International Freight Transport Services

Draft Report - January 2012

The New Zealand Productivity Commission

The Commission – an independent Crown Entity – completes in-depth inquiry reports on topics selected by the Government, carries out productivity-related research, and promotes understanding of productivity issues. The Commission's work is guided by the New Zealand Productivity Commission Act 2010.

Information on the Commission can be found on www.productivity.govt.nz or by calling +64 4 903 5150.

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Terms of reference

The Government has asked the Productivity Commission to undertake an inquiry into international freight transport services.

New Zealand Productivity Commission Inquiry into International Freight Transport Services

Issued by the Minister of Finance, the Minister of Commerce, the Minister of Transport, and the Minister for Regulatory Reform ('the referring Ministers').

Pursuant to sections 9 and 11 of the New Zealand Productivity Commission Act 2010, we hereby request that the New Zealand Productivity Commission ("the Commission") undertake an inquiry into international freight transport services.

Context

Increasing international trade is a critical part of achieving productivity growth in New Zealand. Given that freight transport costs (including port charges) currently represent a sizeable proportion of international trading costs for New Zealand firms, it is important to ensure that New Zealand's infrastructure and regulatory regimes are effective in promoting accessibility and efficiency in international freight transport services, while continuing to meet New Zealand's international obligations. Currently, certain aspects of international carriage by air and sea are exempted from parts of the Commerce Act 1986 and subject to industry-specific regimes under Part IX of the Civil Aviation Act 1990 and Part 1 of the Shipping Act 1987 respectively.

Scope

Having regard to the context outlined above, the referring Ministers request that the Commission undertake an inquiry to evaluate the factors influencing the accessibility and efficiency of international freight transport services available to New Zealand firms, and opportunities to increase the accessibility and efficiency of these services. For the purposes of this evaluation the Commission should:

- Identify and analyse the cost of all components of the international freight transport supply chain for New Zealand importers and exporters.
- Identify any impediments to the accessibility of the international freight transport services, and to competition within and between the components of the international freight transport supply chain.
- Identify mechanisms available to improve the accessibility and efficiency of the international transport supply chain.

Particular attention should be given, without limitation, to the following matters:

- the nature of New Zealand's international trade, including the effects of distance from overseas markets and reliance on overseas providers of international freight transport services;
- factors influencing the accessibility, cost and efficiency of New Zealand's international freight transport supply chain, with international comparisons;
- the level and growth of productivity in all components of New Zealand's international freight transport supply chain, with international comparisons; and
- the effectiveness of current regulatory regimes (including those noted above in the Civil Aviation Act 1990 and the Shipping Act 1987) affecting international freight transport services in promoting accessibility and competition, and the potential costs and benefits of alternative regulatory arrangements with international comparisons.

Consultation Requirements

In undertaking this review, the Commission should consult with key interest groups and affected parties.

Timeframe

The Commission must publish a draft report and/or discussion paper(s) on the inquiry for public comment, followed by a final report, which must be submitted to each of the referring Ministers by 1 April 2012.

BILL ENGLISH, MINISTER OF FINANCE
SIMON POWER, MINISTER OF COMMERCE
STEVEN JOYCE, MINISTER OF TRANSPORT
RODNEY HIDE, MINISTER FOR REGULATORY REFORM

30 MARCH 2011

The draft report

The inquiry into freight and transport has proven to be a wide and challenging piece of work. Our inquiry process so far has involved extensive engagement with interested parties, including 79 engagement meetings and receipt of over 50 submissions on our issues paper. We have also conducted a substantial amount of original research.

The draft report is intended to show our thinking for further input from interested parties. We are keen to hear from you over the remainder of the inquiry period – as part of ensuring we deliver a high-quality final report by 1 April 2012. Find out how you can provide submissions or feedback to us over the page.

Key inquiry dates

Release of draft report:	12 January 2012
Draft report submissions due:	27 February 2012
Final report to Government:	1 April 2012

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Making a submission

The Commission wishes to benefit from the knowledge of people interested in international freight transport services. Effective engagement will also help that inquiries are well-informed and relevant.

How to make a submission

Anyone can make a submission. It may be in written, electronic or audio format. A submission can range from a short letter on a single issue to a more substantial document covering a range of issues. Where possible, you should provide relevant facts, figures, data, examples and documentation to support your views. While every submission is welcome, multiple, identical submissions do not carry any more weight than the merits of an argument in a single submission. Submissions may incorporate material made available to other reviews or inquiries that are relevant to this inquiry.

The Commission seeks to have as much information as possible on the public record. Submissions will become publicly available documents once placed on the Commission's website. This will occur shortly after receipt of the submission, unless it is marked 'in confidence' or accompanied by a request to delay release for a short period of time. We can accept material 'in confidence' only under special circumstances. You should contact us before submitting such material, to discuss its nature and how the material should be handled or presented.

Submissions may be sent through our website www.productivity.govt.nz, or by email or mail. Where possible, an electronic copy of submissions should be sent to freightinquiry@productivity.govt.nz in Word or PDF format. Submissions should include your name and contact details and the details of any organisation you represent. If the content of a submission is deemed inappropriate or defamatory, the Commission may choose not to accept it.

What the Commission will do with submissions

Submissions will play an important role in shaping the recommendations made to the Government in the final report. Where relevant, information from submissions may be cited or used directly in inquiry reports. As noted above, the Commission will publish submissions (unless arrangements have been made with the Commission regarding any confidential content).

Other ways to engage with the Commission

The Commission's engagement on the draft report will be a mix of the following activities:

- *receiving submissions from interested parties* – the Commission encourages you to make a submission either supporting our draft findings or telling us how and why they could be improved;
- *meetings the Commission requests* – from late January 2012, the Commission will be seeking further meetings with interested parties;
- *meetings requested by interested parties* – the Commission is open to meeting on request to hear and discuss the views of any interested party (and to present the findings of the draft report). If a number of parties from a city or region express interest in meeting, the Commission may run a discussion forum in those locations; and
- *'roundtables'* – the Commission may run its own roundtable meetings for in-depth debate of the evidence and analysis of key issues in the report. It is not practical to invite all interested parties to those meetings. We will, however, ensure an even-handed coverage of different viewpoints.

While it may not be possible due to time constraints to meet with every interested party, the Commission will do its best – across the activities above – to meet the needs of each party in some way. Please also note that meetings do not constitute a submission, so all parties are encouraged to make their views known by way of a submission that can be made public.

Contents

Terms of reference ..... **iii**

The draft report ..... **v**

Making a submission ..... **vi**

Commonly used terms ..... **xii**

Overview ..... **xvi**

What has the Commission been asked to do? xvi
Why the inquiry is important xvi
Key characteristics of international freight transport xvii
How well is the sector performing? xix
Where are the opportunities for improvement? xx
Concluding observations xxxi

1 The international freight transport services inquiry **1**

1.1 What has the Commission been asked to do? 1
1.2 The importance of international freight transport services 4

2 The Commission's framework **13**

2.1 Efficiency and wellbeing 14
2.2 Freight economics – what are its distinctive features? 16
2.3 Roles of government in freight transport 20
2.4 Accessibility 22

3 International freight transport – how it operates and performs **24**

3.1 New Zealand's international freight services – a description 24
3.2 A brief history of New Zealand's transport reforms 30
3.3 Productivity and performance comparisons and trends 34
3.4 Financial performance of New Zealand ports 42

4 Freight transport costs **45**

4.1 Supply chain costs in aggregate 46
4.2 Supply chain costs by component 53
4.3 Transit times and their costs 60

5 Impediments to competition in international freight **65**

5.1 Competition and operational efficiency 65
5.2 Coordination and operational efficiency 69

6 Employment relations at ports **75**

6.1 Introduction 76
6.2 Labour requirements of ports 76
6.3 Labour market reforms 77
6.4 Work practice concerns 78
6.5 Reasons why restrictive work practices may persist 81
6.6 A competitive port sector 82
6.7 Other approaches to mitigate work practice concerns 83

7 Customs, security and biosecurity **87**

7.1 Introduction 87
7.1 Minimising the cost of achieving border security 90

8 Investment, innovation and dynamic efficiency **99**

8.1 Likely future trends in markets and technology 100
8.2 Dynamic efficiency in New Zealand's international freight transport services 102
8.3 Optimising investment: institutions, markets and planning 107

8.4 Resource Management Act 108

9 Investment coordination and planning 114
9.1 Government transport planning 115
9.2 What coordination failures could strategic planning address? 118
9.3 Public ownership and coordination failures 123
9.4 Strategic planning models 124
9.5 Assessment of models 132
9.6 Planning and investing for bigger ships 133
9.7 Case study – merging Port of Tauranga and Ports of Auckland 139

10 Governance and ownership 142
10.1 Governance 143
10.2 Ownership 153

11 Regulation of international sea freight competition 171
11.1 International sea freight exemptions 172
11.2 New Zealand's current regulatory approach to international shipping 177
11.3 Is New Zealand's exemption needed for reliable shipping services? 179
11.4 What are the benefits of removing exemptions? 186
11.5 Recommendations 190

12 Regulation of international air freight competition 193
12.1 Framework for New Zealand's regulation of international air services competition 193
12.2 The current competition regime 195
12.3 Alternatives to the current competition regime 198
12.4 Assessment of the current competition regime and its alternative 200

13 Other regulatory issues 203
13.1 Domestic freight transport 204
13.2 Regulation of airports 208
13.3 Regulation of seaports 209
13.4 Access regimes and unbundling 210
13.5 Information gathering and dissemination 219
13.6 External effects of freight transport 222

Summary of questions 227

Findings and recommendations 228

Appendix A Public consultation 240
Submissions 240
Engagement meetings 241

Appendix B Air services agreements 243
The international regulatory framework for air services 243
New Zealand's policy on ASAs 245

Appendix C Regulation of external costs 252

Appendix D International regulatory approaches to international shipping 257

Appendix E New Zealand's regulatory approach to international shipping 263

References 269

Tables

Table 2.1 Types of market failure in freight transport 15
Table 3.1 Sea freight imports and exports by port – percentage of New Zealand totals, 2010 27
Table 3.2 Chronology of key transport sector reforms in New Zealand 31
Table 3.3 Estimates of freight in New Zealand by mode: 1989/90 and 2006/07 31

Table 3.4 Measures of Port Performance ... 36
Table 3.5 Other port performance indicators for selected international ports 2006-2010 ... 38
Table 3.6 Work Load Unit (000s) per employee for airports in the Asia Pacific region ... 39
Table 3.7 Logistics Performance Index ... 42
Table 3.8 Return on average operating capital (%) for selected New Zealand port companies ... 43
Table 3.9 Weighted average cost of capital (%) for selected New Zealand port companies ... 43
Table 3.10 EVA% results for selected New Zealand port companies ... 43
Table 3.11 Return on average regulatory assets (capital) (%) – comparison with selected electricity distribution companies ... 44
Table 4.1 Onshore transportation costs ... 54
Table 4.2 Auckland and Sydney sea freight import cost comparison case studies ... 56
Table 4.3 Auckland and Sydney sea freight export cost comparison case studies ... 56
Table 4.4 Auckland and Sydney air freight import cost comparison case studies ... 58
Table 4.5 Auckland and Sydney air freight export cost comparison case studies ... 59
Table 4.6 Domestic transport costs for one TEU container between Auckland and Christchurch ... 60
Table 4.7 Number of days to complete export and import requirements ... 61
Table 5.1 Comparison of cargo facilities at Auckland, Sydney and Melbourne Airports ... 69
Table 7.1 Summary of key functions of New Zealand's border agencies ... 88
Table 7.2 Selected export fees in New Zealand and Australia (2011 NZD) ... 97
Table 7.3 Cost recovery charges on imports ... 97
Table 8.1 Investment and innovation issues in port services ... 103
Table 8.2 Government investment in rail ($m) ... 105
Table 8.3 Freight transport investment issues in the draft inquiry report ... 107
Table 9.1 Coordination failures and public ownership ... 124
Table 9.2 Four broad approaches to planning ... 125
Table 9.3 Market-driven planning models ... 125
Table 9.4 Planning models based on information sharing ... 126
Table 9.5 Coordination problems and facilitated discussion models ... 127
Table 9.6 Leadership planning models ... 128
Table 9.7 Directive planning models ... 129
Table 9.8 Approaches for dealing with coordination failures ... 132
Table 9.9 Estimated port investment required to receive 6000-7000 TEU ships ... 135
Table 10.1 Legislated objective of publicly-owned companies ... 148
Table 10.2 Director appointments in publicly-owned organisations ... 149
Table 10.3 Ownership of international freight services components ... 156
Table 10.4 Control rights available at different levels of company ownership ... 165
Table 10.5 Control levels required for specific reasons ... 166
Table 11.1 Risk of anti-competitive detriment from carrier agreements ... 187
Table 13.1 Service providers at New Zealand ports ... 212
Table 13.2 Summary of comparison of infrastructure access regimes to status quo ... 216
Table 13.3 External costs from international freight transport ... 223

Appendix tables

Table B.1 Information on air services rights for New Zealand, in order of size of import/export markets (as at 1 November 2011) ... 247
Table C.1 Road freight – external costs ... 252
Table C.2 Rail freight – external costs ... 253
Table C.3 Air freight – external costs ... 254
Table C.4 Shipping – external costs ... 255
Table E.1 Comparison of New Zealand's shipping regulation with other approaches ... 266

Figures

Figure 1.1 International freight transport system components and issues ... 4
Figure 1.2 Growth in world trade, real annual change 1991-2010 ... 7
Figure 1.3 OECD growth in export intensity, 1991–2011 ... 7
Figure 1.4 New Zealand exports by freight mode ... 8

Figure 1.5 New Zealand imports by freight mode 8
Figure 1.6 Composition of New Zealand's merchandise exports: 1989-2010 9
Figure 1.7 Composition of New Zealand's merchandise imports: 1989-2010 9
Figure 1.8 Breakdown of New Zealand's exports by level of processing: 2002-2010 10
Figure 1.9 Breakdown of New Zealand's imports by level of processing: 2002-2010 10
Figure 1.10 New Zealand's export composition by destination: 1989-2010 11
Figure 1.11 New Zealand's import composition by origin: 1989-2010 11
Figure 2.1 Interactions in a logistics system 17
Figure 2.2 Transport policy changes, infrastructure and productivity effects 19
Figure 3.1 The New Zealand leg of an international freight journey 25
Figure 3.2 Shipping modes as a proportion of voyages to and from New Zealand 30
Figure 3.3 The stance of transport regulation in New Zealand in international comparison 33
Figure 3.4 New Zealand transport and storage industry productivity growth compared to measured sector (1978=1000) 34
Figure 3.5 Transport and storage labour productivity growth for selected countries: average annual growth rate for 5-year periods 1980-2007 35
Figure 3.6 Average container productivity across six New Zealand ports and Australia 2009-2011 (March years) 37
Figure 3.7 Crane rates at selected international ports (2007-2011) 37
Figure 3.8 Gross VFP vs. residual (net) VFP for selected cities: 2009 39
Figure 3.9 Road freight: average load (tonnes) 40
Figure 3.10 Rail freight density: international comparison 2003-2008 41
Figure 4.1 Ad valorem freight costs for New Zealand imports 47
Figure 4.2 Value of imports (per kilogram) by transport mode 48
Figure 4.3 Import ad valorem freight costs by product type, 2010 48
Figure 4.4 Import ad valorem freight costs by country of origin, 2010 49
Figure 4.5 New Zealand import freight costs: unadjusted and adjusted ad valorem 49
Figure 4.6 Average import ad valorem freight costs relative to 1992, controlling for covariates 50
Figure 4.7 New Zealand and Australia import freight costs: unadjusted ad valorem 52
Figure 4.8 New Zealand and Australia import freight costs: adjusted ad valorem 52
Figure 4.9 Ad valorem freight costs for New Zealand's exports to Australia and the US 53
Figure 4.10 Ad valorem freight costs for New Zealand's exports to Australia by mode of transport 53
Figure 4.11 Stylised demand and supply for air freight to or from New Zealand 58
Figure 4.12 Time taken to complete New Zealand's export sea freight supply chain 61
Figure 4.13 Changes in time to complete components of New Zealand's export sea freight supply chain between 1991 and 2010 62
Figure 4.14 Transit times for New Zealand's top ten export products, 2010 63
Figure 4.15 Time taken to complete New Zealand's import sea freight supply chain 63
Figure 4.16 Changes in time to complete components of New Zealand's import sea freight supply chain between 1991 and 2010 64
Figure 5.1 Freight coordination issues identified in the inquiry 70
Figure 5.2 Schedule of arrivals and departures of international wide-bodied aircraft at Auckland Airport 72
Figure 7.1 Current and future border system 93
Figure 9.1 The Government's overall transport planning framework 116
Figure 9.2 Costs savings from 'bigger ships' 134
Figure 10.1 The firewall between the objectives of councils and council-owned companies 146
Figure 12.1 Framework for New Zealand's regulation of international air services competition 194

Appendix Figures

Figure B.1 Freedoms of the air 244

KEY

F	Findings
R	Recommendations
Q	Questions

Commonly used terms

ad valorem freight costs	The cost of freight as a proportion of the value of the cargo (percentage of value).
allocative efficiency	Achieved when the goods produced correspond best to what people want. In general, no barriers to trade and prices that reflect the marginal social cost of production will result in a product mix that is allocatively efficient.
bellyhold freight	Freight stowed under the main deck of an aircraft.
benchmark competition	Benchmark competition is based on the compilation of performance indicators by an independent organisation, typically published with sufficient analysis to allow interested parties to make an informed judgement about the performance of the companies of interest.
biosecurity	Measures to preserve and protect New Zealand's agriculture and natural resources from the adverse impacts of invasive pests.
border security	Arrangements covering passage across the border of a country, including security, customs and biosecurity.
break-bulk	Non-containerised cargo, that is usually of peculiar mass or shape and would be difficult to pack in containers.
bulk cargo	Cargo unsuitable for packages or containers. Shipped loose in the hold of a ship without mark and count. For example, coal, oil and cement.
cabotage	The reservation of a country's domestic coastal trade to shipping operators of that country (In the context of airlines see Appendix B).
carrier	A shipping line or airline.
cartel	An association of competitors that, by agreement, limits the degree of competition that would otherwise prevail in the buying and selling of goods and services by members of the cartel.
CIF	Cost including insurance and freight. Typically recorded for imports.
collusion	Cooperation of industry rivals for their mutual benefit and at the expense of competitive outcomes.
conference	A route-specific agreement between shipping carriers on conditions for the carriage of cargo. Carriers agree to apply common freight rates, coordinate the scheduling of sailings and ports of call, regulate capacity, and allocate cargo and revenues.
consolidation agent	Freight forwarder or other organisation that combines demand for freight services.
contestability	A market in which new entrants are able to enter and compete with existing participants.
cooperation agreements	An agreement between two or more carriers regarding the joint supply of services.
cross subsidy	The charging of higher prices to one group of consumers in order to pay for subsidised (lower) prices for another group.

dynamic efficiency	Dynamic efficiency is achieved when optimal decisions are made on investment, innovation, and market entry and exit, to create productive and allocative efficiency in the longer term.
economic efficiency	Economic efficiency requires an optimal allocation of productive resources and incentives for efficient use over time. Dimensions of economic efficiency are discussed in section 2.1.
Economic-Value Added (EVA)	EVA assesses the difference between the operating rate of return of a firm and its weighted cost of capital. In broad terms, this shows whether returns were sufficient to justify investment in the company, compared with an alternative use of the funds.
efficiency	Getting the most out of the resources used.
exemption	A formal exclusion from the provisions of legislation; eg, an exclusion from general competition law.
export intensity	The value of a country's exports as a percentage of its GDP.
external costs and benefits	External costs or benefits arising from an economic activity that affect somebody other than the people engaged in the economic activity and are not reflected fully in prices.
factors of production	The ingredients of economic activity: land, labour, capital, information and enterprise.
FOB	Free on board. Value of goods when placed onto a vessel (excluding freight costs). Typically recorded for exports.
freight costs	The cost charged for moving goods, including packing, documentation and loading/unloading charges, transport charges, and insurance while in transit.
freight forwarder	A person or company that organizes shipments for other firms and may also act as a carrier.
governance	The distribution of rights and responsibilities among the different participants in an organisation – such as the board, managers, shareholders and other stakeholders. Effective governance is ensuring that the organisation makes value-maximising decisions across all of its functions and activities.
hard infrastructure	Physical infrastructure such as roads, bridges, railway lines, vehicles and ports.
holding company	A firm limited to holding shares in and supervising the management of other firms (a portfolio of subsidiaries). A holding company is an active investor; it can be thus distinguished from passive investors such as mutual funds. Holding companies aim to create value through their roles as financial intermediaries and active shareholders.
HPMV	High Productivity Motor Vehicle. Vehicles that can carry longer and/or heavier loads than normally provided for on New Zealand roads.
hub and spoke	A transportation model in which freight volumes are consolidated at a central port or airport (or hub). The hub port, for example, is fed by road, rail and coastal shipping services (or spokes).
hubbing	The movement of freight through a central port or location.
institutions	A country's institutions - broadly conceived - include all the formal rules and informal conventions or norms that shape the political, economic, and social behaviours of members of society.
internal costs and benefits	Costs and benefits that are incurred by a firm or individual and as such are factored into production or consumption decisions.

internalise	When individuals or firms take external cost or benefits into account (eg, because of regulation or taxation), those external costs or benefits are said to be internalised.
liner service	A shipping service that operates within a schedule and has a fixed port rotation with published dates of calls at the advertised ports. Cargo is generally carried in containers.
logistics	Management of the flow of goods between the point of production and the point of consumption in order to meet customer requirements.
lumpy investment	Investments that are, by their nature, large, indivisible and infrequent.
market power	The ability of a firm to alter the market price of a good or service.
marshalling	The moving of freight between connecting road or rail transport and loading and unloading by stevedores.
monopoly	A monopoly exists when a specific person or enterprise is the only supplier of a particular commodity.
network utility operator	Defined in s.166 of the Resource Management Act 1991 and discussed in section 8.4.
non-ratemaking agreement	An agreement between carriers regarding a shipping route that does not involve setting prices or limiting capacity.
offshore	Located or based outside of a country's national boundaries.
onshore	Located or based within a country's national boundaries.
operational efficiency	Used in this report to mean economic efficiency with a focus on the short-to-medium term; ie, excluding consideration of dynamic efficiency.
opportunity cost	The cost of passing up the next best choice when making a decision.
port handling charges	The fees levied on carriers and cargo owners by port authorities.
price signals	The information conveyed by the relative level of prices, or by a change in price. Rising prices generally 'signal' a shortage of supply, an increase in demand, or a rise in input costs. Falling prices generally signal the opposite conditions.
productive efficiency	Achieved when goods and services are produced at the lowest cost of production.
productivity	A measure of output per unit of input. For further definitions see Box 2 in Chapter 3.
public goods	Goods that satisfy two criteria: they are non-rival (ie, one person's use of the good does not impair others' use) and non-excludable (ie, it is not practical to exclude people who do not pay, from using the good). Examples include national defence, basic scientific research and national parks.
rate of return	The financial returns on an investment, expressed as a percentage of the total amount invested.
ratemaking agreement	An agreement between carriers to set prices or limit capacity on a shipping route.
reefer	Used to describe both a refrigerated container and a refrigerated ship.
regulation	A set of tools that governments use to achieve their aims.
rent-seeking	Lobbying to obtain a benefit rather than adding value through creating a benefit.

RUC	Road User Charges. A levy on diesel-powered vehicles based on the vehicle type and axle weight.
shipper	The party on whose account goods are consigned. A shipper can be an importer or an exporter.
soft infrastructure	Non-physical infrastructure – such as knowledge, skills and computer software.
specialisation	When a firm concentrates on making one good or one service in order to improve its productivity.
stevedoring	The loading and unloading of ships' cargoes.
strategic holdup	Refusing agreement in order to extract concessions.
strategic planning	Used in this report to refer to long-term planning decisions, typically involving large capital investments and multiple decision makers.
supply chain	The stages or steps between the point of origin of goods and the point of consumption. (The term is related to but differentiated from "logistics" above.)
tactical misinformation	Withholding or misrepresenting privately-held information for private advantage.
tariff	A tax on imports typically collected at the border by customs agencies.
TEU	Twenty-foot equivalent unit. The standard measurement of a 20 foot by 8 foot by 8 foot container.
Time-sensitive	Time-sensitive cargos are those whose value declines while being transported, for example perishable or fashion items.
transaction costs	Costs incurred by the parties making an economic exchange, other than the amount paid directly for the goods or service purchased.
transhipment	The transfer of cargo from one vessel to another at an intermediate port between the port of origin and the final destination port.
transit time	The time taken for cargo to be transported from its point of origin to its final destination.
vertical integration	The control of two or more steps in a supply chain by a single company or entity.
VFD	Value for duty. The value of goods as declared to customs.

Overview

What has the Commission been asked to do?

The Government has asked the Commission to undertake an inquiry into international freight transport services. The key high-level questions for the inquiry are:

- What factors influence the accessibility and efficiency of international freight transport services available to New Zealand firms?
- Are there opportunities for changes in New Zealand's infrastructure and regulatory regimes that could increase the accessibility and efficiency of international freight transport services for New Zealand firms?

In answering these questions the Commission has been asked to pay particular attention to:

- the effects of New Zealand's distance from overseas markets and reliance on overseas providers of international freight transport services;
- the costs, efficiency, productivity level and growth of all components of New Zealand's international freight services supply chain, with international comparisons; and
- the effectiveness of current regulatory regimes (including those in the Civil Aviation Act 1990 and Shipping Act 1987), and the potential costs and benefits of alternative regulatory arrangements, with international comparisons.

Why the inquiry is important

Trade and freight services are intimately connected

International freight transport services provide essential connections between New Zealand and the international economy. They allow New Zealand firms to access export markets and the imported raw materials, intermediate inputs, and equipment necessary for New Zealand's productive base. If international freight costs can be reduced, and quality and reliability improved, then trade will be enhanced, the economy can be more productive and New Zealanders' wellbeing enhanced.

International trade is particularly relevant for a small and distant island nation such as New Zealand. It enables specialisation and access to resources and products that would otherwise be unavailable locally. It expands the range of technologies available to local firms and consumers, and promotes productivity growth because competition with foreign firms spurs local firms to be more efficient and innovative. New Zealand exporters will be more successful if they have access to required inputs, including imported goods, at internationally competitive prices.

Trade costs include the direct costs of freight, but are wider than that. Examples of additional costs include customs and biosecurity charges, tariffs and the financing costs of goods unavailable while in transit. One of the tasks of this Inquiry is to identify all significant sources of trade costs.

Transport costs are significant

Transport costs affect the profitability of exporting industries, and if too high they may preclude a business from exporting at all. Where imported goods (for example, farm machinery) are used in the production of goods for export, higher trade costs hit exporters twice by making inputs more expensive and outputs less profitable.

Ad valorem sea freight costs (that is, the cost of freight relative to the value of the goods transported) have been falling over the last two decades. Total ad valorem freight costs for New Zealand imports were still about 6% in 2010 (down from about 10% in 1990). Equivalent data for all of New Zealand's exports are not available. However, New Zealand export freight costs to Australia fell from 9% of export value in 1991 to

4% in 2010, and to the USA from 8% in 2002 to 6% in 2010. Ad valorem air freight costs tend to be lower than for sea freight because air tends to be used for higher-value goods.

The total freight costs for imports in 2010 were $2.4 billion, excluding domestic onshore costs (such as inland transport in New Zealand). On reasonable assumptions, freight costs for exports were about $2.6 billion in 2010. For both imports and exports this amounts to about 2.7% of GDP.

Figures such as these do not include the costs involved in the transit time that it takes for the product to reach its destination. Longer transit times involve costs such as deterioration of the product and delayed receipt of revenue. If transit times are unpredictable, or there are delays, a market opportunity may be missed and goods arrive when they have less value. Perishable goods in particular may lose value. If the goods are an input to a production process, delays could slow down production, which could be particularly costly for companies that operate 'just in time' production processes.

While it may be difficult to reduce travel times significantly without considerably increasing freight costs (for example, by switching from sea to air transport), useful gains may be made through, for instance, more efficient documentation requirements and customs processing times. Further costs would be incurred if exporters were unable to secure access to transport when they needed it and were willing to pay for it.

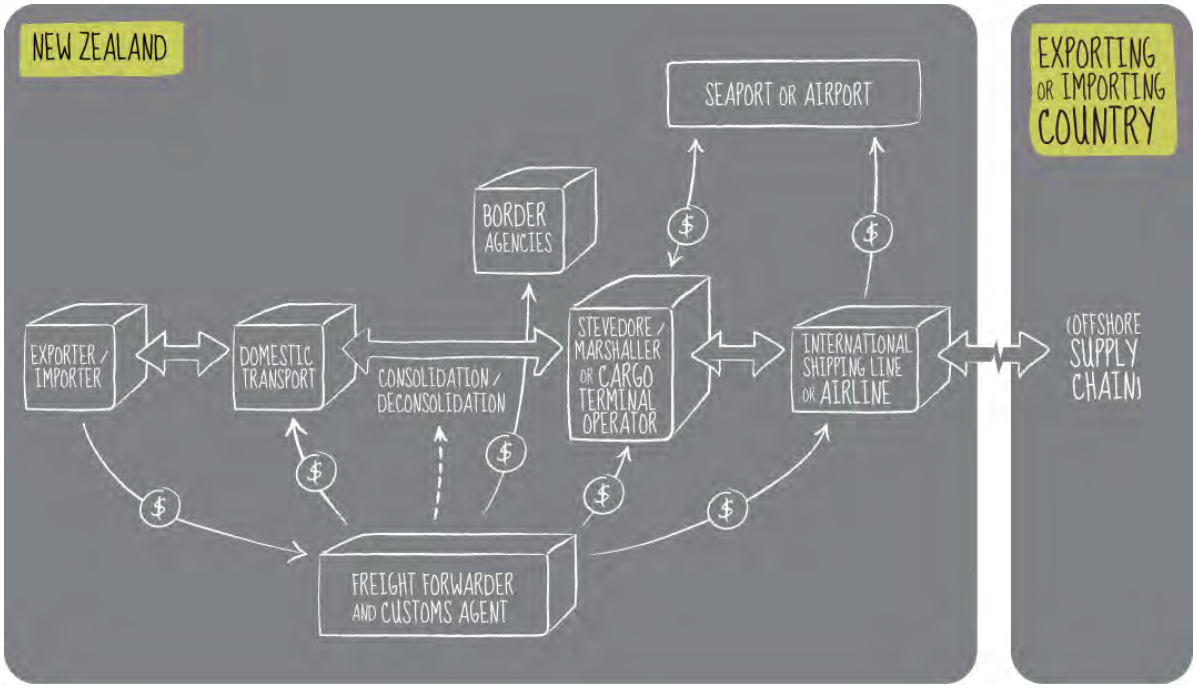
Key characteristics of international freight transport

A complex process

International freight logistics is a complex process involving different operators and various contracting arrangements, as the figure below illustrates. In broad terms, the logistics chain can be split into five distinct phases, with New Zealand exporters and importers at the beginning and end of the chain respectively:

- from factory to port;
- at the export port;
- port to port (sea or air freight service);
- at the import port;
- from port to warehouse.

The New Zealand leg of an international freight journey



Notes:

1. The thick arrows indicate the direction of the physical movement of freight, and the thin arrows indicate where payments for services tend to occur.

From the perspective of an importer or exporter, the key issue is the cost of the total supply chain, rather than simply freight costs. Logistics is the process of efficiently moving goods from their point of production to their point of consumption in order to meet customer requirements, which typically include the quantity and quality of goods as well as the time and place of delivery. Freight is only one component of this logistics process. Logistics management aims to meet customer requirements at minimum cost.

Logistic costs and 'trade costs' are very much the same thing. To the extent these costs include the New Zealand transport leg of any international route, domestic transport costs are also relevant to this inquiry. Smaller importers and exporters may deal only with specialist freight forwarding or logistics firms, who take over responsibility for coordinating the other elements of the chain.

Importantly, it is not just the absolute level of costs that matter. Paying a higher price for a logistics service is justified if the extra value from the customer's perspective outweighs the increment in price. What matters for many New Zealand businesses will be access to a menu of logistics services, from which they can choose the combination of price, quality and timeliness that best meets their requirements.

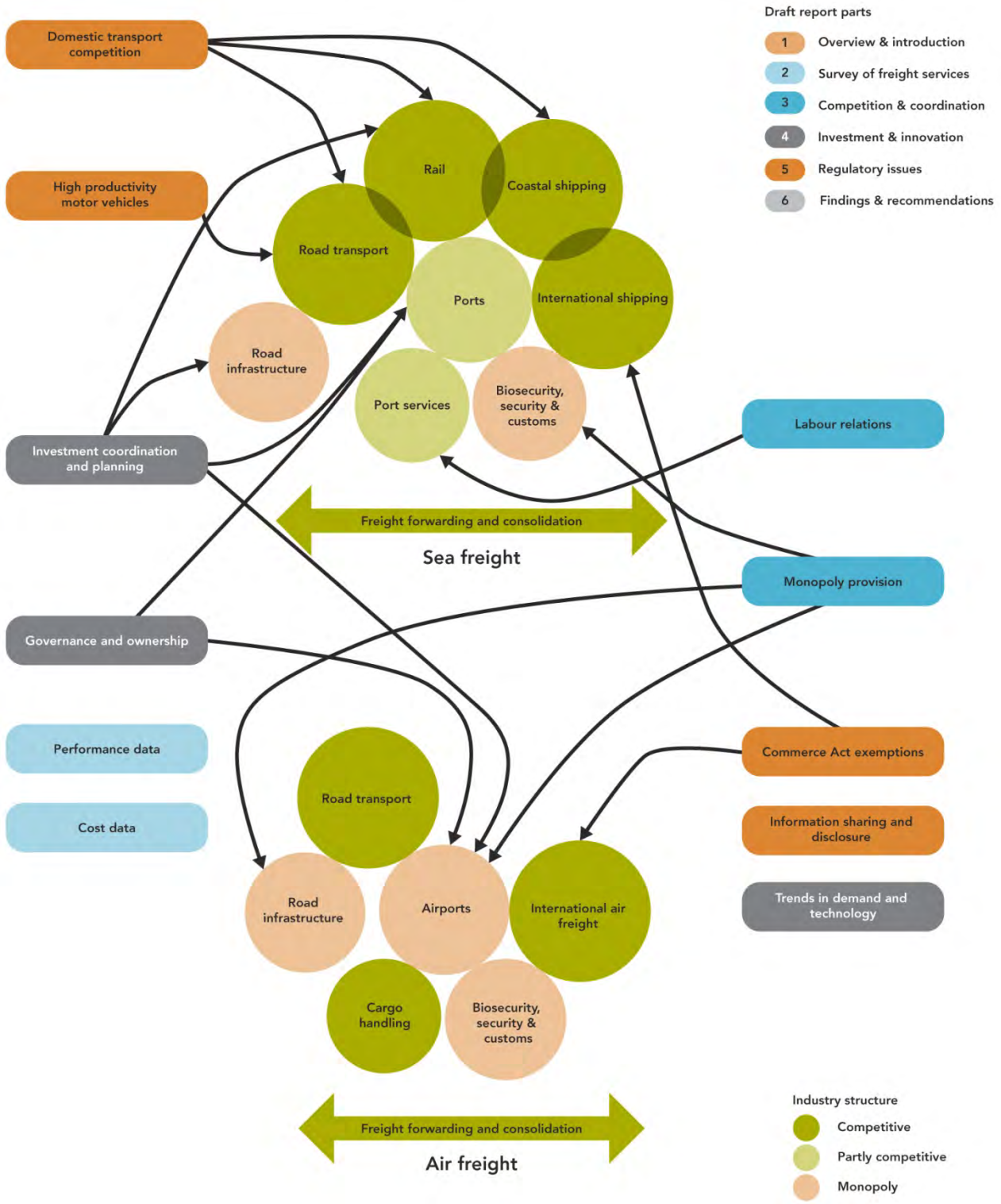
With many components

International freight transport services make up a system that encompasses a number of distinct components. In the diagram overleaf, adjacent circles indicate a logistics interface between components; in essence, a handover point. An overlap between two circles indicates that, in addition to a point of interface, some competition exists between those components. For example, rail sometimes competes with road and coastal shipping transport; but at other times it connects with them as part of an overall logistics chain.

Based on the Commission's analysis of evidence presented during the inquiry, the circles are coloured to reflect an assignment of components into those with natural monopoly characteristics (light orange), those with the characteristics of competitive industries (green), and those that have the potential to be competitive (light green) but where competition may be limited. The boxes on each side of the figure indicate some important issues that are considered in the report.

Freight forwarders interact with all other components and are shown spanning them. While not depicted in the diagram, air and sea are alternative international freight modes. Thus, to some extent, ports compete with airports and international sea freight services compete with air freight services.

International freight transport system framework



How well is the sector performing?

The available data on the international freight sector's costs, productivity, profitability and innovation indicate both pockets of good performance and significant opportunities for improvement.

Ad valorem freight costs

- As noted above, ad valorem sea freight costs (measured as the price paid for freight relative to the value of the goods being transported) have been coming down over the last 20 years, although the rate of improvement slowed in the 2000s. In aggregate, and after accounting for compositional factors, ad valorem sea freight costs are about 20% higher in New Zealand than in Australia (about 5.2% compared

with 4.3% in 2010). Case studies also indicate that in some instances, the ocean transport component of costs can be higher for Auckland compared to Sydney.

- Ad valorem air freight costs decreased in the 1990s, but have been drifting up since then, after controlling for factors such as fuel price increases. Air freight costs are estimated to be about 15% higher in New Zealand than in Australia (about 12.5% compared with 10.9% in 2010). However, case studies suggest that air freight costs for Auckland can, on occasion, be less than those for Sydney.
- The onshore components of New Zealand's air and sea freight costs, particularly its port handling costs, compare favourably with Australia and other OECD countries.

Productivity indicators

- New Zealand's transport and storage industry experienced strong productivity growth in the 1990s, but virtually no productivity growth in the 2000s.
- Productivity measures indicate that New Zealand ports and airports compare favourably with Australian counterparts. Compared internationally, New Zealand customs services are efficient.
- Container productivity indicators show considerable variation in the performance of New Zealand's ports, with Tauranga being the strongest performer. This suggests there may be opportunities to either lift the performance of the below-average performers or for further shifts in freight towards the top performers.
- Compared internationally, New Zealand has low volumes of freight per kilometre of rail, and 'small' trains and trucks.
- There is little information about the productivity of freight handling at airports, but indicators suggest that Auckland Airport's overall productivity (passenger and freight) compares favourably with other Asian and Pacific airports, while Christchurch is about average.
- The number of days taken to complete New Zealand's export and import requirements compares well with other countries, but is behind international best practice.
- Low asset utilisation rates for New Zealand ports may indicate that ports have invested ahead of demand, or that patterns of international freight have changed, possibly leaving some assets under-used.

Other indicators

- Rates of return on the funds invested in some of the publicly-owned assets, for example, in ports and rail, are too low to cover the cost of the funds, which raises questions about the quality of decision-making regarding investments in these assets.
- Significant technological changes are happening in the transport sector internationally. Some parts of the sector in New Zealand are grasping new innovations, but there are also impediments to innovation in places.
- Governance arrangements for the publicly owned parts of the sector have significant scope for improvement.
- Investment coordination and planning can help to address coordination issues between different parts of the logistics chain. There are different possible approaches to this issue and it is not clear that the current approach in New Zealand is best practice.

Where are the opportunities for improvement?

Those who manage freight assets are responsible for delivering productivity improvements. However, their incentives to do this will be influenced by the regulatory and institutional frameworks within which they operate. This report therefore focuses on possible improvements to these frameworks. It identifies

improvements that are specific to particular parts of the logistics chain, as well as improvements to the framework that applies across the freight sector as a whole. The common theme linking the proposed changes, however, is that they would strengthen the incentives for firms to seek opportunities for higher productivity.

Specific changes

The Commission has identified improvements to the regulatory frameworks that affect shipping lines, ports, airlines, airports, road freight, rail freight and border security.

Liner shipping carriers

Cooperation agreements between international liner shipping carriers have historically been exempt from the full application of domestic competition (anti-trust) laws. The policy rationale for these exemptions was that practices such as price/capacity fixing and revenue pooling were needed to ensure access to reliable liner shipping operations. As such, the public benefits of the agreements were considered so likely to outweigh any anti-competitive detriments that there should be no requirement for carriers to prove that this is indeed the case.

This approach was adopted in New Zealand, which has automatic exemptions from the Commerce Act for all agreements between carriers concerning international shipping, including price/capacity fixing agreements. This approach is in contrast to most other industries, where the onus is on the parties to the agreement to prove to the satisfaction of the Commerce Commission that the public benefits of agreements that would otherwise breach the Commerce Act outweigh any anti-competitive detriments.

Continued developments in international shipping over the past two decades, and in particular the rise of cooperation agreements without price/capacity fixing provisions (non-ratemaking agreements), independent carriers, and individual service contracts, have called into question the need to automatically exempt all types of agreements to ensure adequate and reliable services. There now seems to be little evidence that reliable shipping services are so dependent on the ability to have ratemaking agreements that such agreements should be automatically presumed to be in New Zealand's best interest. In relation to non-ratemaking agreements, it is unclear what proportion of these agreements would breach the Commerce Act (absent the exemption), and if they would, to what extent these would benefit New Zealand, and/or to what extent beneficial agreements would be deterred if the exemptions were removed. Accordingly, there seems to be little reason why international shipping should be treated differently to other industries by having an automatic exemption for agreements, without any analysis of the actual impacts of those agreements.

The Commission's view therefore is that exemptions for the types of agreements with the higher risk of anti-competitive detriment – ratemaking and capacity-limiting agreements – should be removed and authorisation mechanisms should be relied upon for assessing whether these agreements are in the public interest. In the case of non-ratemaking and non-capacity setting agreements, there should only be one exemption (in the Shipping Act), extended to apply to inwards shipping, and the remedial regime in the Shipping Act should be strengthened by introducing a registration regime for these agreements.

Coastal shipping

In New Zealand, the Maritime Transport Act 1994 (s.198) allows international operators to compete on coastal routes against domestic operators, providing they do so as part of an international voyage and do not operate in New Zealand beyond a continuous period of 28 days. An issue raised in some submissions was whether cabotage (reservation of domestic coastal trade to New Zealand-owned shipping operators) should be reintroduced.

The Commission does not support the reintroduction of cabotage. International shipping services carry significant volumes of container cargo around the New Zealand coast, much of it at low marginal cost and low prices. They also reposition thousands of empty containers each year. These services are valuable to New Zealand shippers. Reintroducing cabotage would likely increase prices.

The ports

While port charges are not a large part of total freight costs, the potential impact of ports on the overall supply chain is larger than this would suggest. Ports can be a choke point, because delays or poor reliability in them can have cascading impacts on later stages in the supply chain. The Commission reviewed four main ways to improve ports' performance:

- strengthening governance and/or ownership arrangements;
- more use of facilitative discussions and information sharing to aid investment planning (discussed later in this overview);
- increasing the scope for competitive provision of services within ports; and
- improving labour relations.

Governance and ownership

All commercial ports are majority owned by a local authority within whose territory the port is located. Four ports are listed on the New Zealand Stock Exchange. All other minority ownership stakes are in ports held by other local authorities or other port companies.

Local authorities may desire to control ports for a number of reasons, including to:

- pursue regional economic development objectives;
- resist control from outside the region, which conceivably might include closing an uneconomic port or reducing the scope of its activities;
- balance the financial benefits of owning the port against other amenity values of the port's location and surrounds; and
- limit monopoly pricing.

Difficulties in resolving multiple objectives in publicly-owned firms can contribute to problems in areas such as operational efficiency, labour relations and investment planning. To avoid such problems, it is important that port companies have a clearly defined purpose and that there are ownership and governance models that best suit that purpose. Effective governance of organisations is central to their ability to make value-maximising decisions.

The governance arrangements for publicly-owned enterprises need to be of high quality because publicly-owned enterprises face less discipline from other sources than comparable privately-owned enterprises. Publicly-owned organisations are also, in effect, spending others' money (the public) who are not well placed or sufficiently incentivised to monitor performance of such investments.

There are three areas where the governance framework applying to ports is not currently optimal: lack of clarity of purpose of the companies, failure to properly manage conflicts of interest; and insufficient monitoring and transparency of performance information.

Clarity of purpose

Obligations of council-owned ports are specified in the Port Companies Act 1988, Local Government Act 2002 and Local Government (Auckland Council) Act 2009. The purpose of port companies is not as clear as it could be. The State-Owned Enterprises Act, Local Government Act, Port Companies Act, and Local Government (Auckland Council) Act specify different types of publicly-owned companies and different objectives and governance regimes for each of those types. The State-Owned Enterprises Act provides a clearer purpose statement for ports than does the Port Companies Act. In particular, the requirement to be a "successful business … as profitable and efficient as comparable businesses that are not owned by the Crown" is a clearer statement of purpose than the requirement to be a "successful business" specified in the Port Companies Act. The objectives of council-owned port companies should be brought into line with the objectives for state-owned enterprises.

Managing conflicts of interest

To manage conflicts of interest, elected representatives and council staff should be precluded from being a director of port and airport companies. Legislation applying to Auckland already prevents elected representatives from being a director of some companies (recognising conflicts arising from political motivations), and some councils already preclude their staff from being directors (recognising a potential conflict with wider council objectives and the council's regulatory role). Council policies regarding director appointments should, as a result, be updated and their public availability improved.

Monitoring

When other competitive forces are muted, 'benchmark competition' can play an important role. The Commission's economic value added (EVA) analysis of selected ports found that negative EVAs were common. This suggests that the ports are making poor use of a scarce resource – capital – and that port owners should therefore be looking to address this by some combination of better cost control, shifting resources to better uses within the port, or retiring capital for redeployment elsewhere.

The Commission believes that EVA figures provide an important overall picture of the economic efficiency with which capital is being invested and used in the freight transport system. In the interests of improved reporting, transparency, and ultimately efficiency, it recommends that EVA figures are regularly published and given greater attention by owners and policy makers. Local authorities could act collectively to improve their ability to monitor port companies – further strengthening ownership disciplines and encouraging better performance. A possible home for such a function would be within the Local Government Commission; however, the Commission is interested to hear other views on hosting arrangements.

Ownership

The questions of the boundaries of the organisation and the ownership structure that will best promote performance are interrelated. As the boundaries change, the best ownership structure is likely also to change. It is therefore essential for avoiding conflict and confusion that the business activities that are to be run by these companies are ones for which commercial objectives are both appropriate and explicitly chosen. This may not cover all of the present assets or activities of port companies. Some assets and activities may not be best managed to commercial objectives where non-commercial objectives are significant, and should be governed differently and to different objectives.

The optimum level of council ownership will depend on the priorities assigned to particular aims by local communities. Full ownership comes with risks of non-transparent actions by councils with consequent risks for ratepayers. On the other hand, 100% private ownership may expose local community to risks they would prefer not to take. To improve the efficiency of ports, councils should consider increasing the degree of private ownership in them. Councils should evaluate whether they can still achieve important community aims with lower ownership stakes.

One option for public owners seeking to improve governance is to opt out of the relevant public sector governance regime and into the stock exchange regime. A stock market listing offers significant potential governance improvements for larger companies with partial council ownership. These benefits arise from an observable share price, reporting and continuous disclosure rules, and external analysis of management decisions. Council owners of larger port and airport companies should consider listing them on the stock exchange in order to obtain the governance benefits from listing.

Competition within ports

The Commission considered options for increasing competition between service providers within ports for services such as stevedoring and marshalling. A firm seeking to provide such services will typically need access to facilities, such as berths, that belong to the port owner. Section .36 of the Commerce Act can already be used by those seeking access to infrastructure, such as ports, but is difficult to apply as it has to be shown that the infrastructure owner has the purpose and intent of taking advantage of market power, which can provide a difficult threshold for challenging the decision of an infrastructure owner to refuse access. The Commission therefore explored other options.

One option is to separate the ports and service providers structurally. Structural separation, however, imposes transitional costs (which may be substantial) as the assets and operations of the infrastructure owner are detached from the assets and operations of the related service provider. With structural separation, an infrastructure owner is prevented from competing in downstream markets. This means that any benefits from vertical integration can no longer be achieved.

Another set of options involves strengthening the access regime for infrastructure at ports through introducing either a general purpose infrastructure access regime (as found in Australia and the United States) or a 'negotiate-arbitrate' regime, under which port owners are required to negotiate access arrangements with stevedores, with provision for arbitration if negotiation fails. The evidence on the efficiencies that could be gained by enabling access to port infrastructure in New Zealand does not yet, however, provide a compelling case that the benefits of either type of access regime would materially outweigh their costs. However, in the interests of their own productive efficiency and service to customers, port companies should periodically review the extent they unbundle activities within their domains and allow access for competing firms to supply them.

While the Commission would not support introducing a general access regime to cater for issues in the ports, if infrastructure access issues are causing concerns in other sectors, then a general infrastructure access regime is worth exploring for New Zealand.

Labour relations

Seaports have been transformed over the past fifty years in their operational functions and in the scale and sophistication of the equipment used to manage their core tasks. Although these changes have increased productivity, the Commission received many submissions that work practices have not kept pace with the changing nature of the tasks carried out on the waterfront, and that this is impeding further productivity improvements. Ports have long been associated with strained union/management relationships, with allied stress and costs for workers and employers alike, as well as those reliant on port services. This is a history that the Commission considers ports and their employees must move past, given the centrality of the freight system to New Zealand's trading performance.

To form its views on labour relations for this draft report, the Commission used a variety of information and data sources. It conducted ten focused engagement meetings on the issue of labour practices at New Zealand ports. It held individual meetings with senior representatives from six port companies, the Council of Trade Unions, ISO Limited and Business New Zealand. Information from these meetings was supplemented by material contained in submissions and during the Commission's 79 stakeholder engagement meetings. Data from the Department of Labour was also collected and analysed. The Commission also reviewed relevant literature and legislation.

The demand for port services is highly variable, driven by the arrival of ships for loading and unloading. Ports therefore face challenges relating to both optimising investment in capital equipment that may be idle for extended periods between ships, and managing access to labour to meet variable workloads.

Concerns were raised in submissions and discussions that work practices at some ports limit ways of working or unnecessarily increase costs. Inflexible work practices cause some ports to operate less productively or at higher cost than is possible (while maintaining high health and safety standards). Many of these work practices stem from past management decisions that were pragmatic and relevant to the working of ports before the advent of widespread containerisation and bulk material handling. Some originated as measures to limit opportunities for pilfering cargo. Others are an echo of previous systems for paying allowances for dirty or dangerous work or working in inclement weather before machines performed such work.

There are several explanations as to why these practices remain. These include: management reluctance to risk industrial action; management and unions may not share a common view on what constitutes a successful port operation; entrenched positions and cultures among employers, workers and unions; support in common law for 'customary arrangements'; and uncertainty regarding the coverage and implications of the exemptions under s.44(1)(f) of the Commerce Act pertaining to collective agreements,

including a potential perception (whether factual or not) that the exemption provides blanket protection for union activities.

There appears to be no need for a wholesale change to the current employment relations framework, because there is evidence that the current framework works well at some ports. However, the Commission believes that scope exists to make changes that – provided there is effective leadership within ports – would increase productivity and lead to a healthier workplace culture:

- Reviewing the extent to which provisions in existing legislation are sufficient to effectively regulate impediments to competition arising from union activity. This would include clarifying the extent to which labour practices are covered by the exemption set out in s.44 (1) (f) of the Commerce Act.
- Strengthening the governance framework applying to port companies, to ensure decisions related to employment matters are well aligned with the long-term interest of the ports, their shareholders, their customers and their employees, current and future.
- Strengthening the governance framework applying to unions in the Incorporated Societies Act (as is presently being considered by the Law Commission), to better ensure that decisions of unions are made under best practice regimes and aligned with the long-term interests of their members.

While a wider matter than issues relating to this particular inquiry, the Commission heard a number of concerns relating to the Employment Court. The matters raised related both to the length of time taken by the Court to reach (or publish) decisions, and to its apparent tendency to uphold long-standing, but undocumented, practices as employee rights. The Commission has not formed a view on this matter but is interested in evidence that parties may be able to provide about these issues.

Air freight

Air freight is essentially a by-product of the much larger provision of air passenger services. Competition in international air services is regulated in New Zealand by both the Commerce Act 1986 and the Civil Aviation Act 1990. Certain international air services trade practices can be exempted from the Commerce Act's prohibitions on restrictive trade practices if they meet criteria in the Civil Aviation Act and are authorised by the Minister of Transport.

The current competition regime for international air services may not be as effective as it could be. Competition regimes in other countries have evolved in response to market and regulatory developments, but New Zealand's competition regime for international air services has remained the same.

The Commission considers that the most important criterion for assessing options for improving the competition regime is the need to ensure that the process for authorising any trade practices is based on a good analysis of their costs and benefits. This will maximise the likelihood that efficiency-enhancing trade practices are authorised, and minimise the chance that harmful forms of coordination are authorised.

One way to ensure a good analytical process is to remove the specific industry regime in Part 9 of the Civil Aviation Act and rely solely on the Commerce Act regime to assess authorisation proposals. However, the current Civil Aviation Act regime is more suitable than a Commerce Act-only regime in several other respects:

- It requires the decision-maker to consider New Zealand's international obligations and international comity, which are important civil aviation policy considerations.
- It is probably less costly to administer than a Commerce Act-only regime for international air services.
- It is less likely to deter some air services coordination practices that may be beneficial, but have a low commercial return compared to the costs of an authorisation regime.

The cost of changing competition regimes is also an important consideration.

On balance, the Commission favours retaining the current arrangements, but strengthening the analytical requirements for assessing authorisation proposals by assessing and publicly testing costs and benefits, including the impacts on competition.

Airports

The relationship between airlines and airports appears to be strained, with airlines claiming that airports are using their market power as geographic monopolies to overcharge for services. Airports countered with arguments that their ability to exercise market power is constrained.

The three major airports were in 2008 made subject to 'information disclosure' regulation under s.56–56A of the Commerce Act. They are required to disclose a significant quantity of tightly specified information about their operations, including some details on international freight activities. Pricing disclosures under this regime were required by 30 September 2011. Annual performance disclosures for the 2011 financial year are required during the first half of 2012.

A Commerce Commission review of the effectiveness of the information-disclosure regime will be triggered by the first price change for specified airport services during or after 2012. This is likely to be a sufficient mechanism to review whether major airports are exerting market power over freight services providers.

Rail freight

The New Zealand Railways Corporation (trading as KiwiRail) is a state-owned enterprise. Governance and other arrangements are specified in both the State-Owned Enterprises Act 1986 and the New Zealand Railways Corporation Act 1981, which is a potential source of ambiguity and inefficiency. It would be preferable if KiwiRail's governance arrangements were specified only in the State-Owned Enterprises Act.

KiwiRail is currently classified as a 'multiple objective company' whose financial expectations are moderated by public good delivery requirements. However, there is little transparency about exactly what public goods are being delivered and at what cost to the taxpayer. The State-Owned Enterprises Act contains provisions for SOEs to receive direct payments for non-commercial activities (s.7), and it would be preferable if these provisions were used to identify expectations delivery of public goods by KiwiRail and the costs incurred in their provision.

The transparency of KiwiRail's longer-term investment plans is less than might be expected from an equivalent private company (at least one listed on a stock exchange). The public justification for the Government's initial $250 million contribution towards KiwiRail's $4.6 billion Turnaround Plan was very limited. This is unusual given the poor history of previous large capital injections into New Zealand railways. A full cost-benefit analysis, comparable to the ones produced for major road projects, would be a valuable contribution to the public debate.

Road freight

High Productivity Motor Vehicles (HPMV), which can raise productivity through longer and/or heavier loads, are required to have a permit from road-controlling authorities (mostly local councils for local roads, and the New Zealand Transport Agency (NZTA) for the state highway network).

The experience with implementing these permits has highlighted transitional problems. Some are coordination problems between different agencies, while others can be described as incentive alignment problems (from a local government perspective). The core obstacle to successful implementation of the HPMV Rule is the adequacy of infrastructure (mainly bridge capacity), difficulties in obtaining an assessment of whether the infrastructure requires upgrading, and the costs and time required to improve infrastructure where warranted.

Customs, security and biosecurity

Customs, security and biosecurity activities provide many benefits for international trade but also add to the costs of international freight – both directly through the payment of border fees and charges, and indirectly through the cost of complying with border regulations and standards. The agencies that supply these services are government monopolies. While their fees and charges compare favourably with those imposed

on exporters and importers in Australia and other OECD countries, opportunities for productivity improvement should still be pursued.

One way to reduce costs would be for New Zealand to relax its border controls and accept more risks. However, on the basis of submissions to the inquiry, the Commission believes the current level of risk tolerance reflected in the activities of New Zealand's border agencies is in line with the expectations and preferences of stakeholders. As such, the Commission does not believe that the level of border risk management is acting as a barrier to the efficiency of the international freight logistics chain.

Given this level of risk tolerance, the question then is whether there is scope for the agencies to achieve that level of risk in a less costly way. The agencies have embraced a risk-based resource allocation model to help them target expenditure and effort where it adds most value. This model can reduce the regulatory burden on companies with a good compliance record (low-risk companies) and increase the burden on those that consistently fail to comply (high-risk companies). Implementing this approach requires timely and accurate data and intelligence in order to correctly assess emerging risks; consistency and transparency in the approaches and assumptions used to assess the consequences of potential threats; and outcome-based performance measures. Border agencies should continue to enhance their performance measures and performance review procedures in order to improve the transparency of agencies' performance and increase management accountability.

The overall efficiency of border services is heavily influenced by the technologies and management practices that are used to achieve the desired outcomes. The introduction of the Joint Border Management System (JBMS), currently being developed by the Ministry of Agriculture and Forestry (MAF) and the New Zealand Customs Service (NZCS), will save costs by reducing duplication of paperwork and simplifying border procedures. While the number of days taken to complete New Zealand's export and import requirements compares well with other countries, the JBMS is an important opportunity for further improvement. The second phase of the JBMS project will largely address coordination issues between MAF and NZCS, but the introduction of this system is several years away. In the meantime, the role of the Border Sector Governance Group should be strengthened and performance measures for border cooperation developed and monitored through joint six-monthly reports to relevant Ministers. These performance measures should be in addition to, and separate from, those developed as part of the JBMS project.

Finally, the current Customs and Excise Act 1996 was developed in the early 1990s. Since then, the trade environment, technology and the types of risks confronted at the border have changed significantly. Given the rapid pace of development in information management and the growing need for accurate and timely communication with overseas agencies, it is important that the adoption of new technologies within border agencies is not unwittingly held back by legislation. The Customs and Excise Act should be added to the Government's legislative review agenda, to assess whether the legislation is fit-for-purpose in light of changes to border management practices and developments in technology since the 1990s.

General issues

The Commission has also considered ways to improve government interventions that impact across the freight sector: subsidisation of domestic freight transport; investment planning and coordination; and managing the external effects of freight transport.

Subsidisation of domestic freight transport modes

Road, rail and coastal shipping largely serve separate markets. Road is best suited to time-sensitive and short-haul freight. Rail is best suited to bulky, heavy products and/or long-distance freight. A high proportion of rail tonnage is to and from industrial plants, mines and ports. Coastal shipping is best suited to bulky, heavy, long-distance, non time-sensitive freight. It is not suited to short-distance freight because of handling costs and the inaccessibility of inland routes. The low frequency of services combined with the need for multiple handling means that in general it is the slowest form of transport.

There is some contestability, however, between transport modes. A small proportion (3–7%) of the road freight task is contestable by rail, and one estimate is that 8% of the overall freight task in tonnage is contestable by coastal shipping. For those products and routes on which transport is contestable by

different modes, it is desirable that price signals encourage shippers to choose the mode that imposes the least costs on society (for the required service quality). To the extent that subsidies distort these choices, they impede this economic efficiency goal. Explicit subsidies involve payments to providers, price discounts to consumers or a government-owned entity deliberately accepting a low return on capital provided. Implicit subsidies occur when externalities are not priced. Examples may include greenhouse gas emissions, water pollution and other forms of air pollution.

Many inquiry participants commented on the existence of subsidies to one or more domestic transport modes. Their general view is that coastal shipping is most disadvantaged by present arrangements, with less clarity on the relative positions of road and rail. Three main arguments were put forward:

- Road freight is subsidised as, under the pay-as-you-go (PAYGO) methodology, user charges are insufficient to generate a rate of return on past road infrastructure investment.
- Rail is subsidised by the government as it does not achieve an acceptable rate of return on the capital invested.
- Users of road and rail create externalities for which they do not pay.

Determining the level and direction of subsidies across transport modes is complex and difficult. Assessing subsidies for road transport is made more difficult by the fact that road infrastructure is used for both passenger and freight transport, and there may be cross-subsidies from one group to another. Furthermore, few externalities are priced, and most are difficult to estimate. The Commission has not examined domestic transport subsidies in detail and confines itself to a few observations in order to aid further analysis and discussion.

The Commission's preliminary view is that the 'PAYGO' methodology does not subsidise road use, as capital spending is recovered in the period in which it occurs. Another argument is that rail is subsidised by the government as it does not achieve an acceptable rate of return on the capital invested. The Commission has not undertaken the analysis needed to reach a conclusion on whether current and envisaged levels of rail subsidies are economically efficient, but it is concerned to see the investment of large amounts of public money without the presentation of a full business case. The Commission therefore recommends that a full cost-benefit analysis should be produced for future government investments in rail infrastructure. Such analysis would make the purposes and amounts of subsidies transparent, and help inform public debate and decision-making.

Investment planning and coordination

Efficient levels of investment are a key to achieving dynamic efficiency in freight industries; however, the nature of investment (large and 'lumpy'), demand (uncertain) and the supply chain (multiple interdependent decision makers) creates significant risks of under- and over-investment. While coordination might reduce these risks, 'coordination failures' of various types can lead to organisations making individually sensible decisions with collectively sub-optimal outcomes. A significant number of inquiry participants identified 'strategic planning' or 'government leadership' as a solution to a wide variety of perceived problems in international freight transport services. However, strategic planning (in its various forms) and government leadership have their own costs and risks. Governments should be wary of calls for it to assume the normal commercial risk of other parties.

Coordination failures may be exacerbated by the multiple objectives associated with public ownership. Such failures may be better addressed through governance and ownership changes rather than strategic planning. Government service providers (eg, road infrastructure providers), particularly those receiving poor price signals, face a difficult problem in collecting reliable market research on which to base their investment decisions. 'Facilitated discussions' can assist with this important task, and also promote relationship building and information sharing, leading to improved coordination.

Directive planning, in the sense of a centralised plan imposed on independent parties, has large associated costs due to the incentives it creates for non-productive behaviour, including rent-seeking, tactical misrepresentation and strategic hold up. Experience has shown directive planning should be avoided in

favour of lower-cost and lower-risk mechanisms. In an environment with considerable uncertainty and risk, there is value in a diversity of approaches. Centralised planning tends to lock in a single approach – with high costs should the future not turn out as expected.

Proposals for government investment in road and rail should be subject to rigorous investment screening in a coordinated way, so that the best projects are selected – be they road, rail, or a combination of the two. Without this level of transparency, the public cannot be confident that scarce resources are being allocated to the most beneficial projects.

In light of investment risks associated with preparing for 'bigger' container ships, an evolutionary path with staged investment is preferable. The scenario in which a lack of container ports in New Zealand capable of handling 'bigger ships' forces hubbing through Australia with both higher costs and transit times appears unlikely. This is because the commercial viability of this scenario would be undermined by direct services with smaller, albeit less fuel-efficient, container ships.

Port mergers have a number of potentially large benefits and costs. Where a proposed merger would result in a lessening of competition, the Commerce Commission is best placed to evaluate the public benefits relative to the detriments of that proposal.

External effects of freight transport

The international freight logistics chain can generate external costs outside the business producing them – for example, through its impact on the environment. These costs are largely managed through government regulations, which (appropriately) push the external costs (in part or full) onto the companies that produce them and the consumers of their products. The government's management of external costs can influence the efficiency with which factors of production are allocated within the economy.

In considering the regulation of external costs, the Commission has focused on issues raised by submitters. These are the impacts of:

1. the Resource Management Act on investment in transport infrastructure;
2. the Climate Change Response Act; and
3. the European Emissions Trading Scheme (the EU ETS) on New Zealand exports to and imports from Europe.

The Resource Management Act

Investment in transport infrastructure can impact New Zealand's natural and physical resources. The principal piece of legislation for managing these impacts is the Resource Management Act 1991 (RMA), the purpose of which is to "promote the sustainable management of natural and physical resources" (s.5 of the Act). This purpose is primarily achieved through district and regional plans that set out activities permitted within a given area. The RMA also includes a process by which an individual or business can apply for a 'resource consent' to undertake an activity that requires council approval.

Responsibility for implementing the Act is largely delegated to local authorities, which are expected to have the largest amount of relevant information and to be most affected by decisions. The role of central government under the Act is to provide policy guidance on matters of national significance and to oversee the implementation of its provisions.

