

**Session 2c**

**PORT REFORM**

**WEDNESDAY 28 AUGUST 1.30 - 3.00PM**

**NEW ZEALAND : ARE THERE STILL TOO MANY  
PORTS?**

**Ian Alexander**

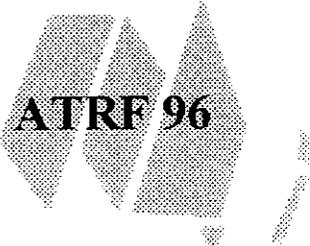
**PORT REFORM**

**John Hirst**

**PORTS IN THE FUTURE: USERS  
REQUIREMENTS**

**John Robinson**

**Session Chair: Lindsay Sturt**

The logo for ATRF 96, featuring a stylized 'A' and 'R' in a grey, textured font, with the text 'ATRF 96' overlaid in a bold, black, sans-serif font.

**ATRF 96**

**NEW ZEALAND- ARE THERE STILL TOO MANY PORTS?**

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**ABSTRACT**

This paper provides an overview of ports in New Zealand, tracing the development of these ports from the middle of the 19th Century to the present day. It seeks to determine whether or not New Zealand still has too many ports for the size of its population, its land area and its trading base, examining the background to the commercial ports which exist today and the necessity for each of them in the current trading environment

A review of cargo flows from/to ports by way of cargo type, the effect of the container revolution of the 1970's and the radical reforms of ports by Government in the late 1980's leads on to show an efficient, competitive ports industry providing services for a diverse range of commodities at locations throughout both the North and South Islands. With some trades being captive to particular ports, other ports having established niche markets for specific services and increasing volumes of cargo being handled, the present number of ports will remain so long as they each continue to offer quality services at competitive rates and are innovative in approaches to solving their customers needs

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## INTRODUCTION:

In 1867, New Zealand had 112 ports of which 26 were classified as overseas ports of entry. (Rimmer 1967) Today in 1996 there are just 16 commercial ports, 14 being involved in international trade and there are some critics who consider even this number is still too many.

## HISTORY:

New Zealand was pioneered in its development by ships moving people and materials around its coasts. Because of its geographical nature, ports were constructed at various locations throughout the east and west coast of both islands to facilitate the development of the growing colony. With many areas of rough mountainous terrain and large rivers, the only real means of transporting passengers and goods inter-island and intra-island was by water, as inland transport in the last decades of the 19th century was extremely difficult.

## SETTLEMENT DEVELOPMENT AND ITS AFFECT ON PORT COMMUNITIES:

An important factor in the choice of settlement areas by colonising organisations was access to safe harbours. Penetration routes from coastal settlements to the interiors were weakly developed due to dense bush, rugged terrain and occasionally hostile natives. (Wilbur Smith 1973) This reflected in the vital need for inter-connection of communities by sea.

(Rimmer 1967) considers that the development of parochialism fostered during this period of isolation has been a persistent factor in subsequent attempts to develop New Zealand ports on a national basis. With the spread of economic activity beyond the boundaries of the original planned settlements, a rapid and very scattered distribution of ports eventuated. However, it soon became apparent that business was being undertaken in particular areas and this led to a concentration of activity at a limited number of ports. Railways were constructed to open up vast stretches of the New Zealand hinterland but actually gave those ports serviced by rail an advantage.

## POPULATION:

Population locations have always had a bearing as to where transport routes were located and the type of transport used to move goods and passengers. With greater population being attracted to particular areas, some ports grew at a faster rate than others due to the need to supply not only the people in those areas with food but also to supply raw materials for the industry which developed for their employment. The corollary was the use of the ports for the export of the finished manufactured product and agricultural production.

## THE ECONOMY:

The evolution of New Zealand's transport system has been characterised not only by the country's remoteness from its trading partners, but also its relatively small population of 3.5 million.

From the country's earliest development days, there has been a heavy reliance placed on sea transport for overseas and coastal trade and this still pertains today.

99% of New Zealand's exports and imports by volume are carried by sea (NZOYB 1995). The vital part ports play in the economy of the nation can therefore be readily recognised, as these figures clearly illustrate the importance to New Zealand of cost competitive international shipping services. Coastal shipping has also had a key role in respect of the moving of specific bulk products between the islands as well as general freight.

