U.S. Airports.

#### REVENUES

In concluding the comparison between Seattle/Tacoma and Vancouver Airports, it is necessary to note how each airport has managed financially. During the calendar year 1985, Seattle produced U.S.\$53.3 million in revenues and U.S.\$61.2 million in 1986. Since Vancouver publishes revenues on a fiscal year basis, the 1985/1986 revenues available show a total of Can.\$78.8 million or U.S.\$59.1 million (converted at Can.\$1.00 = U.S.\$0.75). While the revenue figures for the two airports are difficult to compare, it does provide a rough idea of how Vancouver fared against Seattle. The economic impact of the two airports, again, is difficult to compare since impact studies were conducted in 1982 by Seattle and in 1985 by Vancouver. According to the two studies, job impact places Seattle with 37,200 jobs versus Vancouver with 28,700 jobs. Both Airports compare reasonably well once the major factor of domestic traffic is eliminated. However, if Vancouver is to retain and improve its position, considerable improvement of facilities has to be undertaken.

C. ROLE OF HIGHWAY TRANSPORTATION AND FREIGHT FORWARDING

Unlike ports and airports, it is extremely difficult to gauge the effect of highway transportation comparing Vancouver and Seattle. In both areas, there are hundreds of trucking organisations which perform various functions. There are regular common carriers, private carriers, contract carriers, forest product carriers and movers. For a better understanding, we are dividing these carriers as part of their activities into For Hire Trucking and Private Trucking.

Our main focus is on the For Hire Trucking. To provide an example in British Columbia alone in 1985, this represented approximately 1,095 firms and employed over 9,500 persons. These trucking firms representing companies earning revenues of more than \$100,000 a year were responsible for over \$520 million in revenues, carried over 3 million shipments weighing 8.3 million tonnes and were placed third in the nation's trucking industry in revenues and number of shipments, and placed fourth in tonnage. With such a large operation, it is difficult to assess the impact on Vancouver although it represents the main hub of trucking in B.C.

Earlier we have noted the importance of intermodal transportation in the context of ports and airports. It is therefore important to focus our attention on the part trucking plays in the overall necessity of trucking in the handling of Pacific Rim trade.

The role of highway transportation in widening the ports hinterland has been observed, its compatibility with rail transportation has been an additional factor for the movement of goods. At the same time, considerable competition has resulted between truck and rail as highway networks improved. Part of the reason was that while highways were constructed by governments for the benefit of the

populace at large at no cost to truckers, the railways were responsible for the improvement and upkeep of their routes. This provided the trucker lower costs over the railways. However, over stage lengths of more than 500 miles, rail transportation was proving to be more competitive. Furthermore, rail companies, being large organisations, had better capabilities to sustain losses when business cycles were on the downturn against their trucking rivals. Also, in course of time, rail companies resorted to establishing trucking subsidiaries, the reverse of which was not possible even for the very large trucking organisations. The Staggers Rail Act and the Motor Carriers Act of 1980 in the U.S. in particular changed the picture to the benefit of the railways. The ability of the railroads to acquire truck lines and devoid of strict I.C.C. controls that had been placed on their earlier subsidiaries, has made it difficult for the trucking industry to compete long haul with the railroads with their own rail/road network. For example, in the U.S. "The Chessie System's Chessie Motor express unit, which has become the nation's largest piggyback operation, grew from handling 2,200 truckloads in the first quarter of 1981 (its first operational quarter) to 22,000 truckloads in 1982's final quarter". 2

The effect of these measures have therefore resulted in truckers concentrating on the short and medium haul and then providing the long haul carriage to the railways. The new relationship has created numerous agreements between trucking companies and railways, the latest being the Rail/Motor network set up by Union Pacific with 11 motor carriers to perform local pickup and delivery of LTL freight, with Union Pacific providing long haul carriage.

With these new changes in the trucking scene, the position of the trucking industry now revolves around the following: transportation

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2. Intermodal freight transportation by John H. Mahoney (Pg. 29)

of short and medium haulage, pickup from dockside or CF stations to railheads and from railheads at destinations to the consignee.

At this point, it is important to view the role of the freight forwarder in trucking. In the earlier days, freight forwarders played a central role in providing the trucking industry with its business. The freight forwarders then were responsible for consolidating LTL (Less than Truck Load) to truckloads and LCL (Less than Container Loads) to container loads for the truckers. As the trucking industry grew and became competitive with the railroads, truckers were able to provide direct rates to shippers and eliminated the need for forwarders, in some cases forming their own forwarding companies.