The Commission received submissions highlighting the need for a more balanced approach to weighing up local and national implications of transport infrastructure projects. Participants raised concerns about:

- the RMA not recognising the importance of transport infrastructure;
- the need for additional central government guidance in planning for national transport infrastructure;
- the omission of seaports from the list of 'network utility' operators;
- the rigidity, complexity and cost of the consent approvals process.

These concerns mirror those expressed during other public inquiries and are acknowledged by both central and local governments. To address these and other issues, in 2008 the Government launched the first of a two-phase RMA reform agenda, leading to the Resource Management (Simplifying and Streamlining) Amendment Act 2009.

The second phase of the RMA reforms is currently in progress and includes work dedicated to improving infrastructure provision, including the application of the Public Works Act 1981. As part of the second phase, the Ministry for the Environment formed the Infrastructure Technical Advisory Group (ITAG). The scope of work for this group included reviewing the application of the designation processes to infrastructure projects, and investigating alternatives to designations for planning for and managing the effects of activities on network infrastructure.

The Commission can see four ways to improve how the RMA provides for the analysis of major infrastructure projects, such as those in the transport sector.

- There is ambiguity about whether the purpose of the Act allows for 'balancing' socio-economic aspirations with environmental outcomes, or whether s.5 (a), (b) and (c) represent an 'environmental bottom line' that must be secured regardless of the social or economic cost. In light of this ambiguity, there is a case for reviewing s.5, to clarify (and elevate) consideration of net social benefits and costs (including those accruing at a national level).
- The Government might, however, want to consider the case for such a review in a wider context than transport alone. If the Government decides not to review the purpose statement of the RMA, the Commission supports ITAG's recommendation that s.6 of the RMA be amended to include specific reference to the development and operation of regionally and nationally significant infrastructure. This would mean local authorities would need to 'recognise and provide for' transport infrastructure during the planning process and when considering applications for resource consent.
- The Minister for the Environment should commence development of a national policy statement for transport infrastructure, which would provide central government recognition of the importance of New Zealand's transport infrastructure.
- S.166 of the RMA should be modified to include seaports alongside airports in the list of network utility operators. This would promote efficiency by allowing the expansion of a seaport's land area to be assessed alongside other possible strategies for expanding port capacity.

The Commission expects that recent reforms to the RMA will, in time, reduce concerns about the rigidity, complexity and cost of the consent approvals process,

Climate Change Response Act

The ETS has been introduced to internalise the costs of greenhouse gases emitted by freight transport operators within New Zealand. The Commission notes that parts of the scheme will directly impact international freight.

- Fuel used by international sea freight and air freight carriers is exempt from the New Zealand ETS under the Climate Change Response Act 2002.
- Coastal shipping is covered by the New Zealand ETS through the inclusion of bunker fuels in the Climate Change (Liquid Fossil Fuels) Regulations 2008. Research conducted by the Ministry of Transport suggests that the ETS adds an average of $0.86 per 1000 tonne kilometres. The Ministry of Transport estimates that this adds around $3.4 million per annum to the cost of coastal shipping. At least part of this cost is passed through to shippers – for example, Pacifica currently charges a $6 per TEU ETS levy.
- Under existing cabotage laws, international carriers can carry domestic cargo on any leg of an international service. However, these ships are exempt from ETS costs.
- Cost increases per litre of diesel from the ETS are expected to be in the vicinity of 3–5 cents. Assuming an increase of 3 cents, the Ministry of Transport estimates that the New Zealand ETS adds around $1.32

per 1000 tonne kilometre to road vehicle operating costs. It is likely that these costs will be passed through to shippers.

- The Ministry of Transport has estimated that the New Zealand ETS will add $0.45 per 1000 tonne kilometre to the cost of rail freight.

The European Emissions Trading Scheme

From the start of 2012, emissions from all domestic and international flights that arrive at or depart from an airport in the European Union will be covered by the EU Emissions Trading System and therefore subject to an ETS cost. The Commission estimates that this will impact around 10–15% of New Zealand air freight exports (by value) and that New Zealand exporters may face relatively higher cost increases than their international competitors (who are in general located closer to European markets).

The Commission expects that at least some of the ETS costs will be passed through to freight customers. Information gathered during the inquiry indicated the EU ETS will increase air freight rates from New Zealand to the EU by around $60–70 per tonne. This constitutes an increase of approximately 1.3% on the price of air freight to Germany and around 1.6% on the price to the United Kingdom. New Zealand exporters will have limited ability to pass these costs on.

Concluding observations

The international transport freight sector has a significant impact on the costs faced in the first instance by New Zealand importers and exporters, much of which is ultimately passed through to industry and consumers. Having an efficient transport sector will help New Zealand's engagement in the international economy and its capacity to take advantage of the considerable benefits that engagement can bring.

This report has identified considerable scope for productivity gains in the sector, and has focused on ways that central and local governments, which are closely involved in the sector through ownership and regulation in particular, can improve their involvement. The international freight transport sector faces considerable challenges in an environment that is exhibiting pressure for change, as reflected in developments in markets, technology and preferences, including for better care of the environment. The Commission considers that the package of proposals in this report will enhance the capacity of the sector to make an even more important contribution to the future prosperity of New Zealanders.

1 The international freight transport services inquiry

Key points

- The Government has asked the Commission to undertake an inquiry into the accessibility and efficiency of international freight transport services available to New Zealand firms, paying particular attention to costs, efficiency, productivity and the effectiveness of current regulatory regimes.
- The Commission released an Issues Paper in July 2011, following which it received over 50 submissions and met with many organisations and individuals who provided their views and other valuable information for the inquiry.
- In preparing this draft report, the Commission sees its challenge as presenting compelling, evidence-based findings and making practical recommendations to improve the international freight transport system, and communicating these well.
- International freight transport services provide essential connections between New Zealand and the international economy. Particularly for a small, distant country such as New Zealand these services enable international trade, lift productivity potential and enhance wellbeing.
- But New Zealand's trade growth has lagged its OECD peers over the last 20 years, and its firms have largely failed to participate in the large expansion of intra-industry trade associated with the growth of complex supply chains and segmented, specialised production.
- New Zealand's small domestic market and distant location from major markets pose difficult challenges. The costs of being economically distant from key markets – both in terms of pure transport costs and the opportunity costs of time – are major challenges to New Zealand's ability to participate effectively in the global economy.
- However, improving New Zealand's international freight system will help to mitigate its geographical challenges and raise its ability to participate effectively in the global economy. A more efficient and effective freight system can raise the prosperity of New Zealand's businesses and workers and enhance consumers' purchasing power.

1.1 What has the Commission been asked to do?

Terms of reference

The Government has asked the Productivity Commission to undertake an inquiry into international freight transport services. As set out in the terms of reference,[1] the key high-level questions for the inquiry are:

- What are the factors influencing the accessibility and efficiency of international freight transport services available to New Zealand firms?
- Are there opportunities for changes in New Zealand's infrastructure and regulatory regimes that could increase the accessibility and efficiency of international freight transport services for New Zealand firms?

[1] See page iii for the full terms of reference.

In answering these questions the Commission has been asked to pay particular attention to:

- the effects of New Zealand's distance from overseas markets and reliance on overseas providers of international freight transport services;
- the costs, efficiency, productivity level and growth of all components of New Zealand's international freight services supply chain, with international comparisons; and
- the effectiveness of current regulatory regimes (including those in the *Civil Aviation Act 1990* and *Shipping Act 1987* and the potential costs and benefits of alternative regulatory arrangements, with international comparisons.

Issues paper

As part of its brief, the Commission released an Issues Paper (Productivity Commission, 2011) in July 2011 to set the scene for the inquiry and to invite individuals and groups to make submissions on a wide range of specific questions. The Issues Paper also set out a framework for the inquiry. The framework had two elements:

- An objective of enhancing the overall wellbeing of New Zealanders. The Issues Paper argued that, in the case of international freight, this objective largely amounted to enhancing the efficiency (in a broad sense) of the international freight supply chains that serve New Zealand exporters and importers.
- A breakdown of the international sea-freight and air-freight supply chains to and from New Zealand into their various components and subjecting these to scrutiny individually, in pairs where components interfaced, and in terms of the performance of the whole logistics chain.

The Commission received over 50 submissions on the Issues Paper. It met with many of the submitting organisations and a number of other participants in the international freight transport sector to gain further understanding and information. (See Appendix A for lists of submitters and meetings.)

The ideas and information provided in submissions and through the engagement meetings, together with its own research and analysis, have furnished the Commission with rich material to progress the inquiry to its next stage – namely publication of this draft report. The Commission would like to acknowledge and thank all the individuals and organisations who took time to make submissions, provide information, and meet with the Commissioners and inquiry staff.

The Commission's approach

The Commission's general approach in its inquiries is to investigate opportunities where policy changes can help improve the productivity of the New Zealand economy and, as a result, the wellbeing of New Zealanders. The approach places high importance on working well with others, learning from them and from the experience of other countries. The Commission sees its challenge as presenting compelling, evidence-based findings and practical recommendations, and communicating these well.

The Commission has approached this inquiry by examining New Zealand's international freight transport system for opportunities for change that would improve its performance. Accordingly it has structured this draft report into a number of broad parts, as follows:

1. **Overview and introduction**, including the importance of international freight to New Zealand and a framework for analysing the key issues of efficiency and wellbeing (Chapters 1 and 2).
2. **Performance and costs of New Zealand's international freight transport services** and how they compare with foreign comparators (Chapters 3 and 4).
3. **Impediments to efficiency-promoting competition and coordination** along freight supply chains to and from New Zealand (Chapters 5-7).

4. **Impediments to efficient and effective investment and innovation –** assessing planning, governance and ownership arrangements across central government, local government and the private sector in relation to international freight services for the future (Chapters 8-10).

5. **Effectiveness of current regulatory regimes** for New Zealand's international sea and air freight (Chapters 11-13).

Submissions on the Issues Paper, the meetings the Commission held with interested parties, and its own investigations threw up a number of key issues that appear to hold the most promise for finding ways to improve the performance of international freight services for New Zealand. These issues are spread across the different components of international freight.

These key issues and where they lie in the overall system are shown in the boxes down each side of Figure 1.1. The figure also gives a schematic picture of the distinct components of international freight transport services. Adjacent circles indicate a logistics interface between components; in essence a handover point. An overlap between two circles indicates that, in addition to a point of interface, some competition exists between those components. For example, rail sometimes competes with road and coastal shipping transport; but at other times it connects with them as part of an overall logistics chain.

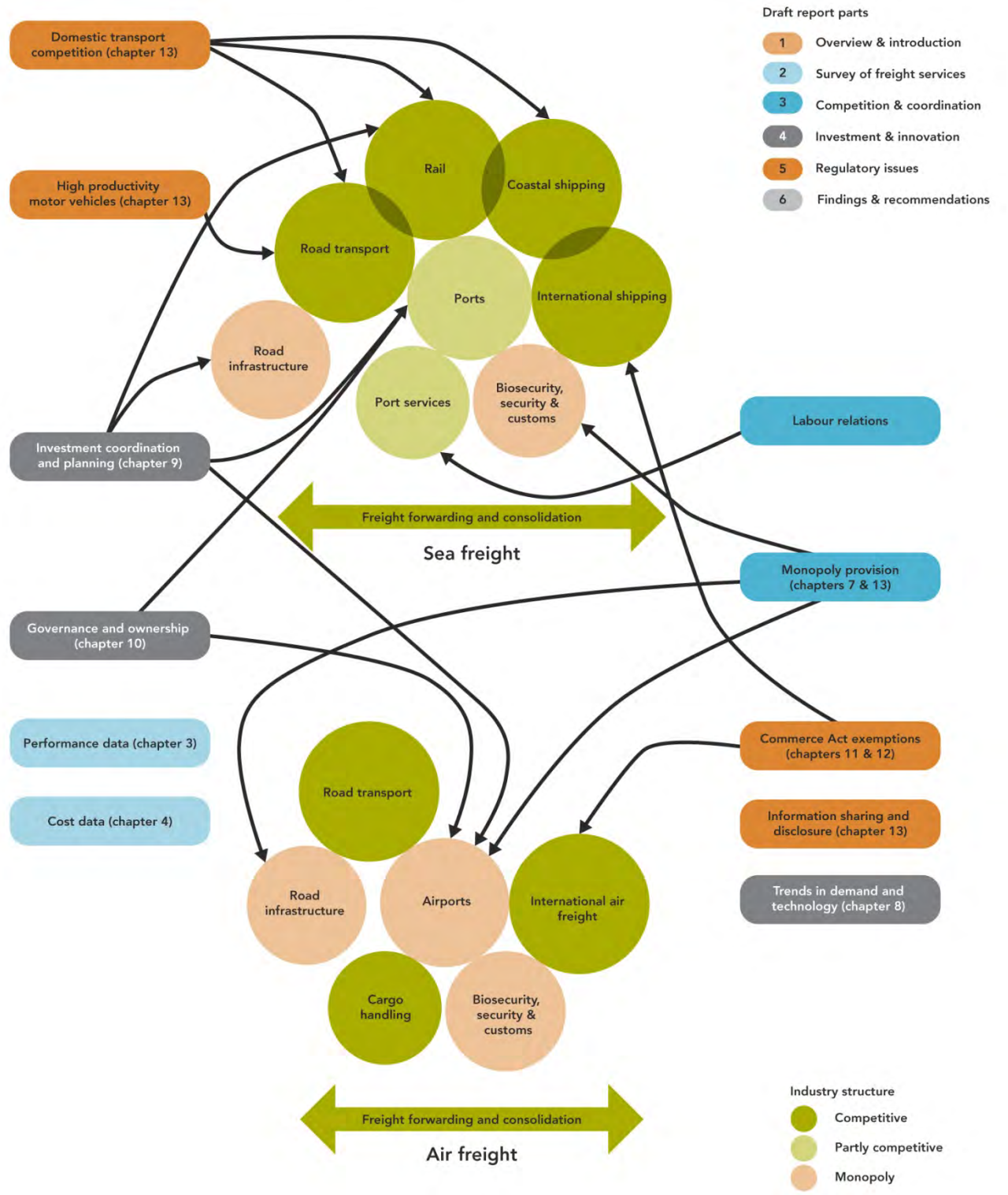
The circles are coloured to reflect an assignment of components into those with natural monopoly characteristics (light orange), those with the characteristics of competitive industries (green), and those that have the potential to be competitive (light green) but where competition may be limited.

Freight forwarders interact with all other components and are shown spanning them. While not depicted in the diagram, air and sea are alternative international freight modes. Thus, to some extent, ports compete with airports and international sea freight services compete with air freight services.

The Commission is aware of other recent work on international economic connections (Acting Secretary of the Treasury, 2011) and on transport and freight infrastructure in particular. The Ministry of Transport's recent report 'Connecting New Zealand' refers to several key documents relevant to this inquiry, including the National Infrastructure Plan, the Government's Policy Statement on Land Transport Funding 2012, the KiwiRail Turnaround Plan, and the Zealand Transport Agency's work on the Upper North Island Freight Strategy (Ministry of Transport, 2011b). In addition a range of regional plans and strategies are relevant, such as the recently released freight logistics strategy for the Bay of Plenty (Environment Bay of Plenty, 2011).

Two significant events have arisen in the course of this inquiry: the 5 October 2011 grounding of the container ship Rena on Astrolabe Reef off the coast of Tauranga, and the protracted industrial dispute between Ports of Auckland Ltd and the Maritime Union of New Zealand representing a large proportion of the port's work force. This inquiry examines a number of issues relevant to these events, for example in Chapter 6 (employment relations at ports) and section 13.6 (external effects of freight transport). However, the Commission does not comment directly on them. Partly this is because these events are subject to other processes or investigations. For example, the investigation of the Rena grounding by Maritime New Zealand may result in changes to improve safety at sea. Also, the Commission's role is to focus on principle-based policy changes that will improve future outcomes regardless of specific events, while also recognising that such events are sometimes the trigger for desirable policy changes.

Figure 1.1 International freight transport system components and issues



Notes:

1. The components are shown in circles, and the issues are shown in the oblongs, with chapter references and the colour indicating the part of the draft report.

1.2 The importance of international freight transport services

Trade and freight services are intimately connected

International freight transport services provide essential connections between New Zealand and the international economy. They allow New Zealand firms access not only to export markets but also to the imported raw materials, intermediate inputs, and equipment necessary for domestic production. If

international freight costs can be reduced, and quality and reliability improved, then trade will be enhanced, the economy can be more productive and New Zealanders' wellbeing enhanced.

While the rationale for trade is widely known, it is worth setting out its importance and key features. Trade:

- enables specialisation, which can improve productivity through concentrating on a narrower range of activities) and economies of scale (large upfront or fixed costs can be distributed over a larger volume of production). Moreover, a nation typically benefits from these economies when they occur also in other countries because it can import goods and services from them at lower prices and/or higher quality;
- allows access to resources and products that would otherwise be unavailable locally;
- expands the range of technologies available to local firms and consumers; and
- promotes productivity growth because competition with foreign firms spurs local firms to be more efficient and innovative.

These features are particularly relevant for a small and distant island nation such as New Zealand.

New Zealand exporters will only be successful if they have access to required inputs, including imported goods, and either:

- the local cost of the goods exported plus trade costs are lower or equal in the destination market to the similarly calculated costs of goods from competing sources; or
- the quality of their goods is sufficiently superior to outweigh any price disadvantage.

In all these cases trade costs have a direct impact on the profitability of exporting industries, and if too high they may preclude a business from exporting at all. Where imported goods (eg, farm machinery) are used in the production of goods for export, higher trade costs hit exporters twice by making inputs more expensive and outputs less profitable.

Trade costs include the direct costs of freight, but are wider than that. Examples of additional costs include direct charges and compliance costs from customs and biosecurity, tariffs, and the financing costs of goods unavailable while in transit. One of the tasks of this inquiry is to identify all significant sources of trade costs (see Chapter 4).

From the perspective of an importer or exporter, the key issue is the cost of the total supply chain, rather than simply freight costs. 'Logistics' is the process of efficiently moving goods from their point of production to their point of consumption in order to meet customer requirements, which typically include the quantity and quality of goods as well as the time and place of delivery. Freight transport is only one component of this logistics equation. Logistics management aims to meet customer requirements at minimum cost.

Logistic costs and 'trade costs', as described above, are very much the same thing. To the extent these costs include the New Zealand transport leg of any international route, domestic transport costs are also relevant to this inquiry.[2]

Importantly, economic efficiency[3] is not just a matter of the lowest possible cost. The logistics requirements of New Zealand firms can be complex (Box 1). Paying a higher price for a logistics service is justified if the extra value from the customer's perspective outweighs the increment in price. What matters for many New Zealand businesses will be access to a menu of logistics services, from which they can choose the combination of price, quality and timeliness that best meets their requirements.

[2] "To reduce costs for importers and exporters we need to be constantly searching for ways to achieve efficiencies across and between transport modes. It is essential that our air and sea ports are well-connected to our road and rail networks." Ministry of Transport, sub. 46, p. 1.

[3] Economic efficiency is discussed in section 2.1.

Box 1 **Case study: Zespri's international logistics chain**

Zespri is an example of a large exporter. Around 2700 growers supply kiwifruit to Zespri, which has exclusive rights to export New Zealand-grown green kiwifruit to the world (excluding Australia), and exclusive rights to Zespri Gold kiwifruit. Zespri ships about 50% of its exports to Europe, with most of the rest going into Asia.

Zespri spends around $120 million on international freight transport services to export around 400,000 tonnes of kiwifruit a year. Around 80% of the fruit is grown within two hours' drive of the Port of Tauranga, with most of the remainder grown in Northland, Gisborne and Nelson regions. Most of the regionally grown fruit is shipped out of the local port directly onto chartered refrigerated ships. Fruit from the Nelson area is also loaded into containers and transported by coastal shipping to the Port of Tauranga. Road transport is used to deliver fruit to packhouses/coolstores, and from there to ports.

A large percentage of the fruit is exported using 'reefer' vessels (refrigerated ships) – approximately 64 voyages each year. These are loaded with kiwifruit pallets, though some squash is also carried at either end of the season. The ships are configured so that ripening gas can be piped to the fruit at the appropriate point in the journey so that the fruit arrives ripened and ready for market.

By using chartered vessels, Zespri retains control over its logistics chain, including transit times. They can choose to 'slow steam' in order to reduce fuel costs, or travel faster in order to ensure customer demand can be fulfilled.

These ships are 'voyage chartered' by Zespri, making it someone else's responsibility to organise a backload. On the journey to New Zealand some of these ships carry fruit from South East Asia such as pineapples or bananas.

Zespri has contracted coolstore terminals on the wharves at Tauranga, and also in Europe and Japan where they can store around three weeks' supply of kiwifruit.

To serve smaller markets, Zespri also exports around 8000 40-foot refrigerated containers per annum using scheduled container line services. At the start of the season Zespri also uses air freight to pre-fill their supply line and put their product into supermarkets before their competitors.

Zespri has been exporting for around 20 years. Exports have doubled over the last 10 years.

Zespri spends around $90 million annually on marketing in overseas markets, focusing on quality, health and nutrition. Its reputation for a high-quality product, backed by an efficient supply chain, enables it to command a premium over competitors (mainly Chile). Total annual kiwifruit sales are around $1.5 billion.

Source: Interview with Sally Gardiner and Mike Knowles, Zespri, 21 September 2011; Zespri website.

New Zealand's trade, economic geography and comparative advantage

New Zealand's economy has a small home market and unusually long distances[4] to other markets. Market size reflects both the size of the home market and the distance to foreign markets, and has a powerful influence on economic development. New Zealand therefore faces difficult challenges from its geography even though there have been some positive developments, such as the rapid advance in communications technologies and the increasing demand for its exports as a result of strong economic growth in Asia.

As set out below, good transport links are a vital offset to geographical isolation. They lift New Zealand's ability not only to exploit its comparative advantage in temperate agriculture and other products, but also to be more closely integrated with the rest of the world economy. It is very difficult to imagine New Zealand benefiting from economies of scale if it does not possess efficient international freight supply chains.

[4] New Zealand is the most remote advanced country in the world in terms of average distance from economic activity (Ewing & Battersby, 2005).

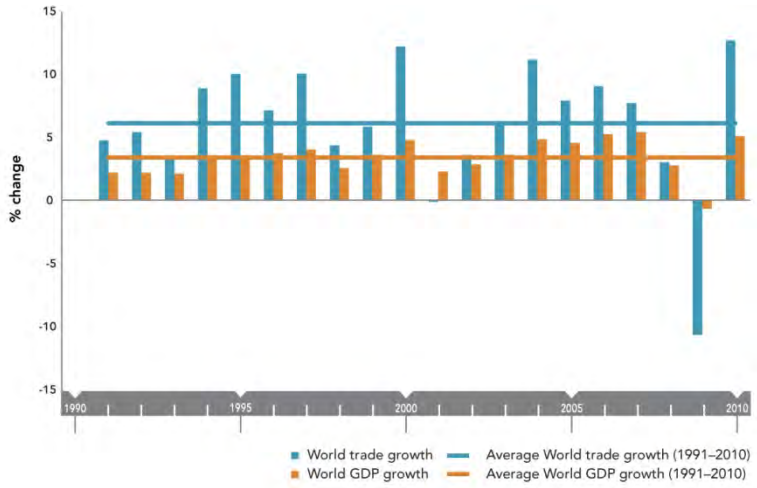
New Zealand's trade growth has lagged its OECD peers

Throughout its history, the role of trade has been crucial to understanding New Zealand's economic performance. New Zealand has tended to show stronger economic growth when its export sector has performed well.

The role of freight efficiency in determining New Zealand's export success has long been established. The development of refrigerated shipping in the 1880s that allowed New Zealand farmers to export meat and dairy products to Europe instead of being limited to subsistence farming has been described as "the most important innovation in New Zealand's history" (Hawke, 2011, p. 142).

Global trade has grown rapidly over the past 20 years, averaging 6.1% per year real growth since 1991, compared to 3.4% per year for global GDP growth (Figure 1.2).

Figure 1.2 Growth in world trade, real annual change 1991-2010

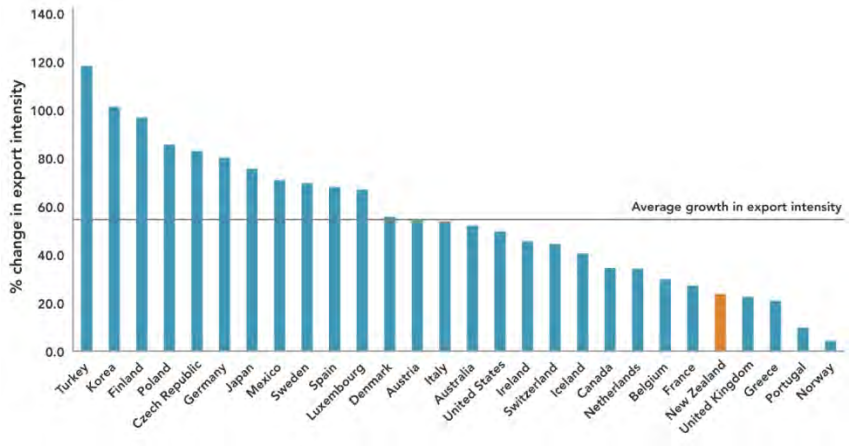


Source: IMF

The global economy is therefore becoming more trade-oriented. This can be seen in the increasing export intensity (measured by the share of exports in GDP) of all of the OECD countries over this period (Figure 1.3). However, New Zealand's growth in export intensity has been at the lower end of the OECD range – only 23% over the 20 years compared with 52% for the average country.

F1.1 Despite the global economy becoming more trade-oriented over the last 20 years, the growth in New Zealand's export intensity has lagged well behind that of most of its OECD peers.

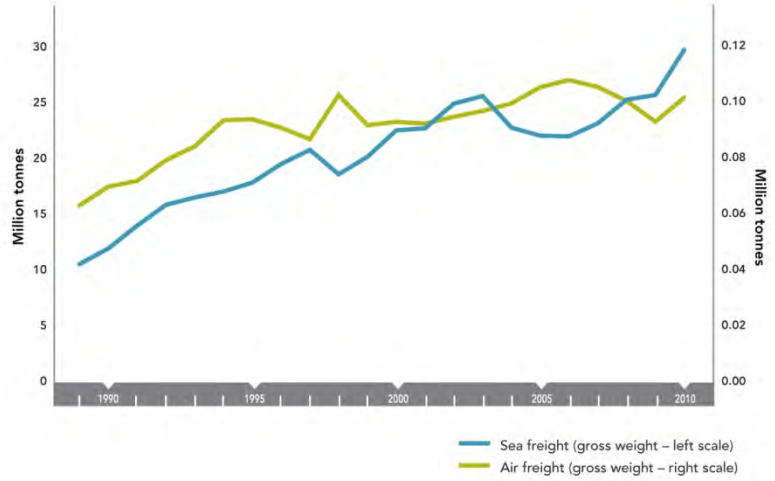
Figure 1.3 OECD growth in export intensity, 1991–2011



Source: OECD

Despite New Zealand's relatively slow trade growth within the OECD, Figure 1.4 and Figure 1.5 show that its freight exports and imports by weight have seen a substantial increase over the past two decades. Sea freight exports have nearly tripled in weight over this period, while air freight exports have increased by approximately two-thirds. Imports have also increased, but not as dramatically.

Figure 1.4 New Zealand exports by freight mode



Source: Statistics NZ

Figure 1.5 New Zealand imports by freight mode

Source: Statistics NZ

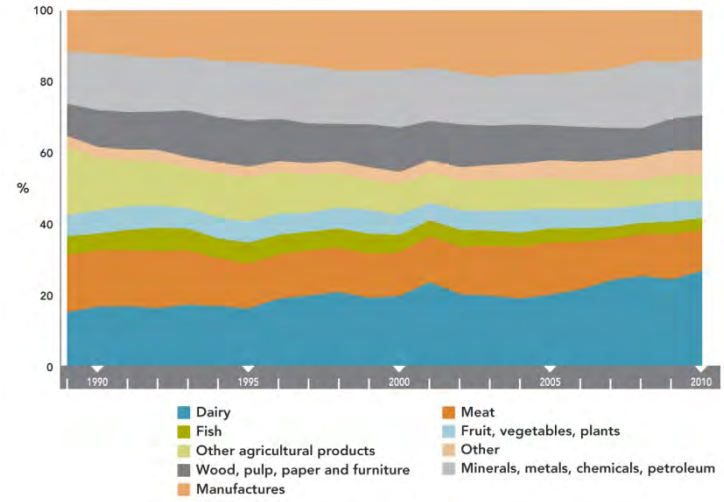
New Zealand's trade patterns

With a relative abundance of land, a temperate climate and natural scenery, New Zealand's comparative advantage supports the production of land-based goods and services – agricultural products and tourism.[5] As developing country incomes rise and consumer preferences develop further towards animal protein-based diets, there are likely to be increasing opportunities for New Zealand.

Figure 1.6 and Figure 1.7 show the composition of New Zealand merchandise exports and imports and how these have evolved over time.

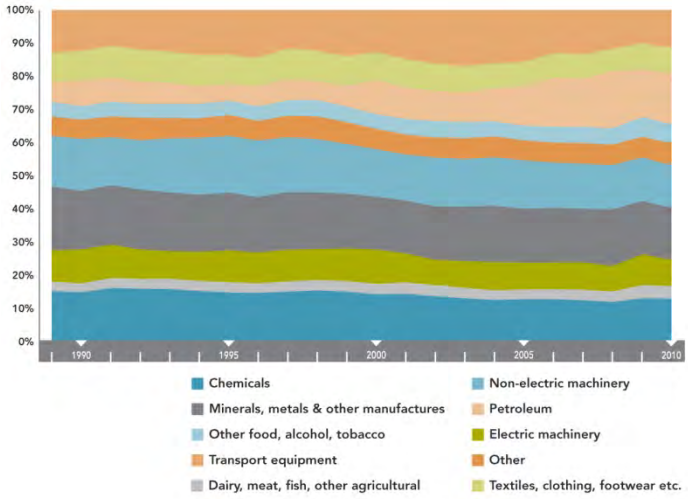
[5] This is not to say natural endowments fix a country's comparative advantage forever. Over medium to long periods some countries have achieved dramatic shifts in the composition of their exports. New Zealand's export composition has changed but to a lesser extent than many other countries.

Figure 1.6 Composition of New Zealand's merchandise exports: 1989-2010



Source: Statistics New Zealand

Figure 1.7 Composition of New Zealand's merchandise imports: 1989-2010

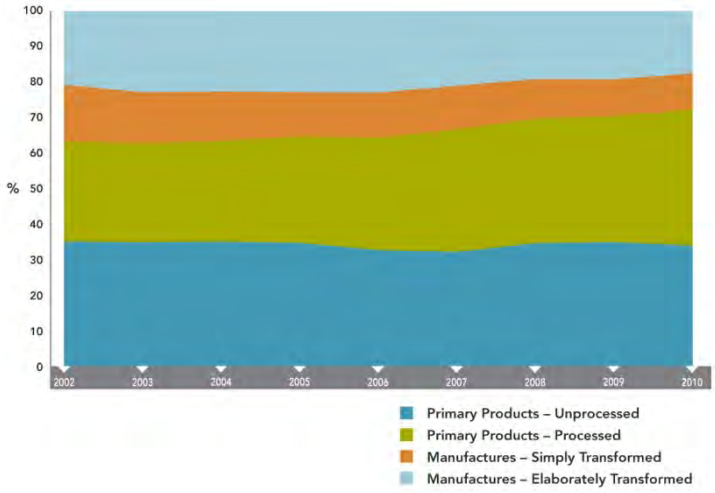


Source: Statistics New Zealand

There has been an increase in the proportion of New Zealand's primary products that are processed, instead of being sent offshore without any transformation (Figure 1.8). This may be due to the fact that New Zealand has some larger firms in the primary sector – such as Fonterra – that have scale and a domestic supply chain that includes processing.

Moreover, New Zealand's primary goods can and do embody knowledge and technology that enables sales into highly differentiated markets based on quality and natural attributes supported by strong branding.

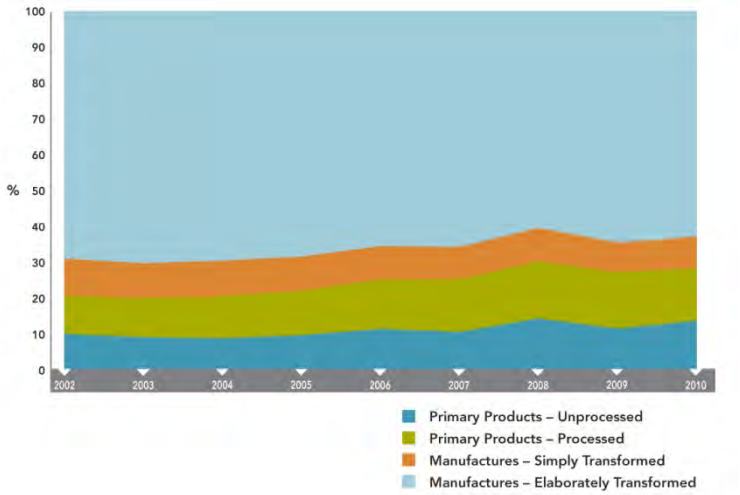
Figure 1.8 Breakdown of New Zealand's exports by level of processing: 2002-2010



Source: Statistics New Zealand

New Zealand's imports largely reflect its limited production of manufactured products and therefore limited demand for intermediate inputs into manufacturing production. Instead New Zealand imports final manufactured products from countries with the economies of scale that enable low-cost production, as well as some bulk items such as oil and ingredients for agricultural fertilisers (see Figure 1.9).

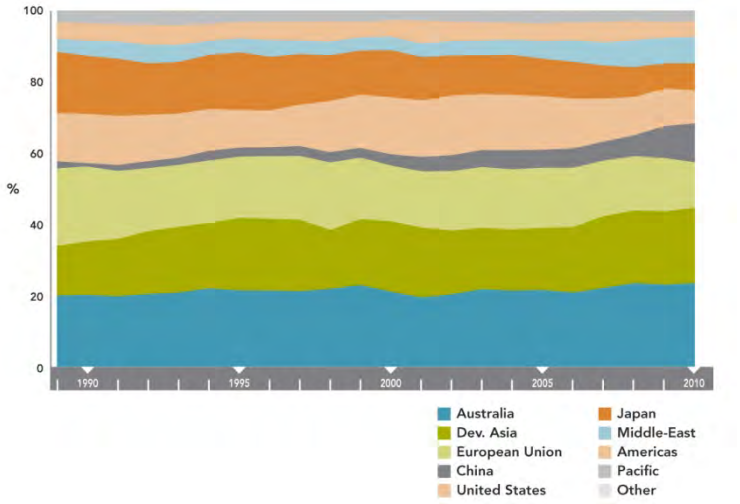
Figure 1.9 Breakdown of New Zealand's imports by level of processing: 2002-2010



Source: Statistics New Zealand

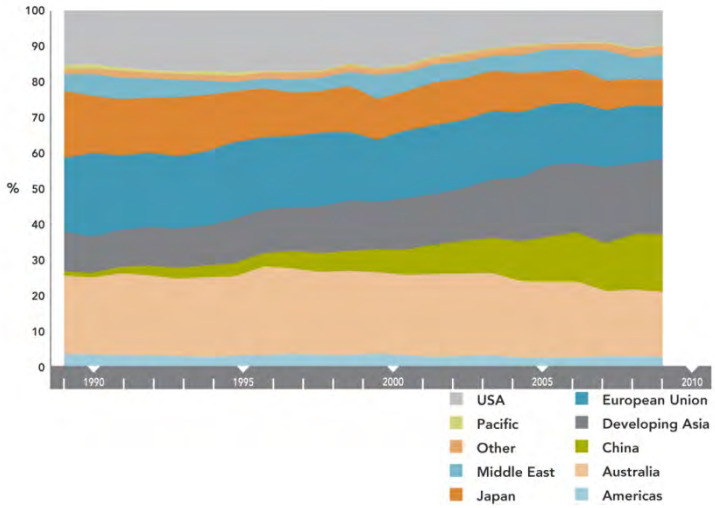
Figure 1.10 and Figure 1.11 show the destinations of New Zealand's exports and sources of its imports.

Figure 1.10 New Zealand's export composition by destination: 1989-2010



Source: Statistics New Zealand

Figure 1.11 New Zealand's import composition by origin: 1989-2010



Source: Statistics New Zealand

As a trading nation New Zealand has a strong interest in improving the efficiency of its international freight transport services. As Yvan Guillemette, an OECD economist who worked on the 2009 OECD Economic Survey of New Zealand, wrote:

> Because of the importance of maritime exports and imports to the New Zealand economy, anything that hampers maritime trade is likely to be a significant constraint on economic performance. These constraints are reflected in the costs of shipping goods by sea. Distance, volumes and product characteristics are important determinants of maritime transport costs, but port efficiency is also critical. In turn, port efficiency depends on governance and competition within the sector, on the quantity and quality of infrastructure, as well as on administrative overhead costs due to regulations. It is thus important for New Zealand's economic potential that regulations do not unnecessarily inflate transport costs, that the infrastructure necessary to deliver goods and services to other markets is efficient, that port governance is appropriate for the sector and that a healthy level of competition exists.
>
> (Guillemette, 2009, p. 12)

How large are the gains that could be expected by lowering transport costs? Venables (1996) suggests there is a "massive premium on proximity". Boulhol and de Serres (2010) suggest favourable locations (in terms of proximity to key markets) like Belgium and The Netherlands increase GDP per capita by about 6% relative to the OECD average. In contrast, more distant locations such as Australia and New Zealand experience a decrease of about 12%. Eaton and Kortum (2002) use a trade model to test the counterfactual

of reducing the economic costs of distance to zero and find income gains (broadly measured) of 16% to 24% across a range of OECD countries, relative to the status quo.

Summary

New Zealand's exports have not kept up with the rate of growth in global trade in recent decades. While the export intensity of the economy has increased slightly, many of the small open economies within the OECD have seen much larger increases in export intensity.

If New Zealand can ensure its international freight transport system is productive and efficient, this will raise the prosperity of export businesses and workers and enhance consumers' purchasing power.

F1.2

New Zealand's small home market and distant location pose difficult challenges. The costs of being economically distant from key markets – both in terms of pure transport costs and the opportunity costs of time – are substantial impediments to New Zealand's ability to participate effectively in the global economy.

Improving New Zealand's international freight system will help to mitigate its geographical distance from markets and raise its ability to participate effectively in the global economy. A more efficient and effective freight system can raise the prosperity of New Zealand's businesses and workers and enhance consumers' purchasing power.

2 The Commission's framework

Key points

- Competitive markets that do not suffer significantly from 'market failures' generally do a good job in generating efficient outcomes.
- Where 'full efficiency' prevails, firms provide whatever goods and services customers desire whenever they can profitably provide them at prices those customers are willing to pay, but without earning excessive profits; and there are sufficient incentives for firms to provide customers even better value for money in the future by investing and innovating in plant, new technology and infrastructure.
- Economic efficiency (broadly defined) is the key yardstick of performance for the international freight transport system. An efficiency approach is not just about financial outcomes but will take account of harmful effects of freight transport on the environment and other market failures. Other important influences on wellbeing are best dealt with through other channels than international freight transport.
- New Zealand's international freight transport services can be usefully viewed as a *system.* This inquiry focuses on the elements and links of this system – the interactions of institutions and policies on medium- to long-term trends in 'hard' and 'soft' infrastructure investment, the transport services that (predominantly) private-sector firms choose to supply, and the overall logistical system serving exporters and importers. It will examine relationships between modes – air, sea, road, and rail.
- International freight transport has distinctive characteristics such as large, lumpy infrastructure investments, tensions between funding to cover costs and pricing to encourage efficient use, and the importance of coordination and transit time along supply chains. These characteristics require central and local governments and the private sector to play their parts to make the system work efficiently.
- Enhancements in freight can, through a series of responses in the wider economy, lead to improved trade performance, higher GDP per capita, and ultimately higher wellbeing.
- Government has several roles in international freight transport including investing in and owning infrastructure, setting taxes and user charges and regulating. But intervention is only justified where benefits outweigh the costs. Principles of good regulation should be used to design and monitor regulatory interventions, including the decision that regulation is the best option.
- Access to international freight transport does not mean services being provided to everyone regardless of cost, but their being provided where there is willingness to pay to cover the cost. Some cases, where relatively isolated producers cite a lack of access, are unlikely to fulfil this condition.

The Commission has adopted an analytical framework for this inquiry that helps it to identify problems in international freight services, understand their causes, and formulate the best options for solving them.

A starting point for the Commission is that competitive markets that do not suffer significantly from 'market failures' generally do a good job in offering consumers choices of goods and services from a range of suppliers. Moreover, such competition generates the lowest prices taking into account the resources needed to produce the goods and services. Competition achieves this because firms offering poor value for money lose custom and do not survive. It also provides the stimulus for firms to invest in new structures and equipment and invent and/or adopt new technologies that will make them more productive in the future. Another way to describe all this is that competitive markets, working well, generate *efficient* outcomes.

2.1 Efficiency and wellbeing

There are several important dimensions to economic efficiency, each of which relates some concept of outputs and their value to the resources used in their production.

- *Productive efficiency* is achieved when goods and services are produced at the lowest cost of production.
- *Allocative efficiency* is achieved when the goods produced correspond best to what people want. In general, no barriers to trade and prices that reflect the marginal social cost of production will result in a product mix that is allocatively efficient.
- *Dynamic efficiency* is achieved when optimal decisions are made on investment, innovation, and market entry and exit, to create productive and allocative efficiency in the longer term.

In a situation where 'full efficiency' prevails, firms provide whatever goods and services customers desire whenever they can profitably provide them at prices those customers are willing to pay, but without earning excessive profits; there are sufficient incentives for firms to provide customers even better value for money in the future by investing and innovating in plant, new technology and infrastructure; and there is cooperation with other firms as necessary to achieve further efficiencies.

In its Issues Paper, the Commission argued that efficiency of freight services should be the key focus in this inquiry:

> The Commission's view is that, in the case of the subject of this inquiry, overall wellbeing is best served by promoting the economic efficiency of the logistics supply chain for New Zealand importers and exporters. Efficiency improvements should result in lower prices for imported goods and higher profits for exporting industries. Lower import prices directly benefit New Zealand consumers and firms, and higher returns for exporters are also likely to benefit employees through better wages and opportunities.
>
> Productivity Commission, International Freight Transport Services Issues Paper, July 2011, p. 3

Several submitters criticised the Commission's approach as too narrow.

> Well-being is not reducible to the narrow concept of economic efficiency set out in section 3.2 of the Issues paper. In a long-run perspective, productivity growth is hindered, not helped by policies that sacrifice social capital and political goodwill in pursuit of short-term gains, especially when those short-term gains benefit particular sections of the community at the expense of others.
>
> New Zealand Council of Trade Unions, sub. 014, p. 6

Local Government New Zealand's submission drew attention to its set of principles:

> In developing a view on the provisions in the issues paper we have drawn on the following high level principles that have been endorsed by the National Council of Local Government New Zealand.
>
> Local Government New Zealand, sub. 042, p. 2

These principles included local autonomy and decision making; accountability to local communities; local difference = local solutions; reduced compliance costs; equity; and cost-sharing for national benefit.

Despite these concerns, the Commission still takes the position that trying to ensure that freight activities contribute most to the overall wellbeing of society is largely about how efficiently businesses undertake those activities. While the Commission agrees with the argument in the CTU submission that efficiency is not the only important driver of wellbeing, the other influences are best dealt with by developing institutions and setting policies that have little or nothing to do with international freight transport services. For example, other important influences are distributional outcomes, social and procedural justice, equality of opportunity, and individual rights and freedoms. Whatever view is taken on desirable outcomes in these spheres, altering the efficiency of freight transport is unlikely to be an effective means to achieve them. It follows that within sensible limits, greater efficiency in freight transport will raise wellbeing without detriment to its other elements, which are best pursued through different channels.

A further reason that the Commission believes it is right to focus on economic efficiency in this inquiry is that international freight is an 'intermediate' good or service.[6] Freight services are not something to be valued for themselves, but as a *means* to achieve something that is valued – for example, consumer goods at a local retail outlet. So while people may have requirements for all sorts of features in purchasing, say, a mobile phone, they do not care about the various electronic components other than whether they work well and cost no more than they need to. The transportation inputs of the phone have a similar status.

Market failures

Un-priced environmental costs are commonly seen as a form of market failure that can undermine the general result that competitive markets produce efficient outcomes. Other forms include congestion, concentration of market power, pricing in the presence of increasing returns to scale, and information problems. The Commission has kept in mind the potential for market failures to undermine efficiency. Table 2.1 provides a guide to the different potential problem areas and where they are dealt with in this report.

Table 2.1 Types of market failure in freight transport

Market failure	Nature of problem caused by freight transport	Where dealt with in the report
Environmental externalities	Greenhouse emissions, noise, soil and air pollution, visual intrusion	Environmental issues (Chapter 13), Resource Management Act (Chapter 8)
Congestion	Vehicles having free access to roads at times when additional vehicles will slow every other vehicle's journey on the same stretch	Not dealt with directly but is relevant to investment decisions particularly on road and rail infrastructure – Chapter 9
Pricing with increasing returns to scale	High fixed costs and low marginal costs are characteristic of many freight technologies – pricing at marginal cost may fail to cover average cost	Freight economics (section 2.2), investment coordination and planning (Chapter 9)
Market power	Inefficiency because a powerful seller (or buyer) influences prices and other terms to their own advantage	Impediments to competition (Chapter 5), and regulation (Chapters 11-13)
Coordination failures	Investors in complementary investments that are 'lumpy', in the sense that the minimum scale of investment is large, will tend to underinvest to avoid stranded assets	Investment coordination and planning (Chapter 9)
Information externalities	Information available to everyone is a public good but markets may not supply it optimally	Section 13.5 on information gathering and dissemination

Government failure

Because market failures detract from efficiency and wellbeing, it is reasonable to ask whether anything can be done to fix them. Potential solutions include environmental taxes, tradable permits, ownership, direct investment, and regulations to modify behaviours and encourage efficient pricing and investment.

But these solutions have costs and it is quite possible that a government's attempted solution to a market failure can end up making matters worse through so-called 'government failure'. Misgivings about the extent and efficacy of many government interventions in the economy were one of the catalysts for the extensive economic reforms in New Zealand that began in the 1980s, including in the transport sector (see Chapter 3).

Debate about whether government, with the public interest at heart, is capable of improving on the market, often centres on information issues. Freight logistics is a very dynamic service industry with multiple players with very diverse needs and changes in supply and demand over time. Even absent normal political pressures, a government would require an immense amount of information (together with the ability to

[6] A terminology meaning much the same is that demand for international freight is a 'derived demand' in that the demand arises indirectly because of the demand for goods in a particular location that are produced or held somewhere else.

process it) in order make optimal investment and operational decisions in the presence of this complexity and dynamism.

In the majority of real-world situations, decisions have to be made with incomplete information about the growth and spatial distribution of markets, changes in technologies, input costs and many other variables. A great strength of a market system is that decisions are based on the knowledge, assumptions and judgements of a diverse range of market participants. This plurality will generally be preferable to a single course of action by government. The 'market' is generally better than a single decision maker at seeking out innovative solutions, saving costs and closing down activities and ventures that turn out to be an inefficient use of resources (see Chapter 9 on investment coordination and planning).

While the Commission's recommendations in this inquiry are mostly to government, it has developed them with a healthy respect for the difficulties that governments and government agencies typically encounter in the presence of complexity, incomplete information and political pressures. It has tried to find recommendations that will improve the efficiency of international freight transport by striking the right balance between the risks of market failure and government failure.

F2.1 The Commission views economic efficiency (broadly defined) as the key yardstick of performance for the international freight transport system. An efficiency approach will take account of harmful effects of freight transport on the environment and of other market failures. Other important influences on wellbeing are best dealt with through other channels than international freight transport.

2.2 Freight economics – what are its distinctive features?

A framework for this inquiry needs to take account of the distinctive features of international freight transport and how these influence the economics of the sector.

- Demand for freight services is 'derived' from other activities.
- Freight transport is a complex supply chain that requires each link to play its part. This linking places a premium on coordination (in both operations and investments) across different firms and levels of government.
- The sector is characterised by large, inherently lumpy investments – for example, half a ship or an airport is of little practical use. The large capital requirements and lumpy nature of these items make them expensive and prone to coordination problems.
- Economies of scale mean that large freight volumes drive down unit costs. Economies of scale mean that not all services can be efficiently provided – for example, services with low volume.
- For some consignments, the certainty and duration of transit time are very important – for example, for perishable goods and fashion goods (Hesse and Rodrigue, 2004).
- Container freight has experienced more productivity improvement (for example, through standardised handling procedures) than has bulk freight. However, the latter includes many items important to New Zealand's trade, including logs, bauxite, fertiliser, oil and coal.[7]
- Refrigerated containers and refrigerated ships (both called reefers) and the power systems that support them are needed for important New Zealand exports such as chilled meat, dairy products, fruit and fish.
- There are large directional imbalances in flows of freight (and containers). This can have major impacts on costs and prices because uneven use of freight capacity on each leg makes the overall operation much less economic.

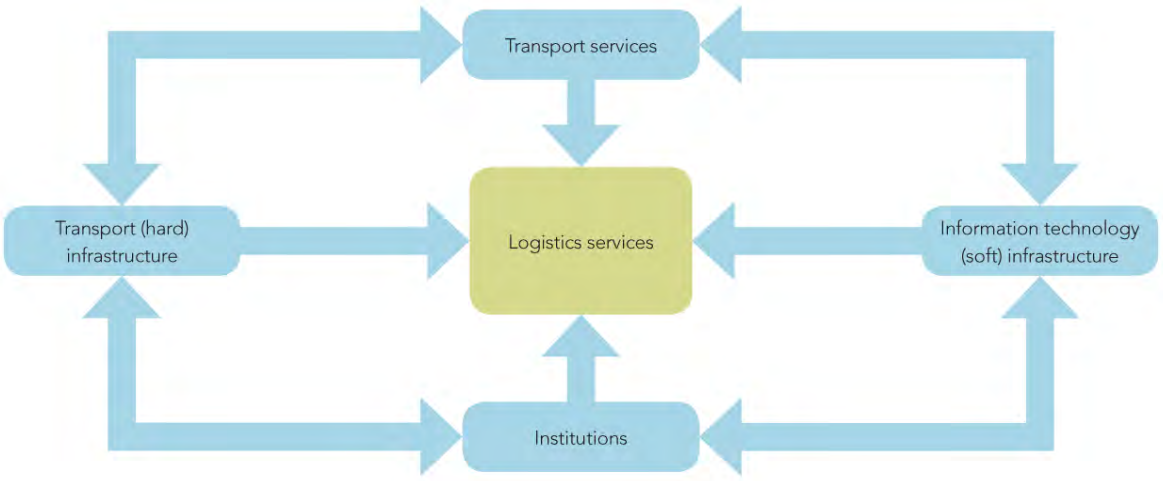
[7] The Commission has estimated that approximately 27% of New Zealand's imports and exports (by weight) are shipped in containers.

- Much of New Zealand's freight exports are accounted for by large entities with high volumes such as Fonterra and Zespri. Containerised imports tend to be more fragmented, although there are some big players such as Fonterra (again), the Warehouse, Foodstuffs and Progressive Enterprises, and some of the large whiteware and electronic retailers.
- Many small shippers rely on the services that exist as a result of the large-volume users.
- The sovereignty of governments to regulate is limited by the sovereignty of other governments.

New Zealand's international freight transport services can be usefully viewed as a *system.* The components of the system include freight forwarding, road transport, port and airport handling, international sea and air freight, each with their own characteristics and involving varying combinations of transport technology, and soft and hard infrastructure. In addition, each will be influenced by various aspects of policy and institutional settings. The interactions between all these will depend on the nature of the freight (for example, bulk or containerised) and its origin and destination.

Figure 2.1 is a generic representation of the interactions in such a logistics system.

Figure 2.1 Interactions in a logistics system



Source: Adapted from Figure 9, page 21, Lakshmanan and Anderson (2002)

This inquiry focuses on various elements and links in this figure – the interactions of institutions and policies on medium- to long-term trends in 'hard' and 'soft' infrastructure investment, the transport services that (predominantly) private-sector firms choose to supply and the overall logistical system serving exporters and importers. It will include interactions between the various modes – air, sea, road, and rail.

Investment in infrastructure

Investment in freight transport infrastructure is undertaken by central and local government, and by a variety of commercial companies under private, public or mixed ownership. The role of government is extensive but differs across modes. Whereas government (central and local) supplies the funding and makes decisions on the road network, KiwiRail (government owned) is the primary decision-maker and part funder of the rail network. Investment in ports and airports (for example, in cranes and terminal buildings) is made by individual companies, and investment in hubs and depots made by the likes of ports, large logistics companies and Fonterra.

Two key questions governing the efficiency of the transport system are:

- What is the best way to encourage the optimal use of existing infrastructure?
- What is the optimal rate of investment in transport infrastructure?

Optimal pricing of freight transport infrastructure

There is a tension between paying for infrastructure and pricing it to users. This is because the high fixed costs and low marginal costs of infrastructure mean that pricing at marginal cost (to encourage efficient use)[8] will generally raise insufficient revenue to cover the long-run average costs of investment. One solution is for government to fund the infrastructure, price it at marginal cost and cover the loss through its ability to raise taxes. But this approach also entails an efficiency loss – the deadweight loss arising from taxes that distort decisions about working, consuming, saving and investing.

It might also be argued that fairness demands 'user pays' and users should pay the full cost and not just marginal cost. Sometimes, therefore, governments charge infrastructure users at higher than marginal cost and possibly at full average cost. An example of this is the various charges that road users pay. On the other hand, the government currently provides taxpayer-funded subsidies to rail.

For commercial companies such as port, airport and shipping companies, there are other ways to cover gaps between costs and revenues in order to improve financial results and economic viability. The impact these mechanisms have on economic efficiency needs to be assessed case by case. Without going into detail, the main mechanisms that companies adopt in practice either singly or in combination are:

- Market power (if available) to price above marginal cost. In order to prevent excessive efficiency costs from this use of market power, the Commerce Act places restraints on behaviour and disclosure obligations to reveal rates of return on investments.
- Price discrimination among different groups of customers, so that those with greater willingness to pay are charged more than those with less. This approach can produce an efficient combination of user pays, marginal-cost pricing to achieve efficient use, and sufficient returns on investment to sustain a viable business.

Strategic interactions and investment

Markets in which there are only a few firms on the supply side (perhaps because of economies of scale and relatively small market volumes), and where investments are 'lumpy', typically suffer from commitment and holdup problems. This combination of features is common in logistics markets.

Commitment problems occur because investments in one part of the supply chain must often be matched in other parts of the chain – for example a port expansion may be useless unless matched by investments in land transport or long-term commitments by customers to use that port. If the supply-chain stages are owned by independent parties, then each party, fearing that its own investment will be stranded, has an incentive to delay investment until the others have committed. Under such conditions the overall level of investment typically will be less than optimal.

Holdup problems occur when parties have assets that cannot be deployed to an alternative use. Potential users of these assets can negotiate favourable prices that do not cover the full costs of providing those assets. Anticipating holdups, firms may underinvest in such assets.

Strategic interaction between firms will determine the prices that apply between stages of the supply chain. Bargaining power is typically determined by the number of choices each player has: those with no alternatives may find themselves unable to shift prices and conditions in their favour. A shipper with a choice of two ports has bargaining power over both the ports. Conversely, a port with a captive customer (one who has no economic alternative but to use that port) has bargaining power over both the customer and the shipping firms that service that customer.

The results of the Commission's analysis of the problems of investing in and coordinating different infrastructure assets across New Zealand's freight-transport logistics system are described in Chapter 9.

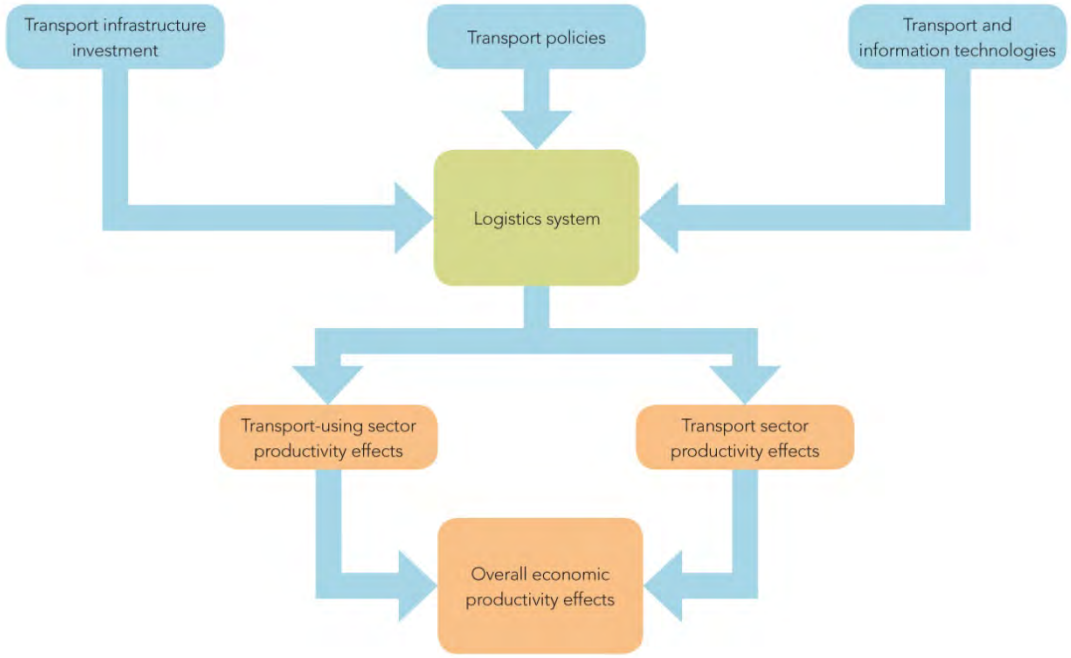
[8] Pricing at marginal cost encourages efficient use because price represents marginal benefit as measured by a consumer's willingness to pay. Allocative efficiency involves production and consumption of a good or service where willingness to pay exceeds or equals marginal cost but not beyond this point.

Freight transport productivity feeds through to wider productivity gains

While the central focus of this inquiry is the logistics of moving freight into and out of New Zealand, it is important to make the connection between improved freight logistics and productivity in the wider economy.

Grasping the nature of this connection can help to understand how performance enhancements in freight might, through a series of responses in the economy as a whole, lead to improved trade performance, higher GDP per capita, and ultimately higher wellbeing than would otherwise be the case. An indication of the relevant economic interactions making up this connection can be found in Figure 2.2.

Figure 2.2 Transport policy changes, infrastructure and productivity effects



Source: Adapted from Figure 11, page 27, Lakshmanan and Anderson (2002)

The top of the figure shows three sources of improvement to a logistics system: physical infrastructure investment ('hard' investment); technological changes in transport and information systems; and transport policies. Collectively, changes from these three sources influence the nature and performance of freight services. Examples include:

- Infrastructure investments in transport networks (for example, the Roads of National Significance, local roads, rail lines, and terminals such as ports, airports, and freight hubs) expand capacity and allow safer and speedier movements and operational improvements.
- Technological changes (eg, tracking systems, new ship designs, design and location of inland ports and freight hubs) have contributed to a variety of service and process innovations in freight logistics (see section 8.2 on freight technologies).
- Public policy changes in governance in the 1980s and early 1990s (for example, deregulation, corporatisation and privatisation) altered economic incentives and released competitive forces. These and changes governing physical flows (eg, high productivity motor vehicles, and streamlined border processes) have also contributed to improved freight logistics.

Broader economic productivity effects are likely to follow as freight transport users respond to improved freight logistics productivity. Such productivity gains should lead to a reduction in the 'generalised cost' of moving freight (including labour, fuel, vehicle-maintenance and time costs), and then to a reduction in the price to users of these freight logistics services.

Lower transport prices to exporters, importers, and those involved in domestic distribution can have effects equivalent to reduced barriers to trade (such as lower tariffs). They improve access to output and input markets, expand markets domestically and internationally, and contribute to economies of scale in production. These economies may arise from consolidation of production and distribution centres into fewer locations. Ultimately, improvements in freight logistics help freight firms to both cut costs and add value, and they also offer gains to freight-using firms in the production of their goods and services.

Adding value to output may arise from freight logistics alone (Lakshmanan and Anderson 2002, pp.85-86). Using fresh fish as an example, the best way to add value to a fish is to do nothing to it – except get it to the consumer quickly! Fresh fish is worth more than salted, frozen, or otherwise processed fish.

Fish can be produced in only a limited number of places and has scarcity value elsewhere. Transportation makes it possible for the fish producer not only to expand markets but to reach markets where the product has a higher value than in its local market. Similar logic applies to a variety of products that are produced in a limited number of locations because of highly specific skills or resources.

As pointed out in several submissions, meat exports are a current New Zealand example in which there is a trade-off between transport costs and the value added from transport.

> For both exporters and importers lengthy transit times add cost – the opportunity cost of capital tied up in goods while in transit. For exporters this cost generally cannot be passed on, given the competitiveness of international trade.
>
> For exporters of perishable goods that have a limited shelf life, such as chilled meat, long transit time also reduces an exporter's ability to service a market with confidence, and if transit times are too long, the export of chilled product is not a viable business model.
>
> As a significant, and growing, proportion of the industry's exports is premium priced, time-sensitive, chilled product, transit times are becoming increasingly important for the meat industry.
>
> Meat Industry Association, sub. 52, p. 5 [9]

F2.2 International freight transport can be viewed as a system with a number of distinctive characteristics such as large, lumpy infrastructure investments, tensions between funding to cover costs and pricing to encourage efficient use, and the importance of coordination and transit time along supply chains. These characteristics require both central and local governments as well as the private sector to play their parts to make the system work efficiently.

2.3 Roles of government in freight transport

The early part of this chapter described much of the Commission's framework for this inquiry – including a prime role for markets and competition in promoting economic efficiency in the freight transport system. There is a case for a more active role for government in cases where market failures occur and where the benefits from intervention are likely to outweigh their costs. The full range of potential roles of government in relation to the freight transport system can be listed as:

Creating, shaping and maintaining institutions. Institutions are 'the rules of the game' in a broad sense and include property rights, the legal system, the regimes for monetary and fiscal policies, and the architecture of central and local government. Governments have a role putting in place good institutional arrangements within which people and organisations face incentives to act in ways that contribute to the common good. The New Zealand Transport Agency (NZTA), Maritime New Zealand, the Civil Aviation Authority and KiwiRail (as a State-Owned Enterprise) are all government organisations that form part of the institutional fabric of the freight transport system.

Policy setting – governments set objectives and priorities on behalf of society.

[9] Refer also to Federated Farmers, sub. 27 and Export New Zealand, sub. 44.

Investing in infrastructure and transport operators – examples include road and rail infrastructure, and putting money into transport operators Air New Zealand and KiwiRail.

Ownership – often linked to investment but distinct from it. All New Zealand commercial ports are majority-owned by local authorities, as are some airports.

Taxation – taxes such as GST, fuel excise tax and corporate taxes affect decisions of suppliers and users of freight transport services. The revenue may also help to finance transport investments and operating expenses. Taxes are also a tool to internalise negative externalities.

User charges – an alternative means to taxation to create incentives for and raise revenue from freight transport users.

Spending – for example, the NZTA and local governments spend money to subsidise passenger bus and train services even though they do not own the bus and train companies that supply these services.

Regulation – central and local governments make and enforce regulations affecting international freight transport services. They include regulation to improve environmental outcomes, land use, safety, competition, and the provision of regular and reliable services. They also include international agreements relating to trade, border security and air travel.

The quality of regulation is important for efficiency

Regulation is a common form of government intervention – not least in international freight transport – and so poor-quality regulation has the capacity to harm economic efficiency. Deregulation in New Zealand during the 1980s and 1990s was largely aimed at releasing and redirecting market forces to improve productive and dynamic efficiency.

Despite deregulation, international airports, ports, airlines and shipping lines are all subject to industry-specific regulation in New Zealand. The regimes have arisen over time in response to the particular history, characteristics and problems of these industries. Debate about the appropriateness and effectiveness of these regulatory regimes continues, and the terms of reference for this inquiry direct the Commission to pay particular attention to some of them.

Regulation enables and constrains the activities of participants in the economy. Given its pervasive effects, there is a common interest in having 'good' rather than 'bad' regulation. The challenge of getting it right – only regulating when the net benefits exceed those of other alternatives, and designing high-quality regulatory institutions and rules when the regulation option is chosen has prompted much effort to develop principles of good regulation (Mumford, 2011). Without putting forward a formal set of principles itself, the Commission supports rigorous appraisal and evaluation of new and existing regulations. They should be subject to questions like:

- What does the regulation aim to achieve?
- Is that aim valid or sensible?
- Will the regulation achieve that aim?
- What side effects does it create? Are those worse than the problem it attempts to solve?
- Are there more cost-effective ways to achieve the aim?
- Is the regulation likely to be flexible, durable and able to continue to deliver net benefits when circumstances change?
- Is it certain and predictable?
- Are the regulatory processes transparent and is the regulator accountable?