## COMMUNITY DEVELOPMENT/PAROCHIALISM:

By 1881, the major New Zealand provinces, Otago, Canterbury, Wellington and Auckland had developed to the extent that their major ports had monopolised the import/export trade and were collectively handling 80% of the country's total trade. (Wilbur Smith 1973)

While some smaller ports were closed or reduced in status to the detriment of their local communities, others thrived due to the earlier development of inland penetration lines. In the mid South Island, the ports of Timaru and Oamaru were an example which showed resistance to competition from the main ports of Canterbury (Lyttelton) and Otago (Port Chalmers), due to this factor. Community development was on the one hand fostered in the vicinity of the main ports but generally struggled to develop in the small provincial port areas. What intensified it, was the railway freight rates which were designed to concentrate cargoes at larger ports. Assets such as ports were defended by communities in order to survive and this was done in a most parochial manner, generally to the detriment of the country as a whole.

So powerful were local interests, that the New Zealand Government, despite vigorous opposition from overseas shipping companies, permitted the reopening of six ports closed during enforced wartime (1939-1945) concentrations of overseas shipping (Rimmer 1967)

At a later date community development was assisted by a period of port concentration where many small ports specialised in exporting refrigerated produce and this was encouraged by the large cost of moving perishable cargo long distances due to its high bulk in relation to value. However, during the early 1960's, high value/low bulk/non perishable imports and the expansion of the internal transport network, permitted the main ports to capture trade from many of the provincial ports.

The provincial ports, then experienced reductions in cargo throughputs which affected their communities' growth.

It was during this period of centralisation that many of the provincial ports clung tenaciously to what remained of their overseas trade and invested heavily in cargo handling facilities based on optimistic forecasts of future development within their hinterlands.

#### PHASING OUT OF PORTS:

With only a few natural deep water harbours, the development of present day ports has necessarily involved dredging and breakwater construction. Many of the early ports, particularly those established in river estuaries now see little or no use whatsoever for commercial shipping operations.

Due to the parochialism and political pressure exerted by communities in the past, there has been a considerable dispersion of overseas cargo through a wide range of ports in both islands.

The growth of provincial ports such as Napier, Taranaki, Nelson, Timaru and Bluff was due largely to the expansion of primary production and its resultant exports and the corresponding need for high levels of bulk imports of fertilisers and fuel oils.

#### CARGO FLOWS:

New Zealand ports in general have tended to serve market niches and consequently there are ports which predominantly handle certain cargo types.

In terms of total throughput, the New Zealand trade is small on an international scale as the following figures show -

	<u>Year Ended June 1994</u>
	Tonnes
Commodities Exported	16,935,500
Commodities Imported	10,328,200
Coastal cargo handled in the same period was -	
Discharged	7,107,800
Loaded	7,165,900
(NZOYB 1995)	

#### THE CONTAINER REVOLUTION:

In the early 1970's, Government after many investigations by independent groups and its own New Zealand Ports Authority, allowed container terminals to be developed in Auckland, Wellington and Lyttelton and at a later date at Port Chalmers (Otago). The first container service to New Zealand commenced in mid 1971 to/from the east coast

of North America and by 1972 container services had started to the United Kingdom and Europe. (R.C. Whyte 1975)

Initially all container throughput was handled by the four container terminals served by cellular or roll on roll off vessels. However, it was not long before roll on roll off vessels and conventional vessels converted to carry containers, started calling at non container terminal ports and by the late 70's containers were being handled in almost all ports trading internationally. The total New Zealand throughput (all ports) has grown from 1970, when almost no containers were handled, to today in 1996 when the throughput is in excess of 760,000 TEU's (twenty feet equivalent units).

#### PORT REFORM 1988:

Until 1988, ports were administered by Harbour Boards, constituted by Act of Parliament. These Boards were restricted in the operation of their ports and the services they could provide, by a considerable number of Regulations, Acts of Parliament and local By-laws. The ability to market ones port was constrained as was the capability to develop due to a national body (the New Zealand Ports Authority) having to approve all capital expenditure over a given amount depending on Harbour Board size.

During the 1980's, the Government funded an "On Shore Cost Study" (NZMOT 1984) with the result that Harbour Boards were phased out and communities were required to establish ports as limited liability public companies, free from the constraints imposed on constituted Harbour Boards and having as their objective "to operate as successful businesses". (Port Companies Act 1988)

This opened the way for more commercial structures and independent local decision making on investments and port development. It quickly focused ports into upgrading and marketing their services, reducing costs and competing with other transport modes

#### LABOUR REFORM 1989/90:

Soon after commercial ports were established as public companies, Government moved to reform the waterside labour arrangements which had existed on the New Zealand waterfront for 40 years. An organisation known as The Commission had been the "paymaster" for watersiders employed under a pooling system where individual companies hired watersiders from the "pool" for the stevedoring of a vessel and after completion of work the men were returned to the pool

The system was grossly inefficient and expensive and it was essential that this labour also be subject to deregulation as had occurred in most other parts of the economy. The resulting changes provided contestability in the labour market and for the first time watersiders had a direct employer and greater productivity in cargo operations resulted.