The effect on the freight forwarders, particularly in the U.S. was devastating, causing many to go out of business. The larger organisations, in order to survive, bought into trucking companies.

With the new atmosphere of truck/rail co-existence, the role of the freight forwarder has once again come into the forefront. Furthermore, since containerisation has become the modus operandi for intermodal cargo carriage and, with certain exceptions, all consolidation of LCL shipments (stuffing, destuffing) takes place at CF stations well outside of city limits at considerable distances from ports but near highways and railheads, the necessity for the trucker, the freight forwarder and the railroad working together has become paramount.

Freight forwarders are however getting competition from various other sources, including NVOCC's. The NVOCC (Non Vessel Operating Common Carriers) is a new form of entity which has come into existence, providing tariffs and charges for intermodal shipments as carriers with all responsibilities, yet not owning any equipment. Unlike the freight forwarder, the NVOCC in the U.S. can avail of volume

discounts from carriers, thus taking control of movement of Sea Land freight. Since NVOCC are not permitted to collect commissions as are forwarders, they are resorting to the use of subsidiary companies to circumvent this part of U.S. law.

Added to all this changing situation, various organisations like ports and airports are also getting involved in the business of surface forwarding. A perfect example is the Port of Seattle which set up a truck contract program in 1981 covering 45,000 destinations across the U.S. designed to arrange for the carriage of LTL freight using the services of seven major truck carriers. Having negotiated extremely low rates, the Port is in a position to sometimes offer as much as 40% less than normal LTL rates for shipments. All necessary arrangements are made by the Port which prepays the truck carrier and then bills the shipper or consignee after delivery of the shipment.

The Truck Contract program has proven so successful that the Port has recently started a new program targetted at the Canadian market. The program which took effect on May 1, 1987 using the services of TNT/All Trans Express offers special LTL rates to all ten provinces.

In Canada, there is no such system in place, either by the Port or any other entity. The reason for this is the more or less stable atmosphere, unlike that of the U.S. since the 1980 Deregulation. In contrast, since 49 foreign controlled multinational freight forwarding companies dominate the market with approximately 40% share<sup>3</sup> and, since the balance consist of numerous small organisations, there is less of competition.

In Vancouver, the hold by the freight forwarders is even more severe because of the benefit of the container clause. In the past, shippers could arrange for rates with carriers' agents and using custom brokers were in a position to do business. However, as a result of the 50

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3. Sector Profile of the Canadian Freight Forwarding Industry  
DRIE 1985, Pg. 6

mile stuffing/destuffing zone in the container clause, they are forced to seek assistance to avoid the excess port labour charges. Forwarders are at hand to arrange for the rerouting of shipments via Seattle and Tacoma and then arranging for truck transportation to/from Vancouver.

With the current Port labour situation and the effect of further diversion to Seattle/Tacoma as a result of rationalisation, centre loading and space charter pacts, substantial tonnage of cargo is available for trans border trucking. According to information available, there are more than 38 transport companies involved in interport container drayage between Seattle and Vancouver with most of the same carriers involved between Tacoma and Vancouver. Of these, approximately eight carriers are Canadian. It is possible that these numbers could be different as it is difficult to determine which company is wholly Canadian or, adversely, wholly American. The reason being that due to various non tariff barriers, both Canadian and U.S. companies have set up subsidiaries in each other's territories to circumvent Canadian or U.S. barriers.

It is extremely difficult to predict the future of transborder trucking. Some changes will occur when the container clause is removed from Vancouver. Major changes, however, are expected when the Free Trade agreement comes into effect. It is unfortunate for Canadian operators that when the Free Trade agreement comes into effect, they will still be in the process of adjustment from the effects of the Canadian Deregulation of the Motor Transport Industry which is expected to become law sometime in early 1988. While some operators are sceptical about their competing in a Free Trade environment, others are confident that the overall benefits will be to their advantage.

In any case, the trans border trucking potential will continue to be there and, if the Port of Vancouver and Vancouver International Airport can gear themselves to promote greater tonnage through their facilities, it will benefit the trucking industry as a whole.