F2.3 Government has a number of roles in international freight transport. But intervention is only justified where benefits outweigh the costs. In particular, principles of good regulation should be used to design and monitor regulatory interventions, including the decision that regulation is the best option.

2.4 Accessibility

The terms of reference for this inquiry include the question of how far New Zealand's infrastructure and regulatory regimes promote 'accessibility and efficiency in international freight transport services' for New Zealand firms. In its Issues Paper the Commission gave an interpretation of accessibility:

> In an efficient system, firms provide whatever goods and services customers desire whenever they can profitably provide them at prices those customers are willing to pay.
>
> An accessibility problem exists if a good or service is not supplied, even though demand exists and it could be efficiently provided.

However, it is evident from submissions that the term 'accessibility' is subject to other interpretations. For example:

> "Accessibility" cannot be reduced to "efficiency". Accessibility is separable from efficiency … and encompasses a wide range of matters … many of them with important regulatory implications. Examples include:
>
> - The role of logistics "hubs" in facilitating or obstructing transfers of cargo amongst transport modes;
> - Open or restricted access for third-party competing suppliers to key infrastructure assets such as oil unloading and storage facilities at major ports;
> - Dredging programmes and port facilities installation to increase the size and/or range of ships that can be handled at particular ports (often leading to excessive competition and stranded investments)
> - Role of competing pilotage and stevedoring operations at the ports
> - Allocation of landing slots at international airports.
>
> New Zealand Council of Trade Unions, sub. 14, p. 8

Also:

> Because the majority of international air cargo moves on passenger aircraft and because the source or destination of air cargo is not the principal determinant as to the airport that a passenger aircraft uses there is no competition between Auckland, Wellington and Christchurch Airports for air freight.
>
> This unfortunately leads to the situation where airports as landlords for air cargo operations give little or no priority to the efficient and effective siting of cargo handling facilities.
>
> New Zealand Air Cargo Council, sub. 8, p. 3

Several other submitters and inquiry participants have drawn the Commission's attention to various examples of accessibility 'problems'. Prominent amongst these were an alleged lack of air freight services from places such as Christchurch and Southland for time-sensitive export products such as cut flowers, horticulture and seafood (Christchurch International Airport, sub. 39 pp. 4-9; Environment Southland, sub. 4, p. 7).

Relatively isolated producers may have to bear considerable transport costs and delays in the local parts of the freight system, and these may mean, in some cases, that exporting from those locations is not viable. The quality of the transport network varies according to volumes carried, so in most cases the initial link into the supply chain will be a rural road, and the distance travelled to the nearest consolidation point (for example, a freight terminal, railhead, port, or airport) could be long. From a national welfare perspective, it makes sense for the level of investment in any part of a transport network to reflect the current or

prospective volume of traffic. So connectivity to, and the standard of service on, road and rail networks will vary widely.

The question for this inquiry is whether cited instances of lack of access are 'market failures' or whether they are examples of the demand for these freight services – as measured by willingness to pay – falling short of the resource costs of providing the services. The Commission remains comfortable with its interpretation of accessibility, and notes that many of the cases above are covered elsewhere in this report (see, for example, Chapter 5) in the course of investigating competitiveness and coordination in different parts of New Zealand's international freight logistics system.

F2.4 Access to international freight transport does not mean services being provided to everyone regardless of cost, but their being provided where there is willingness to pay to cover the cost. Some cases, where relatively isolated producers cite a lack of access, are unlikely to fulfil this condition.

3 International freight transport – how it operates and performs

Key points

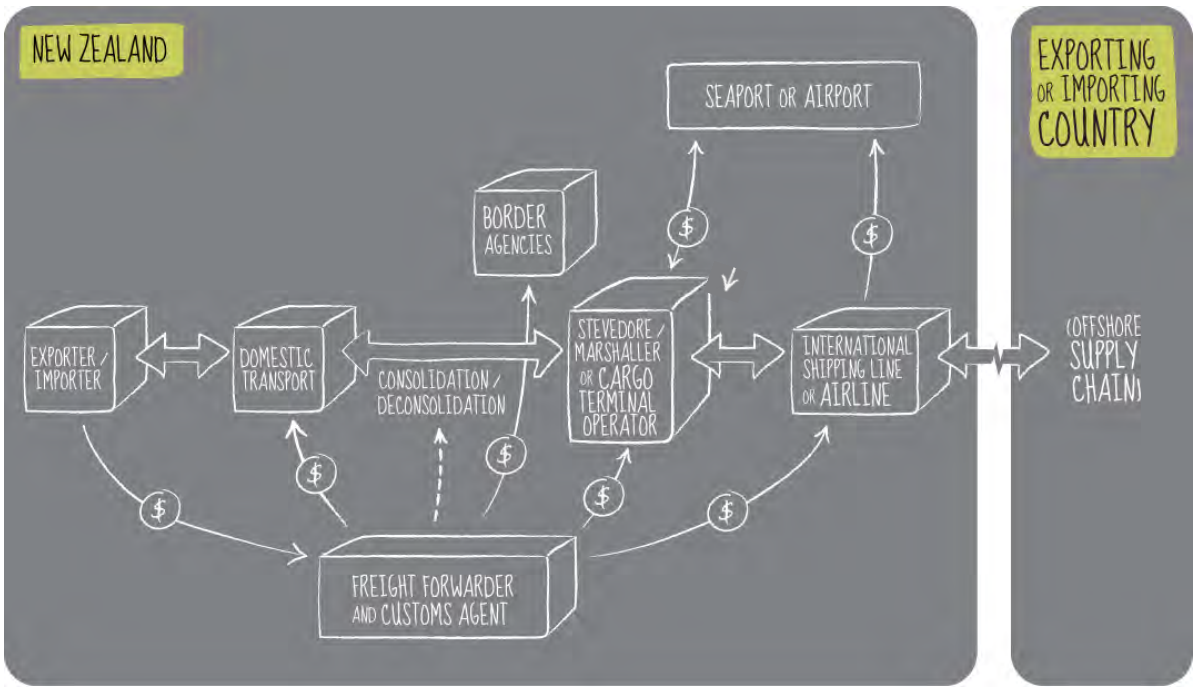
- The international freight chain encompasses a range of components running from 'producer to consumer'. As such, a performance assessment needs to cover all components of the supply chain.
- The New Zealand transport sector was the subject of a number of important reforms from the mid-1980s until the early 1990s. In international comparison, the OECD recently assessed the regulatory environment in the airline, road and rail sectors in New Zealand to be around average in the extent to which they encourage competition.
- New Zealand's transport and storage industry experienced strong productivity growth in the 1990s but virtually no productivity growth in the 2000s.
- Productivity measures indicate that New Zealand ports and airports compare favourably with Australian counterparts. Compared internationally, New Zealand customs services are efficient.
- Container productivity indicators show considerable variation in the performance of New Zealand's ports, with Tauranga being the strongest performer. This suggests there may be opportunities to either lift the performance of the below-average performers or for further shifts in freight towards the top performers.
- Compared internationally, New Zealand has low volumes of freight per kilometre of rail, and 'small' trains and trucks.
- Most of the six major ports analysed recorded negative Economic Value-Added from 2008 to 2011, although there was a trend to less negative figures from 2009 to 2011. This suggests the ports were not able to cover the cost of capital over this period. However, it is important to note that this was a period of very slow growth in trade volumes.

As discussed in Chapter 1, the performance of New Zealand's international freight transport services can influence firms' decisions about whether or not to trade internationally and thereby have a significant impact on New Zealand's trading patterns and economic performance. However, given data limitations, assessing performance is not straightforward. With this caveat in mind, this chapter outlines the performance of the New Zealand freight transport services to the extent possible. It begins by briefly describing the modus operandi and main players in the New Zealand freight logistics industry. It goes on to review the major reforms that have occurred in New Zealand's transport sector, and the productivity and performance of the international freight chain both over time and in comparison with other countries.

3.1 New Zealand's international freight services – a description

To better understand the logistics process, this section briefly describes the different components of the air and sea freight chains that New Zealand's exporters and importers utilise in getting their products to or from international markets. International freight logistics is a complex process involving a number of different operators and various contracting arrangements. In broad terms, the logistics chain can be split into a number of distinct phases, with New Zealand exporters and importers at the beginning and end of the chain respectively (Figure 3.1).

Figure 3.1 The New Zealand leg of an international freight journey



Notes:

1. The thick arrows indicate the direction of the physical movement of freight, and the thin arrows indicate where payments for services tend to occur.
2. This diagram shows a typical example, but the actual supply chain arrangement will vary depending on the firms and the product. For instance, some firms do not employ freight forwarders. The diagram is also likely to be more representative of container shipping than bulk good shipping. Finally, while cargo terminal operators pay airports to use airport facilities, stevedores and marshallers generally receive payments from the port (hence the bi-directional arrow between these components). As the Port of Napier submission emphasised, New Zealand firms use a variety of pathways to and from foreign markets (sub. 10).
3. There will be similar supply chain arrangements in the country of destination (for exports) or origin (for imports).

Freight forwarders

Freight forwarders facilitate the movement of freight along large parts of the logistics chain and play a key role in ensuring that transport links are reliable, tailored to the product and timely. This includes booking space, dispatching cargo and delivering it to the end user, completing all relevant documentation and paying for shipments. Freight forwarders may also consolidate freight from various sources into larger shipments. Freight forwarders in New Zealand may also act as customs brokers and organise inspections and clearance in sending and receiving ports. Some freight forwarders also provide supply chain management services, such as warehousing operations (eg, Schenker New Zealand Ltd) or international courier services (eg, DHL Global Forwarding). Some of the larger freight forwarders will reserve space with a shipping company or airline and act as wholesalers, subcontracting space to other forwarders.

Around 60% of New Zealand's maritime international trade is handled by freight forwarders. For air freight, the share may be as high as 95%. There are approximately 300 freight forwarders in New Zealand, but a very considerable proportion of New Zealand's exports are handled by a group of the ten largest New Zealand-based freight forwarders. On the import side, ten overseas-based freight forwarders account for a significant volume of shipments to New Zealand (Commerce Comission v Air New Zealand Ltd, 2011).

Domestic transport

Exports often pass through a freight forwarders' warehouse, where they may be consolidated with other shipments before being moved to the port or airport. Equivalent arrangements apply to imports. The various modes of domestic transport in the New Zealand context are:

Road

A large number of trucking companies operate in New Zealand, with many small regional operators and owner drivers. However, the largest 2% of operators operate 32% of all vehicles (Upton J. , 2008) and may also offer national distribution and logistics management services.

Rail

KiwiRail is a State-Owned Enterprise operating with multiple business units. KiwiRail Network (formerly ONTRACK) maintains and operates the rail network. KiwiRail Freight provides rail freight services and locomotives for passenger services (KiwiRail, 2010b). KiwiRail Freight operates approximately 800 services per week around the country and competes in three broad freight markets in New Zealand:

- bulk commodities – including coal, steel, logs, raw milk and chemicals;
- import and export – largely containerised goods, moving to and from major ports; and
- the domestic market – all other products that are transported on the rail network whose end destination is not directly for an international market, or that do not warrant an individual tailored service (KiwiRail, 2010b).

Coastal shipping

New Zealand's in-shore shipping fleet is very small, although international shipping companies are also active in this market. The domestic fleet consists of only 15 domestic commercial ships exceeding 45 metres in length (Rockpoint, 2009). These are specialist bulk carriers, the inter-island ferries or general freight ships. Rockpoint surveyed the coastal shipping industry in 2009 and noted:

> Shipping is particularly suited to bulky, heavy products but there exist few growth opportunities for coastal shipping in this natural market segment. In the trade of containerised goods, coastal shipping offers a significant price advantage over road and rail, offering the lowest transit costs in cents/tonne-km. This strength however needs to be balanced against the cost of intermodal delivery, given most journeys require a road or rail leg. (Rockpoint, 2009)

Domestic air freight

Domestic aircraft have a relatively small freight capacity and often cannot carry the standard 'unit load devices' that are used for international freight. For this reason, domestic air freight is not a part of most international transport supply chains in and out of New Zealand, and is not a focus of this report.

Border control and security

Border control and security are provided by government agencies with bases at airports and ports.

- Ministry of Agriculture and Forestry – Biosecurity New Zealand (MAF BNZ) manages New Zealand's biosecurity system. This includes setting standards and regulations, conducting border inspections, and eradicating pests or diseases.
- New Zealand Customs Service (NZCS) aims to prevent illegal goods from entering New Zealand. NZCS also collects excise taxes and the goods and services tax due on imports, and duties on imports and exports.
- Aviation Security Service provides aviation security services in New Zealand, which involves the screening of passengers and baggage.
- Maritime New Zealand conducts safety inspections of all ships calling at New Zealand ports to ensure they meet the various international safety standards, and that relevant port facilities and New Zealand ships meet requirements.
- New Zealand Food Safety Authority (NZFSA) is responsible for monitoring and enforcing food standards within New Zealand, including providing official assurance that food products exported from New Zealand meet the standards required by importing countries.

Sea freight

Shipping agents

As well as freight forwarders, several other agents are prominent in the sea freight supply chain:

- Ship brokers are key intermediaries between ship owners and ship operators. In New Zealand, following a number of mergers and acquisitions in the global shipping industry, a large proportion of vessel charters are undertaken via no more than six ship brokers.
- Port agents act for vessel owners and facilitate the provision of services to the vessel and the cargo from the ports, stevedores, government agencies and domestic transport operators.
- Liner agents act for the container vessel operators in foreign ports and typically ensure that there is sufficient cargo to load.

Shipping operators

Shipping operators transport cargo internationally between seaports. There are a number of different modes of shipping operators' services, which are outlined in Box 2.

Ship owners

International shipping has traditionally been owned by family businesses or governments. In recent years, "banking and retail investment finance have been making inroads into shipping ownership" (Ministry of Transport, 2010a). While shipping lines generally own some of the ships they operate, over 50% of container shipping capacity is chartered from ship owners (Ministry of Transport, 2010a).

Ports

New Zealand ports provide berths for coastal and international ships. Whangarei, Auckland and Tauranga ports handle over 70% of New Zealand's imports (Table 3.1). The handling of exports is more dispersed across the ports. This is particularly the case when measured by weight, while Auckland and Tauranga dominate when freight is measured in value terms.

The business models used by ports differ across the country. In some cases, the port companies own and exclusively operate the full spectrum of port activities, including the provision of port infrastructure, equipment and operational services, and directly hire all labour required for port operations.

At the other end of the spectrum is the landlord port model, where the port leases the land to other operators. Eastland Port in Gisborne, which focuses on non-containerised cargo, is the closest New Zealand has to a landlord port business model with virtually all activities in this port undertaken by independent contractors.

In intermediate cases, operators compete with port companies in some aspects of the business.

Table 3.1 Sea freight imports and exports by port – percentage of New Zealand totals, 2010

Port	Imports (by value)	Imports (by weight)	Exports (by value)	Exports (by weight)	Notable features
Whangarei	14.3%	31.3%	1.3%	6.5%	Oil imports; log exports
Auckland	51.4%	21.1%	24.5%	9.1%	Container imports
Tauranga	12.5%	19.3%	24.6%	27.3%	Coal imports; log and container exports
Taharoa	0.0%	0.0%	0.1%	2.8%	Iron sands exports
Gisborne	0.0%	0.0%	0.5%	4.3%	Log exports
New Plymouth	0.7%	2.4%	7.8%	12.2%	Oil and product exports

Port	Imports (by value)	Imports (by weight)	Exports (by value)	Exports (by weight)	Notable features
Napier	1.7%	2.8%	8.2%	8.0%	Wood and food product exports
Wellington	6.6%	6.1%	3.1%	3.5%	Log exports
Nelson	0.6%	0.7%	2.4%	4.2%	Logs, wood products, fruit exports
Picton	0.0%	0.0%	0.1%	1.1%	Log exports
Lyttelton	8.7%	6.9%	10.4%	11.5%	Coal exports
Timaru	0.6%	1.6%	1.6%	1.0%	Agricultural exports
Port Chalmers	1.5%	1.9%	12.3%	5.9%	Agricultural exports
Bluff	1.5%	6.0%	3.1%	2.6%	Bauxite imports; aluminium exports

Source: Statistics New Zealand

Stevedores and marshallers at ports

Stevedores and marshallers handle freight at seaports. Stevedores load and unload ships. For exports, marshallers receive cargo from road or rail transport and assemble it on the wharf ready for loading onto ships by stevedores. For imports, marshallers remove cargo from the wharves and prepare it for inland dispatch.

The contracting arrangements between the ports and freight handlers differ across freight type and ports. For bulk freight, stevedores and marshallers are typically employed directly by the cargo owners, with almost all ports facilitating choice. For containerised freight, freight handlers are employed by the port. The Port of Tauranga, however, is the exception and uses two competing companies for freight handling services for container traffic. Many of the stevedore companies operating in New Zealand offer services at more than one New Zealand port.

As well as being manpower intensive, the freight handling industry uses sophisticated ICT systems for services such as inventory control, warehouse management and vessel planning.

Air freight

Airlines

The majority of New Zealand's air freight is carried in the bellyholds of international passenger aircraft. Airlines most commonly sell air cargo services to origin freight forwarders. In the past, the International Air Transport Association (IATA) coordinated air freight pricing. However, although still used as a starting point, IATA air cargo rates and charges now play a less prominent role. Recently, 'integrators' have started combining aircraft, logistics and freight forwarding services to provide door-to-door transport of freight, particularly on trans-Tasman routes.

Airports

Airports charge landing fees to airlines and earn revenue for providing facilities to Cargo Terminal Operators, but do not play a direct role in processing international air freight. The New Zealand Airports Association notes that "Airports in New Zealand do not participate directly in the international air freight services market other than by providing infrastructure or acting as landlord to the airlines and other companies participating in the industry." (sub. 41, p. 2)

Auckland Airport handles around 80% of (air-freighted) exports and over 90% of imports. Almost all of the remainder goes through Christchurch.

Freight handlers at airports

At airports, freight is handled by Cargo Terminal Operators (CTOs), otherwise known as ground handlers. CTOs are effectively the cargo handling agents for the airlines. Ground handling involves loading or unloading aircraft, breaking the cargo down or packing it up (although sometimes this is done by freight forwarders at their warehouses), and making the goods available to the freight forwarder at the airport.

Two CTOs operate at both Auckland and Christchurch International Airports – Air New Zealand and Menzies Aviation. Air New Zealand's CTO handles cargo for 14 international airlines, including Air New Zealand and Qantas. Menzies handles cargo for 8 international airlines. Airlines competitively tender for CTO services via a 'request for formal information' every 2–3 years.

Box 2 **Modes of shipping services to and from New Zealand**

The proportion of voyages by mode to and from New Zealand is shown in Figure 3.2.

Container shipping

This refers to cargo ships that carry their entire load in truck-size intermodal containers. As discussed in Chapter 4, charges for container shipping services vary by commodity, weight and route.

Bulk shipping

These vessels are designed to carry bulk dry cargoes such as grains, fertiliser, steel, iron ore, wood chips, logs and cement in their cargo holds. Dry cargo vessels make up approximately 40% of the world's shipping fleet. The five main commodities of bulk ships are coal, ores (iron), minerals (bauxite/alumina), grains and phosphates.

Bulk reefer shipping

A refrigerated ship (or reefer carrier) is used to move perishable commodities which require temperature-controlled transportation (this does not include refrigerated containers, which are referred to as reefer containers). New Zealand export commodities such as kiwifruit, meat, other horticultural products, dairy and fish use these vessels.

Roll on, roll off shipping

Normally called Ro-Ro class, these vessels are designed to carry wheeled cargoes, for instance cars, trucks, and other heavy machinery. New Zealand has a number of shipping services that cater for this type of service and commodity.

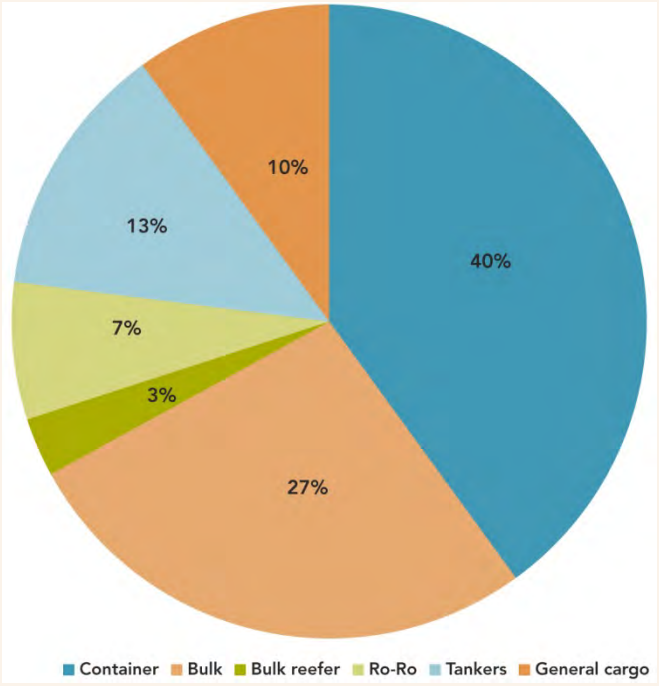
Tankers

These are designed to carry liquids in bulk. The major types are oil tankers, chemical tankers and liquefied natural gas tankers.

General cargo

Cargo that is loaded in general (ie, non-specialised) stowage areas or standard shipping containers – eg, boxes, barrels, bales, crates, packages, bundles and pallets. This includes load on, load off vessels (Lo-Lo), which have to use a crane to load and unload the cargo.

Figure 3.2 Shipping modes as a proportion of voyages to and from New Zealand



Source: Maritime New Zealand; Productivity Commission

3.2 A brief history of New Zealand's transport reforms[10]

In large part, New Zealand's international freight transport sector has been shaped by extensive regulatory changes, particularly during a period of economic reform in the second half of the 1980s and the early 1990s. Prior to these reforms, the transport sector was subject to heavy government regulation, and government departments were directly involved in providing transport services. The regulatory environment was explicitly designed to favour rail, which was 100% owned by Government (as it is now). In addition, extensive limitations restricted the extent to which foreign transport firms were able to serve New Zealand markets.

Deregulation from the mid-1980s was undertaken as part of a broader reform agenda. The key reforms in the transport sector are outlined in Table 3.2. These reforms were based on the following broad principles:

- government policy should be clearly separated from regulatory and service delivery functions;
- service delivery operations are best carried out under a corporate form, preferably under private ownership, on a commercial, competitive basis; and
- government involvement in the transport sector should be based on regulatory neutrality; and safety regulation in each mode should be done on a 'safety audit' (plus user-pays) basis, in which the regulator sets the standards and monitors performance in terms of ensuring that operators comply with their own safety systems (Bollard & Pickford, 1998).

The reforms based on these principles led to fundamental changes in New Zealand's transport markets.

[10] This section briefly describes key reforms that have been implemented in New Zealand's transport sector. The current state of regulation in transport sectors is discussed in detail in subsequent chapters.

Table 3.2 Chronology of key transport sector reforms in New Zealand

Reform	Year
Corporatisation of state rail, air, and bus services	1982-84
Removal of restrictions on road and rail carriage	1983-86
End of quantity licensing of trucking	1984
Corporatisation and sale of airports and Airways Corporation	1986-91
Tendering of local authority bus services and liberalisation of licensing agreements	1987-91
Opening up of domestic aviation industry	1987
Granting of a number of landing and on-flying rights to foreign airlines	1989
Corporatisation of ports	1989
Deregulation of taxi industry	1990
Deregulation of stevedoring industry	1990
Removal of cabotage and deregulation of coastal shipping	1991-94
Privatisation of New Zealand rail	1993
New Zealand government buys an 80% stake in Air New Zealand	2001
Nationalisation of the New Zealand railway track	2004
Nationalisation of New Zealand rail (and ferry) services	2008
Auckland, Wellington and Christchurch airport companies subject to information disclosure	2008
New Zealand Transport Agency established	2008
First National Infrastructure Plan released; Introduction of Roads of National Significance	2010
Input methodologies determined for specified airport services	2010

Source: 1982 to 1993: Bollard, Lattimore and Silverston (1996); 1995 to 2011: Productivity Commission

Road freight[11]

Prior to reform, long-haul trucking, which was defined as trips greater than 40 miles, was heavily constrained. Specifically, trucks were only permitted to make local deliveries and to transport goods to and from Government-owned railroad depots. Exemptions to this regulation were permitted if there was no rail service available between the source and destination. As a result, all long-distance freight movements took place via rail and coastal shipping, wherever possible.

Since 1986, trucks have been able to compete with other modes over long-haul routes. The removal of this restriction saw rapid growth in freight volumes carried by road, largely at the expense of coastal shipping. Road now carries by far the largest share of the domestic freight market in New Zealand (Table 3.3).

Table 3.3 Estimates of freight in New Zealand by mode: 1989/90 and 2006/07

Mode	Tonne – kilometres 1989/90		Tonne – kilometres 2006/07	
	Billions	Percent of total	Billions	Percent of total
Road	8.9	53.9	18.8	70.2
Rail	2.7	16.7	3.9	14.6
Sea (coastal)	4.8	29.2	4	14.9

[11] As well as reforms to the road freight sector, fundamental changes to road funding and administration were also put into place (Dunlop, 1999); (McDermott, Toleman, & Lee, 1997).

Mode	Tonne – kilometres 1989/90		Tonne – kilometres 2006/07	
Air (domestic)		0.2		0.3
Total	16.4	100.0	26.8	100.0

Source: Cavana, Harrison, Heffernan & Kissling (1998), Richard Paling Consulting (2008)

Railways

Despite extensive regulatory protections prior to reform, the financial performance of the rail sector was in perpetual decline (Heatley, 2009). This highlighted the need for reform in the sector.

At least partly in response, the Railways Department was reorganised in 1982 into a Government-owned corporation with a commercial mandate. In 1990, it was converted to a limited liability company that was subsequently privatised in 1993. However, the Government reacquired the track in 2004 and the rail (and ferry) operations in 2008. The workforce employed by the railways went from about 21,000 with the Railways Department in 1982 to about 5,000 in the early 1990s, and 3,757 in TranzRail in 2002 (KiwiRail, 2011).

Since 2008, KiwiRail's freight business has undergone a significant rebuild under the Turnaround Plan. The Government committed in principle to a total package of $750 million over three years, with the first appropriation in the 2010 Budget and the second in 2011.

> The lion's share of the $4.6 billion Turnaround Plan will be funded by KiwiRail itself from customer revenue during the 10 year plan. The money will be used to continue a range of projects, including new locomotives and wagons, and improvements to the network – particularly on the main trunk route and in the 'golden triangle' of Auckland, Hamilton and Tauranga (Minister of Transport, 2010)

Ports

From 1986, the Government began a two-stage approach to waterfront reform: commercialising the port authorities and changing labour force arrangements to promote competition within and between ports.

Thirteen Harbour Boards became local government-owned port companies that were required to operate on a commercial basis under the Port Companies Act 1988. The port company owners at the time – generally local government bodies – were permitted to sell up to 49% of their shareholding at their discretion. Subsequently, the Port Companies Amendment Act 1990 allowed full private ownership of port companies. Over the period, shares in five of the port companies were listed on the stock exchange.

Labour relations were the other key element of port reform. The abolition of the Waterfront Industry Commission in 1989 allowed each port and stevedoring company to determine the number of people it employed on both a casual and permanent basis. The second stage of port labour reform was implemented as part of economy-wide reforms to labour market regulation through the Employments Contracts Act 1991.

Coastal shipping

Much of the impetus for restructuring coastal shipping came from the deregulation of road transport. Prior to 1990, ships operating around the New Zealand coast were only permitted to carry designated cargo. However, after the Shipping Reform Task Force report, these demarcation lines and relativities were relaxed. This permitted, for example, a cement vessel to use any excess capacity to carry containers (Cavana, Harrison, Heffernan, & Kissling, 1998).

New Zealand labour market reforms contributed to significant changes in manning levels on coastal ships. For example, between 1989 and 1992, the workforce on costal vessels is estimated to have fallen by between 20% to 40%. Freight rates on coastal shipping also fell dramatically over this period (Cavana, Harrison, Heffernan, & Kissling, 1998).

The Maritime Transport Act 1994 removed cabotage restrictions and opened coastal shipping to foreign competition. From this time, international vessels visiting New Zealand have been able to move cargo between domestic ports. The extra competition from foreign vessels caused freight rates for shipping

containers and freight between New Zealand ports to drop. In particular, international vessels usually compete for north-south traffic, utilising spare capacity between the unloading of imports in northern ports and the loading of exports in southern ports before departing overseas (see section 13.1 for further discussion, including the 28-day restriction on international shipping lines operating on New Zealand's coastal shipping routes).

Airports

Auckland and Wellington Airports were corporatised and (partially) privatised under the Auckland Airport Act 1987 and the Wellington Airport Act 1990. As a result, private interests now own majority stakes in the Auckland and Wellington Airports. Christchurch Airport remains a public corporation that is jointly owned by the City Council (75%) and New Zealand Government (25%).

At the time of partial privatisation, airports were not covered by any specific regulatory provisions. Instead, airports were subject to a 'light-handed' approach to regulation under a strengthened competition law in the form of the Commerce Act 1986. From 2008, this Act does, however, subject the companies operating Auckland, Christchurch and Wellington International Airports to an information disclosure regime.

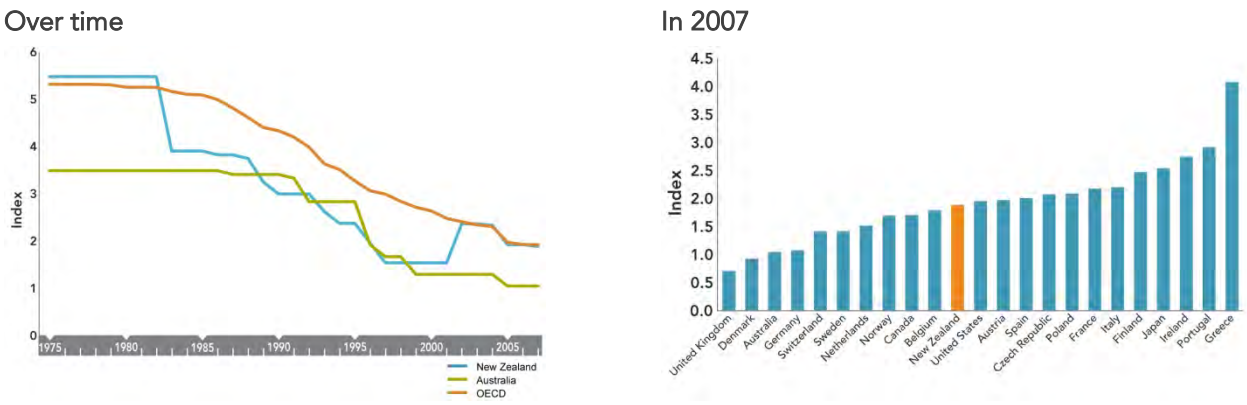
New Zealand's transport reforms in international comparison

The OECD produces indicators of regulatory conditions in some transport sectors that provide a basis for assessing New Zealand's reform experience in international context. These indicators measure the extent to which regulations in the airline, rail and road sectors are conducive to competition.[12]

As is apparent from Figure 3.3, in the late 1970s and early 1980s the stance of regulation in these three transport sectors in New Zealand was slightly more restrictive of competition than in the average OECD country, and significantly more restrictive than in Australia. However, over the following 15 years, transport reforms in New Zealand moved more quickly than in other OECD countries and the regulatory environment became relatively encouraging of competition in international comparison.

From the late 1990s, however, New Zealand's reform period in transport markets effectively came to an end, whereas other OECD countries continued to improve the regulatory environment to encourage competition. As a result, New Zealand's regulatory advantage in transport regulation vis-à-vis other OECD countries began to fade. In the mid-2000s, as a result of increased direct government involvement in the air and rail sectors, the OECD assesses that the stance of regulation in New Zealand deteriorated. By the end of the 2000s, transport regulation in New Zealand is assessed to be around average across OECD countries and significantly more restrictive of competition than in Australia.

Figure 3.3 The stance of transport regulation in New Zealand in international comparison



Source: OECD

Notes:

1. The scale of the OECD indicators of regulation in transport sectors is 0-6 from the least to most restrictive of competition.

[12] These indicators are a subset of the OECD's 'ETCR indicators', which assess regulatory conditions in energy, transport and communications sectors. See (Conway & Nicoletti, 2006) for details.

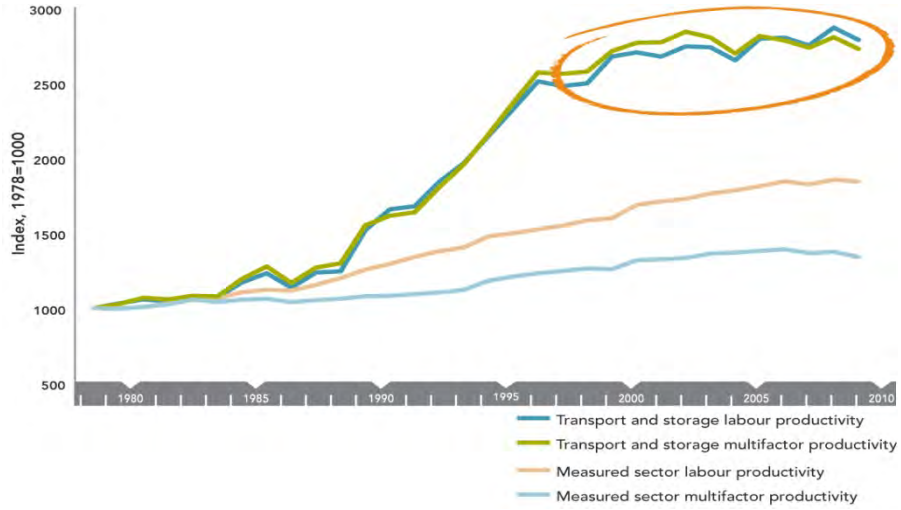
3.3 Productivity and performance comparisons and trends

This section assesses the productivity and performance of the domestic leg of New Zealand's international freight chain, including road, rail, ports, airports and border control and security.

New Zealand freight services industry – the overall productivity performance

Productivity growth in New Zealand's transport and storage industry was high in the 1990s, broadly coinciding with the period of rapid reform in the sector. However, the productivity performance of the sector has since slowed considerably.[13] Compared to the rest of the economy, the transport and storage sector was a stand-out performer in the 1990s, but has subsequently been more in line with a generally poor productivity performance economy-wide (Figure 3.4) (Box 3).

Figure 3.4 New Zealand transport and storage industry productivity growth compared to measured sector (1978=1000)



Source: Statistics New Zealand

Box 3 **Productivity and measured sector definitions**

Measure	Description
Labour productivity	A measure of output per labour hour.
Multifactor productivity	The amount of output produced that cannot be attributed to labour or capital input. This is productivity due to factors such as advances in knowledge, improvements in management, or production techniques.
Capital productivity	A measure of output per unit of capital input. A measure of 'machine hour' of capital can be used as capital input if available (for example, the number of containers moved per crane per hour).
Measured sector	The measured sector covers 80% of the economy and excludes industries where value added is hard to measure. Industries excluded are: government administration; defence; health; education; and ownership of owner-occupied houses. Industries included are: agriculture, forestry, and fishing; manufacturing; electricity, gas, and water supply; construction; wholesale trade; retail trade; accommodation, cafes, and restaurants; transport and storage; communication services; finance and insurance; property services; business services; cultural and recreational services; and personal and other community services.

[13] The transport and storage industry is the most relevant ANZSIC06 industry for international freight. It includes road transport; rail transport; water transport; air and space transport; services to transport (including stevedoring and port operators); and storage. It includes international and domestic freight and passenger services. Personal road use (ie, use of private cars etc.) is not included.

Given data limitations, cross-country productivity comparisons at the industry level need to be interpreted with considerable caution. With this caveat in mind, labour productivity growth in New Zealand's transport and storage sector appears to have been relatively strong in international comparison up until the end of the 1990s, but has since lagged considerably (Figure 3.5). Cross-country data on productivity *levels*, which are prone to even greater measurement difficulties, suggest that the transport and storage sector is significantly less productive in New Zealand than in comparator countries. For example, unofficial estimates put the level of labour productivity in New Zealand's transport and storage industry in the period 2001–2006 at 76% of that in Australia, down from 81% in the period 1995–2000 (New Zealand Institute of Economic Research, 2011). Multi-factor productivity in the New Zealand sector is estimated to be 80% of that in the UK (Mason & Osborne, 2007). Again, these results must be treated with caution given severe measurement difficulties.[14]

Figure 3.5 Transport and storage labour productivity growth for selected countries: average annual growth rate for 5-year periods 1980-2007

Source: Statistics New Zealand; EU KLEMs; ABS; Productivity Commission calculations

Notes:

1. Australian Bureau of Statistics data (available from 1986) is used for Australia for the period 2005–2007 due to substantive discrepancies with EU KLEMs in that period only.

F3.1 Since the end of the 1990s, productivity growth in New Zealand's transport and storage industry has slowed considerably and does not compare well internationally.

Productivity of domestic freight components – what do we know?

Assessing the productivity performance of the domestic leg of the international freight chain is complicated by a lack of 'conventional' productivity measures (value added per unit of labour/capital) at a 'component' level, such as the ports, rail etc. As such, the Commission has used a range of data and information sources to provide a partial picture of the productivity performance of the domestic components of the logistics chain.

'Proxy' measures that are often used internationally in this context include the average number of containers handled per labour hour at a port, or the number of passengers and cargo moved per employee at an airport. Some caution is needed in interpreting these partial productivity measures given that they capture only part of the total picture.[15] However, these types of problems exist to some extent with conventional productivity measures and no one measure is ideal in all respects. As the limitations are understood, partial measures can still provide insight into the performance of the components of the logistics supply chain and

[14] For example, it is difficult to obtain accurate and robust data for industry-level hours worked in New Zealand; Purchasing Power Parities (PPPs) are inaccurate at an industry level; and total economy PPPs are not technically appropriate to use, making cross-country comparisons difficult.

[15] For example, Port A may be capital-intensive and Port B labour-intensive, in which case using a measure of capital productivity (eg, volume loaded per crane) might misleadingly show Port B to be more productive. In this example, if Port B were to replace labour with capital, its capital productivity would diminish whereas overall container handling efficiency would likely increase. Alternatively, an airport that outsources a lot of its activities may report misleadingly high levels of labour productivity, at least if the labour provided by the contracted firm is not counted as labour input.

potentially indicate where productivity could be improved. In the interests of simplicity, in the rest of this section these proxy productivity measures will be referred to as productivity measures.

Seaports

Recent data collected by the Ministry of Transport suggests that the performance of New Zealand's container ports is no less and possibly better than in Australia. However, within New Zealand there is notable variation between the ports. Overall, Tauranga performs quite strongly, including against international comparators; while the other New Zealand ports paint a more mixed picture, some operating well below world best practice.

Container productivity

In February 2011, the Ministry of Transport secured the agreement of six New Zealand ports to supply the productivity information outlined in Table 3.4. Data are supplied on a quarterly basis from 2009 to the beginning of 2011 and will continue to be supplied at this frequency (Ministry of Transport, 2011a).

Table 3.4 Measures of Port Performance

Measure	Definition
Crane rate	The number of containers a dockside crane moves on or off a container ship in an hour (not including time when the ship is alongside the wharf but not being worked). A measure of how efficiently the crane (capital) is used, which will be significantly influenced by how effectively the overall port operation is organised and operated.
Ship rate	The number of containers moved on or off a ship in an hour. A broader measure, but one that does not take account of how much resource is being used – eg, working a ship with two cranes rather than one will result in more containers being moved per hour, but possibly not twice as many.
Vessel rate	The number of container movements per person (stevedore) hour. A measure focused on the productivity of labour – which depends in part on the machinery (eg, cranes) being used.

Notes:

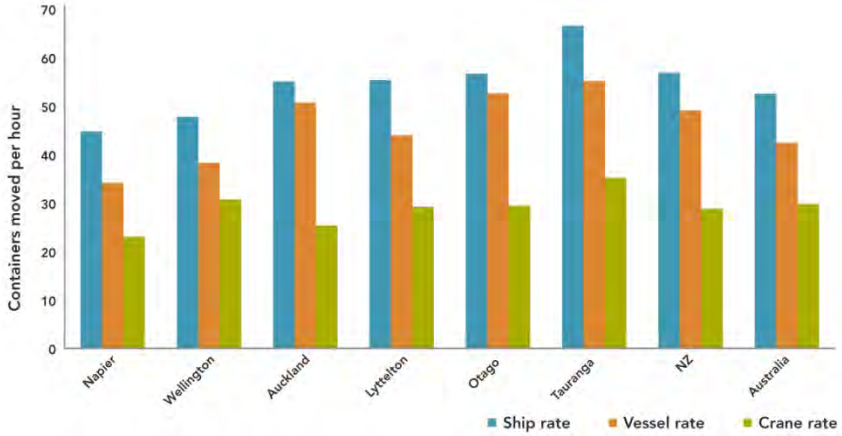
1. An important drawback of these measures is that they exclude 'idle time'; hence a port that receives few ships can record high productivity.

The data collected indicates considerable variation across New Zealand ports in ship and vessel rates whereas crane rates are more consistent. Tauranga scores highest across all three measures; Auckland, Lyttelton, Otago are a step lower; while Wellington and Napier are at the lower end (Figure 3.6). Relatively greater variation in ship and vessel rates, compared with crane rates, points to differences in the overall level of operational performance across the ports, as distinct from the technical efficiency with which they operate their cranes.[16]

On average over 2009–2011, vessel and ship rates in New Zealand ports were generally higher than in Australian ports (with Wellington and Napier being a little below). Crane rates were broadly in line with the Australian average, except for Napier and Auckland which are significantly below (Figure 3.7). In a broader international comparison, crane rates in Australian ports are about 'middle of the pack', indicating that New Zealand ports are also operating at a margin below world best practice. Tauranga is the exception, with crane rates that are not too far behind the international performance frontier.

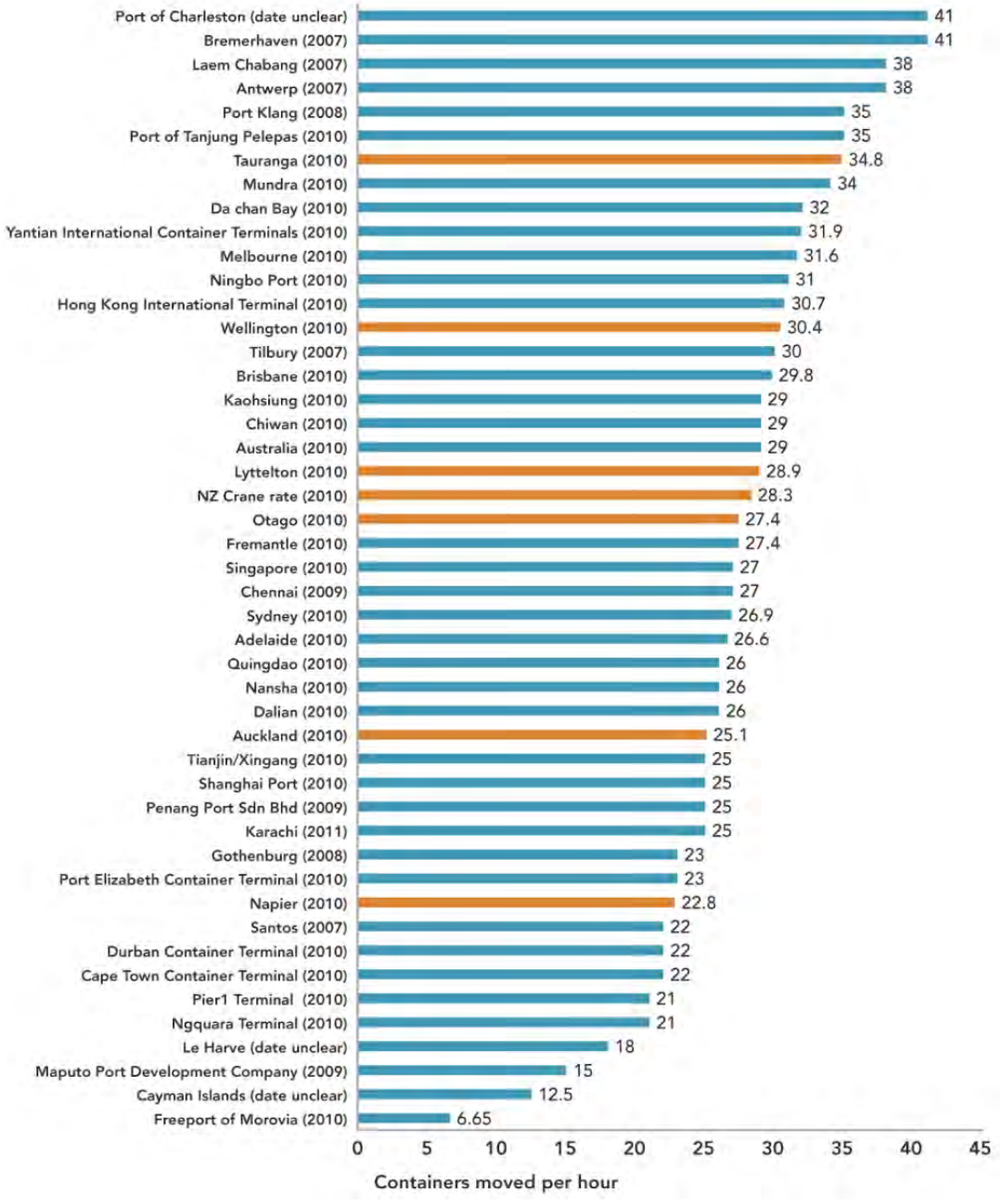
[16] Differences in crane rates may also reflect the number of cranes available – for example, Wellington, with only three cranes, has higher crane rates than Auckland, which has five cranes but lower ship and vessel rates.

Figure 3.6 Average container productivity across six New Zealand ports and Australia 2009-2011 (March years)



Source: Ministry of Transport (2011a)

Figure 3.7 Crane rates at selected international ports (2007-2011)



Source: Ministry of Transport (2011a)

Notes:

1. The data in this graph are from a range of sources. There may be inconsistencies in how container productivity has been calculated, or the reliability of the data.

There are two main caveats that must be kept in mind in interpreting these results:

- The indicators only account for how efficient the port is when ships are in port and take no account of port utilisation. Thus, a port that has few ship visits can score well, even though its capital (cranes, wharves, etc.) and labour force are relatively idle much of the time (although flexible labour arrangements that enable labour to be hired only when needed can help overcome this).
- The indicators used are all based on container traffic, whereas most New Zealand ports service a mix of containerised and other freight and others only handle specialised bulk cargo (Bluff, Whangarei). Performance indicators for non-containerised freight are not available, and could be worth developing (as discussed in the Port of Napier's submission, sub. 10, p. 6). It would also be useful if yard utilisation and other 'landside' indicators, as published by Australia's Bureau of Infrastructure, Transport and Regional Economics (BITRE) for Auckland and Tauranga (Table 3.5), were available for other New Zealand ports.

Table 3.5 also provides an indicator of the ports' asset utilisation. Asset utilisation rates provide an indication of the efficiency of land and asset use of ports. The low asset utilisation rates for New Zealand ports may indicate that many ports have invested ahead of demand, or that patterns of international freight have changed.

Table 3.5 Other port performance indicators for selected international ports 2006-2010

Port	Yard utilisation (container throughput per gross hectare), 2006–2007	Vessel turnaround times (hours), 2008	Throughput per berth metre (containers per berth metre), 2006–2007	Asset utilisation rate, 2010
Lyttelton	-	-	-	46%
Napier	-	-	-	28%
Wellington	-	-	-	26%
Otago	-	-	-	22%
Auckland	12,046	36.8	568	17%
Tauranga	10,664	31.2	777	17%
Overseas mean	26,683	26.4	945	-

Source: (BITRE, 2009); (New Zealand Institue of Economic Research, 2010a)

Although partial, and bearing these caveats in mind, the available container productivity measures suggest that the Port of Tauranga currently provides the New Zealand benchmark for 'best practice'.

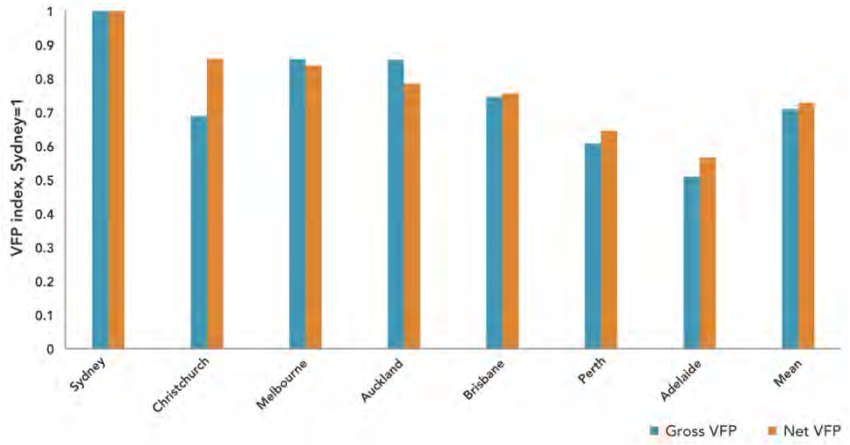
F3.2 Available indicators suggest that New Zealand's container port performance is no less and possibly better than in Australia. However, within New Zealand there is notable variation between the ports, with Tauranga being the strongest performer.

Airports

Available international benchmarking reports of airports unfortunately do not separate freight and passengers, and only provide very partial measures of productivity. Also, freight is generally a small part of an airport's operations relative to its passenger business. As a result, not a lot can be said about the efficiency of freight operations at New Zealand's airports. However, partial indicators are available from the Air Transport Research Society (ATRS), which benchmarks 156 airports including Auckland, Wellington and

Christchurch (Air Transport Research Society, 2011). Its key performance indicator is 'Variable Factor Productivity' (VFP).[17] On this measure, Auckland, which handles by far the majority of New Zealand air freight, is a comparatively high performer (Figure 3.8). After controlling for 'variables outside management control' (average aircraft size, percentage of international passengers, percentage air cargo in total traffic), the ATRS also rates Christchurch as a relatively strong performer.

Figure 3.8 Gross VFP vs. residual (net) VFP for selected cities: 2009



Source: (Air Transport Research Society, 2011)

Notes:

1. Sydney=1.0.
2. Net VFP controls for factors beyond managerial control such as capacity constraint, average aircraft size, % international traffic, etc.

Another indicator provided by ATRS is Work Load Unit (WLU) per employee. On this measure, Auckland rated above the average for the Asia Pacific region in 2009, and Christchurch about average (Table 3.6). Both airports, in particular Auckland, have achieved above average productivity growth on this measure over the past decade.

Table 3.6 Work Load Unit (000s) per employee for airports in the Asia Pacific region

Airport	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average annual % change
Christchurch	31	30	32	35	37	34	33	35	37	2.2%
Auckland	35	41	43	46	48	50	49	51	47	3.6%
Sydney[18]	64	70	75	109	120	122	120	123	127	8.9%
Singapore	29	35	31	35	33	33	31	31	43	5.1%
Kuala Lumpur	12	14	18	19	19	20	21	22	23	8.5%
Mean of the wider Asia Pacific region	34	30	30	35	37	39	39	38	38	1.4%

Source: Air Transport Research Society (2011); Productivity Commission

Notes:

1. WLU combines passenger and cargo traffic volume. One WLU is defined as one passenger or 100kg of cargo. In 2007, of Christchurch's 5,744,000 WLU total, 5,485,000 was passengers and 259,000 was cargo (4% cargo). Of Auckland's 14,600,341 WLU total, 12,355,000 was passengers and 2,245,150 was cargo (15% cargo).

[17] VFP is essentially the ratio of aggregate output (aircraft movement, passengers, cargo, non-aeronautical revenues) index divided by aggregate variable input index, namely labour and soft cost input (total non-labour variable inputs).Total Factor Productivity (TFP) is not possible to compare due to capital input cost accounting problems.

[18] Sydney Airport appears to have very high labour productivity, but Sydney also outsources many of its functions (retaining essentially their central administrative responsibilities) (Air Transport Research Society, 2011). This measure may still be useful as an indicator of one airport's performance over time, assuming there are no major changes in outsourcing.

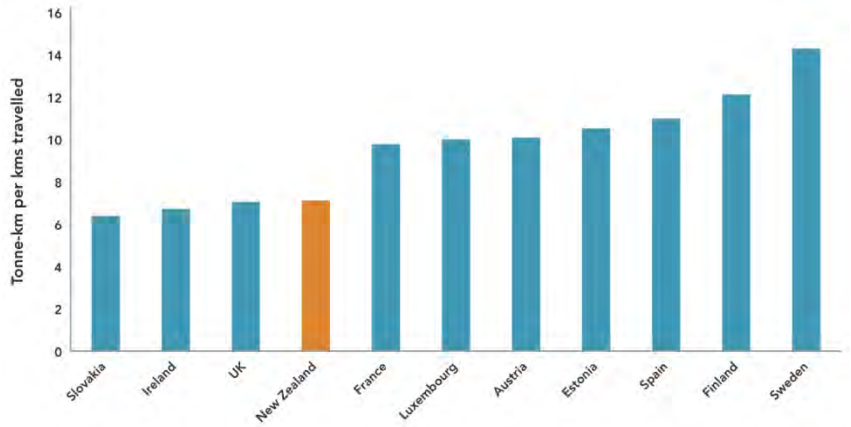
F3.3 Subject to some caveats, Auckland Airport appears to have high productivity relative to other Asia and Pacific airports, while Christchurch is about average.

Road freight

As discussed in section 3.1, the domestic leg is an important component of the international freight logistics chain. In particular, road, rail and/or coastal shipping all add to the overall costs of getting exports/imports to/from the customer/supplier.

There is a lack of established and internationally comparable productivity data for New Zealand's road freight industry.[19] However, one very partial indicator is the 'average weight carried by heavy vehicles'. This measure indicates that New Zealand has low loads per vehicle compared to other countries (Figure 3.9), and that these have increased only marginally since the late 1990s (from 6.5 tonnes to roughly 7 tonnes in 2010) (Ministry of Transport, 2011i). The recent relaxation of weight restrictions for High Productivity Motor Vehicles provides an opportunity to increase average load weights, but this is likely to have only a minor impact under current settings (discussed in section 13.1).

Figure 3.9 Road freight: average load (tonnes)



Source: Eurostat; Ministry of Transport (2011i)

Notes:

1. This measure excludes international journeys and includes 'empty runnings'.

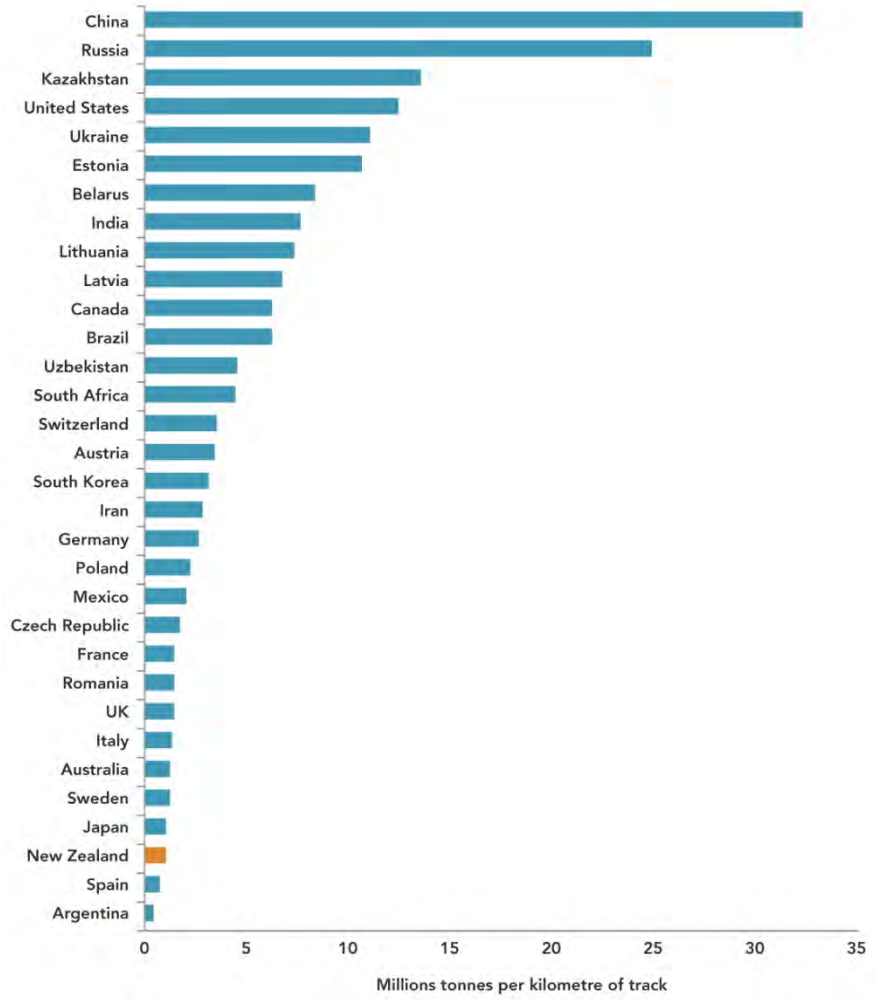
F3.4 Compared internationally, New Zealand has low average loads for road freight.

Rail

New Zealand's utilisation of its rail network, which provides an indicator of rail freight productivity, is low by international standards (Figure 3.10). Contributing factors are New Zealand's low population density, geography (eg, main centres located close to ports, and difficult terrain), competition from other transport modes, and technical and operational limitations of the rail infrastructure (Heatley, 2009). And, as for trucks in the case of road freight, New Zealand has 'small' trains with a maximum axle load of 18 tonnes, compared to the world standard of 25 tonnes (Rockpoint, 2009).

[19] The New Zealand Transport Agency (NZTA) has recently commissioned Covec to assess international road benchmarking indicators and determine whether it is feasible to collect the comparative information in New Zealand.

Figure 3.10 Rail freight density: international comparison 2003-2008



Source: (Heatley, 2009)

Notes:

1. Freight density is the average number of tonnes transported per kilometre of track.
2. Data from years in the range 2003 to 2008 was used in the compilation of this graph, which may lead to some inaccuracies.

F3.5 Compared internationally, New Zealand has low volumes of freight per kilometre of rail and low maximum axle load.

Biosecurity and customs

It is difficult to assess the productivity performance of the biosecurity and customs component of the logistics chain, given that it is difficult to quantify the outputs of the agencies involved (MAF BNZ and NZCS). This is because the services provide long-term public and private benefit and are addressing unknown risk. For example, it is difficult to quantify the benefit of preventing a pest that could have devastating impacts on the conservation estate and the horticultural sector. Biosecurity and customs services are discussed in more detail in Chapter 7.

A partial measure of the 'efficiency' of this component of the logistics chain is available within the *Doing Business* indicators compiled by the World Bank. Specifically, these indicators measure how long it takes to clear customs and the overall efficiency of this clearance in each country (see section 4.2, Table 4.1). MAF and NZCS also produce detailed performance measures from surveying stakeholders (Ministry of Agriculture and Forestry, 2011b); (New Zealand Customs Service, 2011). Overall, New Zealand Customs seems to compare favourably internationally, but has shown no improvement in customs efficiency between 2006 and 2009 (Table 3.7). In addition, stakeholders are generally satisfied with the overall service produced by MAF BNZ (Ministry of Agriculture and Forestry, 2011b).

Table 3.7 Logistics Performance Index

(1-5, higher = better)

	New Zealand 2006	New Zealand 2009	Australia 2006	Australia 2009	All countries average 2006	All countries average 2009
Efficiency of Customs clearance process	4	4	4	4	2.6	2.6

Source: World Bank and International Finance Corporation (2011); Productivity Commission

Notes:

1. Data are from Logistics Performance Index surveys conducted by the World Bank. The 2009 round of surveys covered more than 5,000 country assessments by nearly 1,000 international freight forwarders. Respondents evaluated the efficiency of customs clearance processes (ie, speed, simplicity and predictability of formalities), on a rating ranging from 1 (very low) to 5 (very high).

3.4 Financial performance of New Zealand ports

The performance of the New Zealand port sector can be further assessed using the technique of Economic Value Added (EVA®[20])[21]. In essence, EVA assesses the difference between the operating rate of return of a firm and its weighted cost of capital. In broad terms, this shows whether returns were sufficient to justify investment in the company, compared with an alternative use of the funds. That is, a positive EVA indicates that the company more than covered its cost of capital, whereas a negative EVA suggests that those resources could have been better employed elsewhere.

A number of caveats apply to EVA analysis.

1. EVA does not account for prospective earnings but only the actual returns to the business in the year being examined. So the EVA of a firm that is operating in a recession, or that has recently undertaken large investments that are yet to generate a return, will be biased downwards.
2. Rates of return are sensitive to asset valuations and these can be difficult and controversial to establish.
3. The analysis considers operating performance only.[22]

And specifically for the port companies in this analysis:

4. Because the business mix of each port company is different – varying over container trade, logs trade, cruise ship hosting, facilities for bulk oil and ferries, property investment, etc. – the financial analysis reflects the group of businesses specific to each port company;
5. The capital invested in each port company is deemed to be that based on the NZ IFRS 2007 financial accounts.

Results

Table 3.8 to Table 3.10 present the return on capital, the weighted average cost of capital and the EVA results for six New Zealand port companies respectively. From 2008 to 2011, most of the ports recorded negative EVAs – that is, their returns were less than the cost of capital over the period. It is important to note that over much of this period, growth in global trading volumes was very weak, given the fallout from the Global Financial Crisis. Indeed, the EVA of the ports has generally become less negative over the

[20] A registered trademark of Stern Stewart & Co.

[21] Previous analysis of the port sector using EVA has been done by (New Zealand Institute for Economic Research, 2010) and KPMG.

[22] To better reflect the "cash return" on "cash invested" in the business, the published accounting information for each entity has been adjusted by: (1) reversing items such as impairments, revaluations, one-off gains/losses, and amortisations to achieve "full cost accounting"; (2) reversing accrual accounting (eg, to record tax actually paid); (3) separating operating and financing (eg, by capitalising operating leases); and (4) separating operating from non-operating (eg, excluding associate, joint venture and share investments).

period, reflecting improved operating returns and a fall in the cost of capital. The Port of Napier recorded positive EVA for 2009-2011.

Table 3.8 Return on average operating capital (%) for selected New Zealand port companies

Company	2008	2009	2010	2011
Ports of Auckland	6.0%	3.3%	4.6%	6.0%
Port of Tauranga	5.3%	5.3%	5.6%	6.3%
Port of Napier[23]	7.6%	9.9%	9.6%	8.7%
CentrePort	4.2%	3.2%	4.6%	5.2%
Lyttelton Port	6.7%	5.6%	5.9%	9.5%
Port Otago	5.5%	4.9%	5.9%	6.1%
Consolidated	5.6%	4.6%	5.4%	6.4%

Source: Port company annual financial reports; Ireland, Wallace & Associates Limited

Notes:

1. Returns are Net Operating Profit after Tax (NOPAT) as a % of average operating capital for each year.

Table 3.9 Weighted average cost of capital (%) for selected New Zealand port companies

Company	2008	2009	2010	2011
All ports	9.3%	8.9%	7.9%	7.9%

Source: Ireland, Wallace & Associates Limited

Notes:

1. A standard asset beta of 0.60 has been adopted in calculating the weighted average cost of capital. The beta coefficient is a relative measure of risk diversification that reflects the degree of movement of an asset's return in response to a change in the market return. The Commerce Commission has specified asset betas of 0.60, 0.44 and 0.34 for Airports, Gas Pipeline, and Transpower and Electricity Distribution Businesses respectively.

Table 3.10 EVA% results for selected New Zealand port companies

Company	2008	2009	2010	2011
Ports of Auckland	-3.3%	-5.6%	-3.3%	-1.9%
Port of Tauranga	-4.0%	-3.6%	-2.3%	-1.6%
Port of Napier	-1.7%	1.0%	1.7%	0.8%
CentrePort	-5.1%	-5.7%	-3.3%	-2.7%
Lyttelton Port	-2.6%	-3.3%	-2.0%	1.6%
Port Otago	-3.8%	-4.0%	-2.0%	-1.8%
Consolidated	-3.7%	-4.3%	-2.5%	-1.5%
Simple average	-3.4%	-3.5%	-1.9%	-0.9%

Source: Port company annual financial reports; Ireland, Wallace & Associates Limited

Notes:

1. EVA% is the return on average operating capital minus the weighted average cost of capital for each year.

[23] The balance date is 30 September. For the purposes of the financial analysis the years have been advanced to align with other port companies' June balance dates. For example, the actual year ending 30 September 2010 is assumed to be 2011.