In addition in 1991, the New Zealand Government introduced new employment legislation by way of the Employment Contracts Act which radically changed the industrial relations climate in New Zealand.

#### HUB AND FEEDER PORTS:

In 1970, the then Northland Harbour Board published a document which proposed the development of a deep water port at Marsden Point in Northland to handle the country's total container trade. Their proposal was that container vessels would call only at this port in the upper North Island with the other New Zealand ports being served by smaller coastal feeder vessels.

In the South Island, the Port of Timaru was suggesting its central location should be used for the consolidation/distribution of containers throughout the South Island.

These schemes and others mooted since then would certainly have provided most ports with a continuation of business albeit at a lower throughput (and less revenue) due to fewer or no overseas vessels calling directly. The affect on communities could have been dramatic.

New Zealand unfortunately does not in most trade routes control its own destiny. Shipping Lines and collectives of Shipping Lines (Conferences) make decisions on which port they will serve. At one stage, when containerisation was being introduced, it appeared a number of the smaller ports not chosen as container terminals would be adversely affected by a considerable loss of certain cargoes. As an example, the Port of Timaru in the mid 1970's handled in carcass form 100,000 tonnes of frozen meat primarily to the United Kingdom market. By 1979, total trade to that market had been lost due to containerisation although it continued to handle small parcels of carcass meat to middle eastern and asian markets. Many thought that with containerisation, smaller ports were doomed to extinction particularly as the shipping conferences marketed their container services aggressively and together with the major agricultural producer boards adopted a policy encouraging the aggregation of cargoes to container terminals by meeting the cost of inland transport from nearest port to container terminal. However, what was not recognised was the tenacity and the aggressive stance by these smaller ports in the market place and by diversifying, niche marketing and offering superior service, they not only survived but grew (some of them significantly) to challenge neighbouring container terminals.

There could be very good economic argument for shipping lines to make either one New Zealand port call for the whole of the trade with a feeder service to aggregate cargoes or one port in each island served by aggregating each islands trade. There is absolutely no doubt that it is possible, good rail and road access exist throughout New Zealand including regular inter-island ferry services. Coastal services have also been re-established. However, changes have to be justified particularly on cost/revenue and service grounds. New Zealand's internal transport costs tend to be very high and will in many instances outweigh the reason for aggregating cargo.

Part of this is simply the nature of New Zealand - long and difficult terrain even with upgraded roads and railways. Another major factor is the significant investment in ports and the detrimental affect aggregation of cargoes by land transport would have

on many communities. In addition, there is another major factor in considering the number of ports and that is the "bulk factor". Large quantities (by New Zealand standards) of bulk cargoes are handled at almost every port. (Copeland et al 1982) In view of this, there is no cheaper alternative which could move the considerable volumes of dry and liquid bulk. If ports are required for the handling of bulk commodities, then there is some sense in fully utilising the present infrastructures by offering services to a range of ship operators, so enhancing competition -amongst ports and transport modes.

#### COMMERCIAL PORTS TODAY:

The past seven years therefore have seen radical change in the operation and development of New Zealand ports.

Fourteen ports were transformed into public companies.

Waterfront labour has dramatically improved its productivity. Ports, freed of the previous Governmental constraints have appreciated the new found market freedoms and more capital has been invested in plant, wharves and cranes in this period, totalling in excess of 300 million New Zealand dollars. In the provision of container handling cranes, thirteen new cranes have been commissioned in recent years as ports gear up to compete vigorously for the New Zealand trade. Competition between ports is intense, with less labour, lowered costs, increased productivity, and better service being offered to port customers.

#### PORTS PROFITABILITY:

Most ports, since formation into public companies have successfully traded, reducing expenditure, making better use of resources particularly labour and fixed assets and achieving increasing profitability. A recent analysis of port company profitability over the last twelve months indicates that on the whole the companies are very profitable enterprises. This may well be a counter against the view that there are too many ports in New Zealand.

#### POST PORTS REFORM 1994:

Today, ports are operating at a level of very high efficiency and effectiveness with continuing productivity improvement and progress towards quality management goals in the services they provide. Many are striving for or have obtained ISO9000 accreditation in a bid to provide consistent quality of service.

Ports are focused on securing adequate throughput to fund the capital expansion programmes but therein lies a major problem. New Zealand has few major new industries coming on stream and relies heavily on increased production and expansion in manufacturing, agriculture, horticulture and forestry. Many ports are pursuing the same trades and eventually there will be some winners and some losers. This is particularly so in the handling of timber products and container traffic

## FUTURE DIRECTIONS:

How many ports does New Zealand need in the late 1990's and beyond?