Though, in numbers, both Seattle and Tacoma have over 100 operators involved at their facilities, it is assumed that the numbers at Vancouver are slightly less (since no figures are available). As at the present time there seems to be no lack of competitiveness on the Canadian side, it is felt that this situation will continue also into the future.

D. EFFECT OF LEGISLATION AND OTHER AGREEMENTS ON TRANSPORTATION

A transportation system, whether marine air, rail or highway, can be affected by legislation and by agreements whether domestic or international. Furthermore, with the importance of intermodal transportation, each transportation becomes just a link in the overall transportation chain and is therefore subject to economic consequences, even when the subject legislation is directed at another mode of transport.

In order to view some of the effects of legislation on transportation, it is necessary to focus on one of the most important legislative changes that have affected transportation which is Deregulation of the Transport Industry in the United States. Historically, in the U.S., each mode of transportation was dealt with separately, leading to the formation of the Inter State Commerce Commission (ICC) to deal with railroads, truck lines, pipe lines and inland waterways, the Federal Maritime Commission (FMC) to deal with shipping and the Civil Aeronautics Board (CAB) to deal with air transport. This led to internal rivalry between the three modes covering new regulations to competition for federal grants.

By the early 1960's, it became clear that a more cohesive policy needed to be put into place for the benefit of all concerned. This led to the establishment of the Department of Transportation in 1967 and the formation of new policy as contained in the National Transportation Policy statement of 1975 which recommended "... reduced government economic regulation; equal government treatment among modes; more competition and improved efficiency by placing maximum reliance on market factors; subjecting policy to economic analysis; more streamlined government organisation; greater coordination of government efforts; and utilization of the private sector to a maximum degree".<sup>4</sup>

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4. Intermodal Freight Transportation - John H. Mahoney, Pg. 27

This formation of policy was the stepping stone to legislations which brought about the Deregulation of the Airline Industry in 1978, the Motor Carrier Act of 1980, the Staggers Rail Act of 1980 and the Shipping Act of 1984.

In our dealings with Airports we have seen the effect of deregulation on the airline industry on airports and, most importantly, on the passengers themselves. Aggressive competition as a result of new entrants in the airline business caused fares to plummet, thus creating an additional market of air travellers who hitherto had not been able to afford air transportation. The lifting of a 35 mile zone restriction for pick up and delivery of cargo from airports was of benefit to truck operators who, with the airline industry, were now in a position to offer "Air Land" competitively priced transportation as is now being pursued aggressively by airports like Seatac. As noted earlier, the deregulation of the motor and rail modes created numerous fresh, economical options for shippers and provided a boost to the waning fortunes of the freight forwarding industry.

The Shipping Act of 1984, while retaining the powers of the FMC as the tariff authority, provided it with fresh powers to implement enforcement and penalties. This facet was not consistent with the deregulation policy of the rail, highway or even the air transport mode. It is understandable that, in certain areas, the Shipping Act would follow along similar lines as the air transport mode when the matter concerned international transportation, since the fate of American flag carriers, both air and marine, would be disadvantaged. Furthermore, with protectionist sentiments existing in other countries, with the Japanese in the forefront, a unilateral move into international deregulation would be suicidal for American flag carriers. It is also important to note that despite the deregulation

fervor that existed amongst both the administration and the law makers, the long term future of the U.S. Merchant Marine remained uppermost in their minds. This stems from a fear of national security. Since the U.S. is no longer in a position to maintain a large naval presence, in times of crisis, it has a greater need for the merchant marine than it did in the past. Through the years however, the once formidable U.S. merchant fleet has depleted considerably as more and more shipowners resort to flags of convenience and foreign crews to lower costs. Therefore, any further erosion of the U.S. marine is of great concern. In fact, since the Shipping Act of 1984, a number of bills have been introduced in Congress to protect U.S. interests, the latest being Bill S-1183 which "would provide the Federal Maritime Commission with an additional tool to address practices of foreign governments, carriers and others that unfairly disadvantage the United States Marine".<sup>5</sup>

It was in this spirit that when the UNCTAD liner code was formulated providing a 40:40:20 formula (allotment of 40% each to liners of countries involved in bilateral trade with the balance of 20% provided to cross traders or third country lines), the U.S. refused to abide by it and continues to arrange bilateral arrangements with its trading partners, thereby ensuring the protection of its merchant marine.