To provide an indicative point of comparison for these results, the average EVA across six electricity distribution lines companies over the same time period is given in Table 3.11.[24] Applying the same weighted average cost of capital used in the case of the port companies indicates that the EVA for the electricity lines companies was positive from 2008-2011.[25] This suggests that the ports have been relatively less effective at covering their cost of capital. The interpretation of these EVA results is discussed in more detail in Chapters 8 and 10.

F3.6 The six port companies analysed by the Commission recorded mostly negative Economic-Value Added from 2008 to 2011, although there was a trend to less negative figures. This suggests that the port companies have not recovered their cost of capital.

Table 3.11 Return on average regulatory assets (capital) (%) – comparison with selected electricity distribution companies

	2008	2009	2010	2011
Six electricity distribution companies EVA	+2.0%	+1.4%	+1.8%	+3.4%
Six ports companies EVA	-3.4%	-3.5%	-1.9%	-0.9%

[24] Like the port companies, the electricity distribution companies provide infrastructure services and have mixed public and private ownership. These common features provide some basis for a useful comparison.

[25] Note that this analysis assumes that an asset beta of 0.6 for the electricity distribution companies, rather than the Commerce Commission determined 0.34. Using the Commerce Commission asset beta would increase the EVA of the electricity lines companies.

4 Freight transport costs

Key points

- Ad valorem sea freight costs – the freight costs faced by New Zealand importers and exporters as a percentage of shipment value – have been decreasing over the last two decades, even after factors such as changes in the composition of trade and trading partners are accounted for. This suggests that cost-reducing efficiency and technology improvements have outweighed factors such as fuel price increases. A similar pattern is observed for Australia's ad valorem sea freight costs.
- In aggregate, and after accounting for compositional factors, ad valorem sea freight costs are less than one percentage point higher in New Zealand than in Australia. This indicates significantly higher sea freight costs in absolute terms in New Zealand relative to Australia. Case studies also indicate that in some instances, the ocean transport component of costs can be higher for Auckland compared to Sydney.
- Ad valorem air freight costs decreased in the 1990s, but were flat or even slightly increasing in the 2000s, even after controlling for factors such as fuel price increases. Declines in Australia's ad valorem air freight costs also flattened off in the 2000s.
- As a result, ad valorem air freight costs are estimated to be around 1.6 percentage points higher in New Zealand vis-à-vis Australia. Again, this indicates that New Zealand importers and exporters pay significantly more for air freight than their Australian counterparts. However, case studies suggest that air freight costs for Auckland can, on occasion, be less than those for Sydney.
- The onshore components of New Zealand's air and sea freight costs, particularly its port handling costs, compare favourably with Australia and other OECD countries. However, there may still be room for improvement. For instance, cost reductions on trans-Tasman routes in areas such as documentation and security fees would go some way towards the goal of a more seamless single economic market.
- The number of days taken to complete New Zealand's export and import requirements compares well with other countries, but is behind international best practice.
- The costs of transit times are potentially greater than the costs of tariffs, which highlights the importance of work on trade facilitation. As well as reducing the time taken to complete New Zealand's domestic export and import requirements, New Zealand should continue to work with trading partners to improve trade facilitation.

This chapter investigates the freight transport costs faced by New Zealand importers and exporters. It examines the drivers of these costs; how they have changed over time; and how they compare with freight transport costs in Australia. A description of the data and methodologies used in this chapter to assess freight costs is given in Box 3. This chapter also provides an overview of the time taken for freighting New Zealand's imports and exports to trading partners, and the associated costs.

Box 4 **Description of the data used in this chapter**

The term 'freight cost' is used to mean the freight transport costs faced by shippers. In the case of shipments organised directly by shippers themselves (eg, ship charters) it covers the total transport costs incurred. When shippers use a freight forwarder to organise a shipment, the 'freight cost' will generally be the price charged by the freight forwarder to the shipper.

This Chapter uses two main sources of data to assess freight costs: aggregate data on ad valorem freight costs and information from case studies.

Aggregate data

Section 4.1 uses Statistics New Zealand Overseas Merchandise Trade import data, which is obtained from import documents lodged with the New Zealand Customs Service. Both value-for-duty (VFD) and the cost including insurance and freight (CIF) are collected. This allows ad valorem freight costs, which are freight costs as a percentage of the value of the goods, to be calculated as the difference between CIF and VFD, divided by VFD (ie, (CIF-VFD)/VFD).[26]

The use of customs data as a basis for calculating freight costs is well established in economic literature (see, for example, Hummels (2007b)). However since the data comes from information provided by importers on customs forms, there may be some issues with the accuracy with which importers fill in these forms. Overall, while the data may contain some 'noise', it is likely that any reporting errors are systematic over time, and therefore the broad trends in ad valorem freight costs discussed in this chapter remain valid.

Equivalent data on New Zealand exports are not available from Statistics New Zealand. However, data on ad valorem freight costs of New Zealand exports to Australia and the USA were obtained from equivalent customs import information for these countries.

Case studies

Section 4.2 is based on case study analysis undertaken by industry experts that aimed to measure the actual freight costs (in New Zealand dollars) faced by small-to-medium exporters and importers in New Zealand and Australia. This involved contacting several shipping lines and freight forwarders to obtain quotes for specified import and export consignments and routes. For sea freight, six international shipping lines and four large freight forwarders were contacted, but not all companies provided quotes for all routes, so each route is based on quotes from between two and four shipping lines. For air freight, five large freight forwarders were contacted, with three supplying quotes. The information presented in this section is based on the average prices from these quotes.

The case studies have been designed to capture the typical freight costs faced by smaller importers and exporters. However, due to the small sample size, the results of this exercise are subject to considerable uncertainties and should be interpreted with caution.

4.1 Supply chain costs in aggregate

A number of factors can potentially influence the freight transport costs faced by New Zealand exporters and importers. In broad terms, these can be split into direct and indirect drivers of freight costs. Direct drivers include:

- distance and journey time;
- characteristics of the product – for example, its value per kilogram and whether it requires special facilities (such as refrigeration); and

[26] An examination of shipment-level data suggests that insurance costs are, on average, a small proportion of the freight plus insurance component.

- fuel prices.

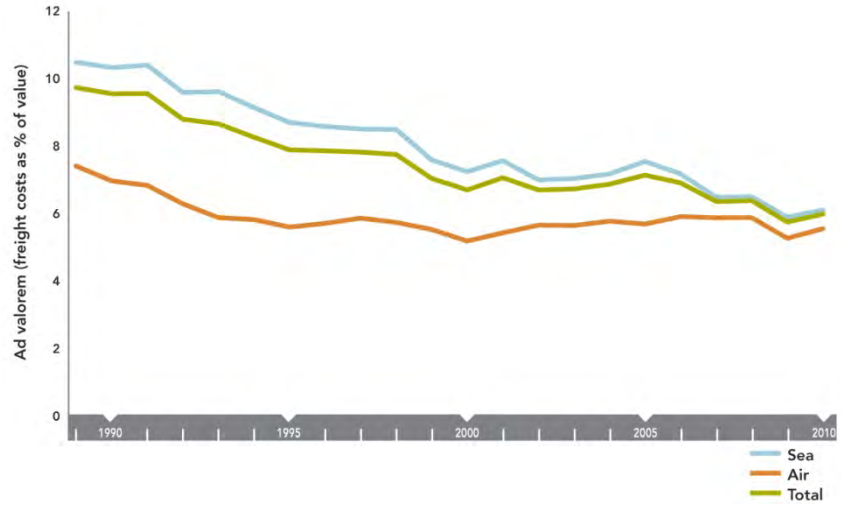
Indirect drivers of freight costs reflect the broad range of factors that potentially impact on market conditions and the efficiency of the market. Broadly speaking, productivity improvements in freight service providers should be reflected in freight costs if there is sufficient competition. If not, the benefits of productivity gains are more likely to accrue to the service provider. From this broader perspective, indirect drivers of freight costs include:[27]

- logistics efficiencies, for example, through integrating international with domestic (coastal shipping, internal air services) operations to maximise capacity utilisation/minimise empty running (travelling without paying cargo);
- the extent of competition in the market;
- trade volumes, which enable scale and attract competition;
- infrastructure – the adequacy and efficiency of port, airport, road, and rail infrastructure; and
- imbalances in the direction and composition of trade, which can result in carriers hauling empty containers on the inward or outward trip. For example, New Zealand's exports require more shipping container space than imports.

Sea and air freight costs for importers

Total ad valorem freight costs for New Zealand imports have fallen over the last 20 years, from about 10% in 1990 to 6% in 2010 (Figure 4.1). For sea freight, the decrease has been reasonably steady, although it slowed somewhat in the early 2000s. For air freight, costs fell over the 1990s but have increased slightly between 2000 and 2011.

Figure 4.1 Ad valorem freight costs for New Zealand imports



Source: Productivity Commission calculations using Statistics New Zealand data

Ad valorem freight costs for air freight are lower than for sea freight given that air transport tends to be used for higher-value goods (Figure 4.2). This highlights a difficulty in drawing conclusions from aggregate freight costs, since these do not account for differences in the direct drivers of freight costs outlined above – the value per kilogram and the mix of products and trade partners. So a shift in trade towards more proximate countries, or more transportable goods, can reduce aggregate freight costs even if freight costs on particular routes are unchanged (Hummels, 2007b).

For example, ad valorem freight costs for wine tend to be lower than for fruit, so if New Zealand shifted to importing more wine and less fruit, overall ad valorem freight costs would fall (all else equal) (Figure 4.3).

[27] For more detailed discussion of the determinants of freight costs for ocean freight, see Ministry of Transport (2010b).

Similarly, the freight cost of importing a particular good from the United States is more expensive than the cost of importing the good from Australia (Figure 4.4). So if New Zealand started importing more from the US and less from Australia, freight costs would tend to increase.

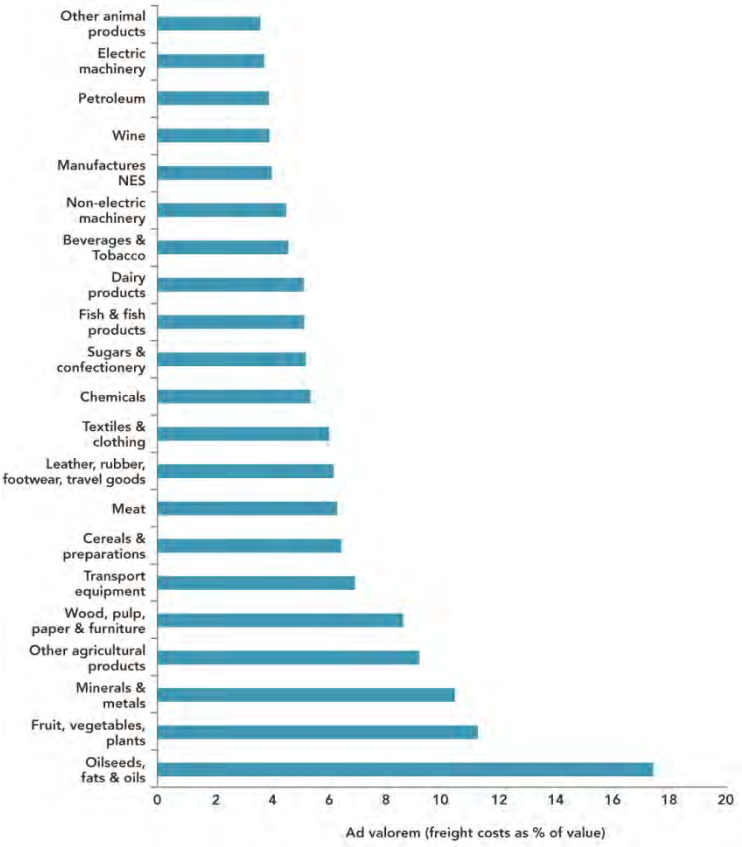
Figure 4.2 Value of imports (per kilogram) by transport mode

Source: Productivity Commission calculations using Statistics New Zealand data

Notes:

1. Value is VFD in 2000 dollars, deflated using Statistics New Zealand's import price deflator.

Figure 4.3 Import ad valorem freight costs by product type, 2010

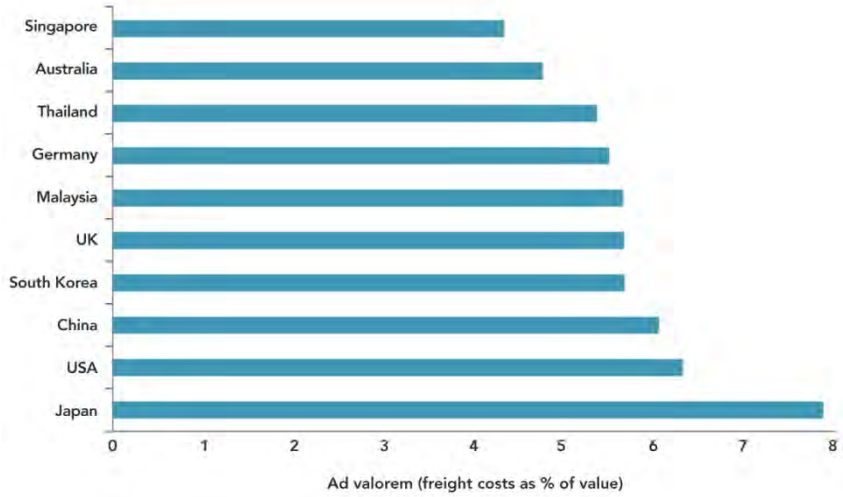


Source: Productivity Commission calculations using Statistics New Zealand data

Notes:

1. 'Manufactures NES' is 'Manufactures not elsewhere specified'.

Figure 4.4 Import ad valorem freight costs by country of origin, 2010



Source: Productivity Commission calculations using Statistics New Zealand data

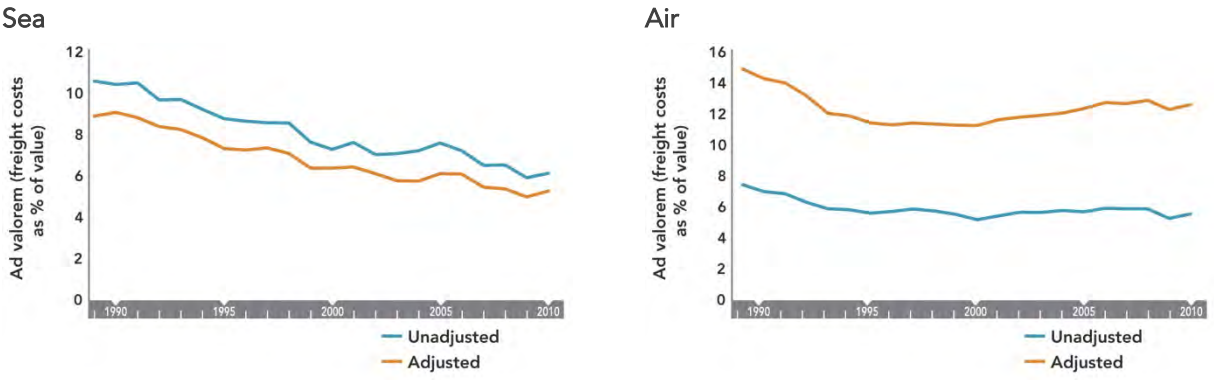
Notes:

1. The listed countries are the top ten countries by total value of New Zealand imports in 2010.

To control for the direct drivers of freight costs, the Commission has used regression analysis to construct 'adjusted' measures of ad valorem freight costs that reflect only the indirect drivers listed above – that is, market conditions and efficiencies within the freight logistics chain.[28] While unadjusted ad valorem freight costs are lower for air than for sea freight, the adjusted measures of ad valorem freight costs are higher for air than sea freight. This reflects the higher overheads associated with shipping a given quantity of freight via air.

Notwithstanding differences in the levels of ad valorem freight costs, the overall trend in sea and air freight is not materially altered by controlling for changes in the composition and source of imports (Figure 4.5). That is, sea freight costs have fallen broadly over recent decades. This suggests that efficiency and technology gains in the shipping industry have outweighed factors such as rising fuel prices. In addition, falls in ad valorem sea freight costs may also reflect the increases in the average value of New Zealand imports (per kilogram) transported via sea freight that have occurred since around 2000 (Figure 4.2 above). For air freight, ad valorem costs fell over the 1990s but have recently increased slightly.

Figure 4.5 New Zealand import freight costs: unadjusted and adjusted ad valorem



Source: Productivity Commission calculations using Statistics New Zealand data

Notes:

1. The unadjusted ad valorem rate is simply freight cost/import value. The adjusted ad valorem rate is derived from a regression that controls for changes in the mix of trade partners and products traded.

[28] This analysis follows the methodology used by Hummels (2007b).

As a robustness check of these results, the Commission has modelled freight costs using a data set of over 13 million import shipments.[29] This modelling exercise uses data from the period 1992 to 2010, and takes account of a number of additional factors that may directly impact on freight costs (such as fuel prices). In broad terms, the results of this work confirm that the general patterns in freight costs outlined in this section (which are based on more aggregated data and simpler modelling techniques) are robust to the underlying data and method of analysis (Box 5).

Box 5 **Shipment-level freight costs – what factors explain changes in import ad valorem freight costs?**

In this modelling exercise, shipment-level import data from the Overseas Merchandise Trade component of the prototype Longitudinal Business Database (LBD) are used to assess the impact of changes in the characteristics of import shipments and other direct drivers of freight costs (such as oil prices) on variation in freight costs over time.

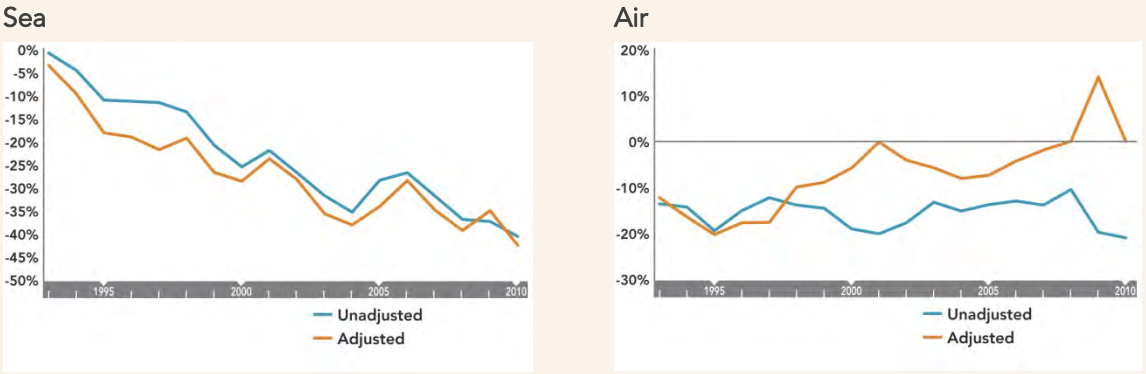
To address this issue, equations of the following form were estimated separately for sea and air using value-weighted ordinary least squares.

$$ln\left(\frac{F_{sit}}{V_{sit}}\right) = \beta^{Z}\mathbf{Z}_{sit} + \delta_{1993} + \cdots + \delta_{2010} + \varepsilon_{sit}$$

That is, the log of ad valorem freight costs for each shipment (s), importer (i) and month (t) was regressed against a set of covariates ($\mathbf{Z}$) and year dummies. The year dummies capture the component of freight costs that is not explained by the covariates – that is, changes in import freight costs that reflect indirect drivers such as market conditions and efficiencies within the freight logistics chain.

A regression that does not include the covariates ($\mathbf{Z}$) and simply regresses the log of freight costs on year dummies indicates that both air and sea freight ad valorem costs are lower in 2010 than 1992 (Figure 4.6). A fixed effect model where goods and trade route dummies are interacted, and time-varying factors such as oil prices are controlled for, shows that sea freight costs have decreased relative to 1992. This suggests that the decline in sea freight costs over time is not due to changes in the composition of imports. However, for air freight, after controlling for compositional effects, air freight costs are found to have increased from around the end of the 1990s.

Figure 4.6 Average import ad valorem freight costs relative to 1992, controlling for covariates



Source: Productivity Commission calculations using Statistics New Zealand's prototype Longitudinal Business Database

This model can also be used to decompose the variation in import freight costs. This reveals that about 75–80% of the variation in freight costs can be explained by the characteristics of the good being shipped and the route taken. Looking at the direct drivers of freight costs, as expected, freight costs are higher (holding other variables constant):

- for higher-value goods;

[29] This model, and a more detailed description of its results, will be published as a forthcoming Productivity Commission Working Paper.

- for heavier goods;
- when goods come from more distant countries; or
- when oil prices are higher.

In addition, ad valorem freight costs are higher:

- For New Zealand firms that import infrequently. This suggests that larger importers can negotiate lower transport costs and have more incentive to invest in supply chain efficiencies.
- When firms import from ports that are not the primary port or when the load port country is not in the export country.[30] These arrangements are likely to result in additional freight costs that get passed on to the importer.
- For less commonly used routes. This suggests that higher freight volumes may result in lower freight costs due to economies of scale or greater competition. Or alternatively, it may be the case that routes with lower freight costs attract greater volumes of trade.
- When the ocean shipment contains multiple goods rather than a single good.

F4.1 Ad valorem sea freight costs (the freight costs faced by New Zealand importers and exporters as a percentage of shipment value) have been decreasing over the last two decades, even after accounting for such factors as changes in trade composition. This suggests that cost-reducing efficiency and technology improvements have not been outweighed by factors such as fuel price increases.

F4.2 Ad valorem air freight costs decreased in the 1990s, but were flat or even slightly increasing in the 2000s, even after controlling for factors such as fuel price increases.

Freight costs for New Zealand importers vis-à-vis Australian importers

Are the freight costs faced by importers similar in New Zealand and Australia?[31] At first glance, in 2010 ad valorem import freight costs were just over one and almost two percentage points higher in New Zealand relative to Australia for sea and air freight respectively (Figure 4.7). However, some of that difference will reflect differences in trading partners, distance to markets and import composition.

Using the regression technique outlined above to adjust for these factors reduces the differential in import freight costs in 2010 to less than one percentage point for sea freight and 1.6 percentage points for air (Figure 4.8). With freight costs relatively low as a share of shipment value, these small percentage point differences suggest freight costs for New Zealand importers are significantly higher than for Australian importers.[32] In broad terms, sea freight costs display a similar trend across both countries, whereas air freight costs in Australia have declined over the 2000s, in contrast to New Zealand where these costs have drifted upwards.

There are a few possible reasons why freight costs for importers differ across New Zealand and Australia. First, freight costs may be lower in Australia given larger trade volumes and therefore greater scale economies and competition. It may also be that freight operators incur higher costs in servicing the New Zealand market compared with Australia. On the other hand, trade imbalances mean that New Zealand

[30] There are up to three different countries associated with a traded good: the origin country (where the majority of the value was added to the good); the export country (where the firm responsible for exporting the good is located); and the load port country (where the good was loaded for export).

[31] International comparisons of freight costs are restricted to imports given data limitations.

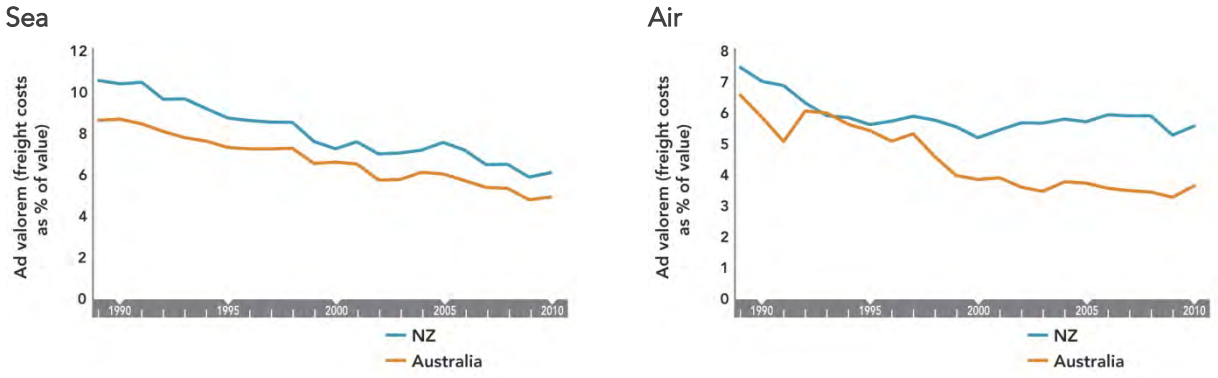
[32] For example, if ad valorem freight costs are 6% in New Zealand and 5% in Australia, then freight costs in dollar terms are 20% higher in New Zealand compared to Australia for an identical shipment.

generally has more spare shipping container capacity on its import routes relative to Australia, which would tend to lower prices in New Zealand relative to Australia.

F4.3 Ad valorem sea import freight costs are higher in New Zealand than in Australia (even after accounting for compositional factors). However, in both countries sea freight costs exhibit a similar decreasing trend over the past two decades.

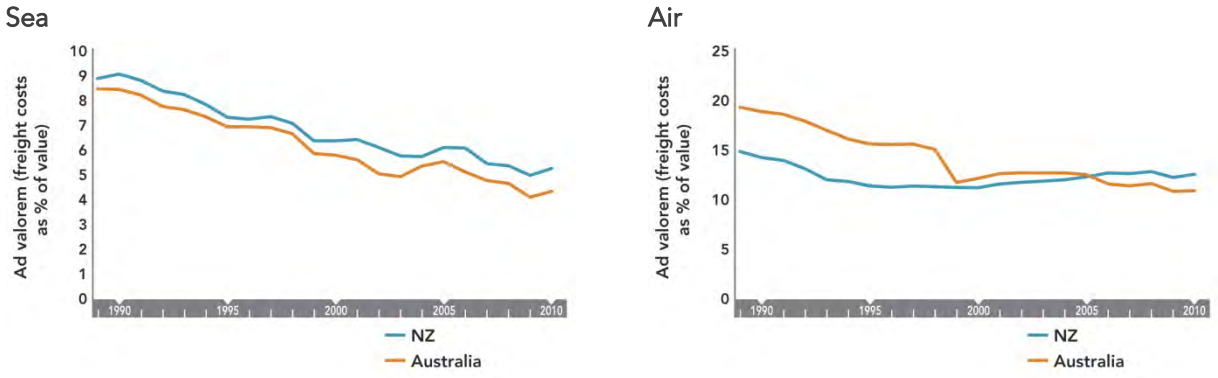
F4.4 Reductions in ad valorem air freight costs in Australia flattened off in the 2000s, but not to the same extent as in New Zealand. As a result, ad valorem air freight costs are currently higher in New Zealand than in Australia.

Figure 4.7 New Zealand and Australia import freight costs: unadjusted ad valorem



Source: Productivity Commission calculations using Statistics New Zealand and Australian Bureau of Statistics data

Figure 4.8 New Zealand and Australia import freight costs: adjusted ad valorem



Source: Productivity Commission calculations using Statistics New Zealand and Australian Bureau of Statistics data

Notes:

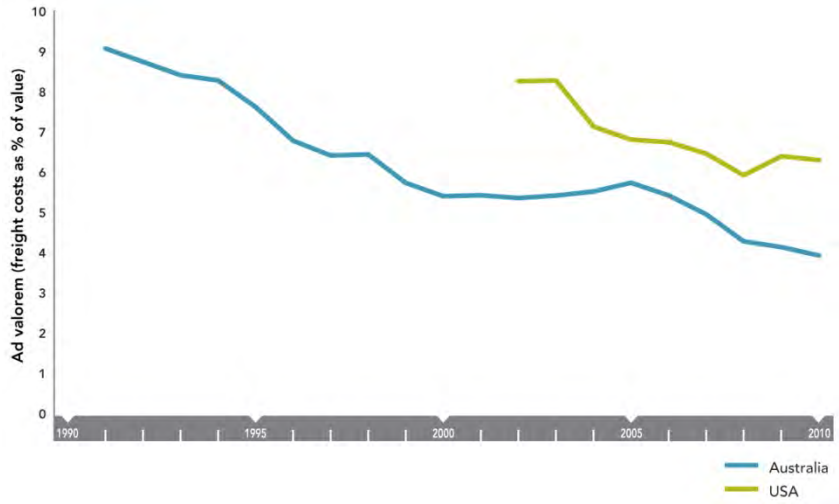
1. The adjusted ad valorem rate is derived from a regression and controls for changes in the mix of trade partners and products traded.

Sea and air freight costs for exporters

Comprehensive data on freight costs for New Zealand's exports are only available for two destination countries – Australia and the United States, which account for about a third of New Zealand's exports by value.[33] As for imports, export freight costs to Australia and the United States have generally fallen over time (Figure 4.9). And, as expected given the distance differential, it costs more to export goods to the United States than to Australia.

[33] This analysis uses Australian and US customs data on inward freight costs.

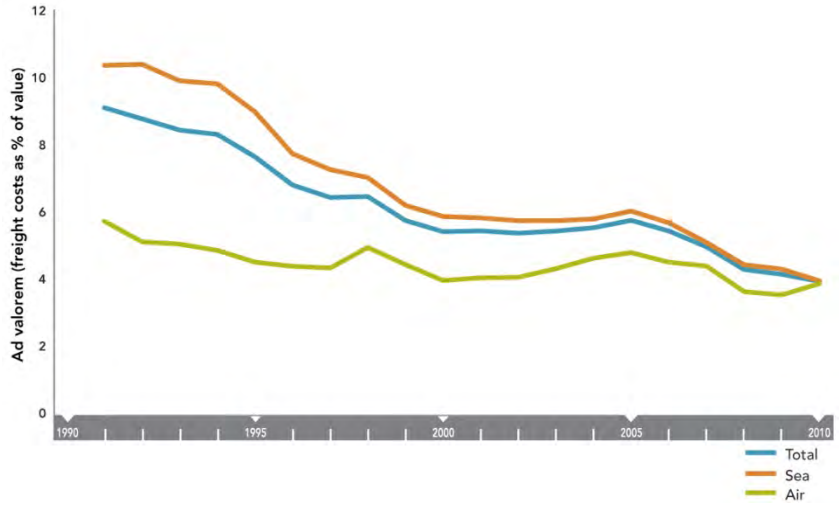
Figure 4.9 Ad valorem freight costs for New Zealand's exports to Australia and the US



Source: Productivity Commission calculations using Australian Bureau of Statistics and US Census Bureau data

Taking a more detailed look at New Zealand's exports to Australia, sea freight costs have fallen more markedly than air freight costs (Figure 4.10). This mirrors the pattern seen for New Zealand's import freight costs.

Figure 4.10 Ad valorem freight costs for New Zealand's exports to Australia by mode of transport



Source: Productivity Commission calculations using Australian Bureau of Statistics data

Overall, New Zealand export freight costs to Australia and the US follow a similar pattern to import freight costs. This suggests that the import freight costs discussed above provide a good proxy for the freight costs generally faced by New Zealand importers and exporters.

4.2 Supply chain costs by component

The results outlined above provide a high-level view of aggregate freight costs. To complement these results and provide a more detailed assessment of the components of freight costs faced by New Zealand importers and exporters, this section outlines data derived from two sources:

- the World Bank's *Doing Business* project on trading across borders; and
- case study analysis of the freight costs incurred in transporting cargo out of Auckland and Sydney via both sea and air freight.

In comparison to the aggregate results outlined above, these approaches provide a relatively selective view of freight costs on a particular route at a given point in time. As such, they can be prone to definitional and measurement issues that may reduce their utility as general measures of freight costs.

The results of both approaches are discussed in turn.

International comparisons of onshore sea freight costs

The World Bank's 'Doing Business' report attempts to measure the cost associated with exporting and importing a standardised cargo of goods by ocean transport, excluding tariffs and international sea freight costs. This methodology is subject to a number of limitations. For example, the results are based on an importer or exporter operating out of each country's largest business centre. As such, transportation costs do not account for differences in the average distance travelled on inland routes. Notwithstanding these caveats, the 'Doing Business' data provides a useful high-level overview of international onshore sea freight costs.

According to the 2011 report, New Zealand's onshore costs compare favourably with other OECD countries – total costs in New Zealand are around 20% and 25% less than the OECD average for exports and imports respectively (Table 4.1). Australia's onshore costs are close to the OECD average and are 19% and 26% higher than in New Zealand for exports and imports respectively.

Decomposing these costs for Australia and New Zealand suggests that New Zealand has lower costs for all components except export customs procedures. So it appears that New Zealand's onshore freight costs are reasonably good in trans-Tasman comparison. However, New Zealand costs are still higher than in Singapore, which is the top-performing country. This suggests there may still be room for further improvements, particularly in the areas of document preparation and customs requirements (discussed further in Chapter 7).[34]

F4.5 The onshore components of New Zealand's freight costs compare favourably with Australia and other OECD countries.

Table 4.1 Onshore transportation costs

	Export procedures (US$)				Import procedures (US$)			
	New Zealand	Australia	OECD average	Singapore	New Zealand	Australia	OECD average	Singapore
Document preparation	205	285	170	116	175	269	184	99
Customs	50	45	83	50	50	120	98	50
Terminal handling	300	350	265	150	300	350	272	150
Inland transportation	300	380	513	140	300	380	531	140
Total	855	1,060	1,032	456	824	1,119	1,085	439

Source: World Bank and International Finance Corporation (2011)

Case studies of cost components

This section presents cost component case studies for both sea and air freight based on the methodology outlined in 0 above. While customs data provide an overview of the freight costs of New Zealand importers and exporters, and *Doing Business* provides a general picture of onshore costs, case studies allow a more comprehensive breakdown of cost components and comparisons of these costs against Australia's.

Case studies do, however, have their limitations and need to be interpreted with caution. In particular, the examples used in the case studies may not necessarily be a representative sample. Also, they are snapshot estimates, so price differences may partly reflect particular conditions, such as capacity constraints, at that point in time. In addition, the material presented here is based on quotes for smaller importers and

[34] As mentioned, the methodology used makes it difficult to compare New Zealand with Singapore on some measures such as inland transportation. However, Singapore still offers an international best practice comparison for document and customs procedures.

exporters. It could be that these prices are not representative of the prices larger importers and exporters can negotiate. A cross-country comparison for these customers may therefore yield different insights.

Sea freight

To examine the components of freight costs faced by small-to-medium sized importers and exporters in New Zealand and Australia, the Commission received quotes in November 2011 for shipping one 20-ft container on the basis of regular shipments of 12 to 30 containers per year. The quotes only cover port-to-port costs and were received directly from shipping lines and border and security agencies. Quotes were received for the following products and routes:

- Imports:
  - electronic componentry to Auckland and Sydney from Singapore, Long Beach and Shanghai;
  - electronic componentry from Sydney to Auckland.
- Exports:
  - aluminium extrusions from Auckland and Sydney to Singapore, Long Beach and Shanghai;
  - aluminium extrusions from Auckland to Sydney.

Overall, Auckland routes were more expensive than the Sydney routes by between 7% and 87%. In all cases this was because the sea freight component of the Auckland routes was relatively more expensive by between 43% and 500%. The destination[35] and origin[36] costs at Auckland were cheaper than at Sydney in all cases, mainly due to lower port costs in Auckland.[37] However, this was not enough to offset the large differences in sea freight costs.

The Commission also received quotations for the same shipments from freight forwarders. As discussed in section 3.1, freight forwarders offer additional services by facilitating the movement of freight along the logistics chain and play a key role in ensuring that transport links are reliable, tailored to the product and timely. These quotes indicate that using the services of a freight forwarder adds between 8% and 21% to the total costs for small New Zealand importers, and between 13% and 24% for small Australian importers. For small exporters, using a freight forwarder adds between 4% and 7% in New Zealand and between 2% and 46% in Australia. This suggests that freight forwarder margins are higher in Australia relative to New Zealand. However, this difference does not outweigh the differences in ocean freight costs.

The figures presented here are the averages for all the relevant quotes, and the variation between the lowest and highest quoted sea-freight costs was considerable for some routes. The routes between Auckland and Singapore exhibited the largest range, with a 43% difference between the lowest and highest quotes for the sea freight component of imports, and a 31% difference for exports. The Shanghai to Auckland route also exhibited a wide range (29% difference between the lowest and highest prices). Quotes for sea freight costs in the remaining cases exhibited little variation.

Due to the limitations of these case studies outlined above, the Commission is seeking further information from industry stakeholders on whether or not these reflect their experience of freight costs.

Q4.1 Notwithstanding their limitations, case studies suggest that the ocean transport component of sea freight costs is higher for Auckland compared with Sydney routes. They also suggest that the onshore components of Auckland's sea freight costs, particularly its port handling costs, compare favourably with Sydney's. Is this information representative of the experiences of industry participants?

[35] 'Destination costs' are costs incurred including and after the unloading of cargo. Depending on the scenario this may include import clearance costs, port/airport costs and the costs of transport to a local warehouse.

[36] 'Origin costs' are costs incurred up to and including the loading of cargo. Depending on the scenario this may include the cost of transport from a local warehouse to the port/airport, port/airport costs and export clearance costs.

[37] Port costs include terminal handling costs, port service costs and terminal security fees. Sydney seaport also has a congestion surcharge for imports; however, even if this charge is not taken into account, port costs for Sydney were still higher than for Auckland.

Table 4.2 Auckland and Sydney sea freight import cost comparison case studies

	Auckland (NZ$)	Sydney (NZ$)	% difference[1]
Singapore to Auckland/Sydney			
Sea freight costs	1,546	763	103
Destination costs	461	934	-51
Total	**2,007**	**1,697**	**18**
Long Beach to Auckland/Sydney			
Sea freight costs	4,255	2,613	63
Destination costs	500	956	-48
Total	**4,755**	**3,569**	**33**
Shanghai to Auckland/Sydney			
Sea freight costs	1,613	913	77
Destination costs	439	931	-53
Total	**2,052**	**1,844**	**11**
Sydney to Auckland			
Origin costs	603		
Sea freight costs	485		
Destination costs	428		
Total	**1,515**		

Source: Productivity Commission

Notes:

1. Percentage differences use Australia as the base (ie, New Zealand costs less Australian costs divided by Australian costs).
2. Origin costs are not included if the terms of sale are free on board (FOB) load port (ie, all origin costs paid by the supplier of the goods).

Table 4.3 Auckland and Sydney sea freight export cost comparison case studies

	Auckland (NZ$)	Sydney (NZ$)	% difference[1]
Auckland/Sydney to Singapore			
Origin costs	398	728	-45
Sea freight costs	1,553	486	219
Destination costs	348	348	0
Total	**2,298**	**1,562**	**47**
Auckland/Sydney to Long Beach			
Origin costs	431	760	-43
Sea freight costs	2,822	2,258	25
Destination costs	640	625	2
Total	**3,892**	**3,643**	**7**
Auckland/Sydney to Shanghai			
Origin costs	398	728	-45

Sea freight costs	1,661	277	500
Destination costs	348	282	23
Total	**2,406**	**1,287**	**87**
Auckland to Sydney			
Origin costs	408		
Sea freight costs	654		
Destination costs	767		
Total	**1,828**		

Source: Productivity Commission

Notes:

1. Percentage differences use Australia as the base (ie, New Zealand costs less Australian costs divided by Australian costs).

Air freight

The Commission received quotes in October 2011 for air freight services from three major freight forwarding companies to carry a cubic metre of general goods weighing 167kg[38] on a regular weekly basis for:

- Imports:
  - from Shanghai and Los Angeles to Auckland and Sydney;
  - from Sydney to Auckland.
- Exports:
  - from Auckland and Sydney to Shanghai and Los Angeles;
  - from Auckland to Sydney.

Overall, the case studies indicate that total air freight costs for Auckland are lower than those for Sydney (Table 4.4 and Table 4.5). The air freight component of total costs are fairly similar for Auckland and Sydney, and most of the differences in total costs are due to lower ground handling costs in Auckland. These ground handling components can account for a reasonable proportion of the total costs, particularly for the shorter trans-Tasman routes, where they make up the majority of the total costs. A substantial portion of these costs are for documentation and security fees, indicative of significant barriers to the goal of a seamless trans-Tasman single economic market.

There can be marked differences in freight costs depending on route direction. For example, the air freight component for Shanghai to Auckland or Sydney is much higher than for the routes from Auckland or Sydney to Shanghai. These differences may be due to the air freight capacity from Shanghai to Australasia being more heavily utilised than the routes from Australasia to Shanghai (see Box 6 for a discussion of the supply of air freight).

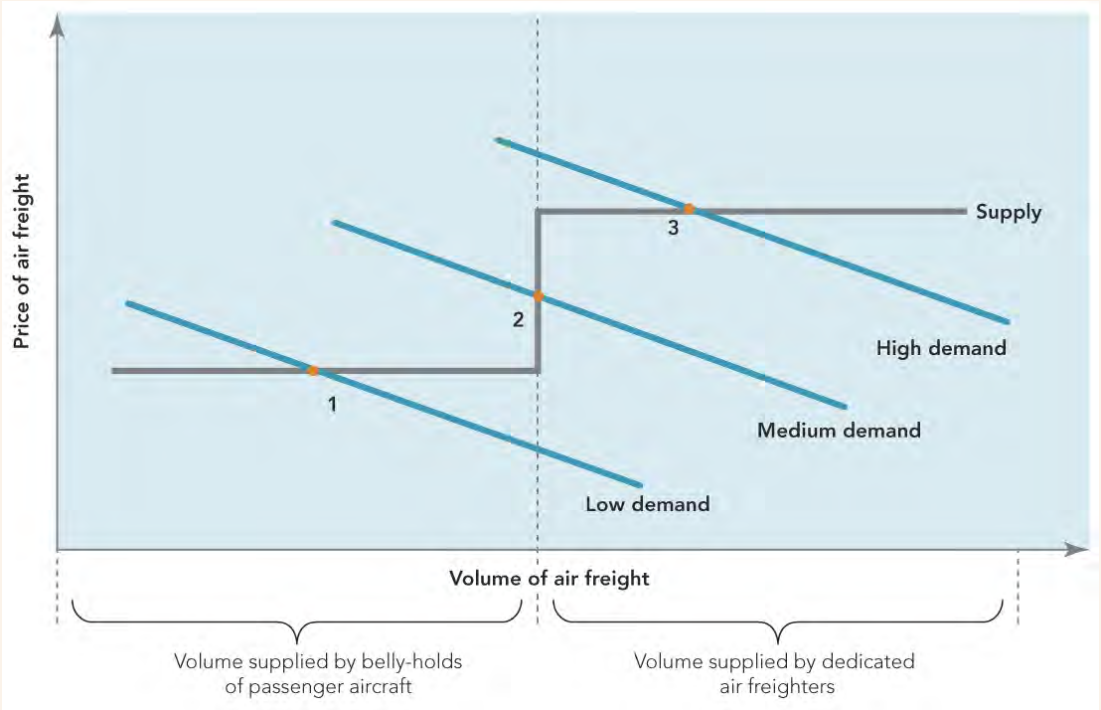
F4.6 Case studies suggest that air freight costs for selected international routes into and out of Auckland are less than those for the analogous routes into and out of Sydney.

[38] The volume conversion of $1m^3$ = 167kgs is an International Air Transport Association (IATA) standard.

Box 6 **The economics of bellyhold air freight and dedicated freighters**

The distinctive feature of New Zealand's air freight market is that the supply curve for air freight on international routes has a kink. For low total volumes the price of air freight per unit is low because freight will be carried in the bellyholds of passenger aircraft at marginal cost prices. When the bellyhold capacity of aircraft on a route is filled (at the vertical line), additional freight will be carried by dedicated freighters, but at a higher price per unit to cover the operator's fixed and marginal costs.

Figure 4.11 Stylised demand and supply for air freight to or from New Zealand



The diagram shows three scenarios:

- At point 1, where there is low demand for air freight by exporters and importers, the demand can be met by passenger aircraft using their bellyhold capacity.
- At point 2, where there is a medium level of demand for air freight, there are capacity constraints in the bellyholds of passenger aircraft. At this point, passenger airlines are able to charge more for bellyhold capacity. Essentially this is a congestion charge.
- At point 3, where there is high demand for air freight, dedicated freighters will supply additional capacity, provided that the market is willing to pay for the higher costs of dedicated air freighters.

The total amount of bellyhold capacity will depend on the market supply and demand for international passenger services. However, on some routes the supply of passenger services, and hence the supply of bellyhold capacity, may be constrained by government air services agreements. These agreements sometimes set an upper limit on the number of passengers that designated airlines may fly on an international route (see section 5.6 for further discussion).

Table 4.4 Auckland and Sydney air freight import cost comparison case studies

	Auckland (NZ$)	Sydney (NZ$)	% difference[1]
Shanghai to Auckland/Sydney[2]			
Air freight costs	939	896	5
Destination costs	213	274	-22

Total	**1,152**	**1,170**	**-2**
Los Angeles to Auckland/Sydney			
Origin costs	136	136	0
Air freight costs	757	760	-0.4
Destination costs	203	274	-26
Total	**1,096**	**1,170**	**-6**
Sydney to Auckland			
Origin costs	110		
Air freight costs	253		
Destination costs	197		
Total	**560**		

Source: Productivity Commission

Notes:

1. Percentage differences use Australia as the base (ie, New Zealand costs less Australian costs divided by Australian costs).
2. Origin costs are not included if the terms of sale are free carrier aboard (FCA) load port (ie, all origin costs are paid by the supplier of the goods).

Table 4.5 Auckland and Sydney air freight export cost comparison case studies

	Auckland (NZ$)	Sydney (NZ$)	% difference[1]
Auckland/Sydney to Shanghai[2]			
Origin costs	147	233	-36.9
Air freight costs	238	243	-2.1
Total	**385**	**476**	**-19.1**
Auckland/Sydney to Los Angeles			
Origin costs	147	243	-39.5
Air freight costs	664	657	1.1
Destination costs	272	304	-10.5
Total	**1,083**	**1,204**	**-10.0**
Auckland to Sydney			
Origin costs	134		
Air freight costs	148		
Destination costs	243		
Total	**525**		

Source: Productivity Commission

Notes:

1. Percentage differences use Australia as the base (ie, New Zealand costs less Australian costs divided by Australian costs).
2. Destination costs are not included if the terms of sale are free carrier aboard (FCA).

Domestic freight costs

As mentioned, domestic transport costs are not included in the sea freight case study results presented above, and the air freight case studies include only the cost of transporting goods from (to) a metropolitan area to (from) the freight carrier's warehouse. However, domestic transport costs may account for a

substantial proportion of total freight costs. For example, case study research suggests that it costs between $1,500 and $5,000 to transport one TEU between Auckland and Christchurch (Ministry of Transport, 2011h). There is wide variation in domestic transport costs across different transport modes, with coastal shipping the least expensive and road transport the most expensive (Table 4.6).[39] However, coastal shipping tends to be relatively slow – between Auckland and Christchurch, delivery via coastal shipping takes 4 days, compared to 2.5 days for rail and 1.5 days for road (Hyder Consulting, 2008).

Table 4.6 Domestic transport costs for one TEU container between Auckland and Christchurch

	Coastal shipping ($)	Rail ($)	Road ($)
Auckland-to-Christchurch	1,703	2,311	5,197
Christchurch-to-Auckland	1,515	2,071	4,569

Source: Ministry of Transport (2011h)

4.3 Transit times and their costs

Transit times are an important aspect of freight costs, particularly in a relatively distant country such as New Zealand. Longer transit times can entail significant en-route depreciation and opportunity costs of capital tied up in goods in transit. As such, transit times impact negatively on the competitiveness of New Zealand exports in global markets. Relatively long transit times can also increase the cost of imported goods, with negative implications for consumers and manufacturers that use imported intermediate goods. Indeed, New Zealand's distance to markets and associated high transit times may be one reason for low levels of intermediate exports and imports, despite the global trend towards more segmented production chains.

The relatively long transit times faced by New Zealand importers and exporters most likely have a larger impact on the value of traded goods than other trade barriers, such as tariffs. For instance, Hummels (2007a) estimates that a one day cut in transit time would reduce the price of imports into New Zealand by 1%, implying a total transit time cost that is much higher than New Zealand's average tariff on imports of 2.2%. For exports, the daily time cost is estimated to be 0.6%, suggesting 20 days of transit time is equivalent to a 12% tariff, compared with the average tariff faced by New Zealand exporters of 8.7%. Of course, in reality the costs of transit time are not linear. For example, the costs for perishable goods such as chilled meat face a shipment time threshold where the value of the good falls to zero beyond a certain date.

International comparisons

It is difficult to reduce transit times without significantly increasing freight costs by, for example, switching from sea to air transport. However, significant gains may be made through greater facilitation of trade via, for instance, reducing documentation requirements and customs processing times. Based on the World Bank's *Doing Business* report, the time requirements to import to or export from New Zealand are below the OECD average (Table 4.7).[40] However, New Zealand is behind the international best practice standard, which is set by Singapore, suggesting there may still be room for improvement.

F4.7 The number of days taken to complete New Zealand's export and import requirements compares well with other countries, but is behind international best practice.

[39] This is an indicative illustration only as, in practice, an exporter or importer would most likely have the container picked up from/delivered to Christchurch rather than Auckland by the international shipping line.

[40] The *Doing Business* reports relates to sea freight. However, for elements such as document preparation, customs and inland transportation, it is likely that the time involved is similar for air freight. For a discussion of the limitations of the methodology, see section 4.2.

Table 4.7 Number of days to complete export and import requirements

	Export procedures (days)				Import procedures (days)			
	New Zealand	Australia	OECD average	Singapore	New Zealand	Australia	OECD average	Singapore
Document preparation	5	5	4.9	1	5	3	5.3	1
Customs	1	1	1.3	1	1	1	1.5	1
Terminal handling	2	1	2.1	1	1	2	1.9	1
Inland transportation	2	2	2.2	2	2	2	2.1	1
Total	10	9	10.5	5	9	8	10.7	4

Source: World Bank and International Finance Corporation, 2011

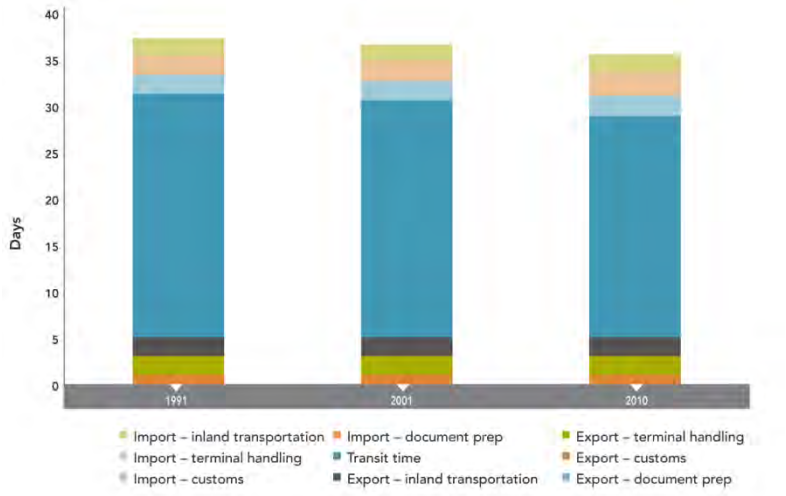
Transit times for New Zealand's imports and exports

Export supply chains

The importance of transit times for New Zealand exporters is highlighted by two examples – Zespri and chilled meat. Zespri is a coordinated industry that has invested in its freight logistics chain to ensure a reliable supply to international markets (see Box 1 in section 1.2). On the other hand, the meat industry is fragmented with a less coordinated supply chain. Chilled meat is a time-sensitive product that is transported to mostly European markets, and the Meat Industry Association submission (sub. 52) highlighted difficulties with practices such as 'slow-steaming' of ships to save fuel.

On average, a typical New Zealand export consignment shipped by sea is estimated to take about 35 days to go from one end of the supply chain to the other in 2010. About two-thirds of that time is spent at sea; almost one-fifth is spent on the destination countries' onshore import procedures; and the remaining five days were spent on New Zealand onshore processes (Figure 4.12).

Figure 4.12 Time taken to complete New Zealand's export sea freight supply chain



Source: Productivity Commission calculations using Statistics New Zealand, World Bank and ComPair data

Notes:

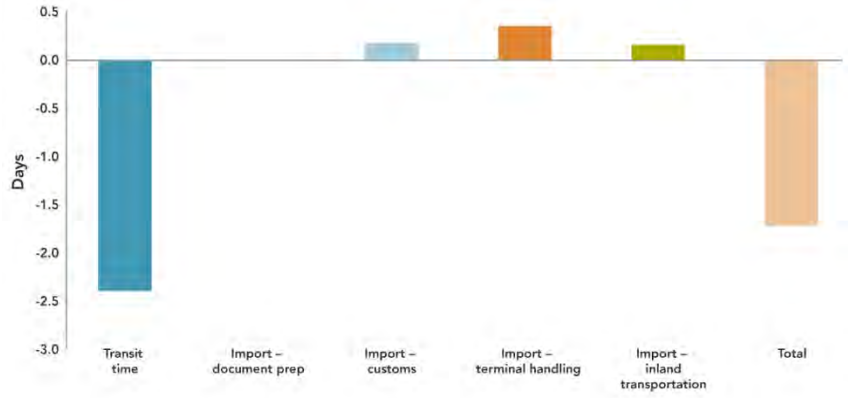
1. To better reflect elapsed time, documentation time is assumed to occur at the same time as other export/import procedures, and only adds to elapsed time if it takes longer than other export/import procedures. This adjustment will still tend to overstate total time in cases where documentation can be prepared in advance of starting those other procedures, for example for regular, planned shipments. In those cases the effective contribution of documentation preparation time to total transit time will generally be zero.

2. Information on the number of days required to complete trade-related procedures from the World Bank's *Doing Business* is combined with transit times for sea freight from ComPair. The World Bank data covers only the 2006-2010 period; so for those years the logistics data varies. For all years before 2006, the World Bank 2006 data is used. Transit time data is not available over time, so this remains constant across all years. For all years, the trade weights of New Zealand's export partners differ.

Over the last 20 years, transit times have decreased as a greater share of New Zealand's exports have gone to more proximate trading partners, particularly in Asia (Figure 4.13). There has been a slight increase in the time taken to complete customs, terminal handling and inland transportation. So, although New Zealand's new export destinations are less distant, they tend to have more time-consuming import processes. For example, these components of the supply chain for exports to China and Indonesia take 9 and 12 days respectively, compared with 3 days for the USA.

As discussed above, while New Zealand is performing reasonably well in areas such as customs procedures and documentation requirements, there may still be scope for improvement in these areas. In addition, continuing to work with trading partners to improve trade facilitation could result in New Zealand's exports reaching international markets more quickly.

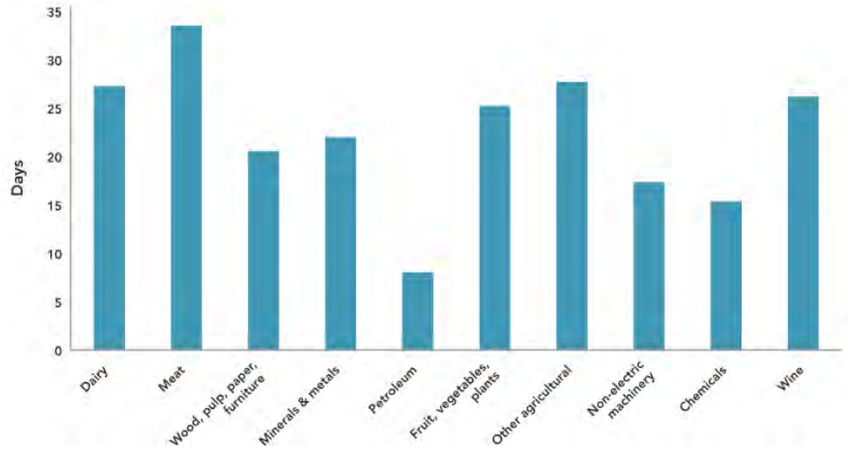
Figure 4.13 Changes in time to complete components of New Zealand's export sea freight supply chain between 1991 and 2010



Source: Productivity Commission calculations using Statistics New Zealand, World Bank and ComPair data

Different products within New Zealand's export basket are sent to different geographic markets. As a result, average transit times differ by product (Figure 4.14). Timely delivery is crucial when goods are subject to rapid depreciation (such as fresh produce), or when demand is uncertain but less important for bulk commodities and simple manufactures. Some of New Zealand's most time-sensitive exports are destined for more distant markets and subsequently have the longest transport times. For example, petroleum, which is one of the least time-sensitive products, takes 18 days to transport on average, while meat has the longest transit time because New Zealand's main meat markets are in Europe and North America.

Figure 4.14 Transit times for New Zealand's top ten export products, 2010



Source: Productivity Commission calculations using Statistics New Zealand, World Bank and ComPair data

Notes:

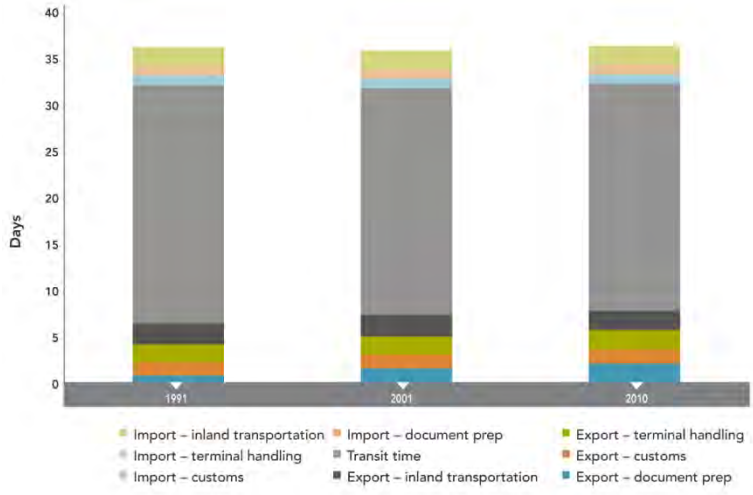
1. ComPair provides port-to-port sea freight data, which allows the calculation of transit times between New Zealand and its trading partners. These transit times vary only by the destination and not by product type, and therefore are an indication of differences due to the destination only.

Import supply chains

On average, New Zealand imports take 36 days to travel from warehouse-to-warehouse by sea. Over two-thirds of that time (or 24 days) is spent at sea, one-fifth (eight days) is spent completing onshore processes in the origin countries, and the remaining four days are spent on New Zealand onshore processes (Figure 4.15).

As with New Zealand's exports, other than transit time, the most time-consuming stage of the logistics chain is related to the processing times in the country of origin. Continuing to work with trading partners to improve trade facilitation may improve this. In addition, although New Zealand is performing well in comparison with many other countries, there may still be room to improve domestic procedures.

Figure 4.15 Time taken to complete New Zealand's import sea freight supply chain



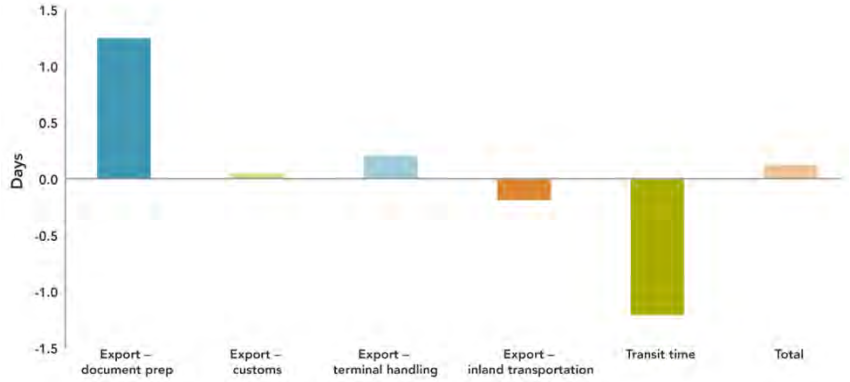
Source: Productivity Commission calculations using Statistics New Zealand, World Bank and ComPair data Notes:

1. To better reflect elapsed time, documentation time is assumed to occur at the same time as other export/import procedures, and only adds to elapse time if it takes longer than other export/import procedures. This adjustment will still tend to overstate total time in cases where documentation can be prepared in advance of starting those other procedures, for example for regular, planned shipments. In those cases the effective contribution of documentation preparation time to total transit time will generally be zero.
2. Information on the number of days required to complete trade-related procedures from the World Bank's *Doing Business* is combined with transit times for sea freight from ComPair. The World Bank data covers only the 2006–2010 period; so for those

years the logistics data varies. For all years before 2006, the World Bank 2006 data is used. Transit time data is not available over time, so this remains constant across all years. For all years, the trade weights of New Zealand's import partners differ.

The time required to import an 'average' consignment of goods from New Zealand's trading partners increased slightly (0.1 days) between 1991 and 2010 (Figure 4.16). While New Zealand has shifted to importing from closer trading partners, the resulting reductions in transit times have been more than offset by increases in the longer export process times of these countries.

Figure 4.16 Changes in time to complete components of New Zealand's import sea freight supply chain between 1991 and 2010



Source: Productivity Commission calculations using Statistics New Zealand, World Bank and ComPair data

F4.8 While New Zealand is performing reasonably well in areas such as customs procedures and documentation requirements, there may still be scope for improvement in these areas. In addition, continuing to work with trading partners to improve trade facilitation could reduce transit times.

5 Impediments to competition in international freight

Key points

- In principle, competitive pressures provide incentives for firms to meet the transport needs of their customers in the least costly ways.
- This chapter identifies impediments to competition in parts of freight transport. These include potentially anti-competitive practices in international shipping that are exempt from competition law, port governance arrangements, and work practices at ports. These impediments are discussed in more detail in subsequent chapters.
- Coordination between components of the supply chain is important because the efficiency of one component of the supply chain often depends on the efficiency of other components.
- Participants have identified opportunities to improve coordination in a number of areas, although most seem to be issues for commercial resolution. These opportunities for coordination include combination of freight shipments, minimisation of empty containers, timing of bill payments, and the minimisation of truck waiting times at airport freight handling facilities.

The terms of reference direct the Commission to identify impediments to competition within and between the components of the international freight supply chain. Section 5.1 identifies impediments to competition within each component, and section 5.2 examines factors that limit efficient coordination between the components of the supply chain.

5.1 Competition and operational efficiency

As noted in Chapter 2, competitive pressures provide incentives for transport operators to meet the transport needs of their customers in the least costly ways. The strength of these pressures depends on characteristics of the market within which firms are operating, such as the number and size distribution of firms in the industry, barriers to entry faced by new firms seeking to enter the market, the characteristics of customers, and the industry's technology.

Analysing the ways in which these factors interact and the performance outcomes that they generate in particular markets is a complex task that would be too large for this inquiry to undertake, and is not envisaged by the terms of reference. Rather, the terms of reference require the Commission to undertake the narrower task of identifying impediments to competition. For this analysis, the Commission considers that it is useful to classify three types of impediments to competition, depending on whether they are:

- inherent in the economic geography of the sector (for example, the small size of New Zealand's population in relation to the economies of scale in airports means that there are inherent impediments to market entry by new airports);
- the result of potentially anti-competitive behaviour by firms; and
- caused by or could be addressed by regulatory or other government interventions.

While the analysis reveals examples of all three types of impediments, the Commission has focused on the last two. The first type is generally not amenable to policy intervention. The Commission's approach to the second type is to consider whether certain potentially anti-competitive practices should be permitted. The third type of impediment, having been created by government, can be removed, should it be demonstrated that the public policy case for the impediment no longer exists.

The existence of these impediments is considered for sea freight, road freight, rail freight, air freight, and for services to the transport sector as a whole.

Sea freight

International shipping lines

New Zealand is relatively well served by liner shipping operators, with nine of the largest sixteen shipping companies operating regular liner services to New Zealand. It is not clear how well New Zealand is served by bulk shipping, which is usually carried out with chartered vessels.

Historically, liner shipping has enjoyed an unusual situation in that various types of agreements between carriers have been exempt from the full application of domestic competition laws in New Zealand and in many other countries. The policy rationale for this exemption is that the combination of high fixed costs, the need to maintain a schedule, the consequent excess capacity that could arise, and fluctuating and diverse demand could lead to 'destructive competition' and price wars that would undermine the reliable supply of shipping services. This could happen as prices fall to short-run marginal cost in times of excess supply, leading to returns that are not large enough to cover long-run marginal costs. The fear is that this could lead to some carriers monopolising the trade.

Because potentially anti-competitive practices are exempted from competition law, this part of the transport supply chain has a possible impediment to competition that the government has endorsed. It therefore sits squarely within the terms of reference for this report. Chapter 11 analyses the benefits and costs of this exemption.

Coastal shipping

International shipping lines calling at many New Zealand ports provide the majority of coastal container shipping services. Few New Zealand ships are involved. This has been the case since 1994, when section 198 of the Maritime Transport Act enabled owners of non-New Zealand flagged international trading ships to move cargo between New Zealand ports (Rockpoint, 2009, p. 94). The main regulatory impediment to competition in coastal shipping is the requirement that, for immigration purposes, international ships and their crew must exit local waters before a 28-day period has elapsed (Rockpoint, 2009, p. 94).