If we firstly consider in a little more detail the Hub and Feeder Port concept developed earlier in this paper and the possibility of reducing the number of ports in New Zealand bearing in mind the "bulk factor" argument raised, it is possible two or three smaller ports could be closed.

Perhaps the question of "Are there still too many ports" could be addressed specifically to those ports handling containers.

New Zealand's main container terminals are located at Auckland, Wellington, Lyttelton and Otago (Port Chalmers). However, significant container throughput is handled by either gantry crane or mobile harbour crane at the ports of Tauranga, Napier, Timaru, New Plymouth and by ships gear at Nelson. Total New Zealand throughput of containers (TEU's), is approximately 760,000 per annum, with the greater concentration in Auckland but the balance spread through ports in both islands. By world standards, the figure is almost insignificant as many overseas ports handle that individually.

The proposal of Northland to develop one container port for the whole country was sound in 1970 given it was the only port with natural depth in excess of 12 metres and a large area of adjacent land. However, if one considers the issue today, it is more than likely the terminal for the "hub" of container operations could possibly be the Port of Tauranga's Sulphur Point facility of sixty hectares of land, six hundred metres of berth with 14.5 metres of draft, and the installation of two Post Panamax gantry cranes. There is no doubt that with an efficient coastal container feeder shipping services, together with upgraded road and rail transport links, all containers could be moved to and from Tauranga.

The real issue for exporters and importers though would still be cost and inland freight costs are such a significant part of the overall shipping costs (even with the possible economies of scale), that it is unlikely to be wholeheartedly supported and therefore the economies of scale would not be realised. Much would also depend on the attitude of ships operators, who possibly for marketing, customer service and indeed competition in the container trades would not all find it acceptable to "hub" on one New Zealand port.

A recognised key to successful port operations is the intensive use of equipment and other assets. For the small New Zealand economy then, it makes a great deal of sense to concentrate total container throughput at one port such as Tauranga, and transfer two cranes from another port to provide a four crane facility. Based on Singapore's figures, where each crane handles in excess of 192,000 TEU's per annum, four cranes should cope with the total New Zealand throughput.

The transfer of all or a significant number of TEU's to Tauranga would cause some reduction in revenue for all ports except Tauranga. Even if only a proportion were freighted on internal transport and the majority shipped by coastal feeder service,

revenues would fall in most ports due to a reduction in visits by large container vessels, and the replacement with much smaller but more frequent calls of coastal vessels. Revenue could of course fall even further if inland transport obtained all the business and then the impact on some ports could be significant.

If New Zealand was setting up a transport system in 1996, it is obvious there would not be a need for fourteen ports engaging in international trade. For the handling of containers clearly one cellular container terminal for New Zealand, established in Tauranga with coastal feeder vessels and road and rail transport modes providing the distribution links, would be advantageous in respect of capital investment and from an economic viewpoint. Supporting Tauranga as the main container port, coastal feeder services could operate from Northland, Auckland, Wellington, Nelson, Timaru and Bluff.

However, while that situation may be ideal, the reality is that New Zealand presently has fourteen commercial ports, each with a supporting community and huge capital investment in port facilities. Not to use the ports infrastructure would cost dearly in economic and human terms. In addition, the capacity of the existing internal road and rail network is suspect, as the large volumes of bulk product would cause over capacity and eventual breakdown of the road and rail systems in the short to medium term.

Some bulk commodities have limitations in their internal movement due to cost. For example, logs were only considered a viable export if they were within eighty kilometres of a port, although of recent times this has been extended. Hence most ports are now in the log export trade. Distances greater than eighty kilometres could mean that an important resource and overseas export earner may not be handled which would be to the detriment of the country. Similar comment can be made in respect of other bulk cargoes - petroleum products, grains etc.

In my view therefore, while the country does have a proliferation of ports, provided each port continues to offer quality service at competitive rates and remain a profitable commercial enterprise, there are not too many ports. However, if good service and a viable commercial operation cannot be maintained, then the best alternative for the nation (but not necessarily for the local community) would be to close such a port. In the present deregulated economy a business stands alone in the market place and will survive only by taking innovative approaches and providing the level and quality of service which customers require.

While there remains a strong competitive ports industry where some ports have captive trades and others have niche marketed services for particular clientele, there will always be pressure on services provided at all ports and this is healthy for ports and advantageous to customers.

Are there still too many ports?

I believe the answer is no!

The present number of ports have not only survived but prospered and with trade levels running at record levels, they expect to service vessels and cargo well into the next century.

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