While it has been noticed that the Shipping Act of 1984 did not open up the international shipping market, one change was effected which was the authority to conferences to establish through intermodal rates which had been denied earlier. This change has had positive effects on the intermodal movement of goods and has therefore benefitted all modes of transportation.

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5. Statement by Edward V. Hickey Jr., Chairman FMC - Traffic World, June 1, 1987

What effect does all this have in the Canadian context? The National Transportation Act 1986 has provided for the gradual deregulation of the transportation industry. Noting the effect of deregulation in the U.S. which, while creating benefits for passengers and shippers alike, did cause a chaotic atmosphere and, most importantly, has caused situations where questions regarding proper maintenance and other safety related problems have become the object of scrutiny.

While trying to benefit from a deregulated atmosphere, Canadian lawmakers are ensuring that problems faced in the U.S. are not repeated in Canada. The effect on the airline industry has been minimal and, due to the lack of population and the already air-mindedness of the Canadian public due to immense distances, the ratio of travellers uninitiated to air travel is relatively small. The railroads will have certain marginal benefits, particularly in countering the effects of the Staggers Act of 1980 which permitted U.S. railroads to offer confidential rates to shippers resulting in Canadian subsidiaries of American corporations sending them goods via U.S. rather than Canadian railroads in order to benefit from volume rebates.

The maximum effect will be felt in the trucking industry when the Motor Vehicle Transport Act comes into effect in 1988. Through the years, the trucking industry has been highly regulated and therefore a lot of movement should take place within the industry. In fact, even though the act is not in effect, considerable opposition has already erupted. The basic issue evolves around what is normally termed as the Public Convenience and Necessity test which has to be passed by new applicants. This test comprises a fitness test, requiring among other things that the applicant can operate with safety, have a sound operating plan and have insurance. Besides providing the fitness components, the applicant also had to prove the availability of existing transportation services and effects on other transportation services. The new Act changes the Public

Convenience and Necessity text with a reverse onus clause which means that the objectors now have the responsibility of providing proof, not the applicant. Although the Act provides a 5 year period before the Convenience and Necessity clause is removed altogether, truckers who have to face added competition are extremely upset that the act would flood the market with independent truckers and are therefore raising the safety issue. Shippers, on the other hand, are upset that the Act has not gone far enough and are lobbying that the Convenience and Necessity clause should be done away with altogether, leaving only the fitness test. With the situation in limbo, it is difficult to gauge what the actual effect will be in 1988.

Aside from the effect of deregulation, various agreements have proved to be effective in changing situations. Two of the more noticeable are the effect of the "Guaranteed Annual Income Provision" in the collective agreement of the Port of New York and the "Container Clause" in the collective agreement in Vancouver.

An important agreement, namely, the Free Trade Agreement between Canada and the United States, is in the works. What effect it will have on the three transportation modes is difficult to assess since the contents of the Agreement are not known.

It is assumed that there will be no effect on air transportation, very little, if any, on the railroads and no effect on marine transportation since, in any case, Canada does not have a merchant marine to speak of. The only area where any effect could be noticeable will be in the trucking industry which even now has reasonable access for both countries.

E. CONCLUSION

In the preceding sections, we have taken note of the various factors that have contributed to the inferior position of facilities or transport systems in Vancouver in comparison to those in Seattle/Tacoma. While it is clearly apparent that in certain cases it is not possible to be as competitive due to the larger markets available in the U.S., it is with this premise that decision makers in Vancouver should gear themselves to be more competitive, for it is the lack of a larger market which should be the driving force for people in Vancouver.

If one takes a normal common sense approach to competition, it should be clear that a smaller competitor will guard his market much more vigorously since it represents survival versus the larger competitor who can become complacent and therefore susceptible to losing business. Unfortunately, it has been noticed that the reverse has been taking place in Vancouver. Immediate steps therefore have to be taken to awaken Vancouver from its inertia and to undertake steps to stop, firstly, the loss of its business and, more importantly, to aggressively go after the larger U.S. market.

The first step in this direction is to emphasize to all concerned the need for proper marketing. Even world class facilities do not automatically translate into more business. In its marketing efforts, flexibility should be the key factor, as transportation changes constantly and if innovative thinking can produce overall cost savings, additional business will be generated.