Submissions argued that coastal shipping cannot successfully compete with other transport modes such as road and rail under current arrangements. Lyttelton Port Company's submission argued that road transport is heavily subsidised; rail partially; and sea not at all, and that this is impacting the level of competition in domestic freight movement (sub. 16). Chapter 13 assesses impediments to competition in coastal shipping.

Seaports

New Zealand's fourteen ports are an important part of the international freight transport supply chain. While it is difficult to be precise, one estimate puts port charges at 6.3% of total logistics costs for New Zealand businesses (Ministry of Transport, 2010b).

As described in Chapter 3, New Zealand's ports perform different functions. Each port generally has a large degree of geographical monopoly over bulk cargo sourced from, or destined to, that port's hinterland. Many of the smaller ports are specialised for particular bulk cargos (for example, oil at Marsden Point, bauxite at Bluff). Land transport enables ports to compete for higher-valued goods, typically containerised cargo.

The Port of Tauranga has a railhead in Auckland that acts as an 'inland port'. Inland ports can increase the reach of a port and hence the size of its effective hinterland. Inland ports can also improve efficiency of port operations in instances where there are bottlenecks at the port due to land transport, land area (for storage) or border-clearance issues. Ports of Auckland operate an inland port at Wiri for these sorts of reasons.

The Commission has observed two ways in which government regulatory frameworks may impede competition between ports.

- The governance arrangements within which ports operate are likely to affect major investment decisions, the introduction of new work practices, and moves to partner or merge with other owners or

new entrants. Work practices are discussed in Chapter 6 and governance arrangements are discussed in Chapter 10.

- Environmental approval processes may be needed before ports can undertake significant investments. These processes are discussed in Chapter 8.

Stevedoring and marshalling

Port companies can either provide stevedoring and marshalling services themselves, with their own equipment and workforces, or contract them out to independent providers. In New Zealand, there is greater choice of stevedoring and marshalling firms for bulk and break-bulk cargos than there is for container cargo.

New Zealand ports are predominantly vertically integrated – the same party that owns the port infrastructure also operates the port terminal. In most New Zealand ports the level of contestability to provide services within the port is limited, with ports using their own subsidiaries to provide most services. In contrast, overseas ports commonly adopt a 'landlord' model, where the port owner offers contestable contracts to terminal operators. This landlord model allows the terminal operators to compete to provide port services, or to contract with specialised service providers to provide services at that terminal.

A question for this inquiry is whether ports have incentives to refuse access to their facilities by potential providers of stevedoring or marshalling services. Such incentives would constitute an impediment to competition that might be addressed by the Government putting in place stronger arrangements to facilitate access. Chapter 13 considers whether there is a need for such arrangements in New Zealand.

Road freight

Some participants have suggested that regulation covering High Productivity Motor Vehicles (HPMVs) is an impediment to competition. HPMVs can carry longer and/or heavier loads, but they must have a permit that is issued by road-controlling authorities (mostly local councils for local roads and the New Zealand Transport Agency (NZTA) for the state highway network). This issue is discussed in Chapter 13.

Rail freight

KiwiRail is New Zealand's only provider of rail services but faces competitive pressure from road transport. Rail has an advantage over road in transporting bulky goods such as coal over long distances. However, rail competes with coastal shipping in these markets. These goods represent a small proportion of overall freight traffic.

In addition, while road competes with rail, the reverse is not the case. Rail is not a serious competitor for the vast majority of road freight traffic. According to Transport Engineering Research Ltd, only 3–7% of the current road freight task was contestable by rail in 2006 (Mackie, Baas and Manz, 2006).

In its 2010 Budget, the Government agreed in principle to invest $750 million in the KiwiRail Turnaround Plan. In this announcement, the Government noted that the Plan is designed to preserve and enhance New Zealand's national rail freight network and move KiwiRail towards full financial self-sufficiency within 10 years, meaning that it will be able to fund its ongoing operating and capital costs (though only for certain capital items such as rolling stock) from customer revenue.

In respect of freight, the Turnaround Plan notes:

> Increasing the amount of domestic freight carried on the Auckland-Christchurch route is critical to the growth and sustainability of the freight business. Other routes are busy and important. But in most cases, rail is already relevant and growth depends on some other factor – like natural growth in the economy (KiwiRail, 2010a).

Chapter 10 discusses governance of KiwiRail.

Air freight

International airlines

Air freight is mainly carried to and from New Zealand in passenger aircraft bellyholds. Competition in international air services is regulated in New Zealand by both the Commerce Act 1986 and the Civil Aviation Act 1990. Together, these Acts make up the 'competition regime' for international air services in New Zealand. However, certain international air services trade practices can be exempted from the Commerce Act's prohibitions on restrictive trade practices if they meet criteria in the Civil Aviation Act and are authorised by the Minister of Transport.

Chapter 12 considers the regulation of competition between airlines carrying freight to and from New Zealand.

Airports

Airports tend to be geographical monopolies, due to their large fixed costs, network effects and barriers to entry. As a result there is limited scope for international freight competition between Auckland, Wellington and Christchurch International Airports. This assessment is in line with the assessment in the submissions by the Board of Airlines Representatives (BARNZ) (sub. 36), Air New Zealand (sub. 47) and the Air Cargo Council (sub. 8).

The Commerce Commission's 2002 assessment of some key aspects of airport market power still appears relevant to Auckland, Wellington and Christchurch International Airports today. These are:

- There are high barriers to entry. The nature of the investment in a major airport facility, such as those at Auckland, Wellington and Christchurch, is such that barriers to entry are high, and hence competition from potential entrants is limited.
- There is low competitive restraint from smaller local airfields. There is some scope for supply-side substitution for general aviation aircraft given the presence of small airfields in the vicinity, but not for larger (commercial) aircraft.
- There is low competitive restraint from other international airports. Demand is driven by the destination to which passengers/shippers want to go.
- There is low competitive restraint from other transport modes. Alternative modes of transport are also unlikely to provide a constraint on the behaviour of airport companies.

(Commerce Commission, 2002, p. 18))

As with ports, a question for this inquiry is whether airports have incentives to refuse access to their facilities by potential providers of other services (such as freight handling services) at the airport. Chapter 13 considers this issue, as well as the benefits for competition of more disclosure of information by airports.

Cargo terminal operators

As noted in Chapter 3, Cargo Terminal Operators (CTOs) load and unload freight at airports. Competition between CTOs should lower the cost of freight handling for exporters and importers, improve the speed of handling, and minimise freight damage.

Auckland and Christchurch Airports are each served by two CTOs – Menzies Aviation and Air New Zealand. There do not appear to be barriers to entry for a new CTO at either airport. The two CTOs at Auckland and Christchurch Airports also seem capable of effectively challenging each other for airline contracts as they come up. However, several submissions to the inquiry noted potential competition issues with respect to CTOs. The Customs Brokers and Freight Forwarders Federation of New Zealand (CBAFF) considered that limited space and commitment from airport authorities hinder growth (sub. 17). The Air Cargo Council noted that a bar to a CTO starting up in Auckland would be lack of a suitable site, lack of volume and high setup costs (sub. 8). The BARNZ submission considered that freight-related services at airports are subject to no or little competitive pressure (sub. 36).

In addition, despite handling similar freight volumes, Australian airports support more CTOs. For example, Melbourne Airport has six CTOs, even though its volume of air freight is not much more than Auckland's. Table 5.1 compares the situation for Sydney, Melbourne and Auckland Airports:

Table 5.1 Comparison of cargo facilities at Auckland, Sydney and Melbourne Airports

2009 air freight benchmarks	Auckland	Sydney	Melbourne
No. of CTO operators	2	7	6
No. of air cargo carriers serving airport	16	40	23
Bellyhold capacity – tonnes p.a.	161,387	277,625	161,283
Freighter capacity – tonnes p.a.	31,136	120,364	47,495
Total available export capacity – tonnes p.a.	192,524	397,989	208,778

Source: Auckland International Airport (drawing on www.melbourneairport.com.au)

Auckland International Airport advised the Commission that it would welcome a new entrant, and would build facilities for them. However, as noted earlier, situations can arise in which infrastructure owners have an incentive to refuse access to their facilities. Regulation around access issues is discussed in Chapter 13.

Services to the transport sector

Freight forwarders

As noted in Chapter 3, there are about 300 freight forwarders in New Zealand, with 10 of them handling most of New Zealand's exports. This large number of participants may indicate also that barriers to entry are low, because it is clearly possible for firms to succeed on a small scale.

The situation is, however, not straightforward. Entering the freight forwarding market for products that require special handling, such as wine, perishable products and racehorses, may require freighting know-how for a particular product. Forwarders may also need to gain access to particular distribution channels or invest in specialised equipment (such as coolstore facilities at warehouses for specific products) with low re-sale value. Moreover, the recent experience of this industry – in which the Commerce Commission has reached a settlement of proceedings against five international freight forwarding companies accused of anti-competitive conduct in the freight forwarding market[41] – indicates barriers to entry into at least these parts of the market.

The Commission has not, however, been alerted to any ways in which government regulations or other policy settings are impeding competition in freight forwarding.

Q5.1 Are there impediments to competition in freight forwarding that could be reduced by government intervention, and what would be the costs and benefits of reducing these impediments?

Customs and biosecurity

Customs and biosecurity services are provided by the New Zealand Customs Service and MAF Biosecurity. Parts of these services are contestable,[42] but others are not. Chapter 7 considers customs and biosecurity issues.

5.2 Coordination and operational efficiency

Competition is one important means of achieving efficient freight transport services, but coordination is equally important because the efficiency of one component of the supply chain often depends on the

[41] The Commerce Commission's latest press release on these proceedings (Commerce Commission, 2011c) provides background.

[42] MAF Biosecurity contracts out the delivery of many of its services, or has internal contracts or memoranda of understanding with other parts of MAF – for example, border control and quarantine services, and disease investigation (Office of the Controller and Auditor General, 2002).

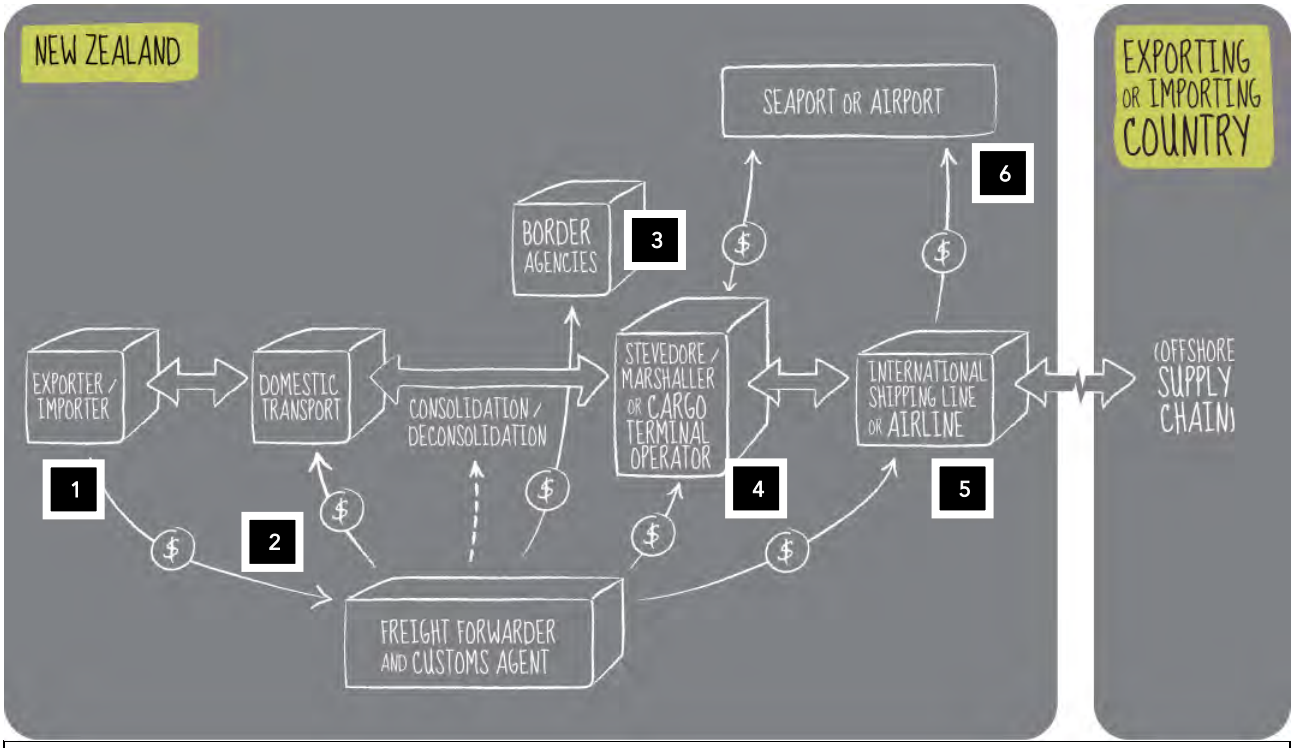
efficiency of other components. For example, service improvements in one component of the supply chain can lead to an increase in demand for services in other components. Conversely, a reduction in the quality of one component can cause hold-ups for other components.

Coordination in freight supply chains may not be optimal. On the one hand, there may be too little coordination if the benefits of coordination cannot be sufficiently retained by the firms that bear the cost of coordination. On the other hand, some coordination may be harmful, as in the case of coordination by cartels to jointly fix prices without offering any offsetting efficiency benefits.

This section reviews six coordination issues that have been raised in the inquiry, in order to identify if any improvements could be made to increase freight efficiency. These coordination issues are shown in the diagram below.

The Commission's general impression from reviewing these issues is that international freight services are well coordinated and that there are market-led solutions to many of these coordination issues. However, there is an opportunity for some improvements in a number of areas, which together may increase the efficiency of the freight supply chain.

Figure 5.1 Freight coordination issues identified in the inquiry



Key:

1. Combination of freight shipments
2. Timing of bill payments
3. Coordination of border security processes
4. Minimisation of truck waiting times at CTOs
5. Minimisation of empty containers
6. Availability of aircraft freight capacity at Christchurch International Airport

Note: Investment coordination and other longer-run coordination issues are considered in Chapters 8 and 9.

Combination of freight shipments

The combination of freight shipments by exporters or importers often enables them to reduce their unit freight costs by increasing the utilisation of container space and increasing the bargaining power of exporters and importers with respect to shipping lines and airlines.

Many freight forwarders provide these freight combination services to exporters or importers, by consolidating less-than-container-load shipments into containers at the forwarder's warehouse, before transporting the container to a port or airport. Freight forwarders can also assist smaller exporters or

importers to secure more favourable international shipment rates, as these forwarders deal frequently with shipping companies and airlines and should have some bargaining power.

Exporters and importers can also collaborate to combine freight shipments without specialist freight forwarders. One instance of this is currently being tested by the Commerce Commission, with respect to the freight coordination arrangement being proposed by Fonterra Co-operative Group Limited in consultation with Silver Fern Farms. These two large New Zealand exporters propose to form a limited partnership, Kotahi Logistics, to improve the efficiency of their freight logistics. The proposal envisages other companies joining the collaborative arrangement. Fonterra has applied to the Commerce Commission seeking authorisation of agreements involving Kotahi Logistics.

According to the proposal, Kotahi would procure and manage the provision of containerised freight services on behalf of contracted exporters and importers. This would include the transport of containers to and from ports by road, rail or coastal shipping, and contracting with international shipping lines. Kotahi would also pool and coordinate the container freight volumes of its contracted exporters and importers through fewer ports. The aim of this is to leverage scale to deliver better service and potentially achieve cost savings (Commerce Commission, 2011b, p.2).

The Commerce Commission released a draft determination on the Fonterra application on 16 December 2011 and is currently seeking submissions on this draft determination. It considered that the Kotahi arrangements were unlikely to result in a lessening of competition, but it also considered that the public benefits of the arrangements were not extensive:

> The [Commerce] Commission's preliminary view is that the only likely public benefit arising from Kotahi relates to its increased countervailing power. Such countervailing power would likely enable Kotahi to negotiate lower prices for containerised ocean freight. The Commission has not quantified the extent of this benefit.
>
> At this time, the [Commerce] Commission is not convinced that the other benefits claimed by Fonterra would result from, or are dependent on, Kotahi. Critically, the Commission is not satisfied that the Kotahi arrangements would be likely to significantly hasten the arrival of bigger ships to New Zealand, relative to the counterfactual [ie, Kotahi continuing with Fonterra as sole limited partner and without implementing the Kotahi arrangements]. Other rejected benefits are:
>
> - Improved efficiencies in intermodal freight services.
> - Reduced costs of providing services for containerised ocean freight to/from New Zealand.
> - Reduced greenhouse gas emissions.
> - Reduced inefficient infrastructure spending.
>
> Commerce Commission (2011a, p.10)

Timing of bill payments

Bills in New Zealand are frequently due for payment on the 20th of the month following the receipt of an invoice, which is not the general practice in other countries. The Commission heard that one implication of this is that many businesses want to get their goods on the first day of the month, in order to maximise the time they have to sell these goods before payment is due, and thereby minimise their cash-flow requirements. This can generate bottlenecks in freight deliveries at the start of each month.

The Commission considers that there are market mechanisms to address these bottlenecks, if they are creating inefficiencies. For example, domestic transport companies could charge higher prices for moving goods at the start of the month. To the extent that this bill payment convention creates costs for domestic transporters, the Commission expects that commercial solutions will emerge.

Coordination of border control processes

Several submissions suggested that border control agencies need to coordinate their operations more closely, to improve the level of service to exporters, importers and the freight industry. Chapter 7 discusses how the border agencies are creating a 'single trade window' across their operations and how this will

facilitate coordination. It also discusses coordination between New Zealand's border control agencies and their overseas counterparts.

Minimisation of truck waiting times at CTOs

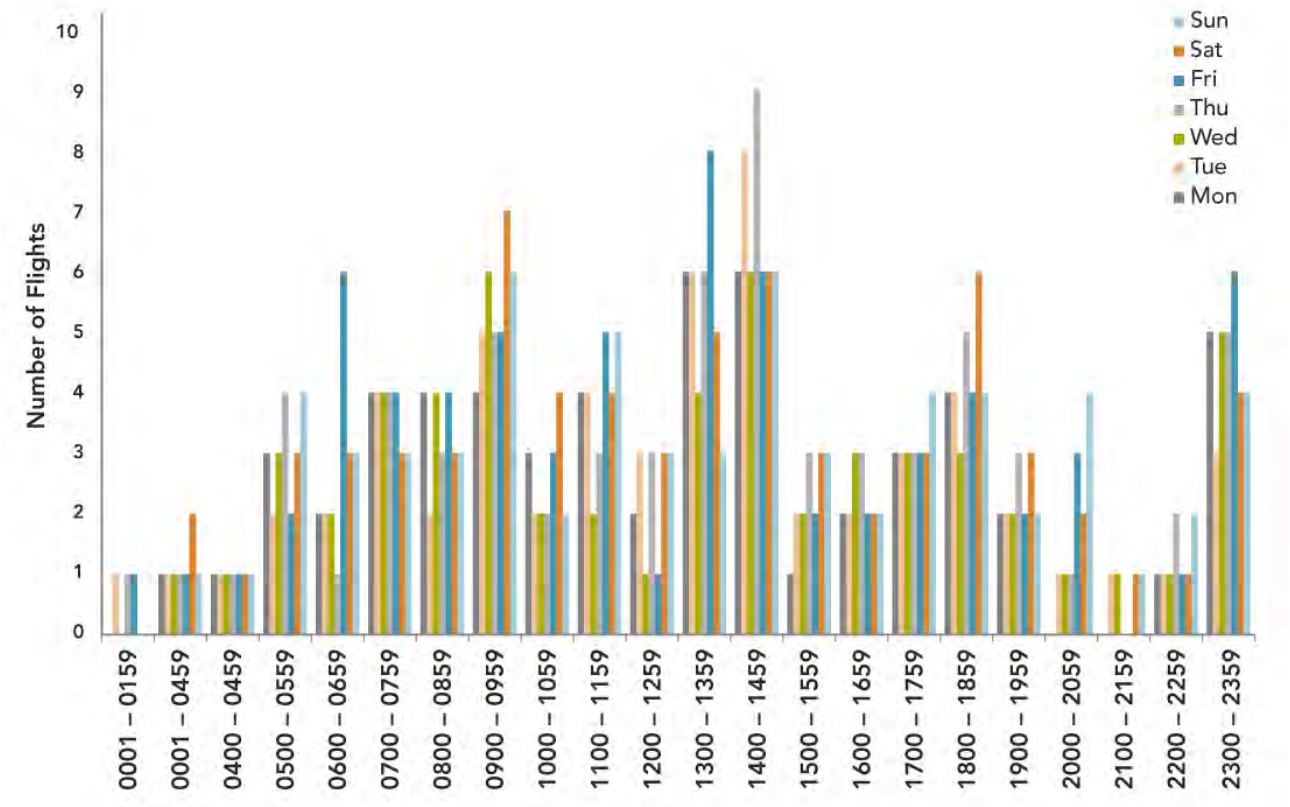
The Commission has heard that trucks wait outside airport CTO facilities for long periods of time before loading and unloading freight. The submission by the Customs Brokers and Freight Forwarders Association reported "trucks queuing for many hours every morning resulting in additional costs incurred by forwarders which is then passed on to customers" (sub. 17, p. 2). This was supported by views in some of the Commission's engagement meetings.

This view was not universally held. The Air New Zealand CTO advised the Commission that dwell times at its CTO were not long. It cited delays maximum of 1–2 hours during the peak time and considered that for the majority of the time, the waiting time is 20 minutes.

While the Commission does not have sufficient information to determine if queuing is having a material impact on the efficiency of the freight supply chain, it has considered possible reasons for queuing.

- There are particularly busy periods of the day with respect to aircraft landing schedules, due to New Zealand's geographical position in relation to the countries it trades with. Airlines on Asian routes aim to get back to home base by the end of the day and so aircraft all arrive around the same time in the middle of the day. Airlines on Australian routes aim to do two return trips over the Tasman each day, and so also land close together. Figure 5.2 provides a picture of the peaks, focusing on the wide-bodied aircraft that are the main carriers of international freight into and out of New Zealand.

Figure 5.2 Schedule of arrivals and departures of international wide-bodied aircraft at Auckland Airport



Source: Sabre ADI, 07 November 2011 extraction

- CTOs have advised the Commission that the current facilities and road accesses for freight movement around the airports are not ideal. It is also possible that because airports do not earn revenue directly from freight operations, their incentive to optimise the facilities for moving freight around the precinct may be muted.

- CTOs themselves may not have an incentive to reduce truck waiting times, if the costs of waiting are incurred by truck drivers. These drivers do not have a choice of CTO and may not have significant leverage over freight decisions by exporters or their freight forwarders.
- Airlines may be exacerbating the problem. The Commission heard from one CTO that airlines give some freight forwarders extensions to the normal deadline for delivering freight to the CTOs for loading onto aircraft. This can place pressure on the CTOs, which may result in delays for other trucks waiting to drop freight off.

A slot booking system could be a useful way to improve the efficiency of truck waiting times at CTOs. Ports of Auckland has recently introduced a vehicle booking system that requires trucks to book slots in advance for picking up and dropping off containers. The booking system encourages off-peak truck travel, with the aim of smoothing the workflow at the port to avoid bottlenecks at peak traffic times.

F5.1 Episodes of significant truck queuing at Auckland Airport suggest poor coordination, leading to low operational efficiency. There is scope for market participants to address this issue, through coordination mechanisms such as a slot booking system with variable charges.

Reducing the costs of empty shipping containers

The Commission frequently heard that trucks, rail wagons and ships carried significant numbers of empty shipping containers on one leg of a journey, due to the imbalance in traffic to and from New Zealand.

One potential solution presented to the Commission was to enable different shipping lines to use unbranded containers. Currently, shipping lines have their own branded containers and will largely only deal with their own empty containers. The Commission heard that a 'grey box' model of unbranded containers might minimise the number of empty containers by improving the utilisation of containers.

The Commission understands that the 'grey box' model has had limited success globally. Shipping companies also operate a container interchange service, but this also has limited use internationally. One issue is the cost of surveying containers between interchanges, a practice which is similar to checking a rental car before and after use. Surveys of containers are important because containers can suffer damage from handling by machinery or leakage of freighted items such as hazardous chemicals.

In addition, the imbalance in container traffic is a common international occurrence and the industry has adopted a number of solutions in addition to the limited use of 'grey box' models and interchange. The International Transport Forum provided examples of some of these practices:

- Shipping lines use IT solutions to manage global container flows, taking into account the effects of global trade imbalances.
- Lines may also get information on other lines' regular flows, so as to know where useful surpluses and/or deficits may arise.
- Lines build up relationships with inland transport operators who move their containers to where they are needed free of charge. In return the inland operator gets free one-way use of the container.
- Lines lease containers by 'master leases', which allow carriers to pick up/drop off containers at will, transferring the repositioning problem to the leasing company.

(International Transport Forum, 2009)

Availability of aircraft freight capacity at Christchurch International Airport

The submission by Christchurch International Airport (CIAL) makes a case for increasing the volume of freight flying in and out of Christchurch (sub. 39):

- There is a gap between the potential volume of air freight through CIAL and the actual volume of freight (the potential volume is estimated on the basis of population and economic activity rates in and around Christchurch).
- Based on CIAL's estimates of the potential volume, the airport is currently handling only half the volume of the potential exports it could handle.
- This situation is not optimal because some freight must be transported to Auckland and some export/import does not happen at all.

In CIAL's view, the capacity gap could be closed by better coordination between the demand and supply sides of the market. It argues that exporters would make more investment commitments if they knew the direct air freight capacity would be available, and airlines would commit to more flights if they had greater certainty about freight volumes (sub. 39, p. 3).

It is not likely that passenger airlines would commit to more flights on the basis of greater certainty about freight volumes. As the CIAL's submission acknowledges, airlines set their flight schedules with a focus on passenger business. The resulting bellyhold freight capacity is a by-product of this scheduling decision.

However, it is likely that a dedicated freighter would commit to flights in and out of Christchurch if it had a strong signal that there was adequate demand for such a dedicated freighter service. There do not seem to be any barriers to the entry of such a dedicated freighter service, and there are already dedicated freighter operations in and out of Auckland.

The issue does not seem to be so much a coordination problem as a matter of the willingness of shippers to pay the higher cost of a dedicated freighter service (see the discussion of the supply curve for bellyhold air freight in Chapter 4). If they are willing to pay for a dedicated freighter service, exporters should be able to effectively signal this to airlines directly or through a 'consolidation agent' such as an agricultural cooperative or a freight forwarder.

F5.2 Limited air freight capacity in and out of a New Zealand airport does not seem to be a coordination problem, because there are no barriers to entry of a dedicated freighter to increase capacity. If they are willing to pay for a dedicated freighter service, exporters should be able to effectively signal this to airlines directly or through a 'consolidation agent'.

CIAL also considers that New Zealand should move to an 'open skies' policy for air services to promote increased airline capacity and competition. This issue is considered further in Chapter 13 and Appendix B.

6 Employment relations at ports

Key points

- At the heart of modern, high-productivity workplaces are effective employer-employee relationships based on mutual trust, shared values and shared commitment to common outcomes.
- In the course of this inquiry, the Commission received numerous submissions, together with commentary during consultation sessions, contending that workplace relationships, particularly in some ports, fall well short of that ideal. This was presented by some submitters as a significant impediment to improved productivity performance. Further, the Commission heard that the risk of labour-related disputes can, in itself, introduce significant costs by blocking, discouraging or delaying productivity-enhancing investments or other operational changes.
- Ports have long been associated with strained union/management relationships, with allied stress and costs for workers and employers alike, as well as those reliant on port services. This is a history that the Commission considers ports and their employees must move past given the centrality of the freight system to New Zealand's trading performance.
- Based on our work to date, there appear to be work practices and behaviours in some ports that are impeding productivity and innovation. Those same factors may be jeopardising progress towards improved health and safety standards and increased workforce diversity. The Commission is seeking further information and evidence about any such practices and their implications.
- Typically, such practices are not codified in workplace agreements, but originate from unwritten 'customs and practices of the port'. It appears to the Commission that these workplace practices are deeply rooted in history and in the nature of the work on the waterfront in eras long past. Most appear to have little relevance in today's environment and legal or institutional settings.
- Obviously, there are two parties to any relationship. The parties to workplace relationships are the employer and the employees, or the representatives of the employees. Responsibility for establishment and maintenance of constructive and productive relationships cannot rest with either one of those parties alone.
- Governance and management of ports must come under scrutiny as a potential factor when relationships persistently fall short of those required for effective and efficient operation of port services. Governance issues are discussed in Chapter 10. Governance of unions is also likely to be a factor.
- There appears to be scope to ease impediments to improved workplace relationships and productivity performance through improving the governance frameworks applying to both ports and unions. These issues will be the subject of further work and discussion with interested parties.
- Impediments to competition in the provision of port services can reduce the efficiency and long-term viability of New Zealand ports, and undermine broader competition policies and legislation.
- The Commission recommends the Government reviews whether existing legislation is sufficient to effectively regulate barriers to competition that arise as a result of union activity.

6.1 Introduction

Sea ports have been transformed over the past fifty years in their operational functions and in the scale and sophistication of the equipment used to manage the core tasks associated with moving cargos on and off ships. Although these changes have increased productivity, the Commission has received many submissions to the effect that work practices within the port environment have not kept pace with the changing nature of the tasks carried out on the waterfront, and that this is impeding further productivity improvements. This chapter outlines these concerns and considers possible responses to them.

The introduction of bulk material handling methods and containerisation of cargos is undoubtedly the most influential development to emerge within the international freight logistics chain over the past fifty years. These innovations have greatly increased productivity – a key factor for New Zealand's international competitiveness. In common with most productivity enhancements, effective introduction and operation of new technologies and techniques on the waterfront are critically dependent on changing work practices and the introduction of new skills.

Notwithstanding historical improvements, the Commission received many submissions, and feedback in engagement meetings, that work practices exist in some ports that impair further productivity improvements. Further, the Commission heard that the risk of labour-related disputes can, in itself, introduce significant costs by blocking, discouraging or delaying potentially productivity-enhancing investments or other operational changes.

Overview of assessment process

To form its views for this draft report, the Commission used a variety of information and data sources. It conducted ten focused engagement meetings on the issue of labour practices at New Zealand ports. It held individual meetings with senior representatives from six port companies, the Council of Trade Unions, ISO Limited, Business New Zealand and Trans-Tasman Resources. Information from these meetings was supplemented by material contained in submissions to the inquiry and during the Commission's 79 stakeholder engagement meetings. Data from the Department of Labour was also collected and analysed. Finally, the Commission reviewed relevant literature and legislation in light of the key messages that emerged from the consultation process.

The Commission notes that much of the evidence collected is subtle and anecdotal in nature. The nature of labour issues means that there are invariably two sides to each story. An important objective of this draft report is to elicit further information and/or analysis from interested parties and, as for other matters in this report, test the Commission's preliminary views.

6.2 Labour requirements of ports

Ports are service providers. They exist to provide capacity for the movement of cargos onto and off ships, and to complete those movements as quickly and efficiently as possible. While they account for a relatively small part of the overall value chain, in terms of the share of the total cost of moving cargos into and out of the country, ports are strategically significant as a potential bottleneck in the supply chain. Inefficiency in the port can add a good deal of cost elsewhere, particularly if ships and cargos are delayed or diverted from their preferred routes or schedules.

The nature of the work of a modern port requires a high degree of flexibility in the timing of provision of services. Ports typically organise labour requirements around arrival and departure time 'windows'. If a ship arrives within its window, the ports are able to plan for adequate labour to be available for unloading or loading. However, the demand for port services can be unpredictable because of:

- fluctuations in the number and type of ships arriving at any one time – for example, as a result of changes to shipping line schedules;

- variations in the number of containers to be loaded and unloaded – for example, as a result of year-to-year variations in seasonal exports, or shippers taking advantage of available space on ships at short notice; and
- unexpected factors, such as delayed arrivals due to weather conditions, mechanical faults or delays incurred at other ports (APC, 1998).

The consequence of such variation in work flow is that ports must always have capacity to handle unexpected peaks or troughs. As the New Zealand Shippers' Council notes in its submission:

> Ports operate 24 hours a day and seven days a week and must have the ability to obtain labour as required rather than on fixed terms
>
> New Zealand Shippers' Council, sub. 43, p. 7

There is nothing new in the notion that the demand for port services is highly variable and requires similar variability in access to labour. Historically, port operations were very labour intensive, and came to rely heavily on access to 'casual' workers to load and unload ships. Workers were paid when there was work and received no pay on the days when there was no work.

However, with the introduction of bulk material handling methods and containerisation, more permanent labour arrangements could be introduced. While a broad generalisation, where thousands once laboured, only a relatively small number of more skilled individuals are now required to operate the machinery committed to cargo movement on and off ships.

F6.1 The demand for port services is highly variable, driven by the arrival of ships for loading and unloading. Ports face a challenge in managing their capacity to meet those variable demands for service. Those challenges relate to both optimising investment in capital equipment that may be idle for extended periods between ships, and managing access to labour to meet variable workloads.

6.3 Labour market reforms

In 1989 and 1990 New Zealand ports underwent a series of reforms aimed at improving port performance by increasing their commercial focus. These reforms abolished the Waterfront Industry Commission[43] that had run the wharves and employed waterside workers, and established council-owned port companies to manage and control New Zealand ports. This change, focused on commercialising port operations, is generally regarded to have significantly improved port productivity, a perception supported by the available data.

Port reform was followed by general labour market reform aimed at improving labour flexibility and productivity through the economy. The initial and key legislative reform of that period was the *Employment Contracts Act 1991* (ECA). Key aims of this legislation were to strengthen the direct contractual relationship between employees and their employers, and removing obstacles to the development of different types of employment contracts (such as individual employment contracts) and flexible working arrangements (Morrison, 1996). More productive work practices emerged following the introduction of the ECA, including greater focus on multi-skilling and an increased use of performance-related pay. The reforms also changed the legal arrangements for organised labour, resulting in a significant decline in membership of unions. ISO Limited notes in its submission:

> The Employment Contracts Act (ECA) was introduced in 1991 and spelled the end of national (multi-employer) collective bargaining in New Zealand's ports and the introduction of individual contracts, allowing employers to choose who they contracted to supply labour for port services. This enabled flexible terms to be set for the provision of these services, particularly through a mix of permanent, part-time and casual work and a move to more flexible hours of operation—the traditional working day

[43] Established as the Waterfront Control Commission by the *Waterfront Control Commission Emergency Regulations 1940* as a wartime emergency measure.

> of 7am to 5pm was replaced by different shift configurations, with most ports now working 24 hours a day.
>
> ISO Limited, sub. 28, p.16

In 2000, the *Employment Relations Act* (ERA) was introduced in an effort to redress the imbalance of bargaining power between employers and their employees, with the goal of creating relationships conducive to the adoption of high-performance work practices. The Act aims to build these relationships by promoting good faith bargaining and trust between employers, their employees and unions.

Push for high-performance workplaces

A key goal of the ERA was to promote productive employment relationships – an important factor in developing 'high-performance workplaces'.

The term 'high-performance workplaces' is a descriptor of the outcome achieved by innovation in the organisation of work, and shorthand for particular work practices. The term arose from research in the 1990s which found that teamwork, employee involvement, up-skilling (training) and job rotation were key factors in determining the level of labour productivity. Such practices are underpinned by a number of principles of work organisation, including worker discretion[44] and flexibility (Parks, 1995). These principles are cornerstones of 'flexible production', which in turn requires workplace structures that feature both flexibility in deployment and relatively high levels of worker discretion (Hunter & Hitt, 2001).

6.4 Work practice concerns

Concerns were raised in submissions and in discussions with the Commission that work practices remain at some ports that limit ways of working or unnecessarily increase costs and which could be classed as 'restrictive'. The views of a number of submitters are included in Box 8 at the end of this chapter.

Not all work practices that limit ways of working or increase costs are 'restrictive'. Some are necessary to support the health and safety of workers, and as such, they are consistent with a productive workplace and with the wider expectations and values of society. These judgements are not straightforward. For example, what one party may see as an appropriate working restriction for workplace safety, another may see as an unnecessary employment cost given other protections for worker health and safety, including legal requirements. Ultimately, the rationale for any work practice – whether restrictive or not – should have a clear link to some particular outcomes desired by society. The Commission encourages all submitters to consider and highlight these links and outcomes when shaping and articulating their views.

The Commission has used the following definition to inform its own thinking on whether or not practices are 'restrictive':

> Work practices which cause a port to operate less productively or at a higher cost than is possible and reasonable and which are not of themselves necessary for the health, safety and wellbeing of the workers.
>
> Harding, 1990

Specific work practices in ports that may be restrictive

Based on this definition, the Commission has identified the following categories of work practices that may be considered restrictive. Some of these practices are, in effect, alleged practices, such that the Commission wishes to further test the veracity of this list through submissions and further discussions. The potential practices are:

- Limiting work hours, limiting shift length, and inflexible scheduling of rostered days off – the principal effect of restricted work hours is normally one of cost so that, for example, round-the-clock working to permit the fast turnaround of a container ship becomes significantly more expensive. Restricted work

[44] 'Worker discretion' is an ingredient in job design. Prevailing modern technologies are such that relatively dense local decision making (by workers themselves, individually or in teams) is efficient up to a point. It therefore makes sense to allow suitably trained and skilled employees some leeway to make task-related decisions in their jobs. But such leeway permits self-interested employees to take advantage and work less hard. Discretion can be effectively granted to those workers whose preferences are to identify with the employer's objectives, share its values, and to show loyalty. The combination of skill and loyalty relate to demonstration of professionalism in the workplace.

hours may also affect the ability of the port to offer stevedoring and marshalling services when demanded, including at times when a port is congested. Examples include:

- regarding 'office hours' as normal port working hours despite ports' operational requirements, in common with some other industries and sectors, for 24-hour work schedules;
- restricting shift length to periods shorter than general practice for ports internationally; and
- requiring that a fixed proportion of the workforce is rostered off on Saturday and Sunday regardless of the demand for port services.

- **Work extending practices** – the effect of such 'make-work' is to increase the cost of labour by paying for unworked hours and for unnecessary hours. Examples include:
  - requiring more workers to be employed than are reasonably needed to perform a given job;
  - implementing time-consuming procedures intended to employ additional workers;
  - limiting the ability of managers to employ casual overtime necessitating the engagement of a gang for a full shift even if a full eight hours work is not needed. A gang has to be paid for a full shift even if it does not work the full time and cannot be moved to a different vessel or different work; and
  - resisting changes to port layout that would improve efficiency (but may require less labour).
- **Work-sharing arrangements** – the effect is to prevent specialisation by the most skilled workers, reducing their incentive to increase individual skill and so perform at higher levels. For example, requiring that workers take turns at tasks day-by-day regardless of their skill specialisation.
- **Restrictions on output** – for example, opposition to 'double lifts' that can be done without compromising worker safety, ie, carrying two containers per straddle carrier.[45] The effect is to reduce the productivity of workers and machines.
- **Job definition, demarcation and assignment rules** – these rules have the effect of preventing more skilled workers specialising and can result in workers being paid for hours they do not work (increasing cost). Examples include:
  - practices that limit tasks that may be assigned to workers designated as 'casual' or 'part-time';
  - practices which prevent specialised teams performing tasks such as lines work and lash/unlash of containers; and
  - practices that limit a worker changing tasks or machine assignments during a shift.
- **Barriers to access to jobs** – the effect of these entry barriers is to limit the ability to recruit skilled workers to port jobs, with consequential effects on productivity. Practices that discourage labour mobility will also impact efficiency as workers will not leave their current positions for fear of being relegated to a casual position at a different port. Examples include:
  - requiring new employees to start as casuals and progress through part-time regardless of skill and previous employment;
  - cultures that may reduce or impair workforce diversity – ordinarily considered an important factor in high-performing modern workplaces – at the expense of women; and
  - pressure on new employees to join the union, in effect creating a de facto 'closed shop'.
- **Slow uptake of practices compatible with a workplace safety culture** – industrial accidents are a personal tragedy for workers and families with a wide potential range of social costs, including negative effects

[45] Straddle carriers are used for stacking and moving containers. Straddles carry containers while straddling the container, which is connected to lifting points via a spreader. These machines have the ability to stack containers up to four high. The operator sits at the top facing the middle for clear views forward and backwards. Straddle carriers can lift weights which equal two full containers.

on productivity. Some ports lag behind other industries in the acceptance of a workplace safety culture. Noticeably, where port operations intersect with the forestry industry, an improved safety culture emanating from forestry is evident. However, this culture does not necessarily filter through to other parts of port work – for example, at some ports there continues to be resistance to the adoption of drug and alcohol policies and related testing.

- **Competition-limiting practices** – these practices, which can include some of the specific practices noted above, have the effect of limiting the spread of more flexible and innovative contracting arrangements (so-called 'externalisation') to more ports and areas of port work – a matter further discussed below.[46]

A number of the practices above, when combined with collective bargaining, constitute a form of 'barrier to entry' for other workers who may be willing to agree to different work practices, such as shift lengths or applying skills to a more flexible range of tasks. This includes externalisation of labour. The reasons why such barriers to entry may persist are discussed further below.

In ports or parts of port work where externalisation of labour has occurred, working arrangements generally involve more flexibility. Some ports have achieved similar changes in work practices without externalisation.

It appears, however, that externalisation, where desired by ports, is not straightforward. Attempts to have certain kinds of work supplied by external providers have been met with industrial action from unions. In some cases this action has involved unions affiliated to the International Transport Workers Federation (ITF – the global federation of 751 transport unions, including maritime unions, representing over 4.6 million workers in 154 countries). ITF campaigns against ports that permit non-ITF affiliated unions to represent workers.

ITF calls ports or terminals that fail to meet its requirements for affiliated union coverage, including use of externalisation of port work, 'Ports of Convenience'. The main instrument used by ITF and its affiliates to resist the spread of externalisation are International Framework Agreements (IFA). The main purpose of IFAs is to ensure the labour standards in countries where labour legislation is insufficient or poorly enforced (ITF, 2006). In the New Zealand context, potential human rights abuses and exploitation of workers are already addressed by robust employment law. However, IFAs have been used by organised labour to limit effective competition in New Zealand ports for stevedoring and marshalling services.

Q6.1 To what extent are the work practices identified during consultation restrictive in nature and not in the long-term interest of the efficiency of the international freight transport services system? What evidence is there that these practices are, or are not, necessary to ensure desired outcomes, such as with respect to worker safety?

Prevalence of restrictive work practices

The sorts of work practices that have been raised as concerns are not present at all ports. This, in itself, suggests such practices are not a necessary feature for the safe and effective operation of a port. In port workplaces where non-affiliated union[47] collective agreements and individual employment agreements predominate, the organisation of work generally differs materially. In particular:

- Workers have either individual employment agreements, or a collective (containing terms and conditions) plus an individual employment agreement which covers pay rates, performance and skill expectations and working arrangements.
- Pay links to hours worked, not shifts. Generally, there is a flat hourly rate without overtime or penalty time except on statutory holidays.
- Where compatible with health and safety considerations, shifts are generally 12 hour or 10 hour, and may extend to 16 hours, instead of 8 hours.

[46] For a recent instance of alleged competition-limiting practices, see judgement of Potter J in New Zealand Steel Limited V National Distribution Union Incorporated and Ors HC AK CIV 2009-404-6090 11 May 2010.

[47] That is, unions not affiliated with the New Zealand Council of Trade Unions.

- Shift notice periods are generally, but not always, shorter.
- Skill and experience often reflect in extra paid working hours that translates into higher take-home pay for higher-skilled workers, including supervisors being paid at higher hourly rates.

Interestingly, pay bands seem to be broadly comparable at affiliated and non-affiliated workplaces.[48] Permanent employees, however, are more predominant in non-affiliated workplaces with around two-thirds being permanent in contrast to affiliated workplaces where around half are permanents.

Origins of restrictive work practices

It appears that many practices now regarded as 'restrictive' stem from past management approaches that were pragmatic and relevant to the working of ports before the advent of containerisation and bulk material handling. Some practices originated as measures to limit opportunities for pilfering cargo. Others are an echo of previous systems for paying allowances for dirty or dangerous manual work or working in inclement weather. A frequent motive was the perceived need to bring some order to the combination of casual workers and the oscillations in demand for the work. For instance, what today is seen as job assignment inflexibility arose from employers' desire to prevent workers from abandoning a difficult cargo when a ship containing a more attractive cargo arrived in the port.

6.5 Reasons why restrictive work practices may persist

As a starting principle, value-maximising employment arrangements emerge from willing agreements between employers and employees. Implied in such willing agreement is some degree of shared view of future success and the pathway to that future. Where the starting positions are at variance; where there is little commonality of view regarding what might constitute future success; or where the negotiating parties see the process as inevitably involving one party emerging as the 'winner' at the expense of the other, then the pathway to a willing agreement will inevitably be fraught.

By and large, collective agreements or individual employment agreements do not codify inflexible work practices. Rather, those practices have typically existed and been accepted for many years, and remain because the parties have not seen joint reason to change them. It appears to the Commission that restrictive work practices may persist due to one or more of the following factors:

- Management is reluctant to change these practices as they wish to avoid the short-term consequences of workplace disruption (recognising that such reluctance, if not in the long-term interest of the company, may be problematic in itself – discussed in Chapter 10).
- Management and unions do not share a common view on what constitutes a successful port operation. This can result in resistance to changes that are perceived as being inconsistent with either party's preferred view of the future.
- Entrenched positions and cultures among employers, workers and unions, which view negotiations as a 'zero sum game' rather than an opportunity to develop mutually beneficial outcomes.
- The risk of industrial or legal action, which can give rise to a 'holdup'[49] problem given the large potential costs such action can entail for a port – making change more difficult, and therefore entrenching status quo arrangements.
- Support in common law for 'customary arrangements'.[50]
- Uncertainty regarding the coverage and implications of the exemptions under s.44(1)(f) of the Commerce Act pertaining to collective agreements, including a potential perception (whether factual or not) that the exemption provides blanket protection for union activities.

[48] That is, workplaces were the labour force does not belong to a union affiliated with the Council of Trade Unions.

[49] As noted in Chapter 2, holdup problems occur when parties have assets that cannot be deployed to an alternative use. Potential users of these assets can negotiate favourable rates.

[50] For example, see NZ Amalgamated Engineering Printing & Manufacturing Union Inv v Amcor Packaging (New Zealand) Limited (2011).

While difficult to isolate any one factor as more important than others, it is ultimately the Employment Court's decisions with respect to work practices that significantly influence, if not dictate, the work practices that apply. Accordingly, the Commission is interested in further information on particular aspects of Court judgments regarding the significance of 'customary arrangements'.

Q6.2 To what extent do the factors identified by the Commission in the course of its investigations explain the continuation of restrictive work practices? To what degree are the factors identified valid and complete?

F6.2 By and large, collective agreements and individual employment agreements do not codify restrictive work practices. There are several possible reasons as to why restrictive practices may remain, including weak governance arrangements for ports and unions; entrenched cultures; and significant negotiation leverage of organised labour arising from a number of factors, including common law support for 'customary arrangements' that makes changing work practices more difficult.

6.6 A competitive port sector

The terms of reference for the inquiry instruct the Commission to evaluate factors that influence the accessibility and efficiency of international freight transport services available to New Zealand firms. This request is in keeping with the principal purpose of the Commission, which is to provide advice to the Government on improving productivity in a way that supports the overall wellbeing of New Zealanders.[51]

As set out in Chapter 2, a starting point for the Commission is that competitive markets generally do a good job in generating efficient outcomes and stimulating productivity improvements (provided they do not suffer significantly from 'market failures'). The vital link between competition, efficiency and sustained economic growth is the underlying rationale for New Zealand's regulation of anti-competitive behaviour – principally through the Commerce Act 1986, which establishes a robust framework for addressing anti-competitive behavior on the part of companies.[52]

The Commission has been made aware of a number of occasions when unions have used their influence to limit competition between companies providing port services. Box 7 provides examples given by ISO in its submission. These examples were confirmed during a number of engagement meetings held throughout the course of the inquiry.

F6.3 There is evidence to suggest that unions have used their influence to limit competition among port service providers.

Box 7 **Examples of affiliated unions blocking access to ports for members of unaffiliated unions**

> …in 2007, Port of Napier offered a tender opportunity to its incumbent and external contractors. ISO, utilising labour organised by a rival union to the traditional CTU-aligned unions, offered contracting arrangements with the terminal operations, which the Port considered met all safety, productivity and pricing measures and offered better quality services to cargo interests. This led to aggressive CTU and ITF affiliated union opposition and picketing protests that prevented the agreement, derailing opportunities for improving efficiency in the Port of Napier…
>
> …In January 2009, a situation arose for the Port of Tauranga at its Sulphur Point container terminal, following a breakdown in commercial negotiations between NZL Group Limited ("NZL") and Port of Tauranga. The Port of Tauranga cancelled a lash/unlash terminal stevedoring contract it held with NZL. ISL, a stevedore already operating in the Sulphur Point terminal, was appointed

[51] Refer s.7 of the New Zealand Productivity Commission Act 2010.

[52] Note that union involvement in the collective bargaining processes is covered under exemptions to the Commerce Act outlined in s.44 (1) (f).

> to do the work by the Port of Tauranga. MUNZ who represented the NZL workers threatened the Port of Tauranga with work stoppage, which resulted in Port of Tauranga giving 50% of the work to C3, whose personnel are represented by MUNZ & the RMTU. Coupled to this dispute was the threat of industrial action in Tauranga and overseas to the shipping lines should they allow non-ITF affiliated labour to do the work. Indeed on one occasion a vessel did stop loading in Tauranga temporarily. This action appears to have been settled, with ISL and C3 working alongside in Sulphur Point…
>
> …Union action has also been directed at exporters themselves. When ISO competitively bid and won the Zespri Kiwifruit stevedoring and marshalling contract from the incumbent NZL Group (who employed CTU-affiliated union members) in 2010, the Maritime Union of New Zealand (MUNZ) and the Rail and Maritime Transport Union (RMTU) agreed to develop a campaign to hinder seasonal kiwifruit contracts by all lawful means, rather than targeting the port. Both RMTU and the MUNZ stated that New Zealand port employers will be targeted nationally and internationally to ensure that marshalling and stevedoring work in New Zealand is done by workers who belong to a bona fide ITF-affiliated union.
>
> ISO Limited, sub. 28, p. 16

Practices such as those described by ISO can reduce the efficiency and long-term viability of New Zealand ports. By preventing (or at least severely limiting) the opportunities for companies to compete for the provision of port services, these practices also undermine the objectives of broader competition policies and legislation.

F6.4 Impediments to competition in the provision of port services can reduce the efficiency and long-term viability of New Zealand ports and undermine broader competition policies and legislation.

The Commission believes there is a case for reviewing the extent to which provisions in existing legislation are sufficient to effectively regulate impediments to competition arising from the activities of unions. This would include clarifying the extent to which practices such as those described in Box 7 are covered by the exemption set out in s.44 (1) (f) of the Commerce Act.

R6.1 The Government should review whether existing legislation is sufficient to effectively regulate barriers to competition that arise as a result of union activity.

6.7 Other approaches to mitigate work practice concerns

There is no need for a wholesale change to the current employment relations framework because evidence suggests that the current framework work wells at some ports. However, the Commission believes that scope exists to make changes that would increase productivity and lead to a healthier workplace culture.

Effective leadership

As noted earlier, effective workplace relationships are a product of shared aspirations and shared values. Reaching that point of shared aspirations and values does not happen by itself or automatically in any organisation. Rather it requires skilful, persistent, honest and resolute leadership – on the part of boards and management as well as workers and their representatives. Dysfunctional relationships, which generally embody disparate world views and a sense of differentiated ambitions, cannot be expected to deliver innovative and efficient services, productive and high-quality jobs or sustainably high incomes.

Ultimately, it is boards and their management teams that are accountable for the performance of their organisations. It is they who have not just the right to lead and manage, but the obligation to do so on behalf of their organisational stakeholders. Embodied in that leadership obligation is the need to work out how to effectively engage with workers and their representatives in a way that leads to productive, socially responsible and sustainable port operations.

Strengthening governance

Governance arrangements for port companies (dealt with in Chapter 10) may be a factor that impairs the ability of ports to reach efficient and constructive working relationships as a part of achieving high-productivity port operations. In particular, weak governance arrangements may lead to confused or 'soft' strategic direction, inadequate clarity of purpose, and unconvincing articulation of longer-term direction for the enterprise.

Just as strong governance defines the prospects for success in any enterprise, not just ports, the quality of governance and leadership of unions will define the contribution that a union is able to make to the sustainable wellbeing of its members. The Commission heard concerns about the governance of unions – specifically claims of a lack of secret ballots on key decisions, poor conflict of interest management, and opaque financial reporting.

Under the ERA, any group of employees can set up and register a union after first becoming an Incorporated Society under the *Incorporated Societies Act 1908* (ISA). The union must have at least 15 members (section 4(1) ISA), be independent of employers (section 14 (1)(d) ERA), and have rules that comply with both Acts. The rules must define the union's aims and purposes because an incorporated society cannot lawfully undertake activities outside its objects.

In July 2010, the Minister of Justice wrote to the Law Commission proposing a review of the ISA. The Minister stated:

> The Incorporated Societies Act 1908 is uncomfortably old and has been little amended since its enactment... Difficult questions frequently arise around the governance and administration of such organisations and the resolution of their internal disputes. Many of the reported cases revolve around such disputes.
>
> Law Commission, 2011

In its June 2011 Issues Paper, the Law Commission indicated that the ISA does not support modern governance structures or practices, in stark contrast to other governance-related statutes including the Companies Act. For example, there is nothing in the ISA to prevent elected officials from acting in their own self-interest without first disclosing that interest. The Law Commission summarised its view that "the 1908 Act can be criticised for requiring only the bare bones of a corporate structure" (p. 8). The Law Commission is considering, among other things, recommending that incorporated societies be required to have a written constitution, a means of disciplining members, a regulator, a code of governance duties, misuse of office provisions, and an appropriate dispute resolution mechanism.

While the Law Commission's general direction for reforming governance of incorporated societies is not related specifically to the governance of unions, the issues referred to in its issues paper are directly relevant to the matters raised during the course of this inquiry and represent a potentially effective means to add to the quality of governance arrangements of unions.

A presumption that key decisions undertaken by unions should be based on secret ballots of members seems unexceptional. This matter is currently the subject of a Bill before Parliament – the Employment Relations (Secret Ballot for Strikes) Amendment Bill. This Bill proposes to amend the ERA to require unions to hold a secret ballot of their members before undertaking any strike action.

Role of the Employment Court

While a wider matter than issues relating to this particular inquiry, the Commission heard a number of concerns relating to the Employment Court. The matters raised related both to the length of time taken by the Court to reach (or publish) decisions, and to its apparent tendency to upholding long-standing, but undocumented, practices as employee rights. It may be that the balance of these expressed concerns reflects the preponderance of employer interests represented in our submissions, and the relative paucity of employee or union submissions, rather than anything more substantive. Accordingly, the Commission has not formed a view on this matter, but is interested in evidence that parties may be able to provide with respect to these issues.

F6.5 While subject to further work and discussion with interested parties, there may be scope to remove impediments to improved workplace relationships through improving the governance frameworks applying to ports and unions.

Box 8 **Comments from submitters on port labour practices**

Council of Trade Unions

> Any suggestion that major productivity gains could result from a renewed assault on employment, wages and conditions under cover of slogans about "labour market flexibility"… would clearly be unsustainable in the absence of compelling evidence. (sub. 14, p. 18)

Federated Farmers

> Federated Farmers believes that real productivity improvement will not be possible without significant changes in work practices, including contracting out within-port activities. One of the reasons most port companies have declined to move in that direction is fear of industrial disputes. We are aware that Port of Tauranga has been put under pressure by stevedoring and maritime unions to put an end to competition for stevedoring. (sub. 27, p. 7)

Employers and Manufacturers Association

> Union relationships have always been an issue in port operations and for that reason allowing effective competition for stevedoring and other operations within a port allows those types of inflexible labour practices to be reduced. We are reluctant to say eliminated as the right of a worker to belong to a union is established as right in the New Zealand workplace law and for that reason there inevitably will remain some practices and difficulties when negotiating with unions at various times. (sub. 7, p. 7)

Port of Napier

> The waterfront as a whole within NZ is still highly unionised which in itself is not a negative, but the use of that influence and power can be highly unproductive. Confrontational management practices have also contributed to less than positive outcomes. (sub. 10, p. 8)

Pacifica Transport Group

> The case for 12-hour shifts at ports is one example where there could be productivity gains and health and safety gains for the industry. Are the days of 8-hour shifts well and truly over? (sub. 11, p. 6)

Lyttelton Port Company Limited

> Waterfront labour tends to have a monopoly (Union organized) in most developed countries. However, it is worth noting that LPC (in common with some other NZ ports) has been able to work positively with staff and Unions to achieve on-going productivity improvements in key areas such as container terminals. (sub. 20, p. 2)

ISO Limited

> The impact of union power over how the ports and shippers are able to pursue future efficiencies and innovations in logistics has led to a lack of contestability in stevedoring and marshalling—particularly container cargo. Performance improvements could be reinvigorated through clearer transparency in how contracts are awarded, and by promoting the ability of exporters and shippers (primarily) and ports (secondarily) to access the full range of logistics providers without regard to union representation. The focus of bidding for stevedoring, marshalling, and other port activities that sustain employment opportunities in particular regions should be on the preferences of the shipper for innovation and productivity performance, rather than the preservation of a favoured union and short-term local politics. Especially where it can be shown that labour terms and conditions are not compromised with more efficient and effective

stevedoring and marshalling companies. (sub. 28, p. 17)

Ports of Auckland

POAL is committed to a collaborative and upfront approach with staff and unions, and to working together to achieve the changes that are necessary to take the company forward.

We have already made progress in this regard with pleasing productivity improvements being delivered by our people over the last five years (refer to the data at Q77).

However, embedded and inflexible labour practices are a major obstacle to further improving productivity and efficiency at POAL and other New Zealand ports.

Significant changes to work practices at POAL are required, with the company needing greater flexibility in order to operate efficiently and in a way that meets the needs of its customers now and into the future. (sub. 50, p. 19)

7 Customs, security and biosecurity

Key points

- On the basis of the submissions to the inquiry, the Commission believes the level of risk tolerance reflected in the activities of New Zealand's border agencies is in line with the expectations and preferences of stakeholders.
- The risk-based approach adopted by New Zealand's border agencies is a sound approach to allocating border agency resources. Eliminating border risk is not feasible, efficient or desirable.
- Border agencies should continue to enhance their performance measures and review procedures in order to improve the transparency of agencies' performance and increase management accountability.
- The Trade Single Window (TSW), which is scheduled to commence operation towards the end of 2012, will reduce duplication of paperwork by allowing exporters and importers to submit compliance-related information once, rather than to multiple agencies – thus improving the efficiency of service provision and reducing compliance costs for industry.
- The second phase of the new Joint Border Management System (JBMS), subject to government funding approval, will replace the remaining systems used by the Ministry of Agriculture and Forestry (MAF) and the New Zealand Customs Service (NZCS) to undertake business functions such as scheduling audits and tracking compliance records. Replacing these systems will improve 'back office' coordination between MAF and NZCS activities.
- The second phase of the JBMS is several years away from being delivered (assuming funding is secured). In the meantime the Commission believes coordination should be promoted by increasing the role, visibility and accountability of the Border Sector Governance Group.
- Rising security concerns after 9/11 may be placing additional costs on some New Zealand exporters – particularly those with time-sensitive cargos. Mutual Recognition Agreements (MRAs) are being used to ensure that New Zealand's high border standards are recognised by trading partners and are reducing time delays associated with securing arrangements at overseas ports.
- The Government's cost recovery measures are based on either the 'beneficiary pays principle' or the 'risk exacerbator pays principle'. In general, these fees and charges compare favourably with those imposed on exporters and importers in Australia.

Customs, security and biosecurity activities add to the costs of international freight – both directly through the payment of border fees and charges, and indirectly through the cost of complying with border regulations and standards. It is therefore important to examine whether services are being supplied in a way that maximises the wellbeing of New Zealanders.

This chapter examines the services provided by New Zealand's border agencies, their impact on international trade, and whether border services are being supplied in an efficient manner.

7.1 Introduction

Broadly speaking, New Zealand's border agencies support international trade in two separate, but related, ways.

First, by working with trading partners, border agencies facilitate the movement of New Zealand exports into foreign markets. This is largely achieved through negotiating the recognition of New Zealand's standards of biosecurity, security, food safety and customs services. Recognition by trading partners allows exports from New Zealand to be treated as 'low risk', thus reducing the chances of cargo being delayed by overseas border procedures.

Second, New Zealand's border agencies support international trade through preventing border incursions that could harm New Zealand's export industries; for example, by reducing access to markets, increasing the costs of production or eroding the brand reputation of 'NZ Inc' (Victorian Department of Primary Industries, 2008). The main functions of the agencies are outlined in Table 7.1.[53]

Table 7.1 Summary of key functions of New Zealand's border agencies

Agency	Key areas of responsibility
New Zealand Customs Service (NZCS)	The key responsibility of the NZCS is to prevent illegal goods from entering New Zealand. This includes everything from illegal weapons, objectionable material and drugs, to dangerous persons, hazardous substances and copyright counterfeits. Customs is also responsible for collecting duties, excise taxes, and the goods and services tax due on imports and exports. This includes the Biosecurity Levy which NZCS collects on behalf of the Ministry of Agriculture and Forestry (MAF). To fulfil these responsibilities, NZCS has the power to check containers, vessels, baggage, mail, persons or property. They also conduct investigations and audits of personal and commercial documents, and the movement of currency and goods. Beyond the border, NZCS is involved in developing mutual recognition programmes with overseas trading partners and international initiatives led by the World Customs Organisation.
MAF – Biosecurity New Zealand (MAF BNZ)	MAF BNZ has responsibility for managing New Zealand's biosecurity system. This includes activities such as working with trading partners to develop standards and regulations, conducting border inspections to prevent biosecurity-risk pests and diseases getting into New Zealand, and eradicating or managing any pests and diseases that do get through.
Aviation Security Service (Avsec)	Avsec is the official provider of aviation security services in New Zealand. It is responsible for screening passengers and their carry-on baggage; screening checked baggage; controlling access to airport areas and facilities; screening airport workers; and managing the Airport Identity Card system for restricted areas.
Maritime New Zealand	Maritime New Zealand is responsible for a range of areas relevant to international freight. These include conducting safety inspections of all ships and calling at New Zealand ports to ensure they meet the various international safety and environmental protection conventions, investigating and analysing maritime accidents, ensuring that relevant port facilities and New Zealand ships meet the requirements of the Maritime Security Act 2004, maintaining the New Zealand Marine Oil Spill Response Strategy and National Contingency Plan, and administering the New Zealand Oil Pollution Fund.
MAF – New Zealand Food Safety Authority (NZFSA)	The NZFSA is responsible for monitoring and enforcing food standards within New Zealand. This includes: ensuring that food safety programmes are adhered to at premises where meat, seafood and other animal products are processed; ensuring that food imported to New Zealand meets national standards; and providing official assurance that food products exported from New Zealand meet the standards required by importing countries.

Source: Agency websites

While border agencies provide many benefits for international trade, they also impose costs on New Zealand's importers and exporters. As noted, these can be either direct costs such as border fees and charges or indirect costs associated with regulatory compliance.

[53] In addition to supporting international trade, the Commission notes the important role of border agencies in avoiding less tangible consequences of a border breach such as potential damage to New Zealand's environmental assets and the risk of terrorist attack. Similarly, by limiting border incursions New Zealand's border services also avoid additional government expenses that may arise as a result of a border breach. These expenses include additional expenditure on pest or disease eradication and additional demand for government health, policing and administrative services.

The Government must weigh up the costs and benefits associated with different risk exposures, and select the level of border services that they believe reflects society's tolerance to border risks, given the costs of protecting society from these risks.[54] This is a challenging task as data, public perception, incomplete scientific knowledge,[55] and "expert" opinions may present conflicting views of how the border should be managed. As Peterson and Fensling explain:

> Public concerns, sometimes amplified by the media, can create pressure for new regulations (or a diversion of regulatory effort) among the community and politicians, reflecting disproportionate perceptions of risk, beyond what an objective assessment would show… Regulators and policy makers may find it difficult to deflect demands for new regulatory solutions to perceived risks. These difficulties are compounded by method related issues with measuring appetite, because the perception and reality of risks change over time. (Peterson & Fensling, 2011, p. 6)

Submissions to the inquiry largely supported the level of risk tolerance reflected in the activities of New Zealand's border agencies. For example, Ravensdown Fertiliser Co-operative states in its submission:

> As a farmer co-operative, reliant on farmer income, Ravensdown is acutely aware of the biosecurity needs of NZ. We think NZ has the system about right for its risk assessments and controls.
>
> Ravensdown Fertiliser Co-operative, sub. 3, p. 5

Similarly, the Federated Farmers submission states:

> …New Zealand relies more than any other country on stringent biosecurity to safeguard export industries and the economy. We would strongly oppose any moves to weaken biosecurity standards and controls.
>
> Federated Farmers, sub. 27, p. 3

The Commission notes that the complete elimination of border risk is neither feasible nor efficient. There are several reasons for this.

First, some risks, such as those posed by migratory species of birds or fish, are extremely costly, if not physically impossible, to avoid.

Second, the elimination of risk would involve allocating significant resources to removing risks that are very small and/or have low potential impacts. This would forgo the benefits that society could receive from spending these resources elsewhere in the economy.

Third, an important element of free-trade agreements is reciprocity of market access. In other words, if New Zealand wishes to obtain the benefits from gaining access to overseas markets, it must allow other countries access to its markets. This is not to say that New Zealand should allow, or be required to allow, harmful goods into the country, only that it must apply the same doctrines to imports that it would expect its exporters to follow.

F7.1 The complete elimination of border risk is neither feasible nor efficient. Rather an optimal balance between costs and benefits needs to be struck.

F7.2 On the basis of submissions to the inquiry, the Commission believes the current level of risk tolerance reflected in the activities of New Zealand's border agencies is in line with the expectations and preferences of stakeholders. As such, the Commission does not believe that the level of border risk management is acting as a barrier to the efficiency of the international freight logistics chain.

[54] Examples of detailed risk and cost-benefit analysis conducted by MAF can be found on the Biosecurity New Zealand website publications section.

[55] For example, *Didymosphenia geminata*, commonly known as didymo, was not identified by scientists as a potential invasive species prior to its discovery in New Zealand.

7.1 Minimising the cost of achieving border security

Economic efficiency is best served by selecting the combination of border activities that minimises the cost of achieving society's preferred level of border risk. This means border agencies need to:

a) prioritise their resources into areas that deliver the highest net benefit to society.

b) select methods that deliver the desired outcomes in the most efficient and effective manner.

By operating efficiently, border agencies minimise government expenditure and the amount of costs that are passed to industry via the government's cost-recovery measures.

Prioritising resources

In order to allocate resources to the areas with the highest net benefits, New Zealand's border agencies have embraced a risk-based resource allocation model. Broadly, this approach involves the following steps (Foley & Northway, 2010):

1. Establishing the desired level of risk tolerance.
2. Identifying risks and the chance of the risk incident occurring (rare, unlikely, possible, likely, or almost certain).
3. Assessing the consequence of the incident should it occur (insignificant, minor, moderate, major, or extreme).
4. Assigning a priority to the various risks.
5. Allocating resources to high-priority areas.

In theory, a risk-based approach allows New Zealand's border agencies to target their resources where they generate the highest value. Through targeting expenditure and effort, the risk-based model can reduce the regulatory burden on low risk companies with a good compliance record, and increase the burden on those high-risk companies that consistently fail to comply.

Within MAF and NZCS, this approach is guided by a set of operating principles, outlined in Box 9.

Box 9 **New Zealand Customs Service and Ministry of Agriculture operating principle**

Border management is guided by a set of operating principles recently agreed between NZCS and MAF. The principles provide a framework for border agencies, guiding their approach to the changing shape of the border environment, to increasing trade volumes and to changes in international transportation. The principles are:

- high assurance, light touch.
- risk is managed as early as practicable in the supply chain.
- partnerships to manage risk benefit everyone.
- rules are accessible and easy to understand. (sub. 34, p. 3)

The Commission supports the use of a risk-based approach as an efficient means of allocating scarce resources whilst maintaining New Zealand's biosecurity, security, customs and food safety standards. However, challenges to effectively implementing this system across all border agency activities, include:

- the crucial need for timely and accurate data and intelligence about emerging threats.
- the need to ensure consistency and transparency in the approaches and assumptions used to assess the consequences of potential threats. This is particularly important when dealing with the economic impacts of events, as such evaluations can be particularly sensitive to underlying assumptions.

- the increased need to develop, and regularly monitor, outcome-based performance measures. Border agency managers need to be accountable for this, and for taking decisions to rectify problems with the risk assessment system at an early stage. The Commission notes the recent advances made by MAF in developing more robust performance measures and recommends that all border agencies conduct similar reviews as soon as practicable.
- the need for greater cooperation and coordination between New Zealand's border agencies and similar agencies overseas via the application of the latest technologies.
- the need for flexibility to ensure that resources are reassigned between areas to deal with changing circumstances or threat assessments.
- the need to manage the political risk and social expectations associated with moving from a 'check everything' philosophy to a 'check the things that matter' approach – particularly in highly visible areas such as air-passenger screening.

F7.3 A risk-based approach is a sound framework for allocating the resources of New Zealand's border agencies.

R7.1 Border agencies should continue to enhance their performance measures and performance review procedures in order to improve the transparency of agencies' performance and increase management accountability.

Efficient and effective methods of delivery

The efficiency of border services is heavily influenced by the technologies and management practices that are used to achieve desired outcomes. As noted in Chapter 4, the number of days taken to complete New Zealand's export and import requirements compares well with other countries. Nevertheless, submissions have highlighted areas where stakeholders believe there is potential to improve efficiency (Box 10). These areas include:

- reducing the duplication of paperwork required by border agencies;
- improving coordination between MAF and NZCS to avoid costs such as the double handling of containers to accommodate audits;
- simplifying customs procedures in order to reduce the need for importers to engage customs agents; and
- reducing the number of government agencies that exporters and importers need to deal with.

Box 10 **Stakeholders' comments on New Zealand's border agencies and the JBMS**

Port of Napier

> A far quicker adoption of the paperless Trade Single Window project (as part of the Joint Border Management System promoted by MAF and Customs) would greatly simplify current processes relating to a range of border issues, including security. A single electronic entry covering all imports and exports and transmitted seamlessly to all parties in the logistics chain is essential at the earliest opportunity. (sub. 10, p. 10)

New Zealand Customs Brokers

> …there is some concern that the audit regime costs are an area where there is unproductive cost incurred and a need for uniformity in audit procedures and requirements. There is also a need to reduce the number of departments that an individual or company must deal with for the release of a shipment, additional complexity leads to additional costs. (sub. 17, p. 5)

Employers and Manufacturers Association (Northern) Inc.

> The most obvious improvement areas are around provision of information and timely release of goods by Customs/MAF-biosecurity for imports and for ensuring all documentation for the intended market is provided early for exports. (sub. 7, p. 16)

Air Cargo Council of New Zealand

> This is an area where airlines at the operational level see scope for considerable improvement. In this regard we are encouraged by the steps currently being taken by the New Zealand Customs Service and MAF under the JBMS umbrella to introduce the trade single window system.
>
> We are however apprehensive at the prospect of costs being imposed on industry through two government agencies replacing their own inadequate ageing systems which needs to be done for them to undertake their statutory functions. (sub. 8, p. 6)

Federated Farmers

> The development of the Joint Border Management System (JBMS) is seen as the main initiative to reduce import and export costs. A system that allows the sharing of processes, data and technology between MAF and Customs should create a more efficient lower-cost system, which is welcomed if properly implemented. As with any new system, it is important that consistency in meeting end goals is applied, as one of the reasons for increasing border clearance costs and the current cost under recovery is the inconsistent application of chargers [sic] from the government agencies. (sub. 27, p. 10)

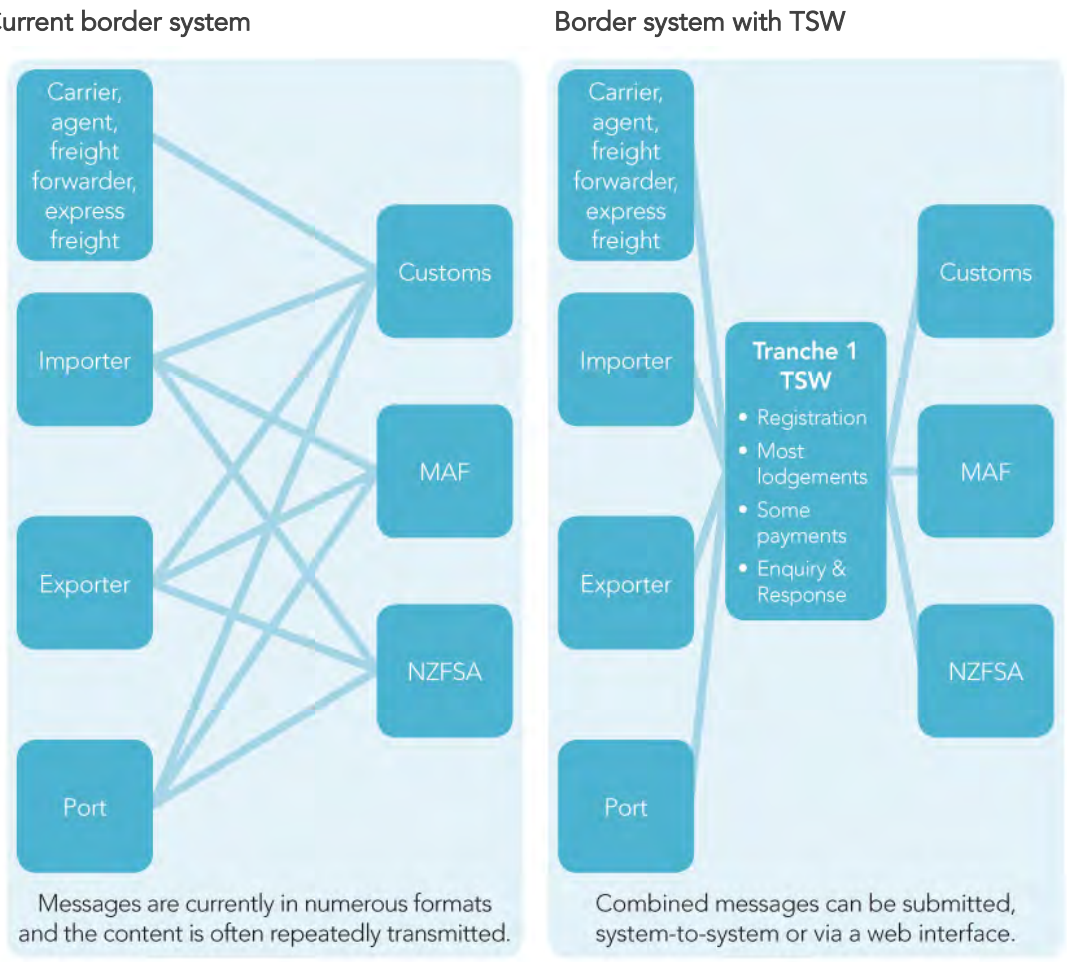
New Zealand Public Service Association

> Freight costs include fees and costs for customs and biosecurity measures. There is good reason for these charges: they ensure that prohibited or dangerous goods do not enter New Zealand and prevent biosecurity incursions. They also allow our exports to be certificated so that our trade partners can have confidence in the quality of the New Zealand goods and the produce being exported meeting their import requirements. (sub. 18, p. 2)

The introduction of the Joint Border Management System (JBMS) currently being developed by MAF and NZCS will address some of these issues. The JBMS will replace the existing processing systems run independently by the two agencies (NZCS's CusMod system and MAF's Quantum system). These systems have been in place since the mid-1990s and have not kept pace with the increasing complexity and changing demands of border agencies, nor with progress in information communication technologies.

A key feature of the JBMS system will be the Trade Single Window (TSW). This facility will reduce paperwork duplication by allowing exporters and importers to submit information once, rather than to multiple agencies. TSW will therefore reduce compliance costs for industry and create a more streamlined, less fragmented interface with border agencies. Figure 7.1 compares the current border system with the system after the implementation of the TSW.

Figure 7.1 Current and future border system



Source: NZCS website (www.customs.govt.nz)

The TSW and the JBMS will be developed in two stages. The first tranche, budgeted to cost NZ$75 million, is due to be introduced at the end of 2012 and will include functionalities such as the ability to lodge craft and cargo clearances, make online payments and check on the status of cargos (via the TSW).

The second stage will, subject to government funding approval, replace the remaining background systems used by MAF and NZCS to undertake business functions such as scheduling audits and tracking compliance records. The Commission is informed that replacing these systems will improve 'back office' coordination between MAF and NZCS activities, thus preventing problems such as the double handling of containers to accommodate audits from multiple agencies. As the business case for this second phase is currently being developed, it is too early to comment on its economic benefits.

While the second phase of the JBMS project will largely address the inefficiencies arising from limited coordination between agencies, this system will not go live for several years (assuming that the second phase receives funding). In the meantime, low-cost measures of improving coordination need to be further explored. To this end, the Commission believes that the role of the Border Sector Governance Group[56] should be strengthened, and that performance measures for border cooperation should be developed and monitored through joint six-monthly reports to the relevant Ministers. These performance measures should be in addition to, and separate from, those developed as part of the JBMS project.

F7.4 While the second phase of the Joint Border Management System project will largely address coordination issues between the Ministry of Agriculture and Forestry and the New Zealand Customs Service, the introduction of this system is several years away.

[56] The Border Sector Governance Group consists of representatives from New Zealand's core border agencies. The group's purpose is to increase overall efficiency at the border through better collaboration and closer coordination

R7.2 The role of the Border Sector Governance Group should be strengthened. Performance measures for border cooperation should be developed and monitored through joint six-monthly reports to the relevant Ministers. These performance measures should be in addition to, and separate from, those developed as part of the Joint Border Management System project.

Dynamic efficiency at the border

Technology and methods for managing border risks are constantly evolving. To promote dynamic efficiency, border agencies must continuously search for new and innovative ways to achieve their objectives. One example of this can be seen in the increased use of paperless electronic border clearances. NZCS notes that:

> Customs' business strategy, since the early 1980s, actively considers ways to reduce the impact border management has on the efficiency of international supply chains. It was one of the first administrations in the world to embrace paperless electronic border clearance. Goods processing went from paper based manual systems, that took 10 days on average to clear goods, to a national paperless computer processing system that takes less than 30 minutes. (sub. 34, p. 3)

Such innovations can be more difficult to implement in the public sector than the private sector. Reasons for this include:

- Public agencies are often monopoly suppliers of goods and services where the social and political costs of 'getting it wrong' are high, and the rewards for introducing new ways of doing business are low.
- Public sector agencies operate in a political and media environment that rewards pointing out examples of public sector failures and is intolerant of the perceived 'waste' that can often come with experimentation.
- Innovation and productivity can be harder to measure in the public sector, and it can therefore be harder to hold leaders to account for the choices they make (State Sector Reform Secretariat , 2011).

It is also important to ensure that the adoption of new technologies within border agencies is not inadvertently held back by existing legislation. NZCS suggests that this could become a problem.

> The current Customs and Excise Act 1996 was developed in the early 1990s. Since then, the trade environment and the types of risks confronted at the border have changed significantly. The legislation has been continually adapted and amended to enable systems and processes to respond to events as they occurred. However, a total review is likely to be required to enable efficiency gains from information management and compliance partnerships to be realised.
>
> New Zealand Customs Service, sub. 34, p. 8

Given the rapid pace of development in the area of information management and the growing need for accurate and timely communications with overseas agencies, the Commission recommends the Customs and Excise Act 1996 be added to the Government's Regulatory Review Work Programme.

R7.3 The Customs and Excise Act 1996 should be reviewed to assess whether it is fit for purpose in light of changes to border management practices and developments in technology since 1996.

Rising security costs

Since the events of 9/11 there has been a global trend towards increased security at air and sea ports. These security measures have been heavily influenced by the requirements of the United States Implementing the 9/11 Commission Recommendation Act of 2007 – known as the 9/11 Act (Morrell, Moving Boxes by Air :The Economics of International Air Cargo, 2011). Amongst other measures, this Act requires the Secretary of Homeland Security to establish strict screening regimes for US-bound cargo. Similar legislation exists within the European Union.

Increased security measures impose the direct costs associated with the purchase and operation of additional equipment (such as x-ray machines and cargo scanners) as well as indirect costs from delays in the supply chain where security measures create a bottleneck at either the departure or the destination port.

The size of the costs imposed by security delays depend on a number of factors. These include:

- The costs will be larger if they result in a cargo missing its shipping window. However, if the delayed cargo can still be loaded on its scheduled carrier, there is little or no cost to the shipper.
- Delay costs will vary widely according to the nature of the cargo. Perishable goods may lose a significant proportion of their value if they are delayed, while non-perishable goods may suffer little impact.
- If the cargo is critical to downstream manufacturing, delays could slow down production. This would be particularly costly for companies operating 'just-in-time', as such companies carry small inventories. The possibility of delays may cause companies to maintain higher levels of inventories as a contingency (Cirincione et al., 2007).

It is difficult to assess accurately the additional costs to New Zealand shippers arising from security measures. However, several stakeholders expressed concern. For example, the Air Cargo Council of New Zealand suggests that:

> …the ever mounting aviation security costs imposed on airlines and other parties in the supply chain are of very real concern, furthermore some of the requirements emanating from USA are putting New Zealand's air cargo exports at risk.
>
> The New Zealand Government needs to put more resource into ensuring that the New Zealand security system for air cargo exports (Civil Aviation Rule 109) is of a very high standard and that this is known and accepted by the rest of the world leading to no further need to meet the requirements of other States.
>
> Air Cargo Council, sub. 8, p. 5

Similarly, the Meat Industry Association comments that:

> Security-related requirements being imposed by governments, particularly in Europe and the US, increase costs and transit times for New Zealand exporters. These security-related requirements take a 'blanket' approach rather than a risk-based approach to security measures, and do not recognise that cargo from some countries, such as New Zealand, poses very little risk.
>
> New Zealand has over the years developed robust and well-respected border and security systems and scientifically based assurance systems and processes, which the government can use in the negotiation of equivalency arrangements, in order to mitigate the impact of these security requirements.
>
> Meat Industry Association, sub. 52, p. 5

A central strategy for reducing delays at overseas ports has been the development of a number of Mutual Recognition Agreements (MRA). These are formal arrangements between the NZCS and customs services in other countries with similar supply chain security standards.

In New Zealand, MRAs link with the 'Secure Export Scheme' (SES), under which businesses maintain an agreed level of security and data integrity in return for 'SES partner status'. The mutual cooperation assured by MRAs means that overseas border agencies in mutually recognised countries treat imported goods from SES partners as 'low security risk'. This increases the speed and ease with which their goods are able to pass through the relevant border procedures (NZCS website). NZCS has signed MRAs with the United States and Japan, and is currently negotiating an arrangement with South Korea. The NZCS explains that:

> In recent years, Customs has entered into export security screening arrangements with some of New Zealand's major trading partners to enhance the ease of access into their markets. The process gives an overseas importing administration confidence to quickly clear New Zealand exports on arrival. The current container security initiative undertaken in New Zealand involves a non-intrusive pre-load vetting process that has minimal impact on the export supply chain.
>
> New Zealand Customs Service, sub. 34, p. 4

NZCS also notes that clearance times for cargo at Japanese ports are 60% faster for SES partner members than for other cargo and that sea containers from SES partners are 3.5 times less likely to be subject to security checks or inspections in the US (sub. 34, p.12).

While the Commission has not been able to locate quantitative evaluations of the net economic benefits of MRAs, qualitative evidence suggests that such programmes improve the efficiency of the international freight logistics chain. The Commission therefore encourages the targeted pursuit of further agreements based on New Zealand's current and predicted patterns of trade and on the nature of the cargos being exported.

F7.5 While the Commission has not been able to locate quantitative evaluations of the net economic benefits of Mutual Recognition Agreements, qualitative evidence suggests that such programmes improve the efficiency of the international freight logistics chain.

Border services cost recovery

New Zealand's border agencies have in place a number of cost-recovery mechanisms, which have been designed to be consistent with Treasury and the Office of the Auditor General good-practice guidelines on costing and charging for public sector goods and services. Two key principles of these cost recovery measures are the 'beneficiary pays' and the 'risk exacerbator pays' principles.

The beneficiary pays approach seeks to recover costs from parties who benefit from the output of a government service. This includes those that would be adversely impacted if the service was not provided (The Treasury, 2002). This principle is based on the premise that those who benefit from the provision of a service should pay for it, thereby decreasing the tax burden on those who do not derive a measurable benefit (Department of Agriculture, Fisheries and Forestry, 2011). Where the beneficiaries are the community in general (for example, through the provision of a public good) then it is appropriate for the community to contribute to the costs of the service (usually through taxes). Where the beneficiaries can be readily identified, then it is efficient for them to contribute to the cost of the government service as long as it is administratively feasible to do so (for example, where the transaction costs of collection, compliance and enforcement are not prohibitively high) (The Treasury, 2002).

The risk exacerbator pays principle, on the other hand, recovers costs from parties that increase the risk of an adverse event – such as the introduction of a new species of pest, plant or animal.

In general, New Zealand's border agencies apply the beneficiary pays principle to services that enhance public goods and those that promote exports, and apply the exacerbator pays principle in the case of imports.

Charges – exporters

Businesses incur a range of fees and charges when exporting goods from New Zealand. These include documentation charges, fees for services and charges for export registration. Exporters also receive a number of benefits from New Zealand border agency activities – particularly in relation to facilitating access to overseas markets.

The level and type of costs recovered from exporters are largely influenced by the nature and destination of the exported product and the beneficiaries of the services provided. As noted by MAF in its submission:

> Many biosecurity activities are Crown funded, either because they have public good elements, or because there is no basis for third party funding under the Biosecurity funding principles.
>
> Other services provided by MAF are recovered from export industries. Some of the services benefit the industry as a whole, and are recovered by way of a fixed fee per export consignment.
>
> MAF, sub. 32, p. 8.

Table 7.2 compares a selection of fees imposed on New Zealand exporters of fish, dairy and meat (lamb) with the comparable fees imposed on Australian exporters. With a few exceptions, the fees are lower in New Zealand, sometimes considerably so.

F7.6 In general, registration, certification and inspection fees and charges paid by New Zealand exporters are lower than those imposed on Australian companies exporting similar products.

Table 7.2 Selected export fees in New Zealand and Australia (2011 NZD)

	New Zealand	Australia
Application fee for registration as exporter		
Fish	$137 per application plus assessment charge of $34/quarter hour	$788 per application
Dairy	$137 per application plus $137 per hour in excess of 1 hour processing application	$788 per application
Meat	$137 per application plus assessment charge of $34/quarter hour	$788 per application
Official Assurance/certification		
Fish	$36	$52 (Electronic certification) $131 (Manual certification)
Dairy	$137/hour or part hour	$27 (Electronic certification) $131 (Manual certification)
Meat	$36	$65 (Electronic certification) $131 (Manual certification)
Inspections/Audits (veterinary verifiers)		
Fish	$93/hour	$52/ quarter hour (fee for service)
Dairy	$184/hour	$43 / quarter hour (fee for service)
Meat (food safety assessor)	$68/hour	$118/hour

Source: www.legislation.govt.nz; www.daff.gov.au

Notes:

1. Assumes an exchange rate of 1 NZD = 0.76 AUD. Figures rounded to the dollar.

Charges – importers

Imported goods can be the source of numerous types of border risks. As such, importers of goods into New Zealand face a range of fees and charges including an import entry transaction fee, a biosecurity levy, and fee-for-service costs relating to cargo inspections. The level of fees incurred depends on a range of factors including the type of goods being imported, whether the cargo arrives by sea or air, and the cargo's country of origin. Table 7.3 summarises the main fees in New Zealand.

Table 7.3 Cost recovery charges on imports

Cost recovery mechanism	Amount
Inward Cargo Transaction Fee	$359.82 (goods carried by sea) $30.66 (goods carried by air)
Import Entry Transaction Fee	$25.30 (all goods by sea and air)
Biosecurity Levy	$12.77

Source: NZCS, sub. 34. p. 6

The Commission compared New Zealand charges with those faced by Australian importers. It believes this is a valid comparison due to the similar biosecurity and customs standards in the two countries.

Although the comparison is complicated by differences in the cost-recovery mechanisms and approaches used in the two countries, the Commission's review of the data suggests that New Zealand fees and charges compare favourably with similar charges imposed by Australian agencies. For example, compared to Australian importers, New Zealand importers generally pay lower import cargo transaction fees and less per hour for veterinary and customs inspections (if required). This is consistent with the findings of the Australian Productivity Commission Review of Food Imports and Exports (Australian Productivity Commission, 2009). It is also consistent with views expressed by stakeholders. For example, Ravensdown notes that:

> …[it] is familiar with biosecurity measures for fertiliser importation in Australia and NZ. Here in NZ, the system is much more pragmatic, lower cost, but equally as effective as Australia. In Australia the AQIS system is complex and excessive. It creates a significant hidden cost to the Australian economy due to the limitations on the ships that can be used to import bulk cargoes based on their previous cargo history.
>
> Ravensdown, sub. 3, p. 5

F7.7 Fees and charges imposed on New Zealand importers generally compare favourably with those imposed by Australian border agencies.

Cost recovery for Joint Border Management System

The JBMS will be partly funded by costs recovered from industry. The JBMS Joint Policy Team, which consists of representatives from MAF and NZCS, is currently considering alternative cost-recovery mechanisms. They anticipate consulting on proposals for cost recovery between March and June 2012, with a view to finalising the cost recovery mechanism by December 2012.

In relation to recovering costs for the implementation of the JBMS, the Commission makes the following observations:

- Applying the 'risk exacerbator pays' principle is consistent with the recovery of a proportion of the JBMS costs from importers.
- Applying the 'beneficiary pays' principle is consistent with some level of public funding for JBMS. It would also imply that exporters should contribute to the cost of the system.

It is preferable (and more equitable) to cover capital cost via depreciation over the life of the JMBS rather than recover capital costs as they are incurred. This is consistent with the New Zealand Treasury cost recovery guidelines.

8 Investment, innovation and dynamic efficiency

Key points

- Dynamic efficiency is finding better ways of producing products or developing new products. It has a large impact on consumer welfare.
- New Zealand freight volumes are predicted to increase substantially in the next 30 years, and these forecasts highlight the need for future investment in capacity and innovation in the freight sector.
- There are impediments to efficient investment and innovation in many parts of freight transport, and there are opportunities to improve regulatory arrangements affecting investment decision-making.
- For example, there are opportunities to improve planning and the consent processes within the *Resource Management Act 1991*, which affect the efficiency of investment decisions at various points in the international freight logistics chain.

Chapter 5 considered whether there are impediments to competition that may weaken the incentives for firms in the freight sector to make the best use of their available resources to meet their customers' needs. In this chapter we examine 'dynamic efficiency', which takes a long-run view. It is about developing new products and services, investing in better ways of producing existing products and services, and creating new markets.

Dynamic efficiency has been given increased emphasis in recent decades, both in discussions of economic growth and in policy assessment including regulation and competition. The OECD concludes that "it seems likely that dynamic efficiencies have a considerably greater potential to benefit consumers than static efficiencies" (OECD, 2007, p.10). It also notes that "innovation is responsible for most of the increase in material standards of living that has taken place since the industrial revolution" (OECD, 2007, p.10).

There are many examples of past innovation in the freight supply chain. For example, technological innovation has seen the development of electronic data interchange (EDI), automated product movement in distribution centres and warehouses, and track and trace systems (see Box 11). Similarly, vehicle design has advanced with larger ships (New Zealand Shippers' Council, 2010) and more fuel-efficient planes, trucks and trains.

In New Zealand, dynamic efficiency in the freight supply chain is likely to come from the adoption of new technology and processes that have been developed overseas. Examples are Air New Zealand's purchase of new fuel-efficient planes that can carry more freight,[57] and the Ports of Auckland and the Port of Tauranga using global positioning system (GPS) technologies to monitor the performance of straddle carriers and stacking cranes.

Investment in new equipment or in product and process innovation involves uncertainties and risk. The investor can never be certain how long it will take to amortise the upfront costs of investment. The investment decisions of firms are more likely to be successful when they are based on sound judgements about likely growth in relevant markets, technological change and competitive threats from alternative suppliers.

[57] For example, Air New Zealand has placed orders for Boeing's new 787 'Dreamliner'. The 787 is calculated to offer fuel savings of up to 20% while still being able to carry 50% more cargo than jet aircraft of a similar size (Mayerowitz, 2011).

Competition often stimulates dynamic efficiency as firms try to 'escape' competition. For example, by adopting a new, more efficient process a firm may not only reduce costs but also gain market share. The Commission also recognises that dynamic efficiency can sometimes be harmed by a lack of scale, making large investments uneconomic, and by coordination failures, which will be covered in Chapter 9.

8.1 Likely future trends in markets and technology

New Zealand freight volumes are predicted to increase substantially in the next 30 years. The National Freight Demand Study (Richard Paling Consulting, 2008, p.v)[58] forecasts that over the period from 2006/07 to 2031 freight transport of various commodities will increase by about 70–75% in terms of tonnes lifted and in terms of tonne-kms transported. Treasury's National Infrastructure Plan (National Infrastructure Unit, 2011) forecasts that in the 20 years to 2030, freight tonnes per kilometre travelled will increase by 28%, and by up to 61% in a high-growth economy.

While the future size and shape of the freight sector is difficult to predict exactly, it will be influenced by how trade patterns play out. However, these forecasts highlight the need for future investment in capacity and innovation in the freight sector. Treasury's National Infrastructure Plan (National Infrastructure Unit, 2011, p.27) concludes that "increases in freight movement will put pressure on New Zealand's road, rail and port infrastructure. Developing these networks to provide the right level of service in the right location, and support the export sector will be a key focus for transport infrastructure providers."

Meeting growth needs will require well-considered investment decisions. Inadequate investment in any part of the chain can cause costs (eg, congestion costs and costs of delays) in other parts of the supply chain and thus to customers. Excessive investment or the wrong sort of investment, on the other hand, is wasteful. Dynamic efficiency will also require efficient use of new technologies, some of which will be imported and some of which will be home grown. New Zealand will tend to be an importer of new technology embedded in transport equipment, possibly with some modifications to suit New Zealand conditions (eg, in rail locomotives and rolling stock, as well as trucks). In contrast, most design and building of freight transport structures will tend to take place in New Zealand. Likewise, New Zealand firms have made significant innovations in 'soft' infrastructure.

There are likely to be major changes in logistics technology over the next few decades, driven by factors such as increasing concern for the environment, pressure for more rapid and flexible delivery, and new communication technologies. Given these trends, it is not surprising that entrepreneurs have been drawn to innovations in freight transport aimed at achieving:

- support for complex networks of freight operators and users within supply chains;
- encouragement of regular and reliable services;
- promotion of real-time information access and exchange to assist scheduling and tracking;
- environmental, as well as economic, efficiencies; and
- greater efficiency through reducing human operation and/or labour intensity.

Examples of new technologies include:

- Larger ships (described in Chapter 9).
- New materials and design technologies. Advanced materials, hydrodynamic design, and new engine and propulsion technologies have all generated significant savings for vessel and aircraft operators (Jolley, 2006) and can also have environmental benefits.
- Automation of port and airport equipment and processes, such as the use of GPS technologies.

[58] The study provides 30-year projections (from 2006/07) of the freight task (tonnes and tonne-kilometres) by mode, by commodity group, and data on inter-regional flows. It includes a detailed discussion of the many influences on both projected volumes and supply responses. These include cost factors specific to particular modes and macroeconomic growth influences.

- Information and communication technology, both within components of freight transport systems and to promote linkages and the integration of information flows along the supply chain.
- Intelligent transport systems, which can reduce the need for human involvement in data collection and entry.

Box 11 provides more information on two of these technologies.

Box 11 **Information & communication technology (ICT) and intelligent transport systems (ITS)**

Components of the international freight transport services system have improved their individual performance by adopting information and communication technology (Ballis, 2008). There continues to be a strong focus on innovation in ICT that promotes linkages and the integration of information flows right along the supply chain.

For example, software systems increasingly interface with each other, allowing single entry of data, but multiple uses along the supply chain. Internet-based industry portals, like the Ports of Auckland's InterACT, allow paperless information flows. Innovation in this way supports interconnection between shipping lines, ports and transport companies and shippers (Notteboom & Rodrigue, 2009). This can increase efficiencies across several components in the logistics chain. The increased provision of online technologies by freight operators and use of them by freight users is also allowing stock to be managed, tracked and traced worldwide. This can help importers and exporters to access overseas markets more cheaply and effectively.

The major freight operators in New Zealand generally offer, or have access to, some form of online tracking and tracing of international shipments. However, the extent to which each part of the supply chain is covered varies, and human intervention is usually required at various stages in order to maintain data integrity. Mainfreight, a significant New Zealand global logistics company, now has its international freight software system interfacing across the countries it operates in. The interfacing characteristics of the Ports of Auckland's InterACT are not typical in New Zealand and its supply chain coverage is limited to its direct customers only.

A further example of innovation in freight transport technologies is the emergence of intelligent transport systems (ITS) , which can be referred to as freight ITS (Ioannou, 2008; Beiki, 2010). Freight ITS have similar characteristics to earlier ICT innovations, allowing interface between components. However, perhaps the major difference is that freight ITS can remove the need for human involvement in data collection and entry. An aspect of the Ports of Auckland's InterACT, the paperless gate, is a step in the direction of freight ITS, but uptake levels by transport companies have only reached 10–15% at this stage.

An example of a freight ITS technology is radio frequency identification (RFID), which can enable identity, location and sensory information to be stored on a tag and transmitted when and where it is required (Beiki, 2010; Shi, Tao & Voss, 2011). The potential of RFID technology is significant and some proponents consider it to be a cornerstone of economic growth over the next fifty years (Sundmaeker et al., 2010).

RFID technologies allow businesses to track the movement of their products and monitor the condition of their products remotely throughout the supply chain. Perhaps the most significant feature of freight ITS technologies is their potential to link operational processes across different components of the international freight supply chain (OECD, 2010).

8.2 Dynamic efficiency in New Zealand's international freight transport services

This section considers whether there are any impediments to efficient investment and innovation in New Zealand's air and sea freight supply chains. In line with Chapter 5's discussion of competition impediments, this section focuses on impediments that may be caused by regulatory or other government interventions. The existence of these impediments is considered for sea freight, road freight, rail freight, air freight, and for services to the transport sector as a whole. The Commission discusses these impediments further in Chapters 11, 12 and 13 of the report.

Sea freight

International shipping lines

New Zealand businesses have little or no influence over the level of investment and innovation by the international shipping lines visiting New Zealand.

The issue for New Zealand is to what extent its freight services can benefit from developments in the international shipping industry, such as the trend towards bigger ships and the use by shipping lines of new pricing and financial instruments, which may have the potential to improve the efficiency of New Zealand freight services. For example, a new 'container swap' instrument enables a shipper to buy a contract to ship containers in the future at a certain fixed price. The Ministry of Transport considers that this could assist medium-sized New Zealand shippers to hedge their trading costs (Ministry of Transport, 2010a). Chapter 9 discusses the issue of bigger ships.

It is also possible that competition regulation may affect the level of investment and innovation. This type of regulation is discussed in Chapter 11.

F8.1 New Zealand businesses have little influence over the level of investment and innovation by the international shipping lines visiting New Zealand, but New Zealand ports may have a role in enabling more efficient ships to service New Zealand.

Coastal shipping

Coastal shipping is well suited to the movement of bulky and heavy products, especially oversize goods that cannot be easily transported by road and rail (eg, cars). However, coastal shipping struggles to compete against road and rail in transporting most general goods. While dedicated coastal ships provide services for key bulk products such as petroleum and cement, the coastal fleet for general cargo has diminished over recent years (Rockpoint, 2009, p. 100).

One development in respect of coastal shipping business practices is that Pacifica Shipping now has a dual role. Pacifica Shipping is acting as a vessel owner and operator as well as an agent for some international lines calling at New Zealand ports, to handle domestic shipping between New Zealand ports as part of an international route.

Section 13.1 discusses regulatory arrangements affecting coastal shipping and its ability to compete with rail.

F8.2 Except in specialised bulk shipping, coastal shipping struggles to earn returns on investment. This is partly a consequence of government subsidies to rail.

Sea ports

Chapter 3 reported on an Economic Value Added (EVA®) analysis of six New Zealand ports from the period from 2008 to 2011.[59] This chapter found that most of the six major ports in the sample recorded negative EVA rates from 2008 to 2011, although there was a trend to less negative figures from 2009 to 2011. The

[59] As discussed in Chapter 3, the EVA of a company is the difference between the company's operating rate of return and the weighted cost of capital, which shows whether the company's return was sufficient to justify investment in the port compared with an alternative use of the funds.

low EVA rates raise a concern that the ports are making poor use of a scarce resource – capital – and that port owners should therefore be looking to address this by some combination of better cost control, shifting resources to better uses within the port or retiring capital for redeployment elsewhere.

Several potential impediments to efficient investment and innovation at New Zealand ports are considered in this report. Chapter 10 looks at whether the current ownership and governance arrangements of New Zealand ports are creating the appropriate framework for investment planning and decision-making. Chapter 9 looks at whether strategic planning is a potential solution to inefficient investment in transport infrastructure, especially at ports. Finally, section 8.4 of the present chapter considers whether Resource Management Act processes are distorting resource allocation and planning decisions.

F8.3 The Commission's EVA analysis poses questions about how well ports use capital resources. The potential impediments to efficient investment and innovation at these ports discussed in this report are ownership and governance arrangements for ports, investment planning processes, and the effects of the Resource Management Act.

While productivity growth at New Zealand ports has slowed during the past decade, there are indications of some investment in productivity-improving automation technologies. For example, both the Ports of Auckland and the Port of Tauranga are using GPS technologies to monitor the performance of straddle carriers and stacking cranes.

The discussion above considers the overall performance of ports, but to what extent are investment and innovation taking place in specialist activities within ports? Stevedoring and marshalling services are considered in the next section. The following table reviews investment and innovation issues in some other specific port operations. Table 8.1 indicates few regulatory impediments to investment and innovation for specific port services.

Table 8.1 Investment and innovation issues in port services

Port service	Investment and innovation issues	Potential impediments
Towage (Provision of tugboat or 'tug' services)	Some New Zealand ports may not have sufficient scale to efficiently operate modern tugs Effective tugs are especially important for working in small or narrow harbour areas such Napier and Gisborne	No apparent regulatory impediments
Berths (Spaces for a ship to dock or anchor)	What is the efficient level of 'flat deck' wharf space at New Zealand ports?	Ownership and governance arrangements at ports (Chapter 10)
Dredging (Deepening of harbours and waterways)	Do imaging technologies have the ability to improve dredging by more accurately identifying the areas that need to be dredged?	No apparent impediments, but dredging may be subject to the RMA processes that are discussed in section 8.4
Inland ports (Inland sites that carry out some functions of a seaport)	Some New Zealand port companies have developed inland ports to consolidate freight and compete with other ports (Ports of Auckland's Wiri inland port, Port of Tauranga's MetroPort). CentrePort has developed an inland container depot in the central region of the North Island.	No apparent impediments

Stevedoring/marshalling

As noted in Chapter 3, stevedores load and unload freight onto ships, and marshallers move freight between the wharves and connecting domestic road and rail transport. Investment and innovation issues for these activities relate to incentives to innovate and the optimal use of mechanical equipment and computer systems to track, sort, assemble, move and store freight at ports.

Incentives to innovate

As noted in Chapter 5, in New Zealand there is greater choice of stevedoring and marshalling firms for bulk and break-bulk cargos than there is for container cargo. However, a model that seems to work well for container cargo is that followed by the Port of Tauranga, which allows exporters, importers and shipping lines a choice between two competing container stevedoring firms that work alongside each other at the port (New Zealand Institute of Economic Research, 2010a).

The Ministry of Transport's recent study of port productivity attributes the Port of Tauranga's high crane rate performance to its competitive subcontract provision of container stevedoring work. It considers that, in practice, the Port of Tauranga is better able to match its services to the peaks and troughs of shipping arrivals and departures (Ministry of Transport, 2011a).

ISO Ltd's submission to the inquiry considers that there are impediments to further contestability of stevedoring and marshalling:

> The impact of union power over how the ports and shippers are able to pursue future efficiencies and innovations in logistics has led to a lack of contestability in stevedoring and marshalling—particularly container cargo... The focus of bidding for stevedoring, marshalling, and other port activities that sustain employment opportunities in particular regions should be on the preferences of the shipper for innovation and productivity performance, rather than the preservation of a favoured union and short-term local politics. Especially where it can be shown that labour terms and conditions are not compromised with more efficient and effective stevedoring and marshalling companies.
>
> ISO Ltd, sub. 28, p. 17

Labour and management practices at ports are considered further in Chapter 6.

F8.4 Contestability of stevedoring and marshalling is only occurring at some ports. Provided there is sufficient scale, greater contestability at other ports would improve incentives for innovation in stevedoring and marshalling at these ports.

Technology

Technological investment and innovation issues for stevedores and marshallers also vary depending on the type of freight that is being moved. For example, container stevedoring and marshalling involves the movement and preparation of containers for loading using specialised equipment such as straddle cranes and forklifts, and the tracking of individual containers via specialised IT applications. Some important technological innovation issues for container marshalling are:

- whether there is an economic case for robotic straddles at some New Zealand ports; and
- whether New Zealand container ports have kept up with developments in scheduling software, and optimisation of container stacking.

There are different technological innovation issues for stevedoring and marshalling of bulk cargos. For example, the stevedoring and marshalling of logs requires technology to track and sort shipments, ship-based equipment to move logs on and off ships, and facilities and equipment for the fumigation of logs.

The Commission has not identified any specific impediments – other than possible lack of sufficient scale at some ports – to technological innovation in stevedoring and marshalling. However, the ownership and governance arrangements of ports discussed in Chapter 10 may influence the investment decisions of stevedores and marshallers.

Road freight

Technological innovation is an important part of road freight industries internationally and is partly driven by the potential to reduce operating costs through greater fuel efficiency. Fuel efficiency can be achieved through engine technologies as well as more aero-dynamic trucks. Other reasons for innovation in truck engine and vehicle technology include increased payload capacity, improved compliance with regulations, and improved driver safety (Christensen et al, 2010).

Heavy vehicle regulation in New Zealand may be delaying investment in new trucks. This is discussed in Chapter 13.

F8.5 Other than the possible effect of heavy vehicle regulations on the uptake of higher productivity vehicles (discussed in Chapter 13), there do not appear to be any impediments to investment and innovation in road freight.

Rail freight

There are numerous opportunities to improve the efficiency of rail freight through investment and innovation. For example, technological innovations in rail freight internationally have reduced the weight of wagons and containers, facilitated loading and unloading of freight at depots, and increased the capacity and speed of rail transport (Pimenta, 2009).

However, while there may be investment in rail in New Zealand, this is funded by government and is not expected to yield economic returns in the short- to medium-term. Instead, the KiwiRail Turnaround Plan has the objective of moving KiwiRail towards full financial self-sufficiency within 10 years, meaning that it will be able to fund its ongoing operating and capital costs from customer revenue (Ministry of Transport, 2011e).

Table 8.2 provides information about the current level of government investment in rail. As noted in Chapter 9, the previous large capital injection was approximately $900m from private investors in the late 1990s (Clark, 2010). Rail investment subsidisation is discussed further in Chapter 9 (investment coordination and planning) and Chapter 13 (other regulatory issues).

Table 8.2 Government investment in rail ($m)

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Operating[1]	418	436	356	95	15	17
Capital – KiwiRail Turnaround Plan	-	250	250	250[2]	-	-
Capital – loan	380	68	331	189	188	29
Total rail	798	754	937	534[2]	203	46

Source: Information Supporting the Estimates of Appropriations for the Government of New Zealand for the Year Ending 30 June 2012

Notes:

1. Operating funding includes funding supporting the metro rail network in Auckland and Wellington, funding to upgrade the Wellington network, and funding for public policy and railway safety work.
2. Consistent with the KiwiRail Statement of Corporate Intent 2012–14, this table assumes that the third tranche of funding for the Turnaround Plan will be $250m in 2012/13, but the actual disbursement has not been decided by the Government. The disbursement of the third tranche is dependent on the Government's approval of suitable business cases and demonstrable progress towards objectives.

Air freight

International airlines

With the exception of Air New Zealand, investment and innovation in international airlines is driven by factors that are outside the control of New Zealand's government and businesses. The issue for New Zealand is the extent to which external innovations are adopted by airlines carrying freight in and out of New Zealand.

As with international shipping, it is possible that competition regulation may affect the level of investment and innovation in air freight services to and from New Zealand. Chapter 12 discusses New Zealand's regulation of competition in international air services markets.

Two international trends that are likely to affect the efficiency of New Zealand air freight services are:

- New aircraft: There is significant international investment in R&D and aircraft-building to improve the fuel efficiency and passenger/freight capacity of aircraft, with indications that these aircraft will fly on New Zealand trade routes. This innovation is driven by strong competition between international airlines.

- New airline business models: Business models for international airlines are currently evolving, driven by airline alliances, and airlines have developed hub-and-spoke networks in air services to improve capacity and plane utilisation. These evolving business models are largely passenger-driven. Low-cost carriers are an important innovation in passenger transport, but there seems to be little change on the freight side. However, the LCC model is still quite new and there are different forms. Longer-haul models such as Air Asia X are more interested in freight (Air Cargo Media, 2009).

Airports

The level of innovation and investment of New Zealand airports with respect to air freight is uncertain. The efficient level of investment by airports is a matter of significant debate between airports and airlines as part of the Commerce Act regulatory process. Regulatory issues are discussed in Chapter 13.

However, airports do play an important role in providing airlines and freight handlers with land, buildings, and access to landing strips and airside facilities. As noted in section 5.2, submitters expressed concern to the Commission that the freight access arrangements at Auckland International Airport are not satisfactory.

One submission commented specifically on airport investment in relation to freight. The New Zealand Airports Association submission considered that investment in airports is directed towards increasing aircraft movements and passenger volumes, and indirectly towards increasing freight (sub. 41). It considered that the only evident constraint on further investment by airports is lack of available suitable aircraft capacity. It also considered that the Airport Authorities Act 1966 provides an effective process for the consideration and disclosure of asset planning to determine the optimum timing for the periodic lump sum investments that are required in relation to the freight industry.

Cargo terminal operators

There are indications of cargo terminal operator investment in terminal facilities and equipment to improve the efficiency of freight handling, though there are also some barriers to further efficiency-enhancing investment. In particular, the CTOs the Commission spoke to considered that having facilities that were not 'airside' (adjacent to the aircraft tarmac) was not ideal, as there were additional security costs involved in moving freight from airside to the terminal.

Section 5.2 notes that the amount of queuing of trucks outside CTOs at Auckland Airport may be inefficient, and considers that there is a possible role for a slot booking system.

F8.6 There are indications of investment by cargo terminal operators in bigger freight-handling facilities and new documentation technologies.

Services to the transport sector

Freight forwarders

The international freight forwarding industry appears to be innovative, driven by competition between exporters and between importers to move freight as quickly and efficiently as possible. Indications of international freight forwarder innovation include:

- the development and implementation of new electronic systems for seamless tracking and tracing of products;

- closer working relationships between freight forwarders and international producers and retailers.

Larger New Zealand freight forwarders are participating in this innovative activity through the adoption of information technologies and evolution of business models. This may be a response to competition from other components of the supply chain that can also undertake freight forwarding. Companies such as DHL

are competing strongly in the trans-Tasman market for air freight. These companies are known as 'integrators' because they provide air services as well as freight forwarding services. Some New Zealand domestic transport companies focused on container transport have begun performing container consolidation and de-consolidation services (ie, loading and unloading containers), which have traditionally been done by forwarders.

Exporters and importers appear to drive much of the freight forwarding innovation in New Zealand. For instance:

- Section 5.2 discussed the Kotahi freight coordination arrangement being proposed by Fonterra Co-operative Group Limited in consultation with Silver Fern Farms.
- The Warehouse advised the Commission that its collaboration with international freight forwarder Kuehne + Nagel is an important basis for supply chain innovation. In its 2007 annual report, The Warehouse named Kuehne + Nagel as its non-trade supplier of the year, noting that the forwarder had been "responsible for developing and implementing a vast range of new services and solutions for our business" (The Warehouse Group, 2007).
- New Zealand horticultural exporters are driving innovations in freight handling. New tray configurations in the horticultural industry allow more fruit to be fitted onto a pallet and in a container. New protocols and temperature management software for managing the atmospheric conditions in containers optimise the quality and storage of horticultural produce (Ministry of Agriculture and Forestry, sub. 32).

F8.7 Freight forwarding innovation is driven by large New Zealand and overseas-based freight forwarders, and by large exporters and importers using forwarders. There do not appear to be any impediments to further innovation in New Zealand freight forwarding.

Customs, security and biosecurity

Chapter 7 discusses investment and innovation in the government agencies that provide customs, security and biosecurity services in New Zealand. It notes that there is investment in a 'single trade window' for border agencies, but that this is part of an international movement to this form of service.

8.3 Optimising investment: institutions, markets and planning

Many of the impediments to dynamic efficiency that have been identified in the previous section focus on impediments to investment. This reflects one of the distinctive features of international freight transport: that it requires large, inherently 'lumpy' investments in capital items such as ships or port infrastructure.

These impediments to investment largely relate to the institutions, markets and planning processes in which investment decisions take place. As a result, most of the following chapters – and the next section on Resource Management Act issues – deal with institutions, markets and planning processes.

Table 8.3 provides a guide to these chapters from an investment perspective.

Table 8.3 Freight transport investment issues in the draft inquiry report

Freight transport investment issue	How the draft inquiry report addresses this issue
Getting the institutions right	
Coordinating investment decisions where there are multiple decision-makers	Chapter 9 considers the greater use of facilitative discussions and information sharing to aid investment planning Chapter 13 considers road transport infrastructure coordination
Ensuring investment decision-makers have sufficient incentives to maximise the long-run return on the	Chapter 10 considers altering the ownership and governance arrangements at New Zealand ports

Freight transport investment issue	How the draft inquiry report addresses this issue
investment	Chapter 10 considers the governance arrangements around the government's investment in rail
Promoting competitive markets	
Improving competitive access to key infrastructure	Chapter 13 considers strengthening the access regime for infrastructure at ports and airports through regulatory instruments
Improving planning processes	
Ensuring RMA processes take account of freight logistics benefits and minimise costs	Section 8.4 of this chapter considers RMA processes

8.4 Resource Management Act

Getting the institutions right

Investment in transport infrastructure can impact New Zealand's natural and physical resources. The principal piece of legislation for managing these impacts is the Resource Management Act 1991 (RMA).

The purpose of the RMA is to "promote the sustainable management of natural and physical resources." (s.5). "Sustainable management" is defined in s.5 (2) of the Act as follows:

> In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—
>
> (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
>
> (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
>
> (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

The purpose of the Act is primarily achieved through the development of district and regional plans that set out the activities that are permitted within a given geographic area.[60] The RMA also includes a process by which an individual or business can apply for a 'resource consent' to undertake an activity that requires council approval.[61]

Responsibility for implementing the Act is largely delegated to local authorities. This is founded on the assumption that the best people to make resource management decisions are those that a) have the largest amount of information; and b) will be most affected by the decisions.

The role of central government under the Act is to provide policy guidance on matters of national significance and to oversee the implementation of its provisions.

Issues raised during consultation

The Commission has received a number of submissions highlighting the need for a more balanced approach to weighing up local and national implications of transport infrastructure projects. Specifically, participants raised a number of concerns around:

1. the absence of recognition given to the importance of transport infrastructure within the RMA;
2. the need for additional central government guidance in planning for transport infrastructure;
3. the omission of seaports from the list of 'network utility' operators.

[60] That is, without the need for resource consent as they are permissible 'as of right'.

[61] That is, activities that are not deemed 'as of right'. Note the need for resource consent may also be specifically required under a regional plan.

In addition the Commission heard a number of concerns regarding the rigidity, complexity and cost of the consent approvals process.

The concerns expressed to the Commission mirror those expressed during other public inquiries and are widely acknowledged by both central government and local authorities. To address these and other issues, in 2008 the Government launched the first phase of a two-phase RMA reform agenda. The principal outcome of Phase 1 was the introduction of the *Resource Management (Simplifying and Streamlining) Amendment Act 2009*. This Act introduced amendments aimed at:

- streamlining and simplifying consent procedures;
- improving the approvals process for nationally significant projects;
- reducing costs and time taken to prepare and change local plans;
- improving the effectiveness of national instruments such as National Policy Statements (NPS) and National Environmental Standards (NES) (Ministry for the Environment, 2009).

The second phase of the RMA reforms is currently in progress and includes a work stream dedicated to improving infrastructure provisions, including the application of the *Public Works Act 1981*. As part of the second phase, the Ministry for the Environment (MfE) formed the Infrastructure Technical Advisory Group (ITAG). The scope of work for this group included a review of how the designation processes apply to infrastructure projects, and an investigation of alternative ways of planning for and managing the effects of activities on network infrastructure.

The Minister for the Environment has also formed the RMA Principles Technical Advisory Group (RMA PTAG) to undertake a focused review of s.6 and s.7 of the RMA. These sections provide guidance for local authorities by listing 'Matters of National Importance' (s.6) which must be 'recognised and provided for'[62] and 'Other Matters' (s.7) which must be given 'particular regard'.

RMA PTAG will consider the changes recommended by the ITAG and is due to report its findings and recommendations to Cabinet by the end of February 2012.

In reaching its findings and recommendations, the Commission has considered the views expressed by inquiry participants, the 2009 Amendments to the RMA, and the work undertaken by the Technical Advisory Groups established by the Minister.

Recognition of the 'national importance' of transport infrastructure

Transport infrastructure projects commonly result in dispersed benefits and costs that can have national implications for wellbeing. Efficiency is promoted when all of these costs and benefits are taken into consideration when making a planning or consent decision.

However, inquiry participants have suggested the current wording of the RMA does not adequately recognise a) the contribution of transport infrastructure to the social and economic wellbeing of New Zealanders; or b) the inherent trade-offs involved in infrastructure projects.

In this regard the Commission notes the ambiguity around whether s.5 (a), (b) and (c) of the Act allow for the 'balancing' of socio-economic aspirations with environmental outcomes, or whether these provisions represent an 'environmental bottom-line' that must be secured regardless of the social or economic cost (LexisNexis NZ Limited, 2011; Skelton and Memon, 2002; Upton, Atkins & Willis, 2002).

While both interpretations of s.5 have been adopted by the courts,[63] a strict 'environmental bottom-line' interpretation appears at odds with the efficient use of society's natural and physical resources. That is, it may preclude projects that make a positive contribution to the wellbeing of current and future generations of New Zealanders.

[62] These matters include the preservation of the coastal environment, the protection of natural features, indigenous vegetation, heritage values and certain customary rights (RMA s.6).

[63] See for example, New Zealand Rail v Marlborough District Council (1994), Foxley Engineering Ltd v Wellington City Council (1994), Campbell v Southland District Council (1994) and Trio Holdings Ltd v Marlborough District Council (1997).

In light of this ambiguity, the Commission considers there is a case for reviewing s.5 with a view to clarifying (and elevating) the consideration of net social benefits and costs (including those occuring at a national level). The Commission recognises that the Government might want to consider the case for such a review in a wider context than transport alone.

If the Government decides not to review the purpose statement of the RMA, the Commission supports ITAG's recommendation that s.6 of the RMA be amended to include specific reference to the development and operation of regionally- and nationally-significant infrastructure. This would mean local authorities would need to recognise and provide for transport infrastructure during the planning process and when considering applications for resource consent.

F8.8 There appears to be ambiguity around the interpretation of the purpose of the RMA and the extent to which the Act allows the balancing of socio-economic aspirations with environmental outcomes.

R8.1 Section 5 of the Resource Management Act 1991 should be reviewed to clarify (and elevate) the consideration of net social benefits and costs (including those accruing at a national level).

Should the Government decide not to review s.5, s.6 of the Resource Management Act 1991 should be amended to include specific reference to the development and operation of regionally and nationally significant infrastructure.

Central government guidance on transport infrastructure priorities

While responsibility for implementing the RMA is largely delegated to local authorities, central government plays an important role in providing guidance on issues that involve balancing local values with regional or national benefits. During the course of the inquiry, several stakeholders highlighted the need for a greater level of central government guidance, particularly where trade-offs exist between infrastructure development and competing local land uses.

The need for coordinated decisions is made more important by the network nature of road and rail, and the fact that this infrastructure is provided by multiple levels of government. The submission from Local Government New Zealand typifies views expressed to the Commission on this issue:

> Under the Resource Management and Local Government Acts councils are delegated the responsibility not only to pre-emptively plan for growth, but also to manage where and how growth should occur. Many of the constraints facing the current network are less about infrastructural capacity and more about balancing and integrating the competing demands for land use.
>
> Local Government New Zealand , sub. 42, p. 5

F8.9 Central government plays an important role in providing direction on issues that involve balancing local values with regional or national benefits. Without clear signals from central government, national benefits and costs may be assigned a lower priority during the planning and consent process – resulting in the potential reduction of economic, social or cultural wellbeing.

The RMA provides two mechanisms for guiding local authority decision-making on national matters. Part 5 of the RMA includes provision for the Minister for the Environment to develop National Policy Statements (NPS) that outline the objectives and policies for *matters of national significance*. An NPS can require local authorities to amend their plans and policies to reflect, or give effect to, the objectives and policies contained in the NPS (s. 55).

Another mechanism available under Part 5 is the development of National Environmental Standards (NES). These standards may cover areas such as noise, water quality, air quality and contaminants (RMA Part 5,

s.43, 44). An NES may allow or prohibit an activity in an area and can include quantitative standards, narrative statements, or methodologies that become binding on local authorities.

A number of participants in the inquiry noted the need for an NPS and NES covering the transport sector – particularly New Zealand's airports and seaports. For example, the Institute of Professional Engineers New Zealand wrote:

> The Productivity Commission might consider whether there would be a benefit in a National Policy Statement (NPS) or National Environmental Standards (NES) for ports or airports, similar to the NPS for electricity transmission. A NPS would provide guidance for local authorities to decide how competing national benefits and local costs should be balanced and the NES would assist in ensuring consistent approaches and resource consent decision-making processes throughout the country.
>
> Institute of Professional Engineers New Zealand, sub. 25, p. 2

The Commission notes that while the Government has a National Infrastructure Plan, there is no requirement under the RMA that the plan be taken into account by local or regional authorities when making planning decisions. For this reason the Commission believes that an NPS covering transport infrastructure would assist local authorities in prioritising land uses when making planning decisions. This has the potential to improve the efficiency of planning outcomes and reduce the administrative costs faced by socially desirable projects.

R8.2 The Minister for the Environment should commence development of a National Policy Statement for transport infrastructure, which would provide central government recognition of the importance of New Zealand's transport infrastructure.

Treatment of ports as a 'network utility operator'

The Commission has received several submissions highlighting inconsistencies in the delegation arrangements set out in Part 8 of the RMA – in particular the observations that airports are listed as a 'network utility operator' while seaports are not (s.166).

This is relevant because network utility operators have access to a number of legislative provisions – notably:

- Under the provisions of Part 8, approved network utility operators can apply to local authorities to have land designated to a particular use.[64] This is referred to as a 'designation', and once in place, the network utility operator may use the land acquisition provisions of the Public Works Act 1981. They are also given certain rights over the land. For example, the land cannot be subdivided without the written consent of the network utility operator (as the 'requiring authority').
- Network utilities operators listed in the RMA may use certain provisions under the *Marine and Coastal Area (Takutai Moana) Act 2011* – notably the ability to apply to the Minister of Lands for a 'lesser interest'[65] in reclaimed land under s.35.

Participants in the inquiry noted that the omission of seaports from s.166 is placing a physical constraint on the expansion of some New Zealand ports.

This issue was also examined by Infrastructure Technical Advisory Group, who noted the following:

> We made extensive inquiries of officials and others as to why port companies and electricity generators were not able to seek requiring authority status and could see no principal reason for the exclusion. Like airports, sea port companies are fixed assets generally of significant value to regional and national communities. Airports and sea ports both have specific requirements to expand or protect their essential infrastructure (ITAG, 2010).

[64] To have the right to designate land a network utility operator must be 'approved' as a 'requiring authority' by the Minister for the Environment.

[65] 'Lesser interest' is defined in s.29 of the Marine and Coastal Area (Takutai Moana) Act as meaning 'an interest in reclaimed land that is less than a freehold interest and includes a lease, licence, or other right or title to occupy or use the land.'

The Commission agrees with the ITAG observation and can see no economic or policy rationale for the omission. However, the Commission notes that, similar to airports, seaport capacity is determined by more than just physical land area. Other important factors include the berth occupancy, container handling rates, stacking height, the efficiency of yard layout, and the efficiency of the port/transport interface (Auckland Regional Holding, 2009).

Expansion of port capacity therefore can occur in a variety of ways. Productive efficiency will be promoted by first investing in expansion projects with the highest benefit cost ratio (including all social benefits and costs). This is not to say that land availability is not a physical constraint on port expansion in some cases, only that it should not be assumed that physical expansion is the only, or even the economically preferred, option.

Notwithstanding the above, the Commission believes that including port companies as network utility operators would promote efficiency by allowing all possible options for expansion to be evaluated.

R8.3 Section 166 of the Resource Management Act 1991 should be modified to including port companies as network utility operators.

The cost and timeliness of the consent approvals process

Costly, time-consuming and overly bureaucratic regulatory procedures have the potential to reduce investment incentives and hinder productive and dynamic efficiency. One area that is of particular concern to inquiry participants is the impact of the RMA on the ability of New Zealand's ports to accept 'bigger ships' (that is, ships larger than 6000–7000 TEU). Some stakeholders believe there is an opportunity to attract bigger ships to New Zealand ports, thereby capturing the economic benefits of scale.[66] However, before this can occur ports would need to undertake dredging to accommodate the deeper drafts of bigger ships. This would require resource consent under the RMA.

The Commission has received several submissions highlighting the difficulties that this can pose. The Port of Tauranga provided the following example of the potential cost and delays that the RMA process can present.

> A pertinent example is the length of time and significant costs associated with attempting to secure resource consents to increase the depth of our shipping channels. We commenced preparing the Environmental Impact Assessment in July 2007. The Commissioner's Hearing was held in March 2010 and subsequently recommended the granting of the consents. Three iwi parties appealed the Commissioners decision and we have been in the Environment Court since April 2011, with the next hearing date set down for November 2011 four years on. Legal and expert witness costs to date have mounted to $1,624,000, which excludes the considerable internal resource consumed by this process.
>
> Port of Tauranga, sub. 37, p. 1

Another relevant comment was provided by CentrePort.

> The RMA remains the largest single barrier to improving ports so they can provide more cost efficient services to lines. It is clear container port facilities such as those at Sulphur Point (Tauranga) and CentrePort could not be created with the current RMA. The regulatory costs imposed on ports to expand to accommodate larger vessels will ultimately be paid for by the tradable sector and are a barrier to trade.
>
> CentrePort, sub. 33, p. 3

Other more general concerns were also raised about the consent process during engagement meetings. These included:

- delays caused by objections and appeals that have little merit or that are motivated by private rather than public interests;
- the cost to local governments of preparing policy statements and plans;

[66] This issue is discussed further in Chapter 9.

- the frequency with which local governments are unable to process resource consent applications within the timeframes set out in the RMA;
- the practice of some local governments requesting additional information to 'stop the clock' on statutory timelines; and
- the cost and time delays associated with multiple consent hearings (ie, being heard first by council and then the Environment Court).

The reforms introduced under the *Resource Management (Simplifying and Streamlining) Amendment Act 2009* address, or will address, many of the issues raised during the inquiry. However, awareness of these reforms varies between submitters, with some raising problems that were largely addressed by the 2009 Amendment Act. In the Commission's experience, this is an area where negative claims and generalisations gather momentum divorced from specific facts or events.

A case in point is the practice of using requests for additional information to 'stop the clock' on statutory timelines. This practice was considerably reduced by the 2009 Amendment Act, which now limits councils to only two information requests.

Similarly, the 2009 amendments allow parties to apply to the council to have their applications heard directly by the Environment Court (rather than have it first heard by council). This process is known as 'direct notification' (Ministry for the Environment, 2009) and it is in addition to the Ministerial 'call-in' process specified in s.142 in which the Minister can have proposals of national significance directly decided by a board of inquiry or the Environment Court. Applications can also be lodged directly with the newly formed Environmental Protection Authority (EPA), which can make recommendations to the Minister as to whether or not a matter should be deferred directly to a board of inquiry or the Environment Court.

There a number of possible explanations as to why such issues persist as concerns for stakeholders. These include:

- the lag between the enactment of the legislation and it taking effect through the production of local government plans;
- the opinions of individuals, which may be heavily influenced by previous experiences with the legislation.

F8.10 Recent reforms to the RMA have led to improvements in the timeliness and cost of the consent process. The full benefits of these reforms are likely to take time to filter through into council plans, and into the perceptions of those whose opinions may have been shaped by previous experiences.