Two key areas in this regard need to be explored. One of the two areas seems to have evoked interest with the policy makers in Vancouver, as an initial reportage in the local press seems to

indicate. This seems to evolve around the development of land adjacent to the Roberts Bank coal facility into a new container facility tailored for the long term use of a large container liner company at the level of APL or Sealand. Induction of such a large carrier into Vancouver into special facilities would naturally deter the carrier from making calls at other West Coast ports and, with the large U.S. business which it will generate, will make the CP and CN double stack trains operational. This in turn will provide other carriers an additional option to route their traffic to important centres like Chicago. The real key therefore is to market this philosophy to potential carriers and, if the port, railroads, forwarders and truckers in Vancouver can join together and provide the necessary incentives for inducing one large carrier, the future potential, as in the case of Tacoma, will be relatively bright.

The other area, also time proven, is to use the abundance of bulk cargo available for export to increase incoming container movement into Vancouver with the use of bulk/container combination ships. The CAST Corporation of Montreal has proved that by operating ships with container/bulk capability, when sufficient bulk cargo was available, it could move containers more cheaply than cellular container ships, thereby providing shippers with an incentive to ship with them. Some shipping lines calling at Vancouver do provide bulk/container capability, e.g. Westwood Shipping Lines' new 44,000 tonne "Westwood Marianne" can handle 2,000 containers and is also equipped for break bulk handling. Since the Port of Vancouver is not able to quantify the percentage of carriage of containers by such vessels, it is likely that, like most other ports, it has concentrated on lines offering cellular capabilities only. Their carriers are mainly dual port callers and will continue to be so. It is up to the authorities to invoke interest in carriers currently involved in bulk carriage to use Vancouver as an only port using combination ships, thereby maximizing their profits. In fact, since

CAST operates as a joint Canadian/Belgian venture, possibilities exist for a similar venture between Canadian investors and people in the Pacific Rim to establish a similar operation on the West Coast.

In the Airport area, Vancouver has an uphill task to upgrade its facilities since they are near capacity at the present time. Lack of space in the terminal area is one reason why airlines are reluctant to promote sixth freedom traffic, since inadequate facilities deter passengers from using Vancouver as a transit stop. The controversy of the new runway is yet to be resolved. Latest information available seems to suggest that the Airport authorities, finding it difficult to successfully convince all concerned of the need of the additional facility, are now seeking the assistance of the Airline community to champion the cause.

Other than the runway issue, the airport badly needs to build a proper cargo facility and to provide the use of a heavy lift main deck cargo loader, in order to increase the movement of normal air cargo and to target the important "Sea Air" cargo available from the Pacific Rim, particularly for European destinations.

With the increase of cargo at the Port and the Airport, the trucking industry, which will have turned more competitive after the introduction of the Motor Vehicle Transport Act in 1988, will be in a better position to service the available cargoes in Vancouver and from Vancouver to destinations in other provinces and ports in the U.S.

While it is hoped that the effect of the Canada/U.S. Free Trade Agreement will enhance the movement of trade between the two countries, the protectionist sentiment currently prevalent in the U.S. will continue to grow and will further strengthen the role of the FMC in protecting the U.S. merchant marine. This will eventually result in the tightening of quotas on maritime shipping carrying U.S. trade goods.

This action will provide tremendous benefits for Canada, particularly to Vancouver. No factual information is available at the present time regarding bilateral arrangements in existence between the U.S. and countries in the Pacific Rim for the carriage of trade goods by liners belonging to either nation. If any pressure by the U.S. is in existence, it is up to the Port of Vancouver to take advantage of the situation now, to convince such countries and their carriers to continue to carry their original tonnage and to route amounts over quota via the Port of Vancouver.

It is possible that the Port/Airport and other concerned authorities are aware of this and numerous other ways that Vancouver could improve its competitiveness against Puget Sound facilities and are already undertaking steps to implement them. However, if the lack of innovativeness in the past is a guideline, one can only be sceptical regarding any aggressive attitude in the future.

Last but not least, it is absolutely necessary that the "Container Clause" issue be resolved. Vancouver cannot afford to continue carrying this additional burden while competing with other ports. Also it is necessary that a new and non-confrontational attitude be developed between management and labour. Once it is known that Vancouver no longer suffers from labour unrest, a positive climate will have been created for the development of trade through Vancouver's facilities.

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