9 Investment coordination and planning

Key points

- Efficient levels of investment are key to achieving dynamic efficiency in freight industries; however, the nature of investment (large and 'lumpy'), demand (uncertain) and the supply chain (multiple interdependent decision makers) creates significant risks of under- and over-investment.
- While coordination might reduce these risks, 'coordination failures' of various types can lead to organisations making individually sensible decisions with collectively sub-optimal outcomes.
- A significant number of inquiry participants identified 'strategic planning' or 'government leadership' as a solution to a wide variety of perceived problems in international freight transport services. However, strategic planning (in its various forms) and government leadership have their own costs and risks. Governments should be wary of calls for it to assume the normal commercial risk of other parties.
- Coordination failures may be exacerbated by the multiple objectives associated with public ownership. Such failures may be better addressed through governance and ownership changes rather than strategic planning.
- Government service providers (eg, road infrastructure providers), particularly those receiving poor price signals, face a difficult problem in collecting reliable market research on which to base their investment decisions. 'Facilitated discussions' can assist with this important task, and also promote relationship building and information sharing, leading to improved coordination.
- Directive planning, in the sense of a centralised plan imposed on independent parties, has large associated costs due to the incentives it creates for non-productive behaviour, including rent-seeking, tactical misrepresentation and strategic hold up. Experience has shown directive planning should be avoided in favour of lower-cost mechanisms.
- In an environment with considerable uncertainty and risk, there is value in a diversity of approaches. Centralised planning tends to lock in a single approach – with high costs should the future not turn out as expected.
- Proposals for investment in road and rail should be subject to rigorous investment screening in a coordinated way, so that the best projects are selected – be they road, rail, or a combination of the two. Without this level of transparency, the public cannot be confident that scarce resources are being allocated to the most beneficial projects.
- In light of investment risks associated with preparing for 'bigger' container ships, an evolutionary path with staged investment is preferable.
- The scenario in which a lack of container ports in New Zealand capable of handling 'bigger ships' forces hubbing through Australia with both higher costs and transit times appears unlikely because the commercial viability of this scenario would be undermined by direct services with smaller, albeit less fuel-efficient, container ships.
- Port mergers have a number of potentially large benefits and costs. Where a proposed merger would result in a lessening of competition, the Commerce Commission is best placed to evaluate the public benefits relative to the detriments of that proposal.

Investment planning is a core activity for organisations. Planning is necessary to ensure that the organisation's capability is matched to demand, and that investment is made in the right assets at the right time. Given that planning and a failure to plan are both costly,

each organisation has the difficult task of deciding the quantity and quality of resources to commit to its planning activities.

This chapter is particularly concerned with planning that spans organisational boundaries. Inquiry participants have raised a number of concerns about a future in which uncoordinated decision-making by organisations making individually sensible – but collectively sub-optimal – decisions resulting in missed opportunities, or scarce capital wasted in duplicated infrastructure. An example is that investment by a port may be wasted without corresponding investment in domestic transport infrastructure. Another example, the case for coordinated investment in order to support 'bigger ships', is covered in section 9.6. A further case study that examines the costs and benefits of port coordination through mergers is presented in section 9.7.

'Strategic planning' or 'government leadership' was raised by many inquiry participants as a potential solution to these concerns.

As efficient levels of investment are a key to achieving dynamic efficiency, the main questions for the Commission to address are:

- Are there impediments to coordinated decision-making that, if removed, would lead to better collective investment decisions and overall outcomes?
- If so, how might these impediments be reduced?

The chapter starts with a description of current arrangements for transport planning by government.

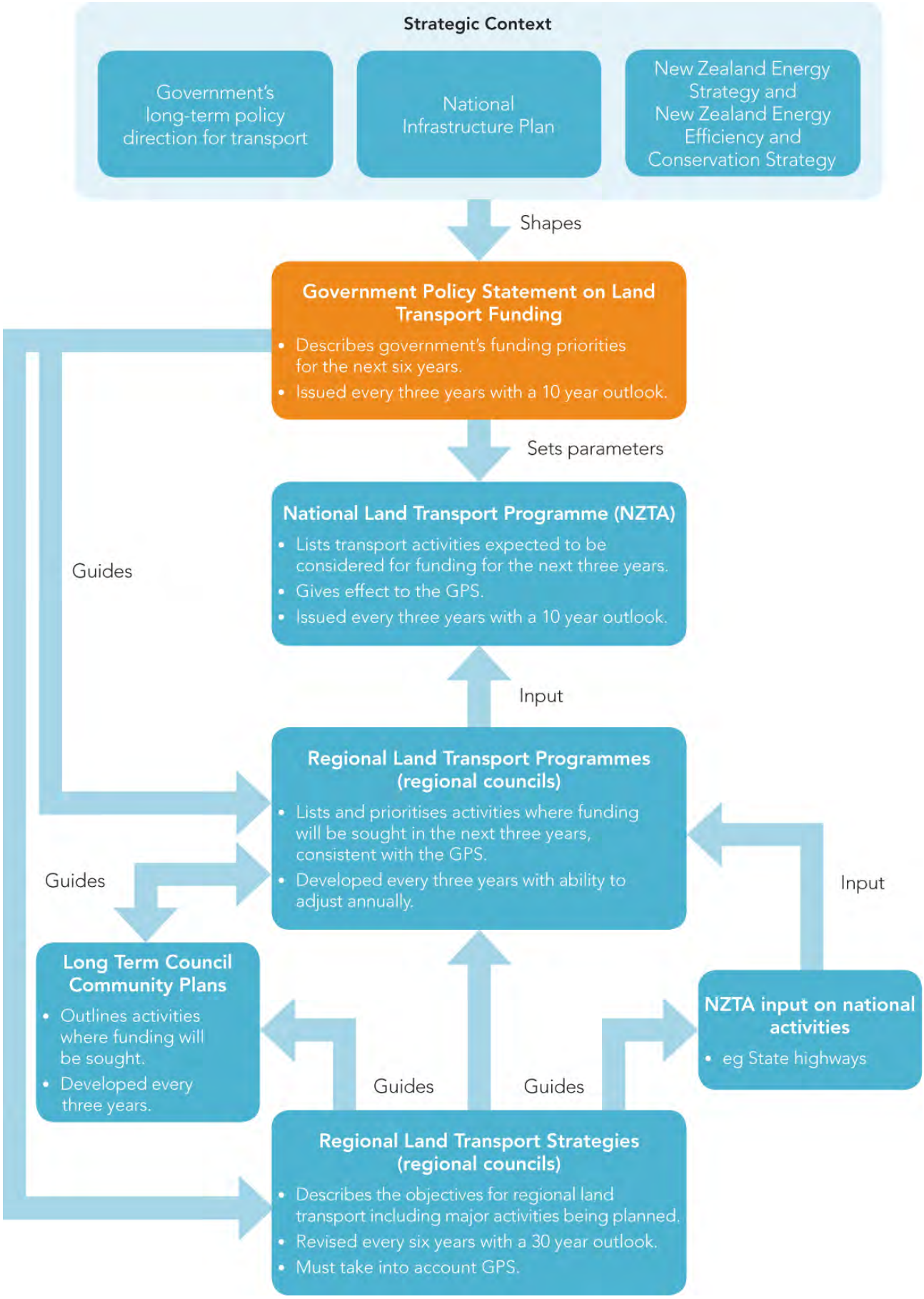
9.1 Government transport planning

Both privately and publicly owned firms need to engage in planning with respect to issues that span organisational boundaries. This chapter, however, ultimately focuses on the Government's role with respect to strategic planning. To set the scene, this section describes current arrangements for transport planning by the New Zealand Government. These arrangements have a much wider scope than just the international freight transport sector.

The Government policy statement on land transport funding

A key document is the Government Policy Statement on Land Transport Funding (GPS), which sets out the Government's priorities for expenditure from the National Land Transport Fund over the next 10 years. Figure 9.1 outlines where the GPS fits within the overall transport planning framework. This planning framework would appear to be comprehensive for land transport, and is integrated with the statutory transport planning responsibilities of local government.

Figure 9.1 The Government's overall transport planning framework



Source: New Zealand Government (2011); Productivity Commission

Integrated planning both between transport modes and between transport and land use planning is a focus of the GPS:

> Integrated planning is important to ensuring that decisions about land use, transport and urban design contribute to the achievement of the government's goals for transport and energy efficiency. To achieve integration, transport strategies and packages of activities should be developed alongside, and be clearly connected to, land use strategies such as spatial plans and implementation plans. In particular, land use and transport planning processes should ensure:
>
> - opportunities are created for better integration within and between different modes of transport;
> - the transport needs of future growth are considered in planning and developing the transport system;
> - existing and future transport corridors are safeguarded from other development;
> - new commercial and residential developments meet the cost of their infrastructural impact on the wider transport network; and
> - urban planning principles are applied.
>
> New Zealand Government (2011), p.10

However, despite the attention to integration between transport modes identified in the statement, this relates to different modes of land transport, rather than between land, sea and air transport modes. This focus on land transport modes is, however, consistent with the obligations for the GPS[67] set out in the Land Transport Management Act 2003.[68]

The New Zealand Transport Agency

The New Zealand Government transport sector is overseen by the Minister of Transport, and includes five Crown agencies, three state-owned enterprises and one Crown-established trust (Ministry of Transport, 2011d).

A key agency from a planning perspective is the New Zealand Transport Agency (NZTA), whose core functions include planning the land transport networks and investing in land transport. It identifies integrated planning as a key approach to meeting the requirements of the Land Transport Management Act and to contributing to national growth and productivity. Its website (NZTA, 2011b) provides details on how it sees integrated planning working, provides an integrated planning toolkit, a policy planning manual, and also describes the role of regional councils in encouraging integrated planning.

The role of local government

Regional councils have statutory responsibilities to produce Regional Land Transport Strategies and Regional Land Transport Programmes covering their regions. Territorial authorities are responsible for local roads within their territories, and contribute 50% of the funds for local roading projects.

Integration across transport modes

While there are legislative requirements for an integrated approach to land transport and the organisational responsibility and capability to deliver it, there may be issues that cut across transport modes (ie, air, sea and land) and which may also be a matter of legitimate government interest. For example, a decision to expand a port could have implications for the road and rail networks linked to that port, and expansion of the rail network might affect coastal shipping. Responsibility for considering issues that cut across transport modes lies with the Ministry of Transport.

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[67] A GPS, which is issued by the Minister [of Transport] every three financial years, enables the Minister to—

(a) guide the [New Zealand Transport] Agency and land transport sector on the outcomes and objectives, and the short- to medium-term impacts, that the Crown wishes to achieve –

(i) through the national land transport programme; and

(ii) from the allocation of the national land transport fund; and

(b) link the amount of revenue raised from road users with the planned levels of expenditure from the national land transport fund. (s. 84)

[68] In June 2011, the Minister of Transport announced proposed changes to the Land Transport Management Act to enable it to be made simpler, more streamlined and less prescriptive. It is expected amending legislation will be introduced to Parliament in early 2012. See Ministry of Transport (2011c).

Coordinated planning across transport providers

The arrangements for investment planning that involve coordination with private and council-owned businesses are less clear. While the National Infrastructure Plan is comprehensive in that it describes infrastructure (including transport infrastructure) regardless of ownership, the Plan is not prescriptive.

> This Plan sets out a twenty year vision, which is directional but not directive, and a programme of work, led by the National Infrastructure Unit and involving a range of agencies, to progress this vision…
>
> National Infrastructure Unit (2011)

Coordinated planning that requires the involvement of businesses that are not directly controlled by central government requires the voluntary participation of those businesses or regulatory intervention.

One example of voluntary participation is the Upper North Island Freight Strategy coordinated by NZTA. This model is discussed further in section 9.4. An example of regulatory intervention is the investment consultation requirements of the Airport Authorities Act 1966, which requires airports to discuss any plans for significant investments with their airline customers.

Implications for strategic planning

Current arrangements indicate considerable commitment to coordinated planning across central government transport agencies. They also show that significant resources are allocated to the coordination of land transport planning between central and local government. The Commission has not investigated these arrangements in sufficient depth to form a view as to whether they could be further improved.

However, the Commission believes it would be useful to provide some insights into the application of strategic planning to transport infrastructure investment, by analysing the types of coordination failures that strategic planning might usefully address, and different options for successfully implementing such planning.

9.2 What coordination failures could strategic planning address?

'Strategic planning' or 'government leadership' was raised by many inquiry participants as a solution to under-, over-, or mismatched investment in transport infrastructure (Box 12).

Box 12 **Participants' views advocating strategic planning**

Marstel Terminals

> There is a clear requirement for a more centralised planning environment for strategic port assets. The experience of the bulk liquid industry in Auckland demonstrates a clear coordination failure that would benefit from the coordination of a central government led strategic plan for port infrastructure.
>
> sub. 30, p. 7

Pacifica Transport Group

> The government needs to show leadership, and point the pathway forward in this industry. Leaving it to market forces is irresponsible, and exposes our exporters to the prospect of an overseas hub and spoke scenario [for container shipping].
>
> sub. 11, p. 9

Environment Southland

> Strategic infrastructure planning is essential. This should be conducted at both regional and national levels and be integrated across all infrastructures…
>
> Efficiency isn't the problem it is the lack of strategic leadership and strategic investment that are the problem.
>
> sub. 4, p. 6,7

Employers' and Manufacturers' Association

> Investments have already been made to utilise inland ports however associated infrastructure such as rail and road should be strategically planned to allow the best advantage of these and to ensure that competition between ports can thrive.
>
> sub. 7, p. 16

Council of Trade Unions

> The NZCTU strongly supports a move to centralised planning mechanisms to develop and implement a national transport strategy, with a representative structure encompassing employers, unions, exporters/importers, domestic transport stakeholders and government.
>
> sub. 14, p. 27

Given the wide scope of potential problems identified by participants, the Commission thought it worthwhile to develop a typology of 'coordination failures', defined as situations that could lead to missed opportunities for cooperative investment behaviour to create better overall outcomes. These can occur for a number of reasons, including poor incentives for information sharing, limitations of commercial contracting, the misalignment of risk and reward, and regulatory barriers to cooperation. Coordination failures are a subset of market failures.[69]

Submissions to the inquiry use the term 'strategic planning' to mean a wide variety of measures. To force some clarity over terminology, this chapter will use the term 'strategic planning' in the context of long-term planning decisions, typically involving large capital investments and multiple decision makers. In particular, the chapter will consider strategic planning as a way of handling the coordination failures identified in this section.

Use of the word 'strategic' suggests that the planning involves choice between alternative courses of actions in an environment where independent parties make their own choices, and each party should anticipate responses from other parties in response to their own actions.[70]

The potential coordination failures raised by participants have been classified into the following seven categories.

Minimum efficient scale

Pacifica Transport Group (sub. 11) argues that subsidies to rail, road and international shipping combine to threaten the viability of coastal shipping. A coordinated response, recognising the effects of these subsidies, might act to reduce subsidies and hence improve the viability of a desirable transport mode.

This is an example of the 'minimum efficient scale' problem, which occurs when a supplier in a competitive market is too small to exploit economies of scale but is unable, for some reason, to exit that market. (For example, political pressure has often been applied to keep financially-unviable railway lines open.) In many cases that supplier will require a subsidy. The presence of a subsidised supplier in a competitive market can have an effect on competing suppliers, reducing their scale, depressing profits and discouraging investment. At the extreme, all suppliers may operate below minimum efficient scale, at a substantial cost to the host economy.

The 'minimum efficient scale' problem is closely related to the 'rationalisation' problem described below. The distinction is that the former relates to competition between transport modes, while the latter relates to competition between firms within an industry.

The coordination failure arises when decisions regarding subsidies are made on a mode-by-mode basis, without full consideration of their effects on competing modes and the transport systems as a whole.

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[69] See chapter 2.

[70] This does not rule out situations where one party may be a natural leader, or parties voluntarily join coalitions.

Investors' dilemma

> Left to individual infrastructure providers over time market forces may deliver an efficient network of ports and domestic transport infrastructure that would support economies of scale but the questions remain: how long would it take and how many poor investments would be made in the process?
>
> Two likely scenarios:
>
> 1) No one invests due to the magnitude of costs and lack of utilisation certainty; or
>
> 2) Too many invest and assets are underutilised.
>
> Kotahi, sub 29, p. 2

This concern reflects well-studied problems of cooperation in game theory, including the classic 'prisoners' dilemma'. In such situations, two players would benefit from cooperation, yet an inability to communicate and reach a binding agreement means they make individually-best choices that miss an opportunity for a better cooperative outcome. In an infrastructure context, such a game is described in Box 13.

Box 13 **The infrastructure game (described in terms of two competing ports)**

Rules of the game:

- An increase in customer freight demand cannot be met without a corresponding increase in the supply of port services. Port capacity comes in lumps, and investment in one whole unit is required to meet the demand.
- Two competing ports must choose to invest or not invest. Each port seeks to maximise the value of its business. They must make their decision and commit to it before learning the other's decision.
- If one port invests, then the outcome is ideal for both ports. Both the investing and non-investing port earns a satisfactory return on its total investment and customer demand is also satisfied.
- If neither invests, then a worthwhile investment opportunity has been missed. Both ports continue to operate profitably; however, customer demand cannot be fulfilled.
- If both ports invest, then the purchased assets will be underutilised. Neither port will earn a satisfactory return on their investment. While customer demand is met, over time they may face higher charges as the ports try to recoup their over-investment.

Under these rules, the most likely outcome is that neither port will invest, thus avoiding the costs associated with over-investment. This outcome is non-optimal for both the ports concerned and their customers.

Explicit cooperation would avoid the theoretical outcome of underinvestment. In many cases, however, explicit cooperation is not required in corresponding real world situations. Implicit cooperation via the communication of investment intentions may be sufficient to permit coordination. Large investment decisions are typically made in a series of small steps (eg, public announcements, feasibility studies, resource consents and capital raising) – many of which are observable by competitors. Project construction can be structured as a number of stages, allowing later stages to be delayed or abandoned if necessary. In most cases, such mechanisms permit sufficient implicit cooperation for commercially-focused suppliers to avoid both the under- and over-investment outcomes.[71]

[71] Under different circumstances, there may be tactical advantage in a supplier keeping its infrastructure investment plans secret for as long as possible. For example, Port of Tauranga kept its intention to establish its MetroPort inland port in Auckland under wraps until a month before opening (Fabling, Grimes, & Sanderson, 2011).

Countervailing power

To the extent to which international shipping lines gain market power through the coordination of their negotiating activities (see the discussion in Chapter 11), they can dictate the prices, terms and conditions of contracts with ports and shippers. The Council of Trade Unions believes that:

> [A national planned strategy] would serve to countervail the ability of Maersk and similar outside parties to dictate outcomes to the New Zealand community simply on the basis of their market power.
>
> CTU, sub. 14, p. 27

The CTU's proposed 'national planned strategy' offers 'countervailing power' to New Zealand interests via:

> … a national authority with a mandate to maintain oversight over investment and access arrangements in rail, road, coastal shipping, ports and airports, to formulate a national strategy for locating logistical hubs, and to regulate where appropriate to secure coordination across transport modes and locations.
>
> CTU, sub. 14, p. 27

While this issue was raised in the context of a 'strategic planning' approach, it is really a more general problem. The lack of countervailing power could be addressed through the removal of exemptions for non-competitive behaviour by shipping lines (considered in Chapter 11), direct regulation of prices, terms and conditions (for example under part 4 of the Commerce Act 1986), and alliances or mergers between ports (see section 9.7) or between shippers. It will not be considered further here.

Resilience

The Employers' and Manufacturers' Association raise a 'resilience' problem, presumably in the context of natural disasters:

> It is also critical that New Zealand not be totally reliant on a single port for imports or exports as part of risk management for the country's trade movement.
>
> EMA, sub. 7

A freight system with a single essential link in the supply chain exposes shippers and consumers to the risk of having no freight service should a failure occur at that point. On the other hand, duplication of infrastructure is expensive and undermines potential economies of scale. The most economically efficient outcome is the one that provides 'just enough' resilience, balancing the cost against the benefits. Optimal resilience at a societal level may not correspond with the amount and type of resilience chosen by individual infrastructure providers acting independently to protect their own assets and businesses.

As an example, a firm may find it cheaper to insure a single asset, whereas the community at large may prefer duplication. If individuals in the community are willing to pay to achieve their preference, and coordination of those preferences and payments is possible, then a cooperative outcome would be ideal.

While this suggests a role for coordination, there is no simple answer to this problem. Infrastructure duplication will inevitably be judged as inefficient should the risk it attempts to mitigate not occur; conversely failure to duplicate will be judged as short-sighted should a risk (anticipated or otherwise) actually occur. The failure of foresight, rather than of cooperation, may be at the heart of the problem; however, cooperation may still play a role.

Rationalisation

In some ways the converse of the resilience problem is the 'rationalisation' problem. In the context of ports, Ports of Auckland submitted that:

> Rationalisation [reducing the number of ports, or the number of activities undertaken at specific ports], consolidation [port mergers] or other moves to strengthen collaboration between logistics players in a transparent form could ensure the supply chain is optimised more efficiently and sustainably, avoid duplication of investment and ensure the most efficient timing and location of investment.
>
> Ports of Auckland, sub. 50, p. 17

Under some circumstances (eg, falling demand or improved inland transport) it could be economically efficient for particular ports to withdraw from particular activities – or close down altogether – in order for remaining ports to gain from economies of scale. In an environment where port mergers were not constrained, then arguably this efficient outcome would arise through mergers and acquisitions, which allow the overall costs and benefits to be internalised within the merged firm.

If mergers and acquisitions are constrained for some reason, then a strategic planning process with the power to choose which port should be rationalised could, at least in theory, lead to a collectively optimal outcome. However, selection of the particular port to rationalise would be politically contentious, and presumably the affected port owners and local community would demand compensation. The amount and source of such compensation would be the subject of further political contention, suggesting very high transaction costs for this approach.

The New Zealand Shippers' Council (2010) and Kotahi (sub. 25) advocate a future involving 'bigger ships' (ie, larger container vessels) servicing a limited number of New Zealand 'hub' ports, supported by the enhanced use of rail and through smaller vessels providing 'spoke' connections from regional ports. They argue that the benefits from this proposal could be brought forward through increased coordination, involving the rationalisation of existing ports into such a port hierarchy. This proposal is examined in more detail in section 9.6.

Commitment and hold up

Commitment problems occur because investments in one part of the supply chain must often be matched in other parts of the chain. For example, a port expansion may be useless unless matched by investments in land transport or long-term commitments by customers to use that port. If the supply-chain stages are owned by independent parties, then each party, fearing that its own investment will be stranded, has an incentive to delay investment until the others have committed. Under such conditions the overall level of investment will be less than optimal.

Hold-up problems occur when parties have assets that cannot be deployed to an alternative use. This is typical of infrastructure assets. Potential users of these assets can negotiate favourable prices that do not cover the full costs of providing those assets – in effect they 'hold up' the asset owner. Anticipating hold ups, firms may underinvest in such assets.

One way to deal with commitment and hold-up problems is common ownership, often termed 'vertical integration'. The coal export supply chain provides an instructive example: coal mined by Solid Energy on the West Coast is transported by rail over the Midland Line to the Port of Lyttelton. It should therefore come as no surprise that Solid Energy attempted to purchase the Midland Line in 2002, as did the Port of Lyttelton in 1993.

Another approach is contracting between the parties. The contract needs to find some way to share the gains and risks between the parties. Given the long-term nature of the risks, each party needs to be reasonably certain about the commercial longevity of the other party.

Chicken and egg

Environment Southland described a 'chicken and egg' problem:[72]

> Airfreight dependent horticulture and manufacturing in particular needs to be assured of certainty of access to export markets for years into the future before an investment decision can be made…This is the classic infrastructure issue; without the necessary infrastructure there can be no businesses and without the businesses there is no demand for the infrastructure.
>
> Environment Southland, sub. 4, p. 7

Essentially this problem boils down to risk, and who bears it. Potential producers risk investing without certainty of freight transport supply, and the transport provider risks investing without certainty of freight demand.

[72] Similar issues were raised by Christchurch International Airport (sub. 39) and Palmerston North City Council (sub. 21).

This problem has similar characteristics to the commitment and hold-up problem. The main distinction is that the potential transport users are not a clearly defined group – and thus the problem is not amenable to common ownership or contracting.

There are at least four general approaches to chicken and egg problems:

- An intermediary (eg, a product wholesaler) may be able to play a valuable role by contracting with both potential producers and freight transport suppliers.
- Producers can invest in the required infrastructure themselves (eg, via a producer-owned cooperative).
- A 'build it and they will come' approach can sometimes work for a funder with the ability (and inclination) to undertake risky projects.
- An ideal outcome may come from subdividing the chicken and egg problem into smaller chunks. For example, producers can start by producing only those products that can be economically freighted using currently available infrastructure, slowly building production to the point where demand for the desired freight services is demonstrable, thus attracting supply.

The risks of the 'build it and they will come' approach should not be understated. Government-funded projects focused on supply – rather than demand – have a poor record around the world. Transport examples in New Zealand might include the overseas passenger terminal in Wellington, the railway station in Christchurch, and some regional airports. Given these risks, and the existence of alternative approaches, this problem is not considered further.

Relevance of coordination failures

Five of the seven coordination failures identified above would appear to be worth considering further in the context of 'strategic planning'. 'Countervailing power' and 'chicken and egg' have been excluded from the following discussion for the reasons outlined above.

9.3 Public ownership and coordination failures

Before considering planning models as potential remedies for the coordination failures identified above, it is noted that infrastructure investment is often undertaken by organisations owned or controlled by central and local government.

As discussed in section 10.2, public ownership of infrastructure is often a means to an end; ie, to ensure the non-commercial objectives of public owners are achieved rather than the presumably commercial objectives of alternative owners. For example, Environment Southland submitted:

> Freight infrastructure must be publicly owned at least to the extent of the serviced community determining service levels.
>
> Environment Southland, sub. 4, p. 8

Central-government owned 'multiple objective companies' including KiwiRail and interests in airports "may have financial expectations moderated by public good delivery requirements" (Crown Ownership Monitoring Unit, 2010, p. 14). In the case of local government owners, objectives are specified in the Local Government Act and include the promotion of the social, economic, environmental, and cultural wellbeing of communities. Local government participants considered the economic efficiency of individual freight enterprises to fall within the scope of only one of these four 'wellbeings' (eg, Environment Waikato, sub. 5). Road infrastructure[73] is provided directly by central and local government and subject to the wider objectives of its owners.

The multiple objectives of infrastructure owners interact with the coordination failures detailed above (Table 9.1).

[73] Noting that road infrastructure is used for many purposes, of which international freight is but one.

Table 9.1 Coordination failures and public ownership

Coordination failure	Effect of public ownership
Minimum efficient scale	Multiple objectives can be pursued through subsidies that may keep one or more suppliers operating below minimum efficient scale.
Investors' dilemma	If an owner is motivated by relative ranking as opposed to commercial returns; for example to not fall behind a competing region, then they may duplicate their competitor's investment, even at commercial cost to themselves. Knowing this, the competitor may decline to invest. Neither competitor will invest if they share the same non-commercial motivation (as they will each anticipate matching investment from their competitor).
Resilience	While all owners are motivated to provide resilient services, it is plausible that regionally-based owners that cannot diversify all their risks (eg, through insurance) are strongly motivated to assess the optimum level of infrastructure duplication in their region and use their ownership control to direct its implementation.
Rationalisation	Non-commercial objectives such as regional economic development will encourage entry into non-profitable businesses, and likely delay exit from those already undertaken. Regional identity and economic development motivations may preclude economically efficient mergers. On the other hand, public ownership may permit the continuance of businesses whose operation delivers valued public policy goals.[74]
Commitment and hold up	Public ownership may reduce otherwise beneficial opportunities for vertical integration between suppliers in different parts of the logistics chain.

Table 9.1 suggests that rather than providing a general solution to coordination failures, in many cases public ownership may exacerbate them. Indeed, the investors' dilemma and minimum efficient scale issues are only a problem in the presence of the multiple objectives typically associated with public ownership. Similar considerations apply to rationalisation. These coordination failures may be best dealt with through governance and ownership changes, rather than strategic planning. According to inquiry participants:

> Parochial ownership makes rationalisation via acquisitions or mergers more difficult. Normal commercial drivers are not the only factors taken into account by the current owners.
>
> Lyttelton Port Company, sub. 20, p. 2

> The key is for ports to be operating on a more commercial basis and … we believe that policy and legislative change is required to encourage this.
>
> Federated Farmers, sub. 27, p. 13

Governance and ownership issues, including the effect of non-commercial objectives, are explored further in Chapter 10.

F9.1 Coordination failures may be exacerbated by the multiple objectives associated with public ownership. Such failures may be better addressed through governance and ownership changes rather than centralised strategic planning.

Notwithstanding this finding, the Commission is mindful that it takes time to make governance and ownership changes, even when the need is clear and agreed by all relevant parties. For this reason it is appropriate to consider the range of strategic planning models available, and their applicability to the coordination failures identified in the previous section.

9.4 Strategic planning models

Strategic planning encompasses a spectrum of alternatives. The models proposed by submitters fall into the four broad approaches listed in Table 9.2. These approaches are discussed in the subsections that follow.

[74] Albeit that such arrangements may suffer from a lack of transparency.

Table 9.2 Four broad approaches to planning

	Planning approach	Explanation
1	Market driven	Encourages a diversity of approaches. Does not preclude information sharing or leadership, but recognises that individual parties will only use those approaches to the extent that they believe they will gain private benefits. In this approach single parties (and sometimes coalitions) commit resources based on their (perhaps widely divergent) views of the future. Not all of these views will turn out to be correct, thus some resources will be wasted. However, a diversity of approaches increases the chances that at least one party will have successfully anticipated the future, and thus deployed their resources optimally. Given that their own resources are at stake, individual parties have strong incentives to adapt quickly to changes in their environment, and to learn from the experiences of other parties.
2	Information sharing	Encourages mechanisms for the creation and sharing of reliable information to inform individual decision-making. Recognising that incomplete information is available about the intentions and plans of others, better individual decisions might be made if such information were available and, importantly, could be relied on.
3	Leadership	A large or influential participant can encourage a particular outcome through making a large commitment to a particular plan.
4	Directive	Forces a single, 'best' approach.

Market-driven models

In a market-driven model, cooperative planning is voluntary. Adoption relies on the benefits of cooperation being visible, that cooperating parties each receive at least some net benefit (in order to give them an incentive to cooperate), and that parties are legally, ethically and institutionally able to cooperate. Such cooperation is usually efficient – as long as it does not impose significant costs on third parties.[75] Table 9.3 outlines market-driven models of strategic planning.

Table 9.3 Market-driven planning models

	Model	Features	Participant support[76]
1a	Commercially-driven organisations	Institutions are improved to make them more responsive to market signals, eg, by reducing the influence of non-commercial objectives on decision making	Port of Tauranga (sub. 37)
1b	Current institutional arrangements	Decisions by individual parties (according to their commercial and non-commercial objectives) operating within current institutional arrangements	Port of Napier (sub. 10) Ministry of Transport (sub. 46)

This model works best when each organisation embodies strong incentives for decision-makers to make informed decisions based on an appropriate balance between risk and potential reward, and to remain adaptable in the face of inevitable changes to the information on which those decisions were based.

The discussion in the previous section has identified that the non-commercial objectives of public infrastructure owners can exacerbate potential coordination failures, and suggested that addressing this problem (model 1a) is preferable to the status quo (model 1b). However, any change to ownership and

[75] Cooperation can become collusion; for example, to raise prices at the expense of customers.

[76] This column (in this and subsequent tables) is not exhaustive; rather it is intended to demonstrate the variety of models suggested by participants. Participants have been assigned to what appears to be the closest applicable model based on statements made in submissions. The Commission is interested to hear from participants if they believe their views have been incorrectly interpreted.

improvement in governance arrangements is likely to require the agreement of current owners, so such changes may take a long time (see Chapter 10).

Information sharing models

Inquiry participants have pointed out that government organisations involved in infrastructure supply run the constant risk of being supply-led rather than demand-led, and need to be vigilant about this possibility:

> To ensure our work is relevant to … our customers, the NZTA's focus is to better understand freight owners' and transport operators' needs in order to improve the efficiency of their business.
>
> New Zealand Transport Agency, sub. 22, p. 4

Due to the poor price signals that exist in public infrastructure provision, public providers face a more difficult market research task than those providing services in competitive markets. Facilitated discussions, such as the Upper North Island Freight Plan (Box 14) facilitated by the New Zealand Transport Agency, are a means of collecting relevant research information, with time and relational commitments[77] from each participant creating some disincentive for 'cheap talk'[78] about future demand for services.[79]

Box 14 **Development of an Upper North Island Freight Plan**

The Upper North Island has some of New Zealand's highest values and volumes of freight movements. Short to long-term improvements of freight across the Northland, Auckland, Waikato and Bay of Plenty regions will benefit the whole economy and inform how we can make more of a difference across the country. The plan will be focused primarily on the Upper North Island's strategic freight network. The plan will be developed with regard to the freight work already completed by the regions and the work underway to develop the Auckland Spatial Plan and Regional Land Transport Strategies. Its focus, however, will take a broader view.

Importantly the development of the plan will have direct input from key private and public sector parties, including regional and local authorities, KiwiRail, NZTA, the Ministry of Transport, Port Companies, major freight owners (shippers) and freight transport and logistics operators. While the network plan will not bind the parties involved, it will provide a basis for greater alignment and integration of plans among private and public decision makers. The plan will provide key decision makers with a common understanding of private and public sector intentions.

Source: Upper North Island Freight Network Plan Proposal (draft dated 3 May 2011).

Models of cooperation based on information sharing, robust discussion and relationship building – but with no ability to bind the participants to particular outcomes – have the advantage that they do not create strong incentives for the costly behaviours that undermine the efficiency of directive planning models. This advantage arises because non-binding planning reduces the potential returns from rent-seeking (lobbying to obtain a benefit rather than adding value through creating a benefit) and tactical misinformation (withholding or misrepresenting privately-held information), and because of the reputational costs to individuals and firms of misinformation in the context of an ongoing relationship.

Table 9.4 outlines two models of strategic planning based on information sharing.

Table 9.4 Planning models based on information sharing

	Model	Features	Participant support
2a	Facilitated discussion	Central government brings together relevant stakeholders and leads them through a discussion process to the development of a common view of	IPENZ (sub. 25)

[77] 'Time and relational commitments' reflects the fact that participants, having invested their own time and personal reputations in the discussion process, are more likely to provide reliable information.

[78] In this context, 'cheap talk' is statements made at low cost to the talker that may create large costs for the listener.

[79] The 'cheap talk' problem in this context is that each potential infrastructure user faces the incentive to announce that they will have significant demand for the proposed infrastructure – whether they expect to do so or not. This is because infrastructure created at someone else's cost may create a valuable real option for the cheap talker. The danger from the provider's perspective is that the sum of demand announced by the cheap talkers is not a reliable guide to the actual demand for that infrastructure.

		the future and voluntarily agreed plans for coordinated actions.	
2b	Information provision	Central government improves the collection and visibility of information via, for example, mandatory national trade data collection, national demand forecasting and scenario analysis, and publishing their own plans (see section 13.5).	Auckland Council (sub. 53)

In the context of infrastructure investment coordination, facilitated discussion models can assist by creating a forum in which investment intentions can be announced and discussed. This can assist with some of the coordination issues identified in section 9.2 (Table 9.5).

Table 9.5 Coordination problems and facilitated discussion models

Problem	Facilitated discussion models can assist to some extent through:
Investors' dilemma	A forum in which intentions can be announced.
Rationalisation	Increasing the transparency around poorly performing enterprises.
Commitment and hold up	A forum in which intentions can be announced. Relationship-building creates a reputation cost for misinformation.

Facilitated discussion models can also be extended to include the creation, sharing and discussion of alternative industry scenarios. The Electricity Commission[80] provided one model of such a process. It produced a Statement of Opportunities (SOO), which set out possible futures for electricity supply and demand "incorporating key information to enable the identification of potential opportunities for efficient management of the grid, including investment in transmission upgrades and transmission alternatives" (Electricity Authority, 2011). The SOO included a range of likely future scenarios for electricity supply and demand – rather than a single planning scenario – "to facilitate informed decision-making about new investment in transmission and transmission alternatives". While this model could be applied to the freight sector, many questions would need to be resolved about who would participate, and what the status of published scenarios should be.

The National Infrastructure Plan (National Infrastructure Unit, 2011) could also be seen as fitting this model, in that it provides information about intentions without binding the parties described in the plan.

F9.2 Government service providers, particularly those receiving poor price signals, face a difficult problem in collecting reliable market research on which to base their investment decisions. 'Facilitated discussions' can assist with this important task, and also promote relationship building and information sharing, leading to improved coordination.

The temptation to extend the facilitated discussion model into a decision-making role binding all or any parties should be resisted. Extension reduces the reliability of the information collected and shared, and is likely to create high costs: including those associated with rent-seeking and tactical misinformation.

Pure information-disclosure models can also offer many of the benefits of facilitated discussions. These models are discussed further in section 13.2 and 13.3.

Kotahi is essentially a shipper cooperative in that it will distribute any profits back to members in proportion to their freight volume (Commerce Commission, 2011a). This creates incentives for constructive behaviour within the cooperative; in particular for information sharing. This encourages members to reveal information that they would otherwise keep private. If used to optimise planning and logistics then such information could be the basis of real efficiency improvements to the benefit of members.

[80] The Electricity Commission has been superseded by the Electricity Authority. The SOO process is now defunct.

Leadership models

The leadership models require a powerful supplier or purchaser that may be able to shape an industry, though the risks involved are high. The requirements for successful leadership models are challenging:

- The leader's commitment must be credible. 'Cheap talk' will be discounted – usually it takes irreversible investment by the leader before others are willing to commit their own resources to follower strategies.
- Coordinated implementation of a poor plan may lead to a worse outcome than no plan at all. It is therefore probably necessary that the leader has a comparative advantage in the information that allows it to plan, relative to the information available to others in the industry.
- The requirement for irreversible investment reduces flexibility. Reduced flexibility has a cost, and is not ideal in environments with changing technology and volatile supply and demand.

Two leadership models are outlined in Table 9.6. To the extent that other parties believe they are able to influence a leader's plans, we would expect to see some of the same high-cost behaviours found with directive planning, ie, tactical misinformation and rent-seeking. These behaviours reduce the quality of information available for planning, and increase the risk of adopting a less-than-optimal plan.

Table 9.6 Leadership planning models

	Model	Features	Participant support
3a	Leadership through coordination of central government infrastructure investments	Central government decides on a plan. It directs its own agencies to follow the prescriptions of the plan. Independent parties (including local government) delay investments until the central government articulates its plan, and then choose their (privately) optimal response.	Federated Farmers (sub. 27)
3b	Leadership through coordinated shipper demand	"In the absence of a coordinated supply chain investment strategy from central government, direction coordination will require a strong coordinated demand signal as a catalyst to collaboration and investment. [Kotahi] is intended to provide a vehicle to facilitate matching of demand and investment."	Kotahi (sub. 29, p. 15)

It is noted that a lot of decision-making power about domestic transport – in particular regarding investments in rail and state highways – is in the hands of central government. Government will inevitably be a leader in this regard, so the question it faces is how to provide leadership in the most effective way.

Some calls for 'government leadership' would do little more than transfer commercial risk from private parties to the government. Governments should be wary of such calls. There is nothing inherently wrong with government lowering its risk (noting that this risk is ultimately borne by the community) by waiting until demand emerges before it invests. Indeed, being responsive to demand is generally a positive attribute.

F9.3 Leadership models for infrastructure planning need to be based on high-quality information. Leadership in an uncertain environment creates high risks for the leader. Governments should be wary of calls for it to assume the normal commercial risk of other parties.

The Kotahi model of coordinated purchase of freight services aims in part to encourage ports, shipping lines and others to commit to investment in upgraded infrastructure. However, it is unclear to the Commission what level of commitment of resources and demand Kotahi members are intending to make. Without such a commitment, it may well be that Kotahi fails to provide the strategic leadership envisaged by its proponents. Other issues relating to the Kotahi proposal are discussed in Chapters 5 and 11.

Transport corridor designation

A special case of leadership models is control over future land use, which is the responsibility of central and local governments. Where there are multiple potential options for a future transport route, designating one option reduces the uncertainty affecting all potential routes, and reduces costs for those considering complementary investments. This provides an example where there may be clear benefits from government leadership.

Designation does have costs, however, both administrative and through effects on the value of affected land. Those costs may represent an absolute loss should the transport corridor not be developed. For these reasons designation should be used judiciously.

F9.4 The designation of transport corridors can create valuable outcomes at a relatively low cost. Corridor designation is a worthwhile activity for central and local government.

Directive planning models

Table 9.7 outlines four directive planning models.

Table 9.7 Directive planning models

	Model	Features	Participant support
4a	Central planning	Central government decides on a plan. It directs its own agencies, and regulates independent parties, to follow the prescriptions of the plan.	Not supported
4b	Delegated central planning	Central government forms a group of relevant stakeholders, and delegates to them the formulation of a central plan that is binding on all parties.	Council of Trade Unions (sub. 14)
4c	Central government direction of central and local government investment	Central government decides on a plan. It directs its own agencies and local government to follow the prescriptions of the plan.	Raised in an engagement meeting
4d	Central and local government direction	Central government, in consultation with local government, decides on a plan. It directs its own agencies and local government to follow the prescriptions of the plan.	Waikato Regional Council (sub. 5)

The New Zealand Ports Authority is one New Zealand experience with central planning of transport infrastructure (Box 15).

Box 15 **An experience with central planning: the New Zealand Ports Authority**

The New Zealand Ports Authority was established in 1969 by the New Zealand Ports Authority Act 1968. The general function of the Authority was:

> (a) To foster an efficient and integrated ports system for New Zealand:
>
> (b) For that purpose, to prepare, in accordance with section 12 of this Act, a plan (to be called the national ports plan) for the development of ports and harbours in New Zealand; and from time to time to review that plan. (s11(1))

The Authority controlled all expenditure by Auckland and Wellington ports in excess of $250,000, with lower limits for other ports. Ports could lodge objections when another port applied to the Authority for capital expenditure. This was one means of port 'competition' (Memon, Milne and Selsky, 2004).

Because approval was required to purchase container cranes – the major capital item (for ports)

associated with increasing containerisation in the 1970s and 80s – the Authority was in a position to centrally plan which ports would become the country's container ports. Their choices, eg, that Port Chalmers would be the container port for the South Island, did not turn out to match the reality of shipping demand. The Ports Authority was abolished by the Port Companies Act 1988.

Submissions from port companies indicate no desire to return to this type of central planning:

> We would not want a return to the position of the 1980's with the New Zealand Ports Authority and the non-profit Harbour Boards and the Waterfront Industry Commission. All these had high ideals … but the complexity and variability of supply chains to each individual exporter/importer doomed them to failure. We don't want to repeat past mistakes.
>
> Port of Napier, sub. 10, p. 11

> Centralised strategic planning (NZ Ports Authority) has been tried and proven a failure.
>
> Port of Lyttelton, sub. 20, p. 3

Coordinated planning has costs as well as benefits. While it may promise more efficient outcomes than less explicitly coordinated alternatives, plans tend to embody a single view of the future (Taneja et al., 2010). Even the best researched and formulated plans may be derailed by unforeseen events, or turn out to have been based on incorrect assumptions. Should the expected future not arise, then significant resources may have been wasted or valuable opportunities missed. For any given situation, the key questions are then what is the best type of planning? And what is the optimum level of planning?

Directive planning systems create both risks and opportunities for participants. Where there are big gains to be had (or losses to be avoided) through influencing those with the power to direct, affected parties are likely to respond via tactical misinformation, rent-seeking and strategic hold up (refusing agreement in order to extract concessions).[81] The costs of these behaviours can be very high.

Inability to reliably access privately held information undermines the ability of the planner to select the optimum plan. The planner's best efforts will be further compromised through rent-seeking and strategic hold up.

Having started out with a sub-optimal plan, any attempt to modify it in future will provide additional opportunity for these costly, unproductive behaviours. Under these circumstances, plans found to be no longer suitable may become locked in rather than flexible. At best, directive plans will tend to optimise operational efficiency at the cost of dynamic efficiency.

Given these high costs, the benefits of directive plans need to be substantial. While directive planning could address each of the coordination problems identified in this chapter, lower-risk mechanisms exist to deal with those problems.

F9.5 Directive planning, in the sense of a centralised plan imposed on independent parties, has some very large associated costs due to the incentives it creates for non-productive behaviour. It should be avoided in favour of lower-risk mechanisms.

Coordination of central and local government

Given significant government ownership and control of, in particular, domestic transport infrastructure, there is a risk of ad hoc planning by responsible agencies. Should this happen, benefits may be forgone due to a lack of coordination between the activities directly controlled by government.

Legislation places specific requirements on local government to produce a variety of planning documents on a scheduled basis. Local Government New Zealand submitted that there is a potential lack of direction from central government:

[81] These problems are not confined to planning by governments.

> …regional councils are required to prepare Regional Land Transport Strategy's under the Land Transport Management Act. These documents must set out the transport priorities for each region over a 40-year time horizon. [Central] government is yet to bind itself to making a similar commitment. With the renunciation of the New Zealand Transport Strategy 2008 there is now no common lens through which to examine long-term transport questions. The inevitable implication of this is a growing divergence between regional priorities over time. Until this gap is plugged current coordination issues, which will only get worse, not better.
>
> Local Government New Zealand, sub. 42, p. 5

The Commission views the coordination of planning by central and local government as normal business and notes that within such structures there is a fine line between the perceptions of a lack of direction and being overly prescriptive. There is a clear coordination need at regional boundaries and where infrastructure is being provided by multiple levels of government within a region (eg, where state highways join local roads). The Commission is not aware of any impediments to such coordination, but is interested to learn of any that might exist.

Q9.1 Are there any specific examples of impediments to the optimal coordination of freight infrastructure planning between central and local governments, or between adjacent local governments?

Specific decisions about transport infrastructure are made under the Resource Management Act 1991. This Act and its implications for transport are discussed in section 8.4.

Institutional coordination of road and rail

New Zealand's rail lines are paralleled by state highways.[82] Infrastructure investment in one mode may be substitutable for investment in the other, at least to the extent that the freight services provided by the two modes are substitutable. This raises the further question as to whether central government should change its institutional arrangements in order to more explicitly coordinate road and rail infrastructure planning.

Mackie, Baas and Manz (2006) estimate that only 3–7% of the road freight task is contestable by rail, ie, that service substitutability from road to rail is low. In the other direction, they found that most of the freight currently travelling by rail is contestable by road – with the notable exception of coal transport over the Southern Alps. Notwithstanding this finding, government policy has tended to focus on the increased use of rail as a substitute for road transport (eg, Ministry of Transport, 2008a; KiwiRail (2010a)).

Many submitters[83] drew attention to the potential for improved coordination between the Government's plans for infrastructure investment in road and rail. Submissions were unclear, however, on the organisational arrangements that would be required to achieve such coordination.

An improvement on the status quo might be to ensure that rail projects are justified on the same basis as road projects. It is notable that the transparency around KiwiRail's longer-term investment plans is less than might be expected from an equivalent private company (at least one listed on a stock exchange). The public justification for the Government's initial $250 million contribution towards KiwiRail's $4.6 billion Turnaround Plan was far from comprehensive.[84] This is surprising given the poor history of previous large capital injections into New Zealand railways.[85] The Government is yet to present a substantive case for public investment in the Turnaround Plan. A full cost benefit analysis, comparable to the ones produced for major road projects, would be a valuable contribution to the public debate.

A transparent process that selected the best-performing projects from rail, road and coordinated proposals would encourage allocative efficiency.

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[82] And also the coastal shipping network. The relationship between government policies for road, rail and coastal shipping is explored in section 13.1.

[83] Including PrimePort Timaru (sub. 12), Council of Trade Unions (sub. 14), Foodstuffs (NZ) Ltd (sub. 24), Port Companies of New Zealand (sub. 31) and Auckland Council (sub. 53).

[84] See Minister of Transport (2010) for the announcement, KiwiRail (2010a) for a brochure and Ministry of Transport (2011e) for further supplementary material.

[85] The previous large capital injection was approximately $900 million from private investors in the late 1990s (Clark, 2010).

R9.1 A full cost benefit analysis (ie, including all externalities) should be published for government investments in rail infrastructure, including further investment in the KiwiRail Turnaround Plan. These analyses should be directly comparable to those produced for major road projects.

Proposals for investment in road and rail should be subject to rigorous investment screening in a coordinated way, which enables the best projects to selected – be they road, rail, or a combination of the two. Without this level of transparency, the public cannot be confident that scarce resources are being allocated to the most beneficial projects.

9.5 Assessment of models

Table 9.8 summarises the coordination failures identified above, and the planning approaches that might assist with those problems. Directive planning models have been excluded due to their high costs. The table also lists alternative mechanisms that may be more cost effective than the planning models considered in this section.

Table 9.8 Approaches for dealing with coordination failures

Coordination failure	Coordination approaches that might assist	Alternatively dealt with via
Minimum efficient scale	1a Commercially-driven institutions	Elimination of subsidies
Investors' dilemma	2 Information-sharing models	Elimination of non-commercial objectives Information provision on infrastructure investment plans
Resilience		Information provision on infrastructure investment plans
Rationalisation	1a Commercially-driven institutions 2 Information-sharing models	Elimination of non-commercial objectives
Commitment and hold up	2 Information-sharing models	Vertical integration Long-term contracting

Competitive processes rarely look neat and tidy. Organisations often make what turns out to be the wrong investments, and even worthwhile investments are rarely made at the optimal time. It is easy to look back over a series of events and identify instances where cooperative behaviour, smarter decisions, or access to a key piece of information would have led to an improved outcome. It is often seen, or felt intuitively, that a 'solution' should be adopted to ensure that these 'mistakes' are not repeated. Such solutions inevitably are subject to 'hindsight bias' – the tendency people have to view past outcomes as being more predictable than they really were.

Hindsight bias understandably leads many to favour strategic planning over market-based outcomes. However, in an environment characterised by volatile input prices and demand, technological change, and incomplete information, centralised planning is both risky and costly. Just as the 'market' will result in imperfect plans, so will any process designed and run by people – even with the best of intentions.

While there is a significant potential for coordination problems in transport infrastructure investment to lead to inefficient outcomes, this does not mean that increased centralised planning will lead to better overall outcomes.

This analysis suggests that there are reasons why the market might undersupply strategic planning. While government could 'improve' on this result, government intervention does raise the risk of oversupply – ie, an inefficiently high level of strategic planning.

The more directive forms of strategic planning have high associated costs and should be avoided.

The best returns in terms of optimising investment are likely to come from four sources:

- improvements in governance and ownership (see Chapter 10);
- improved screening and analysis of government investment decisions across all modes;
- facilitated discussion models; and
- improvements in information disclosure (see Chapter 13).

F9.6 'Facilitated discussion' models of cooperation based on information sharing, robust discussion and relationship-building – but with no ability to bind the participants to particular outcomes – do not create strong incentives for the costly behaviours that undermine directive planning models (ie, tactical misinformation, rent-seeking and strategic hold up). There is scope for their increased use by government in coordinating investment planning.

9.6 Planning and investing for bigger ships

The issue of strategic planning is often raised in the context of preparing New Zealand ports to receive so-called 'bigger ships' (ie, container vessels with 6000-7000 TEU[86] capacity).

The argument runs that without a coordinated approach to investment, New Zealand ports will either under-invest in the infrastructure necessary to support bigger ships, or multiple ports will invest in the same type of infrastructure – leading to over-investment.

There are essentially two schools of thought around the issue of bigger ships.

- One school believes that without strategic planning and an immediate investment push, New Zealand will fail to attract bigger ships. This, they believe, is not only a missed opportunity but also increases the risk that New Zealand freight will be hubbed through Australian ports – thus jeopardising the reliability of international services to and from New Zealand and adding to the transit time of exports.
- A second school views the arrival of bigger ships as inevitable but not imminent. This school believes the move to bigger ships will evolve over time and that ship sizes will increase gradually rather than in large leaps. As such, they believe the preparation for bigger ships will be an evolutionary process with markets signalling the timing and extent of investment required.[87]

In this section we look at the issue of bigger ships through the coordination lens developed in the earlier part of this chapter. We begin by setting the scene for the discussion and then ask the following questions:

- What type of coordination problems may exist when considering investment in readiness for 'bigger ships'?
- Is there evidence that coordination problems are deterring investment? If so, what would be the best approach to deal with the coordination problems?
- What trade-offs are involved in moving to a port configuration that would support bigger ships in the near term (ie, a hub-and-spoke model)?

[86] Twenty-foot equivalent units.

[87] See section 5.2 for summary of the Commerce Commission Draft determination on the formulation of Kotahi.

- What is the likelihood that New Zealand cargos will be hubbed through Australian ports and what would be the consequences of this for New Zealand shippers?

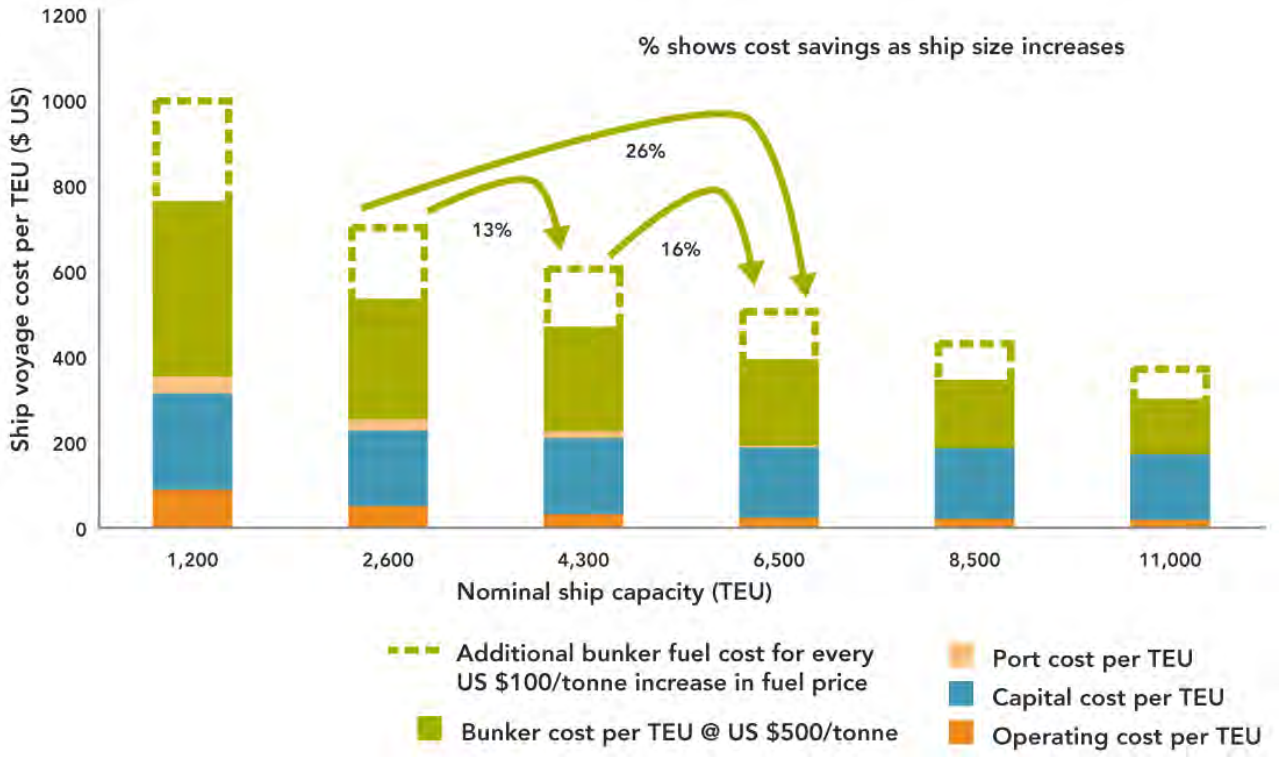
In this section we consider coordination barriers as being separate to any regulatory barriers that may exist – for example, within the Resource Management Act (discussed in Chapter 8).

Bigger ships – setting the scene

The last two decades have seen a consistent trend towards larger cargo ships, resulting in the global average ship size increasing from just over 1300 TEU in 1988 to around 3000 TEU in 2011 (Sys et al., 2008). This trend looks set to continue with 80% of the global cargo fleet anticipated to be 4000 TEU or greater by 2030 (Rockpoint, 2009).

The move to bigger ships is driven by shipping lines seeking to reduce their unit cost by capitalising on economies of scale. These cost reductions can be significant. The New Zealand Shippers' Council estimates that the cost per TEU on a 6500 TEU vessel is 16% less than on a 4300 TEU vessel, and 26% less than on a 2600 TEU vessel (refer Figure 9.2).[88]

Figure 9.2 Costs savings from 'bigger ships'



Source: New Zealand Shippers' Council (2010)

Notes:

The Shippers' Council analysis was based on:

1. an average sailing speed of 20 knots for all ship sizes except the 1200 TEU ship (which is assumed to sail at its maximum design speed of 18.3 knots);
2. current bunker fuel price of approx. US$500 per tonne;
3. shipping companies owning their own ships, rather than chartering ships; and
4. average inbound ship utilisation (based on full paying containers) of 60% and outbound utilisation of 86%.

Larger container ships (up to 14770 TEU) continue to be introduced on the high volume east-west trade routes such as Asia/Europe/North America. Their deployment is expected to create a 'cascade effect' whereby the vessels previously sailing these routes will be redeployed to other 'thinner' routes. This may create an opportunity for New Zealand to increase the size of vessels servicing its ports – particularly the

[88] Based on a New Zealand to Singapore round trip route of approximately 11,000 kilometres.

New Zealand-South East Asia route, which is currently serviced by one weekly 4100 TEU ship service and two weekly 2700 TEU services.

The New Zealand Shippers' Council has proposed that the New Zealand-South East Asia route could be rescheduled to include one 7000 TEU and one 2700 TEU service a week (New Zealand Shippers' Council, 2010). This would allow New Zealand to take advantage of the economies of scale associated with the larger 7000 TEU vessel, albeit at the cost of a less frequent service.

Efficiency gains from larger ships can only be completely realised when the ship is carrying a relatively full load of containers. However, no single New Zealand port currently has the container volume necessary to completely utilise a 7000 TEU vessel.

This implies that if bigger ships are to be attracted to New Zealand, container volumes need to be consolidated at hub ports fed by road, rail and coastal shipping services (ie, a hub-and-spoke model). The scenario commonly discussed is the establishment of one hub port in the North Island and one in the South.[89]

Port investment

Before a 7000 TEU vessel could service New Zealand ports, investment may be required in channel deepening (to accommodate the deeper draft of larger ships), berth lengthening and portside infrastructure. Notably, inquiry participants differ in their views on the scale and nature of this investment.

For example, the New Zealand Shippers' Council estimates that the investment required by the two port companies would total, at most, $180 million (refer Table 9.9). In contrast, NZIER's analysis of a 'two port scenario' assumes the total investment requirement would be $500 million (NZIER, 2010b).

Table 9.9 Estimated port investment required to receive 6000-7000 TEU ships

Port	Port investment required
Ports of Auckland	$50 million
Port of Tauranga	$50-$80 million
Lyttelton Port	$40-$80 million
Port Otago	$100 million

Source: (New Zealand Shippers Council, 2010)

In the view of the Ports of Auckland the need for investment in channel deepening is complicated by the fact that not all vessels of similar TEU capacity have the same draft requirements, and that draft requirements are influenced by the composition of the cargos being carried (eg, proportion of light imports versus heavy exports). Further, they state that dredging undertaken in 2006 means the Ports of Auckland can already guarantee a draft of 13.9 metres twice daily at high tide.[90] This is sufficient to accommodate a fully loaded 6000 to 7000 TEU vessel without the need for investment in any additional dredging.

As a general rule, those inside a business have a greater level of information about the cost structure and operation of the business than those outside. Typically, this information is not publicly available and external parties are left to estimate costs (such as investment needs and returns) based on incomplete or imperfect information. In light of this observation, caution needs to be exercised when using the figures above to reach conclusions on the magnitude of investment needed to support bigger ships.

[89] Inquiry participants have expressed the view that trade volumes in New Zealand would only support two hub ports in the medium term – one in each island.

[90] Note the use of tidal windows to support larger vessels can result in relatively long delays if delays lead ships to miss their arrival or departure windows.

Domestic transportation investment

The adoption of a hub-and-spoke model would increase the demand for domestic transport services (ie, road, rail and coastal shipping). However, what is unclear is the extent of infrastructure investment that would be needed to accommodate this increase.

The Shippers' Council's view is that rail is likely to play the largest role in transporting containers to a hub port for consolidation. Its analysis indicates that additional rail volumes could be accommodated by targeting the Government's $750 million investment in KiwiRail's Turnaround Plan[91] towards the upgrades needed to service hub ports (New Zealand Shippers Council, 2010). The NZIER's analysis, on the other hand, assumes that $500 million of additional investment in land connections would be required (NZIER, 2010b).

F9.7 Caution needs to be exercised when using publicly available cost figures to reach conclusions on the magnitude of investment needed to support bigger ships.

Are coordination problems impacting investment in bigger ships?

An important question is whether coordination problems are preventing investment in big ship readiness, or whether investment is not occurring for sound commercial reasons?

Applying the analysis set out in section 9.2, the potential coordination failures that may apply to investment in bigger ships are:

- **Rationalisation problem:** The consolidation of container volumes at one or two ports would require non-hub ports to exit – or scale back substantially – the international container cargo industry (ie, a rationalisation of ports handling containers). Owners of these ports may have political and financial incentives to resist rationalisation even though it may improve the overall efficiency of the international freight supply chain (and thereby the wellbeing of New Zealanders). Chapter 10 deals with issues of ownership in greater detail.
- **Investors' dilemma:** It is generally agreed that trade volumes (at least in the medium term) will only support one hub port in the North Island and another in the South Island. If more than one port on an island invests then it is likely that much capacity will go underutilised and they will both receive an unsatisfactory return on their investment. If none of the ports invest, a profitable opportunity could be forgone. A dilemma may arise if two or more ports are motivated by non-commercial reasons to become the hub port for an island. Fearing that their investment would be duplicated by another port, each port will avoid making the first investment. The logical outcome from this structure of incentives is that no port invests in becoming the hub.
- **Commitment problem:** Before investing in the infrastructure to support bigger ships, a hub-port may seek commitment from the Government that it will invest in supporting road or rail infrastructure. The Government, on the other hand, may not wish to invest in road and rail infrastructure until a port or ports have committed to investing in the infrastructure needed to receive bigger ships.

As discussed previously in section 9.2 there are a number of possible approaches to addressing coordination failures. For example, contracting could be used to overcome the commitment problem and implicit coordination to overcome the investors' dilemma.

Because rationalisation problems and the investors' dilemma are more likely to occur with the mixed objectives associated with public ownership (section 9.3), reform of governance and ownership arrangements may contribute to addressing these issues. Such reforms are discussed in Chapter 10.

While the above coordination problems could be pointed to as obstacles to investment, ultimately investment decisions will come down to whether or not the parties investing the capital believe they are able to receive a satisfactory return on their investment (ie, better than other uses of available funds).

[91] $750 million is the central government's planned contribution towards the total Turnaround Plan cost of $4.6 billion.

As with any investment, the perception of risk will be important. In the case of investing for bigger ships, the risks associated with the nature of the assets will be important (eg, the technical requirements of ships such as draft and2w1qs berth length). Similarly, the risk that shipping lines will alter their timetable and/or revert back to smaller ships in the future will add to uncertainty around the income stream generated from the investment.

This point is noted by Auckland Council:

> The most significant issue is around future investment. The substantial financial demands required to service ever larger vessels with larger volumes of containers in an environment where international container shipping lines have strong bargaining power and the ability to shift operations between ports creates an environment of uncertainty with the risk of over- or under-investment.
>
> Auckland Council, sub. 53, p. 10

In light of these risks, it is not surprising that individual ports might choose differing investment strategies. These strategies will be determined by the ports' attitudes to risk and their view of how the future will unfold.

Some port companies may believe the arrival of bigger ships is imminent and undertake all the capital works needed to accommodate them. Some may decide to delay investment completely until they have more certainty around the returns on their investment. Others may decide to invest just enough to enable them to react promptly to future changes in market conditions (for example, by commencing the RMA consent process or drawing up infrastructure plans). A diversity of approaches can be an efficient way for a society to deal with uncertainty.

F9.8 An immediate move to supporting bigger container ships would appear to have high risks and uncertain benefits for New Zealand. These conditions favour an incremental approach in which ports make investments in small stages in response to evolving freight demand and changes in container ship deployment. As well as reducing risk, staged investment reduces the need for explicit centralised strategic planning.

Trade-offs involved in moving to a domestic hub-and-spoke model

As noted, the 'hub-and-spoke' model of shipping has the potential to deliver greater economies of scale for shipping lines and ports, which in theory may translate into lower prices for shippers.[92]

However, it has been argued that a reliance on two hub ports will reduce the level of competition between ports, allowing hub ports to raise their fees, which will then be passed on to shippers (NZIER, 2010b). Such increases in port fees could offset the productivity improvements obtained from the consolidation of port volumes and the move to bigger ships.

F9.9 While larger container ships servicing one or more New Zealand hub ports would lower voyage operating costs, it is unclear whether these cost savings will be transferred to shippers, or whether the reduced competition between ports (and shipping lines) would result in higher port charges and shipping fees.

A move to a domestic hub-and-spoke model would also have implications for non-hub ports. These ports may experience reduced revenue as a result of fewer international ship visits. They may also face stranded container-handling assets should significant volumes move to rail. Shippers using these ports may face increased charges.

Shippers that previously utilised non-hub ports would likewise be impacted by a change to a hub-and-spoke model. These shippers would need to transport their cargo greater distances to the hub port, leading to

[92] It should be noted that 'hub-and-spoke' configurations are not inherently more efficient than other arrangements. In particular the 'string' services currently common in New Zealand (where one ship cycles between, for example, Auckland, Lyttelton, Wellington, Napier, Tauranga, Singapore and Port Kelang) may well be the most efficient arrangement given the geographic distribution of freight demand, costs of inland transport and current shipping technology.

higher domestic transport costs and longer travel times. Furthermore, shippers may be impacted due to a less frequent service – particularly those shippers with time-sensitive cargos. Port of Napier's submission summarised several of these issues.

> On an entirely pragmatic level, the logistical challenges for (hub) ports are considerable. Although not insurmountable, we cannot lightly dismiss the effect of New Zealand's unique pattern of trade – ie, the import/export imbalance and geographic location of cargo (remote from many larger ports), its strong seasonal bias, reefer capacity needs, cool chain integrity concerns with longer inland transport transits, and the increased opportunity for spoilage or delays.
>
> Port of Napier, sub. 10, p. 2

Similarly, Ports of Auckland note:

> Cargo owners need options and there is considerable risk for "New Zealand Inc" should we become reliant on 1-2 large services each week where a vessel breakdown or delay could have a significant impact on supply chains. Volumes need to be spread.
>
> Ports of Auckland, sub. 50, p. 27

It thus seems likely that, while a domestic hub-and-spoke model might reduce the transport costs faced by some shippers, it will increase the cost to others – creating both winners and losers. These uneven effects make it difficult to determine whether shippers, as a whole, will be better or worse off in a bigger ship scenario.

F9.10 The domestic hub-and-spoke model required to service bigger container ships would likely lead to reduced freight costs for some shippers and cost increases for others. These uneven effects make it difficult to determine whether shippers, as a whole, will be better or worse off in a bigger ship scenario..

Hubbing through Australia

The Shippers' Council has suggested that, if New Zealand does not prepare for the arrival of bigger ships, shipping lines may hub New Zealand cargos through an Australian port (in addition to hubbing them through Singapore as is currently the case). The Inquiry has received several submissions warning against such a scenario due to the perceived risks for exporters of time-sensitive cargos. The Ministry of Agriculture and Forestry notes the following in its submission:

> In assessing the costs and benefits of hub-and-spoke arrangements it is important to make a distinction between what is efficient for a transport operator and for a cargo supplier. This point was illustrated in the August 2010 New Zealand Shippers' Council report (The Question of Bigger Ships), which identified a number of risks with trans-shipping through Australian ports. While there is potential to access larger and more specialised vessels, time-sensitive cargoes (such as horticulture and meat) could face delays, particularly during peak export seasons in Australia, when container slots are at a premium.
>
> Ministry of Agriculture and Forestry, sub. 32, p.5

An alternative point of view was submitted by Port of Napier:

> There also seems to be concern that unless the country invests for 7000 TEU vessels, New Zealand will suffer the indignity of being subjected to feeder operations in support of larger Australian-oriented services…
>
> If this type of network development gathers pace – and shippers are happy with the resulting passage to/from market – then NZ Inc may be better served by not having to invest hundreds of millions in infrastructure development.
>
> Port of Napier, sub. 10, p. 14

The Shippers' Council estimates that hubbing through an Australian port would add $325/TEU to the current cost of a direct New Zealand-Singapore service, the majority of the additional costs being for trans-shipment at Australian ports (New Zealand Shippers' Council, 2010). Furthermore, they state that the hubbed service would provide inferior service quality relative to the status quo.

This is a significant cost increase, and raises the question of why competing shipping lines would not reinstate a direct New Zealand-Singapore service and capture some of this revenue for themselves. That is, if New Zealand shippers are willing to pay $325/TEU more than they currently do for an inferior service (as this scenario assumes), why would a shipping line not offer a direct service for, say, $300/TEU more? Even though such direct services would be less efficient – judged through the lens of fuel efficiency – they would produce an overall outcome than is more economically efficient.

Clearly, this 'hubbing thought Australia' scenario is unlikely. Shippers are unlikely to pay $325 more for an inferior service, and shipping lines are unlikely to 'leave money on the table' by missing an opportunity for profit. For this reason the Commission cautions against using the 'Australian hubbing' scenario as a justification for investment in bigger ship readiness or central government planning of port infrastructure. This scenario appears to rely more on an appeal to national sentiment than rational economics. Proposals to provide inferior service at higher cost to consumers are invariably punished in competitive marketplaces. Hubbing via Australia will only be viable to the extent that it provides a lower price or improved service quality than the status quo.

It is also important to note that a significant quantity of New Zealand freight is currently hubbed through Singapore. This brings benefits to shippers through scale economies and improved connectivity. The expressed concerns about hubbing though Australia may be overstated.

F9.11 The scenario in which a lack of container ports in New Zealand capable of handling 'bigger ships' forces hubbing through Australia with both higher costs and transit times appears unlikely. The commercial viability of this scenario would be undermined by direct services with smaller, albeit less fuel-efficient, container ships.

Implications for investment coordination and planning

This case study has highlighted the fact that a failure of parties to agree on how the freight industry will develop is not necessarily a coordination failure. The combination of this uncertainty and the large requirements for investment appears to make a staged investment with decentralised decision-making preferable to an immediate, explicitly coordinated approach such as that advocated by the Shippers' Council.

9.7 Case study – merging Port of Tauranga and Ports of Auckland

A merger or other form of close cooperation could deal with a number of the potential coordination failures identified in section 9.2, in particular the investors' dilemma which might otherwise lead to under-investment.

In recent years there have been two attempts at mergers between Ports of Auckland Limited (POAL) and Port of Tauranga Limited (POTL), and one attempted merger between Port of Otago and Lyttelton Port Company. However, as noted by the New Zealand Shippers' Council:

> Port merger discussions have been happening for some time in NZ but there has always been an insurmountable obstacle that defeats any arrangement.
>
> New Zealand Shippers' Council, sub. 43, p. 15

In the previous section we looked at one reason for considering focusing cargo volumes at a fewer number of ports – that is, to allow consolidation of volumes in order to facilitate the arrival of bigger ships.

This case study uses Auckland and Tauranga to briefly explore the potential benefits, costs and other consequences of port mergers. While recognising that a variety of commercial models are possible, this case study assumes a full company merger in which the resulting entity is listed on the stock exchange, with the Bay of Plenty Regional Council and Auckland Council as the largest shareholders.

Background

In 2007, POAL's owner Auckland Regional Holdings, the commercial arm of Auckland Regional Council, rebuffed a proposal to merge the two ports. In 2009, POTL rejected a proposal from Ports of Auckland to buy its container business. Auckland Council clearly believes there is still potential for some form of merger:

> The council has signalled to POAL the need for a long-term strategy which addresses the opportunities and implications of co-operation or alliancing arrangements with the Port of Tauranga and North Port… POAL have indicated that they do not oppose cooperation with Port of Tauranga and see some potential benefits in such cooperation for the overall supply chain. Previous merger proposals in New Zealand have demonstrated increased value for shareholders as well as supply chain efficiencies.
>
> Auckland Council, sub. 53, p. 1

From an efficiency point of view, such a merger potentially offers both benefits (generally from improved cooperation) and costs (generally from reduced competition). The aim of this section is to briefly discuss the source of these costs and benefits, rather than come to a determination on the overall desirability of such a merger.

For a merger: improved coordination

> Port rationalisation or other moves to strengthen collaboration in a transparent form could help to ensure the supply chain is optimised more efficiently and sustainably, avoid duplication of investment, and ensure the most efficient timing and location of investment.
>
> Ports of Auckland, sub. 50, p. 17

A further rationale for a merger is to gain some countervailing power against shipping lines in negotiations over port charges:

> In our view it may be necessary for the Commerce Commission to allow port mergers to enable greater bargaining power which would assist in addressing the bargaining power of shipping lines; however the level of competition and prices would need to be carefully monitored.
>
> Auckland Council, sub.53, p. 8

Other benefits from a merger include reducing the risk of an investors' dilemma over port dredging to support bigger ships, and economies of scale in governance, administration and purchasing.

POAL might also benefit from improvements in governance resulting from multiple shareholders and a stock exchange listing (see Chapter 10), though there is no current impediment to pursuing these benefits without a merger.

A single inland port in South Auckland servicing both ports could provide a better service for shippers; for example the ability to forward a container to the next ship, regardless of the port at which it was berthed. In a similar fashion, the potential to divert ships between ports may reduce the amount of infrastructure devoted to supporting peak loads at both ports.

POAL might also benefit to the extent that it could import the multiple port service companies and multiple union model from POTL. However, it is also possible that a merger might have the opposite effect – strengthening the bargaining power of the major unions over the merged port.

Against a merger: reduced competition

> Competition between [Ports of Auckland Limited] (POAL) and Port of Tauranga has undoubtedly provided an incentive to lift productivity at POAL, and has reduced the prices paid by shipping lines.
>
> Ports of Auckland, sub. 50, p. 10

Separate ownership encourages ongoing competition between the two ports. Negative consequences of a merger could include the discouragement of investment, innovation and ongoing service improvement. Unions might also be able to increase their bargaining power, eg, by threatening a strike that simultaneously affected both ports.

A merger would increase the market power over the ports' customers. As noted in the POAL submission (sub. 53, p. 8), a merged port would likely attract some form of economic regulation under the Commerce Act. Economic regulation can be costly. While the direct costs of such regulation are borne by taxpayers, there can be high costs for regulated companies. Poorly designed or implemented economic regulation also runs the risk of stifling investment and innovation.

Commerce Act restrictions on mergers

Part 3 of the Commerce Act prohibits mergers and acquisitions that substantially lessen competition in a market. However, it allows the Commerce Commission to grant an authorisation for acquisitions that would result in a substantial lessening of competition, if the public benefits resulting from the acquisition are found to outweigh the detriments.

Noting that any merger proposal between competing ports would be subject to a Part 3 assessment by the Commerce Commission, the Productivity Commission will not offer its own assessment here.

Implications for investment coordination and planning

This case study emphasises that proposals to improve investment coordination may have other consequences – and that those consequences are not necessarily positive. In the case of proposals that risk the substantial lessening of competition, current arrangements which require independent evaluation of public benefits and detriments may lead to better screening of merger proposals than if such evaluation was done internally within some form of strategic planning model.

F9.12 Port mergers have a number of potentially large benefits and costs. Where a proposed merger would result in a lessening of competition, the Commerce Commission is best placed to evaluate the public benefits relative to the detriments of that proposal.

10 Governance and ownership

Key points

- Poor governance and the difficulties in resolving multiple objectives in publicly-owned firms have been identified in previous chapters as contributing factors to problems in operational efficiency, labour relations and investment planning.
- Effective governance raises an organisation's capacity to make value-maximising decisions across all of its functions and activities. The governance arrangements for publicly-owned enterprises need to be of high quality because publicly-owned enterprises face less discipline from other sources than comparable privately-owned enterprises.
- The objectives of council-owned port and airport companies should be brought into line with the objectives for state-owned enterprises, ie, to be a successful business as profitable and efficient as comparable businesses that are privately owned.
- To reduce conflicts of interest, roles and objectives, elected representatives and council staff should be precluded from being directors of council-controlled port and airport companies. All relevant legislation should embody this provision.
- Ownership, and the incentives it creates, is an important factor in the efficiency of organisations. While ultimately it is the behaviour of owners and managers that determines organisational outcomes, different ownership models create different incentives that then influence behaviour.
- To improve the efficiency of ports, councils should consider increasing the degree of private ownership. Furthermore, current owners (and the communities they represent) are likely to benefit over the long term from such efficiency improvements.
- One option for public owners seeking to improve governance is to opt out of the relevant public-sector governance regime and into the stock-exchange regime. A stock market listing offers significant potential governance improvements for larger companies with partial public ownership. These benefits arise from an observable share price, reporting and continuous disclosure rules, and external analysis of company decisions. Other options include bringing in a cornerstone private shareholder, or some form of public-private partnership.
- Council control of ports appears to be motivated by a number of non-commercial objectives, including regional economic development and waterfront amenities. Councils are likely to be able to achieve these objectives with lower levels of port ownership.

While many components of the freight supply chain are provided by privately-owned firms, significant components are dominated by central and local government-owned firms. Effective governance of these firms is crucial to ensure decisions that maximise efficient operation and achieve the objectives of their owners. This chapter discusses the challenge of improving governance (section 10.1) and considerations relevant to the choice of an appropriate ownership model (section 10.2).

Issues related to governance and ownership arose in various contexts in this inquiry, including financial performance (Chapter 3), labour practices at ports (Chapter 6) and investment planning (Chapter 9). The achievement of operational and dynamic efficiency in international freight transport services requires ongoing pressure for improvement in cost reduction and service delivery. Whether these improvements emerge and contribute to productivity in the freight chain will depend crucially on whether there are improvements in governance.

The behaviour of a company's owners is critical to creating and maintaining this pressure, as owners define the company's aims, select its managers, and reward the delivery of targets. Choices about ownership can act to incentivise better or worse performance, as can choices about 'governance' – the rules that assign rights and responsibility, and define the processes by which decisions are made within organisations.

10.1 Governance

Debates on the effectiveness of governance – and particularly on the laws surrounding the governance of organisations – can be perceived as subtle and, to some extent, removed from the practical issues and challenges of company performance. However, given the facilitative role that freight infrastructure plays – in this case for New Zealand's transportation and international competitiveness – the significance of effective governance should not be underestimated. Over time, even relatively small changes in the quality of governance could give rise to significant performance improvements.

This section explores the current governance arrangements for port and airport companies that are majority or fully owned by local government authorities, and addresses the question of how they might be improved.

What is governance and why does it matter?

The concepts of governance apply, with some crucial differences, both to governments and corporate organisations. The focus here is on governance of the publicly-owned companies engaged in the international freight chain.

Corporate governance is concerned with the distribution of rights and responsibilities among the different participants in the organisation – such as the board, managers, shareholders and other stakeholders – with the aim of ensuring that the organisation makes value-maximising decisions across all of its functions and activities. Ineffective governance comes at the ultimate expense of the owners, employees and customers of the organisation, and ultimately society as a whole.

While governance is important for all organisations, it is of particular importance in the case of publicly-owned companies. As identified by Michael Jensen:

> There are only four control forces operating on the corporation to resolve the problems caused by a divergence between managers' decisions and those that are optimal from society's standpoint. They are the:
>
> - capital markets [including shareholders as the providers of equity capital];
> - legal/political/regulatory system;
> - product and factor markets; and
> - internal control system headed by the board of directors [ie, governance arrangements].
>
> (Jensen, 1993, p. 850)

Jensen points out that when one or more of these control forces is weakened for whatever reason, the other control forces need to be even stronger in order to compensate. In the case of publicly-owned companies, which typically have reduced discipline in the capital, product and factor markets (see section 10.2), this makes it crucial that governance arrangements are of the highest order – and stronger in some respects than for comparable privately-owned companies.

Weak governance can lead to many adverse consequences. For example, weakly governed firms tend to pay their CEOs more on the basis of luck than performance (Bertrand & Mullainathan, 2001). Weak governance might also allow wages and benefits to get out of line with what is justified by company productivity, or tolerate inefficient work practices (Chapter 6). Powerful customers and suppliers may also exploit weakly governed companies. These consequences all come at the expense of the company's owners and other stakeholders.

F10.1 Effective governance is ensuring that the organisation makes value-maximising decisions across all of its functions and activities. The governance arrangements for publicly-owned enterprises need to be of high quality because publicly-owned enterprises face less discipline from other sources than comparable privately-owned enterprises.

The firewall between multiple and single objectives

The governance arrangements for companies are specified in the Companies Act 1993. Of particular note is the duty of directors, who "must act in good faith and in what the director believes to be the best interests of the company" (s.131(1)). This is a duty to the company, rather than one to the shareholders who appointed that director.

In the case of council-owned ports and airports, additional arrangements are specified in the Port Companies Act 1988, Local Government Act 2002 and Local Government (Auckland Council) Act 2009. These arrangements are subject to relatively low levels of ongoing scrutiny by Parliament and others. The Commission's analysis has led it to the view that the arrangements in those Acts are not consistent with best practice and would benefit from improvement. This analysis is detailed further below.

Councils exist to achieve multiple objectives for their communities. These are specified in s.10 of the Local Government Act:

> The purpose of local government is—
>
> (a) to enable democratic local decision-making and action by, and on behalf of, communities; and
>
> (b) to promote the social, economic, environmental, and cultural well-being of communities, in the present and for the future.

These multiple objectives create a number of problems for the directors of council-controlled organisations.

Box 16 **Multiple objectives create accountability and monitoring problems**

The objectives of council-controlled organisations are often a mix of commercial and non-commercial factors. While the Companies Act is permissive of different business objectives (as the owners dictate), the fundamental premise of the Act is that companies will seek to maximise their commercial success over the long term, usually measured in terms of shareholder value. This single focus sharpens the accountability on directors to vigorously pursue that goal to discharge their duty to the company.

In the general case it is impossible to simulatenously maximise multiple objectives (Jensen, 2001). Notwithstanding this, when faced with multiple objectives the duty of directors is to pursue those objectives as well as possible. This immediately raises issues of how different objectives are weighted and whether the objectives are complementary or, if in conflict, what takes precedence and in what circumstances. In the complex reality that organisations face, these are judgements that individual directors are forced to make; judgements that invariably carry a high degree of subjectivity and are difficult to codify or formulate. In this context, it can be difficult to ever determine whether a director is discharging his or her duty to the company. This has the effect of partially shielding directors from challenge, and therefore they face muted incentives to vigorously pursue the core long-term interest of the company.

For example, it may be difficult to determine whether poor profitability in a port is occurring because managers have been slow to introduce cost-reducing innovations, or because they are pursuing non-commercial objectives, such as avoiding job losses or industrial disputes.

In the context of those council-controlled organisations that are 100% owned by a council, there is also no other shareholder to, in effect, challenge the decisions of directors where decisions could be argued to not accord with the long-term interest of the company. Under the Companies Act there is a

range of protections and entitlements accorded to minority shareholders to ensure their ownership interest (however small) is linked to the long-term interest of the company, and not the interest of one or more larger shareholders. The absence of this discipline further mutes the accountability and transparency of the general duty of care of directors of council-owned organisations.

Where multiple councils have an ownership interest, and are active in the decision making of the company, there is also the risk of trying to accommodate different or competing views – to keep all parties happy (eg, by adopting a 'lowest common denominator' position) – with an associated adverse impact on the company itself. This issue is not unique to council ownership; however, it may have greater significance in the context of the other problems discussed above.

Effective governance will be compromised if the purpose of the organisation – and hence the accountabilities of directors and managers – are unclear. To create value for stakeholders the purpose of the company as set out by its owners must be clear.

The Port Companies Act specifies that the principal objective of every port company shall be to operate as a 'successful business'. However, the interpretation of 'successful business' is not specified. Shareholders have the ability to further specify the port company's objectives through modifications to the port company's statement of corporate intent as that statement includes, amongst other things, the port company's objectives. Furthermore, directors are constrained to make decisions in accordance with the statement of corporate intent.

The Airport Authorities Act 1966 requires airport companies to be managed as a 'commercial undertaking'. This is generally interpreted as a single objective: ie, to maximise the commercial value of the company over time. The High Court has commented:

> The direction is to act "commercially". A commercial operation spends money to make money. It builds a factory or buys a farm as an investment to produce a profit. It always seeks a return upon such 'sunk' capital. If there were no prospect of return from capital outlay, it would not be made. The commercial operator is not building a church or a monument. As a matter of ordinary language and understanding, when a company spends money on assets, against the background of a direction to act "commercially", it is expected to produce a return on that expenditure.
>
> *Air New Zealand Ltd & others v Wellington International Airport Ltd* [1993]

These Acts appear consistent with a perspective that, in order to create an efficient freight system, the optimum arrangement from a societal perspective involves a strict commercial focus for port and airport companies. The Acts, working in concert with the Local Government Act and Companies Act, have the effect of creating a 'firewall' that creates a degree of separation between the company's commercial objectives on the one hand and the wider objectives of the owner on the other.

While a superficial reading of the Acts suggests that this firewall is both comprehensive and effective, in practice each director and potential director is aware of the council's wider objectives. Given that the council has the power to appoint and remove directors, each director knows that they need to keep their council 'bosses' happy over time in order to retain their positions.

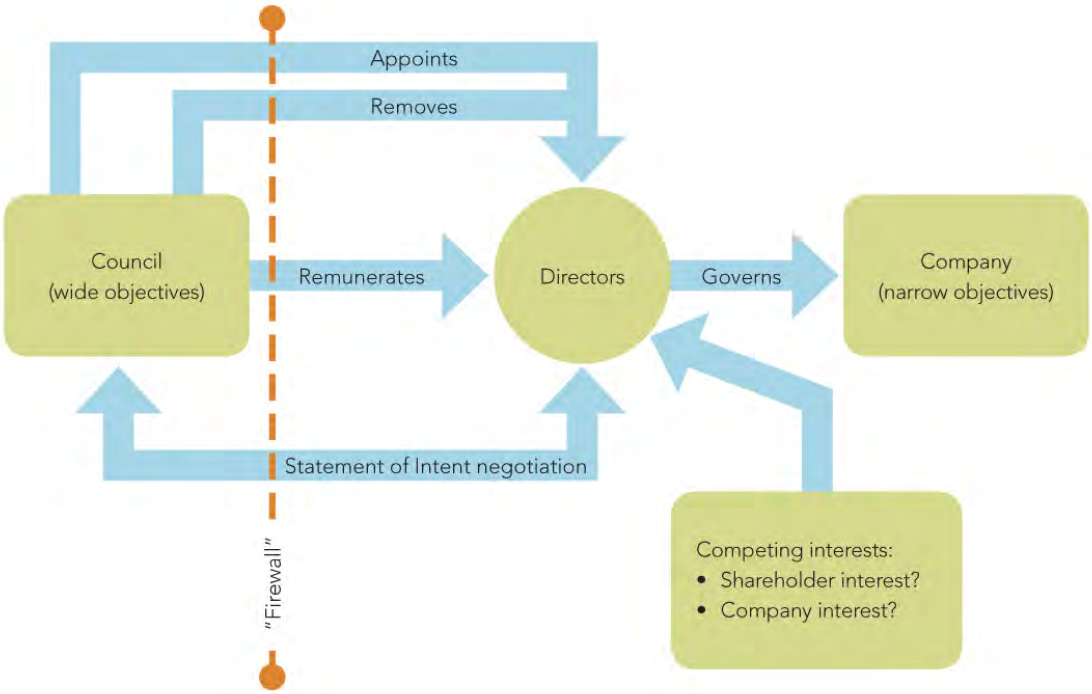
The Local Government and Port Companies Acts specify a process by which a Statement of Corporate Intent is negotiated between a council and the directors of a council-owned company. This process is designed to increase transparency and accountability. However, it creates opportunities for the council to communicate objectives that may not be in the interests of the company (and indeed to insist on them), and further influence the decisions of the board on matters for which the board has a legal responsibility to advance the company's interests.

The council, in its role as owner of a port or airport company, is bound by the wider objectives of the Local Government Act when discharging its duties as owner. These duties cover council decisions about its shareholding and, in the case of majority ownership, substantial control over the capital-raising activities of the company. Council decisions should not, however, cover matters that go beyond the authority of

shareholders under the provisions of company law and transgress on the board's duties under the constitution of the company. For example, council as shareholders should not interfere in operational decisions. An effective firewall resolves this tension between the duties of councils and the duties of directors in a practical way, considering the particular circumstances.

Figure 10.1 shows this firewall, and the routes by which the owner's objectives may influence the governance of the company. The firewall is somewhat 'leaky' with regard to objectives. Directors face competing and potentially conflicting objectives in their decision making.

Figure 10.1 The firewall between the objectives of councils and council-owned companies



F10.2 The Port Companies Act sets the principal objective of every port company as being to operate as a 'successful business'. However, that objective is unclear. In the case of majority council ownership it may be supplemented with the objectives of a port company's owners.

F10.3 The Airport Authorities Act requires airport companies to be managed as a 'commercial undertaking'. In the case of majority council ownership, that requirement may be supplemented with the objectives of the airport company's owners.

This leaky nature of the firewall is consistent with the analysis in section 10.2, which finds that councils choose to own local ports and airports because ownership enables them to exercise control. If the firewall was impervious (with respect to those wider objectives not shared by the company), then the council would presumably treat these assets in an equivalent manner to other financial assets held by the council.

Can a holding company improve the firewall?

Auckland Council argues that the use of a holding company between the council and the port company can mitigate political influence and allow the port to be "run on a strongly commercial basis":

> From 1993 [Ports of Auckland] has been owned by intermediate 'one step removed' agencies, with an appointed board. Consequently, there has been no direct political influence over operational matters…
>
> Auckland Council, sub. 53, p. 6

Others argue that political influence affects port companies, bypassing or flowing through holding companies such as Auckland's:

> During the 2000s there was a trend of diminishing private sector investment in port companies (most evident in the removal of Ports of Auckland from the stock exchange and reversion to 100% local authority ownership). This has been coupled [with] what appears to have been a reduced appetite from port companies' local authority owners to demand significant efficiency and productivity gains. The reason for this lack of appetite is likely to be political rather than economic.
>
> New Zealand Shippers' Council, sub. 43, p. 5

Given that council holding companies are similarly subject to the governance arrangements specified in the LGA and Local Government (Auckland Council) Act, the Commission regards holding companies as at best a partially effective mechanism to improve the firewall. Effectiveness will likely be further reduced if elected representatives are on the board of the holding company, as is the case for Christchurch City Holdings Limited.[93]

Furthermore, it is clear from the Auckland Council's submission that it is not its intention for the port to make its decisions on a purely commercial basis, but rather that the coordination of investment and benefits to the region are to be maximised:

> …the new council governance structure provides an opportunity to better integrate council activities, POAL operations, transport infrastructure, land use planning and spatial planning. The governance arrangements of the Auckland Council and full ownership of POAL enables the two entities to coordinate and take strategic and investment decisions that will be of benefit to the whole region. This balance is the best way of achieving an efficient port which is well integrated with the city.
>
> Auckland Council, sub. 53, p. 7

This statement does not appear to appreciate that such an approach conflicts with good corporate governance of the commercial activities of the port.

F10.4 A holding company can provide partial, but incomplete, insulation between the wider objectives of a council and the commercial objectives of a port or airport company.

Improving the firewall through legislative changes

It would appear that the intention of the Port Companies Act and Airport Authorities Act to assign a purely commercial focus to port and airport companies has not been fully realised. This raises the question as to whether legislation could be improved in order to fulfil the original objective.

Governments (central and local) have three separately identifiable interests in a publicly-owned company: financial, control (in order to achieve wider, non-financial objectives) and regulatory (eg, responsibilities under the Resource Management Act).

In New Zealand the model in the *State-Owned Enterprises Act 1986* has the cleanest separation between these three interests, suggesting that this Act could be used as a model for improvements to other relevant legislation.

Consistency between legislation

The State-Owned Enterprises Act, Local Government Act (LGA), Port Companies Act, Airport Authorities Act and Local Government (Auckland Council) Act specify different types of publicly-owned companies and specify different objectives and governance regimes for each of those types.

With this number of Acts, there is a danger that only some will get updated as best practice evolves, leaving others behind.

There would appear to be a case to clean up the legislation. For example, one Act could cover owner behaviour, another cover general company behaviour, and a third (if required) cover company scope and

[93] In 2011, the Mayor and three councillors held four of the eight director positions. See Christchurch City Holdings Ltd (2011).

behaviour specific to that industry. Airports are closest to this model, where the LGA, Companies Act and Airport Authorities Act fulfil these roles respectively.

Given the importance of clarity of purpose for the governance of publicly-owned companies, the Commission focused its attention on the purposes of SOEs, ports and airports as specified in the relevant Acts. The purpose statements for those organisations as defined by four separate Acts are listed in Table 10.1.

Table 10.1 Legislated objective of publicly-owned companies

Organisation type	Purpose specified in legislation
State-owned enterprises	The principal objective of every State enterprise shall be to operate as a successful business and, to this end, to be— (a) as profitable and efficient as comparable businesses that are not owned by the Crown; and (b) a good employer; and (c) an organisation that exhibits a sense of social responsibility by having regard to the interests of the community in which it operates and by endeavouring to accommodate or encourage these when able to do so
Council-controlled organisations (includes airports but not ports)	The principal objective of a council-controlled organisation is to— (a) achieve the objectives of its shareholders, both commercial and non-commercial, as specified in the statement of intent; and (b) be a good employer; and (c) exhibit a sense of social and environmental responsibility by having regard to the interests of the community in which it operates and by endeavouring to accommodate or encourage these when able to do so; and (d) if the council-controlled organisation is a council-controlled trading organisation, conduct its affairs in accordance with sound business practice
Airports	[In addition to the purpose for council-controlled organisations above] Every airport operated or managed by an airport authority must be operated or managed as a commercial undertaking.
Ports	The principal objective of every port company shall be to operate as a successful business.

The State-Owned Enterprises Act provides the clearest model. In particular, the requirement to be "as profitable and efficient as comparable businesses that are not owned by the Crown" is a clearer statement of purpose than a requirement to be a "successful business" (in the Port Companies Act). It is likewise clearer than the requirement to be a "commercial undertaking" (in the Airport Authorities Act), conducting "its affairs in accordance with sound business practice" (LGA s 59.1), but also required to achieve the stated non-commercial objectives of shareholders (LGA).

R10.1 The objectives of council-owned port and airport companies should be brought into line with the objectives for state-owned enterprises; ie, to be as profitable and efficient as comparable businesses that are privately owned.

In coming to its recommendation, the Commission considered the option of a change to the LGA. However, given the wide range of organisations covered by the LGA, it believes that improvements in the governance of ports and airports might be more directly and transparently achieved through changes to the Airport Authorities Act and Port Companies Act. Nevertheless, a case could be made for improvements to the LGA as it relates to governing council-controlled organisations in general.

Improving boards of directors

In the case of council-owned organisations the appointment of directors is a particularly important power and has appropriately been the subject of special attention and special provisions. Major considerations include the composition of boards, and the independence (perceived and actual) and capability of directors.

Again the provisions relating to these considerations vary significantly between the relevant Acts. Given that fair and transparent processes – in order to build and maintain public confidence – are desirable for all these companies, it is unclear why such variation in approaches has come about, and why it persists. A comparison of the provisions relevant to director appointments is set out in Table 10.2

Table 10.2 Director appointments in publicly-owned organisations

Organisation type	Key statutory provisions relating to director appointments	Implementation
State-owned enterprises	(1) The directors of a State enterprise shall be persons who, in the opinion of those appointing them, will assist the State enterprise to achieve its principal objective. (2) All decisions relating to the operation of a State enterprise shall be made by or pursuant to the authority of the board of the State enterprise in accordance with its statement of corporate intent. (3) The board of a State enterprise shall be accountable to the shareholding Ministers in the manner set out in Part 3 and in the rules of the State enterprise	The Crown Ownership Monitoring Unit within the Treasury has responsibility for company performance monitoring and facilitating director appointments, under the direction of the shareholding Ministers.
Council organisations (includes airports and ports)	A local authority must adopt a policy that sets out an objective and transparent process for— (a) the identification and consideration of the skills, knowledge, and experience required of directors of a council organisation; and (b) the appointment of directors to a council organisation; and (c) the remuneration of directors of a council organisation. A local authority may appoint a person to be a director of a council organisation only if the person has, in the opinion of the local authority, the skills, knowledge, or experience to— (a) guide the organisation, given the nature and scope of its activities; and (b) contribute to the achievement of the objectives of the organisation	The Commission had mixed success in locating these appointment policies across councils. Policies also differ in their approach and viewpoint on what constitutes a good appointment policy and approach. In particular, there are different perspectives on the appropriateness of elected representatives acting as directors. For example: *New Plymouth District Council* – "It is not considered appropriate for either staff or Councillors to act as directors of Council-controlled organisations. This could create conflicts of interest between the roles of staff as advisors to Councillors and Councillors as objective decision makers while having the responsibilities of the role of a director." *Hamilton City Council* – "Council will determine the required skills, knowledge and experience for each appointment. Candidates are not restricted to Councillors – in some cases, it may be more appropriate to appoint Council staff or external people with affiliations to the Council." *Wellington Regional Council* – "CCO boards comprised of four or more directors will have a designated elected member position, unless otherwise determined by Council… Only one

		elected member may be appointed to any one CCO board at any time… Wellington City Council employees are not eligible to be considered as candidates for director positions to CCO boards unless they are appointed in their capacity as an employee of Wellington City Council. Council may choose to appoint an officer to the board of a CCO as a way of ensuring Council's interests in the entity are monitored and managed." *Christchurch City Council* – "The CCHL constitution provides for a maximum of eight directors and it is intended that it comprises a mix of four Council and four non-Council directors. It is critical to the success of this board that it has a composition which is capable of maintaining the confidence of both the Council and the subsidiary companies."
Ports	(a) that there shall be no fewer than 6 directors of the port company; and (b) that not more than 2 members or employees of the Harbour Board or any other Harbour Board, territorial authority, regional council or united council that holds any equity securities in the company of any class that confer rights to vote at any meeting of the company may be directors of the port company. The directors of each port company shall be persons who, in the opinion of those appointing them, will assist the port company to achieve its principal objective.	While ports are not council-controlled organisations under the Local Government Act, they are still defined as council organisations and, as such, the policies applying to the appointment of directors as noted above still apply to the appointment of directors of port companies. The number of appointments of members or employees of local authorities is restricted to two under the Port Companies Act.
Airports	*No specific provisions; the provisions related to council organisations apply in the case of airports owned by local authorities*	The policies applying to the appointment of directors of council organisations (see above) apply to the appointment of directors of airport companies.
Substantive council-controlled organisations (in Auckland)	Councillors and local board members prohibited from appointment as directors of substantive council-controlled organisations Director of substantive council-controlled organisation elected to Council or local board must resign before taking up position Council may appoint chairperson and deputy chairperson of substantive council-controlled organisation	In addition to the provisions relating to council organisations (see above), substantive council-controlled organisations in Auckland have additional provisions relating to director appointments. These preclude elected representatives from serving on boards.

Notes:

1. CCO = council-controlled organisation (defined in the LGA)
2. CCHL = Christchurch City Holdings Limited (a holding company owned by Christchurch City Council).

The following key points arise from this comparison.

- At central government level, there is a body of readily accessible material and good practice guidance from the Crown Ownership and Monitoring Unit (COMU) of the Treasury. In contrast, at local government level there is nothing to the Commission's knowledge that would constitute good practice guidance to inform the decisions and approaches made by each local authority. Without limiting the

discretion of local authorities, the Commission considers that some guidance could be useful and efficient, and would contribute to a more principled and consistent approach across local government.

- In the case of ports there is a statutory limit on the number of members or employees of councils that can act as directors of a port, but there is no such limit in the case of airports. Such inconsistencies between Acts are difficult to understand.
- In Auckland, elected councillors cannot, by law, be appointed to be directors of substantive council-controlled organisations[94] – but there is no such restriction for comparable organisations outside Auckland.
- Outside Auckland, there is also considerable inconsistency in approach taken by local and regional authorities, including going further than the Auckland-specific provisions to prohibit council employees being appointed as directors, to not seeing the appointment of employees or elected councillors as problematic at all. Notwithstanding these differences the Commission has observed that the appointment policies of local authorities – required by law – are not uniformly easily accessible, thereby reducing their effectiveness given their existence and transparency is a means (when working well) to incentivise good policy and practice.

Elected representatives have an unavoidable conflict of interest when acting as a director for a council-owned company – in particular there is a conflict between their responsibilities to the community they represent under the LGA and their responsibilities to the company under the Companies Act.

As an example, councillors may be subject to lobbying in industrial disputes, on the presumption that elected representatives are more sensitive to public campaigns than independent board members. Should councillors in this position place pressure on managers to grant additional concessions to organised labour, then this upsets the normal balance of bargaining power in an industrial relations situation. Any such concessions come at the expense of the company, and ultimately ratepayers.

Similar considerations may apply in the case of council staff, since the council is likely to have regulatory functions (eg, under the Resource Management Act) with respect to the company. While these potential conflicts of interest may be easier to identify and manage than those of elected representatives, council staff on the board of a port or airport may still find themselves seriously conflicted regarding matters before the board.

R10.2 To maintain the separation between wider council objectives and the commercial objectives of port and airport companies, elected representatives and council staff should be precluded from being a director of council-owned port and airport companies. All relevant legislation should embody this provision.

COMU maintains a national database of qualified directors for publicly-owned companies. There is an opportunity for local government to take advantage of this database when recruiting directors for port and airport companies.

Improving monitoring

Transparency and reporting are key parts of any governance regime. They concern the supply of information. They are, however, a means to an end: accountability. The important link between the information and accountability is monitoring. For monitoring to contribute to accountability there needs to be demand for the information, the expertise to analyse the information, and the ability to act on that information.

Councils, particularly smaller ones, may lack expertise in monitoring the boards they appoint, and company performance more generally. Some of the larger councils have responded to this with holding companies, but that may just move the problem as the council still faces the task of monitoring the board of the holding

[94] While neither Ports of Auckland nor Auckland Airport is a 'substantive council-controlled organisation', Auckland Council's holding company Auckland Council Investments Ltd (ACIL) does fall within that classification. ACIL is the council-controlled investment company which owns and manages Auckland Council's major investment assets, including Ports of Auckland Ltd (100% owned) and Auckland International Airport Ltd (22.4% owned).

company.[95] Furthermore, the incentives of the holding company may be compromised by council involvement or the appointment of elected representatives to the board of the holding company.

Benchmark competition

When other competitive forces are muted, 'benchmark competition' can play an important role. Benchmark competition is based on the compilation of performance indicators by an independent organisation, typically published with sufficient analysis to allow interested parties to make an informed judgement about the performance of the companies of interest.[96] For the port sector in New Zealand, KPMG fulfilled this role for some years. More recently it has been undertaken by Rockpoint Corporate Finance, who published port reports in 2008 and 2010.

The economic-value-added (EVA) analysis of selected ports (section 3.4) found that negative EVAs were common for those ports over the period analysed. Persistent negative EVAs raise a number of important questions. At the heart of these is concern that the ports are making poor use of a scarce resource – capital – and that port owners should therefore be looking to address this by some combination of better cost control, shifting resources to better uses within the port, or retiring capital for redeployment elsewhere.

The Commission believes that EVA figures provide an important overall picture of the economic efficiency with which capital is being invested and used in the freight transport system. In the interests of improved reporting and transparency, and ultimately of improved efficiency, it therefore recommends that EVA figures are regularly published and given greater attention by owners and policy makers.

Because New Zealand ports vary in their mix of business activities (eg, container freight, bulk freight, oil and/or ferry terminals, property investment), the reporting should disclose a breakdown across material business segments of each port (in line with Commerce Commission requirements for electricity distribution, airports and some other industries).

R10.3 In the interests of improved reporting and transparency, and the efficient use of capital in the freight transport system, EVA figures for port companies should be regularly published and reviewed, including disaggregated data for significant business segments.

Just as central government has established COMU to gain some economies of scale and specialisation in monitoring SOEs, local authorities could act collectively to improve their ability to monitor their commercial companies – further strengthening ownership disciplines and encouraging better performance. A possible home for such a function would be within the Local Government Commission, which has a statutory function that may already be able to accommodate such a monitoring and reporting activity. However the Productivity Commission is interested to hear other views on hosting arrangements.

R10.4 A collective monitoring function should be established for port companies, to create independent information on comparative performance of ports for owners to consider – further strengthening ownership disciplines and optimal port performance.

Q10.1 What agency would be best able to host the collective monitoring function for port companies?

For benchmark competition to work well, each monitored company needs to provide information in a timely manner and consistent format, and there needs to be an interested and motivated audience for the comparative information. In the case of council-owned organisations, it is the last step that often fails. While ultimately it is each resident or ratepayer that benefits (loses) from good (poor) management of a council-owned enterprise, each ultimate owner faces low incentives to invest energy in monitoring and providing feedback to the companies or councillors. These incentives are further weakened (relative to the private

[95] This task is arguably even more difficult, as it can be tricky for councillors to separate out the performance of the holding company from the performance of the companies in the holding company's portfolio.

[96] Information disclosure as a means of economic regulation is explored further in Chapter 13.

shareholder case) by the fact that residents and ratepayers have few actions available to them as a result of any information they uncover – in particular, they are unable to choose to divest or increase their stake.

Given poor incentives for monitoring by the ultimate owners, it is their agents (ie, the council), that must take primary responsibility. Councillors, however, are tasked with wider objectives than the companies they monitor. They may also face different incentives at a personal/political level from the communities they represent. These factors mean that they may often not be focused on the commercial performance of those companies.

The Acts covering ports and airports recognise the need for the provision of regular and reliable information to council owners through specification of a number of reporting and accountability provisions, covering such things as statements of intent and annual reports. While the details of these arrangements vary from Act to Act, the differences in the core arrangements, while untidy, do not appear to be material.

Improvements in the production and monitoring of information for performance assessment and accountability could be made under existing legislation and would be enhanced by the legislative proposals above regarding objectives and directors. The Auditor General could do more. But the clearest opportunity for further improvement would be to develop an audience that is more strongly motivated to receive information and to do something with it – through the involvement of minority shareholders. This possibility is explored further in section 10.2.

Governance of rail

The New Zealand Railways Corporation (trading as KiwiRail) is technically a state-owned enterprise. Governance and other arrangements are specified in both the *State-Owned Enterprises Act 1986* and the *New Zealand Railways Corporation Act 1981*, which is a potential source of ambiguity and inefficiency. For the reasons discussed above, it would be preferable if KiwiRail's governance arrangements were specified only in the State-Owned Enterprises Act.[97]

KiwiRail is currently classified as a 'multiple objective company', whose financial expectations are moderated by public good delivery requirements (COMU, 2010, p. 14). However, there is little transparency around exactly what public goods are being delivered and at what cost to the taxpayer. The State Owned Enterprises Act contains provisions for SOEs to receive direct payments for non-commercial activities (s.7), and it would be more transparent if these provisions were actively used by the government to identify expectations around public-good delivery by KiwiRail and the costs incurred in their provision.

R10.5 Government should use the s.7 provisions in the State-Owned Enterprises Act (providing for SOEs to receive direct payments for non-commercial activities) with KiwiRail to transparently identify expectations around public-good delivery and the costs incurred in their provision.

Summary: governance matters

This section has explored a range of governance issues that can be particularly difficult in the case of publicly-owned companies. Good governance requires addressing all of them: clarity of objectives, appointments, conflicts of interest, transparency, reporting and monitoring. Given the costs of weak governance of ports and airports – poor returns for owners as well as lower efficiency for importers and exporters – the improvements to governance arrangements outlined above should be pursued.

10.2 Ownership

Decisions regarding ownership changes are ultimately the prerogative of the current owners, and the circumstances of specific companies can differ widely. This section approaches the question of changes in ownership from the perspective of the potential improvements this can make to governance. It points to issues that the owners might take into consideration when evaluating options for changes in ownership, and

[97] Parliament has acted to reduce the scope of similar entity-specific Acts when arrangements for that entity are better specified in a more general Act. For example, the New Zealand Trade and Enterprise Act 2003 was largely repealed by the Crown Entities Act 2004.

related choices about the scope of commercial activities and options for integration or unbundling of activities.

Ownership matters for dynamic efficiency

While it is easy to recognise technological innovation and investment in products and production processes as contributors to dynamic efficiency, less obvious, but arguably just as significant, is innovation in organisational architecture and business models (see Chapter 8). The IT revolution is just one source of innovation making possible new forms of governance and organisation that promote better performance.

Specific organisational models may act to drive or constrain investment, technological innovation, productivity improvement and wealth creation. Two key questions in the architecture of organisations operating in competitive markets are:[98]

- What are the boundaries of the organisation?
- Who should own the organisation?

Where competitive forces operate, and organisational boundaries and governance frameworks are not otherwise constrained, experimentation should be expected in response to changes in the business environment in and around an industry. Should any of those experiments be successful in demonstrating a lower-cost (or higher efficiency) model than is typical in that industry, others in the industry would be expected to follow that lead – or at least adapt that innovation to their individual circumstances. Such experimentation and subsequent changes provide an example of dynamic efficiency in action. Constraints on experimentation and adaptation will dampen dynamic efficiency.

The questions of the boundaries of the organisation and the ownership structure that will best promote performance are interrelated. As the boundaries change, the best ownership structure is likely also to change. Public-private partnerships (PPPs), joint ventures, entering new lines of business, seeking access to new technologies and strategic business partnerships are all likely to trigger some reconsideration of ownership structures.

The scope of the firm

The scope or boundaries of the firm define those productive activities, assets, liabilities, risks and contingencies that the governance structure takes responsibility for and looks to managers to manage. In accordance with the definition of corporate governance in section 10.1, the governance structure includes explicit and implicit contracts between the company and the stakeholders for distributing responsibilities, rights, and rewards. A governance structure must provide for all of these to be effectively managed.

As already noted, the intention – variously expressed – of the laws establishing the companies in question is that they be managed to commercial objectives. It is therefore essential for avoiding conflict and confusion that the business activities that are to be run by these companies are ones for which commercial objectives are both appropriate and explicitly chosen. This may not cover all of the present assets or activities of port companies. Some assets and activities may not be best managed to commercial objectives where non-commercial objectives are significant, and should be governed differently and to different objectives.

For example, urban ports are using land, some of which might have much higher value in an alternative use. The owners of a port may therefore decide not to leave the company free to diversify into real estate and lose focus on being an efficient port. One way to accomplish this is the landlord model (discussed below).

Further, there may be activities where commercial objectives are appropriate but may not, however, be best run by a company whose governance arrangements and primary focus are geared to running a port or an airport.

[98] (Coase, 1937) (as extended by (Williamson O. E., The Vertical Integration of Production: Market Failure Considerations, 1971), (The Economics of Organisation: The Transaction Cost Approach, 1981) and (Hansmann, 1996) provide a framework for understanding these questions. In the Coase/Williamson model, the boundaries of an organisation are best set at the point that minimises total transaction costs (those costs incurred in making an economic exchange, other than the amount paid directly for the goods or service purchased). More recent developments in the theory of incomplete contracts have extended this analysis to incorporate the optimal sharing of residual contractual risks between business partners and agreements about investments by them that maximise and distribute the mutual returns. The Hansmann model is described below.

The key point here is that the most productive governance arrangements will be those that are tuned to the scope and nature of the business in question. Furthermore, the scope of the business is defined by the choices made by owners, boards and managers from a variety of options, including leasing, PPPs, engagement with other public enterprises and outsourcing – in addition to direct managerial control of service delivery. Some of these options involve the entry of other shareholders where this strengthens the governance in various possible ways. The next section discusses some of the issues around such options.

Ownership choices

Hansmann (The Ownership of Enterprise, 1996) defines an organisation's 'patrons' to be those with whom it does business, typically the providers of inputs (investors,[99] employees and suppliers) and the purchasers of outputs. Each group of patrons constitutes a potential owner of the organisation. In the Hansmann model, an organisation should be owned by the group of patrons that minimise total ownership costs (ie, those costs created or defrayed by a particular group of owners). Total ownership costs include the costs of collective decision-making by the owners, which can be particularly high for groups with diverse interests.

Hansmann's observation that a single model is typical for each industry is borne out by observation: eg, lawyers tend to form partnerships (ie, employee-owned); hairdressers are owner-operated; and charities are controlled by their donors. While the firms in many of the productive areas of the economy are owned by their investors, consumer cooperatives (eg, Ballance) and supplier cooperatives (eg, Fonterra) are common in the agricultural sector, where investor-owned alternatives create high costs due to monopoly (single supplier) and monopsony (single purchaser) problems.

Multiple models persist in some sectors: in response to differences in the business environment, because competition is for some reason muted, or because regulatory constraints inhibit change. An example of multiple models as a response to differing business environments is electricity distribution companies: Hansmann noted that in the United States urban firms tend to be investor-owned whereas rural firms are consumer-owned – a pattern also seen in New Zealand. An example of multiple models due to muted competition and regulatory constraints is hospitals – investor, consumer, government and charity owned hospitals provide services in parallel in many countries.

According to this analysis, public ownership becomes the preferred model when the costs – broadly conceived – of other models become prohibitively high. Williamson (1999) observes that there are transactions and functions for which public provision is efficient because no superior feasible alternative can be described and implemented. This is typically the case for the provision of public goods such as law and order, defence or a national road network. It is common for public ownership to extend beyond these core government functions, sometimes for reasons that can be rationalised as promoting efficient service delivery and sometimes not. It all depends on the circumstances.

Local government ownership commonly arises in respect of geographically-specific infrastructure, such as local roads, water supply, sewerage, stormwater, and recreational facilities.[100] Private supply could be problematic due to natural monopoly issues and difficulties in excluding access to essential facilities.[101] It is common in other countries, however, for some of these services to be provided by private sector enterprises, but usually under various governance arrangements involving partnership with the public sector or subject to regulation.

Ownership of New Zealand's international freight services supply chain

The ownership structure of the components of New Zealand's international freight services supply chain is listed in Table 10.3. The third column is the Commission's assessment of evidence of dynamism of ownership in that component. Evidence of dynamism of ownership includes mergers, acquisitions, changes in ownership structures, and other behaviour consistent with ongoing experimentation in organisation and business models which may contribute to dynamic efficiency in an industry.

[99] Investors are the suppliers of equity capital.

[100] While this list is typical for New Zealand, it is noted that some other countries have made different choices about what is acceptable in terms of private provision. One example is the private provision of drinking water in France.

[101] 'Excluding access' in this context means an inability to refuse service to those unwilling to pay. For example, difficulties in excluding access arise for ecosystem services such as clean air and water, and infrastructure services such as street lighting and flood control.

Table 10.3 Ownership of international freight services components

Component	Ownership	Dynamism
Freight forwarders	Generally investor-owned	High
International shipping lines	Generally investor-owned	Medium
Seaports	All commercial ports are majority-owned by a local authority within whose territory the port is located.[102] Four ports are listed on the NZX: Port of Tauranga Limited (45% private ownership), South Port New Zealand Limited (34%), Northland Port Corporation (26%)[103] and Lyttelton Port Company (6%).[104] PrimePort Timaru Limited has 28% private ownership. All other minority ownership stakes are in ports held by other local authorities or other port companies.[105]	Low-medium
Stevedoring/marshalling	Generally investor-owned or vertically integrated with ports	Medium
Road infrastructure	Central government (state highways) and local government (local roads)	Low
Road transport	Generally investor-owned; some owner-operators	High
Rail	Central government	Low[106]
Coastal shipping	Generally investor-owned; however, some government ownership (three Interislander ferries owned by KiwiRail)	Medium
Customs, security and biosecurity	Central government	N/A
International air freight		
Airlines	Generally investor-owned; however, some governments take large stakes in their 'flag carrier' airlines (eg, the New Zealand Government currently has a 75% stake in Air New Zealand)	Medium
Cargo terminal operators	Generally investor-owned or vertically integrated with airlines	Medium
Airports	Auckland: NZX-listed company (22.4% Auckland Council) Christchurch: council-controlled trading organisation (75% Christchurch Council, 25% New Zealand Government) Wellington: private company (67% Infratil Limited (NZX-listed company), 33% Wellington City Council)	Medium
	Source: Company websites; NZX Company Research database; New Zealand Institute of Economic Research (2010a); Productivity Commission.	

Of particular interest in the context of this section are those components where ownership dynamism is low, competition is muted, or because regulatory constraints or political preference inhibit change. These components are seaports, airports and rail, which are explored below. Some issues relating to road transport are covered in Chapter 13.

Improving governance through private capital participation

State-owned firms acquire their equity capital through political and administrative processes rather than private capital markets. Their engagement with debt markets may also be limited relative to similar private-

[102] Technically Eastland Port Limited is owned by a community trust; however, control rights for that trust are held by the Gisborne District Council. For the purposes of this analysis we consider the port to be owned by the council.

[103] A further 20% stake in Northland Port Corporation is held by Ports of Auckland.

[104] A further 15% stake in Lyttelton Port Company is held by Port Otago Limited.

[105] For a comprehensive list see the inquiry's Issues Paper (Productivity Commission, 2011).

[106] While there have been several changes to the ownership of rail over the past 21 years, the post-2008 arrangements appear stable.

sector enterprises (Evans, 2011) and can be distorted by the implicit guarantee that public ownership can entail. This restricted engagement in capital markets, together with other constraints from public ownership, can adversely affect their ability to improve their efficiency relative to similar privately-owned firms.

In a comprehensive review of empirical studies of privatisations around the world, Megginson and Netter found:

> We know that privatisation "works" in the sense that divested firms almost always become more efficient, more profitable, and financially healthier, and increase their capital investment spending.
>
> (Megginson & Netter, 2001, p. 381)

Their review covered dozens of empirical studies and, in total, thousands of privatisations.[107] The important qualification is 'almost always' – while the evidence is statistically overwhelming, it is not a guarantee that every privatisation will have these outcomes. Importantly, the goals of the privatisation need to be clear; any required regulatory regime should be in place before the privatisation; and the privatisation process needs to be well run. Also, the privatisations in the record generally involve enterprises where the case for public ownership was weak or non-existent.

Some reasons why firms in private ownership tend to outperform those in public ownership are presented in Box 17.

Box 17 **Reasons why firms in private ownership can outperform those in public ownership**

Two commonly used mechanisms to encourage efficiency in investor-owned firms are generally unavailable to publicly-owned firms:

- The 'market for corporate control' refers to the disciplining effect of being a potential takeover target (Manne, 1965). One way in which professional investors can make money is to buy into poorly-run companies with significant potential, and, having obtained control, replace the board and managers with better performers. Knowing this possibility, managers have an incentive to perform when there is a risk of an ownership change leading to a management change. Over time good boards 'eat' bad boards, thus incentivising bad boards to improve their performance.
- 'High-powered incentives' are various forms of incentive pay (such as stock options) whose value is directly dependent on returns to shareholders, in an attempt to align the interests of managers and shareholders.[108] These have limited applicability to publicly-owned enterprises that lack market-priced shares.

Publicly-owned enterprises do not face the same market scrutiny as listed companies (COMU, 2010). They lack a share price – which is a very useful monitor of the views of both current and potential investors as to the value of the enterprise. As investors have to commit real money to purchase shares (and risk losing it should the share price fall), they are strongly incentivised to closely monitor the company's performance. The observable share price represents the collective view of investors – with their own money at risk – as to the future value of the firm. This valuable monitoring device is unavailable to publicly-owned firms, whose typical best option is infrequent assessments by individuals and groups with no personal assets as risk.

Additional owners may contribute more than just capital – they can bring experience and monitoring. An experienced 'cornerstone' investor can be particularly valuable to a business if their shareholding leads to improved governance.

The Commission recognises that there is a wide range of views about public ownership of certain assets in the New Zealand community. Ravensdown submitted:

[107] For a review of other studies of privatisations, see Huang, Watson and Chen (2011). The conclusions of the other studies reviewed are similar.

[108] If these incentives are poorly designed, managers may be incentivised to act in ways that work against the interest of shareholders. It has been argued that poorly designed incentive schemes in financial institutions contributed to the Global Financial Crisis.

> Despite our reservations on how ports are being used by their local government owners, Ravensdown would be even more concerned to see the ports sold off or their operations delegated to commercial businesses. This very nearly occurred in 2006 when the Christchurch City Council tried [to] sell half of the Port of Lyttelton and the management contract to Hong Kong company, Hutchinson's. We believe this would have left captive port users very vulnerable.
>
> Ravensdown, sub. 3, p. 2

Ravensdown identifies a particular risk associated with the monopoly provision of port services, and contends that this risk would be exacerbated by private ownership. Monopoly issues are explored further in Box 18.

Box 18 **Private vs. public ownership of monopolies**

If a business has monopoly characteristics, private ownership carries two risks: monopoly pricing and operational inefficiency.

Monopoly pricing can lead to a transfer of wealth from consumers to suppliers, and to the under supply of the product or service in question.

The distributional and efficiency consequences of the monopoly pricing problem could be mitigated under public ownership if any excess profits gained from overcharging customers are returned to the collective owners. This assumes that there is significant overlap between those customers and the owners. Should the overlap be small (as might be expected for components of the international freight supply chain), the (public) owners typically face the same incentives to charge monopoly prices.

Increasing supply to an efficient level may require economic regulation: eg, to set and enforce a maximum price. The Treasury argues that the quality of the regulatory framework in which the business operates is a far more important factor than the identities of owners. While a well-designed and enforced economic regulatory framework can prevent monopoly pricing, a poorly designed one can lead to poor customer service and reduced levels of investment and innovation.

Arguably the operational inefficiency problem is worse in public ownership – as publicly-owned monopolies face weaker incentives to reduce costs and/or improve service provision.

These risks need to be carefully evaluated when considering privatisation of monopoly providers.

Source: The Treasury (2010); Productivity Commission

A number of other arguments have been made against privatisation. While some of these are very general in nature and rather weak in the Commission's view (Box 19), others are stronger (Box 20). An owner considering privatisation of a business should carefully consider all of these arguments and make an appropriate determination as to their relevance to the business under consideration.

Box 19 **Weaker arguments against privatisation**

Some of the arguments voiced against privatisation may reflect a lack of knowledge about how financial markets work in practice. For example:

- 'Selling off future profits.' This assumes that future profits and the sale price are unrelated. In actual fact, the sale price will be determined by the expected future profit stream. If potential buyers conclude that the company will be more efficient and profitable in private ownership, then the sale price should exceed the expected value of the profit stream in public ownership. When sold into a competitive market, the seller should realise the benefits from an efficiency improvement that would not have been achieved under their ownership.
- 'Assets sold are lost forever.' It is hard to see just what is being 'lost' in the sale of an immobile asset such as a port or airport. The proceeds of the sale are not 'lost', and they can be applied

to further worthwhile purposes, including the purchase of other assets or repayment of debt. Ultimately it is the service that matters, not the asset.

- 'Privatisation inevitably leads to foreign ownership…' There is nothing inevitable about foreign ownership – and it can change over time. For example, while Telecom New Zealand was initially sold to two US-based companies in 1990, it was subsequently listed on the NZX and today is majority owned by New Zealand-based interests.
- '…and profits going offshore'. Ultimately this is an issue about domestic savings behaviour. Concerns about profits going offshore fail to recognise that New Zealand's savings and investment imbalance has to be financed in one way or another. Just as 'interest' is what New Zealand pays for overseas debt capital, 'profits' are what it pays for overseas equity capital. 'Borrowing' in the form of equity capital has some advantages over debt as the equity purchaser takes on more risk than the corresponding debt provider. Foreign investment also brings benefits in terms of capabilities, knowledge transfers, connections to overseas markets, and the stimulation of domestic competition.
- 'As a public authority can borrow at cheaper rates than a commercial enterprise, a lower cost of capital for publicly-owned enterprises can translate to lower prices for consumers.' This assumes that the authority's overall cost of borrowing is unchanged as a result of borrowing to fund its (relatively more risky) commercial enterprises. Even a very small increase in borrowing costs for the authority's debt portfolio might be very costly for the community as a whole; however, only a tiny fraction of this cost would be borne by the risky enterprise itself.[109]

Source: NZX Company Research database; Productivity Commission

Box 20 **Stronger arguments against privatisation**

Private ownership may not be the best way to deliver many services valued by the community. Privatisation of a publicly-owned business may not be efficient in cases where:

- 'Public goods' are being provided. Public goods, in this context, are those that satisfy two criteria: they are non-rival (ie, one person's use of the good does not impair others' use) and non-excludable (ie, it is not practical to exclude people who do not pay, from using the good). Examples include national defence, basic scientific research and national parks. These factors lead to the underprovision of public goods by private firms. An efficient solution may be for government to set the level of provision and contract private firms to supply them.
- The risk of corporate failure remains with the seller even after privatisation,[110] and the seller cannot find a better way to remove that risk (eg, the regulatory regime for banks).
- The business is linked to another activity that should stay in public ownership, and the transaction costs of a separated model are too high. A specific case of this would be where there are large potential benefits from the coordination of future activities, and there is no more efficient mechanism to provide that coordination.
- There is an inadequate regulatory framework for the sector in which the business operates, and the costs or difficulties of setting up or improving the framework exceed the benefits of privatisation.

[109] This argument applies directly to the equity invested by councils in their enterprises. Publicly-owned commercial enterprises generally conduct their own commercial borrowing. To the extent that owners provide an implicit guarantee of such borrowing (eg, because lenders assume that the owner would never let the enterprise fail), lending risk is transferred from the enterprise back to the owner. This scenario has the same implications as those outlined in the Box.

[110] The IPENZ submission describes such organisations as a 'too big to fail' (sub. 25, p. 3).

- The seller does not have ability to conduct the privatisation process (eg, lack of capability or the potential for corruption).
- The public owner has specific non-commercial objectives, and ownership is the most efficient way to ensure the achievement of those objectives.
- Ownership of a business is required for a strategic purposes concerning a particular asset. Such situations can arise between competitive firms concerning the ownership of patents for key technologies. 'Strategic purpose' in this sense involves blocking access to that technology by a competitor, or ensuring access in situations where a rival owner might choose to block it.

Partial privatisation and financial performance

'Partial privatisation' or 'mixed ownership' is selling a proportion of a government enterprise while retaining substantial government control. The literature on the performance benefits of partial privatisation is more mixed than the clear results reported for full privatisation. Summarising the literature, Huang, Watson and Chen (2011) noted that studies of the effects of partial privatisation are scant and their results mixed.

> In sum, although the empirical and theoretical evidence is far from comprehensive or conclusive, there are reasons to believe that [static] efficiency gains may accrue from partial privatisation even where the Crown retains a controlling interest…
>
> The existing literature does not consider in depth whether dynamic efficiency gains would necessarily accrue to a partially privatised entity in which the state retains control. It may be, however, that the same theoretical basis exists for believing that some dynamic efficiency gains may be realized (if not to the same degree as for full privatisation) as for static efficiency gains. That is, improved monitoring and access to external capital may improve management willingness and ability to generate dynamic efficiency gains.
>
> Huang, Watson and Chen, 2011, pp.12-14

However, Huang et al. also note that many of the studies of full privatisation they reviewed also included many companies in which governments retained significant ownership or control stakes. This suggests that the reported conclusions for full privatisations may also extend to partial privatisations.

Stock market listing

One option for public owners seeking to improve governance is to opt out of the relevant public sector governance regime and into the stock exchange regime. This has the advantage that the governance arrangements for a listed company will apply. While those arrangements can never be perfect, they are subject to strong, and ongoing, scrutiny and pressure for improvement – stronger than that applying in the case of the public-sector regimes.

Listed companies benefit from observable share prices that react to information about market conditions and the perceived quality of directors, managers and any plans they announce. Stock exchange rules such as those requiring regular reporting and continuous disclosure can expose poorly-performing managers, and pressure from minority shareholders and external analysts can spur the timely rectification of such problems.

For stock-exchange mechanisms to work well in encouraging good governance, a significant proportion of stock needs to be privately held and actively traded. While this is probably the case for Tauranga (45%), it is less likely to be so for the Lyttelton Port Company (6%). At this level of private ownership stocks may be illiquid and the company may only attract relatively passive minority shareholders.

External analysts are unlikely to cover a company unless the market capitalisation of traded shares meets certain thresholds. Stock exchange listing also has some high fixed costs. These factors mean that a decision to list is less clear for smaller ports and airports. These companies will need to offer a relatively large proportion of their stock to make listing worthwhile, which may be incompatible with continuing majority council ownership.

S.13 of the Port Companies Act and s.71A of the Local Government Act specify changes to the governance regimes that apply to council-owned port and airport companies following stock exchange listing, including exempting the listed companies from the statement of corporate intent process.

While there are advantages to a stock exchange listing in terms of transparency and a formal framework of accountability, a cornerstone private shareholder may be more appropriate depending on the objectives for bringing in private capital.

F10.5 One option for public owners seeking to improve governance is to opt out of the relevant public-sector governance regime and into the stock-exchange regime. A stock market listing offers significant potential governance improvements for larger companies with partial council ownership. These benefits arise from an observable share price, reporting and continuous disclosure rules, and external analysis of management decisions.

Increased private ownership of ports

Five New Zealand ports have some degree of private (non-council, non-port company) ownership. The Shippers' Council submitted that more extensive use should be made of partial privatisation:

> With regard to port reform, we believe that local authorities should be encouraged to partially sell down their holdings in port companies, to at least the level of Port of Tauranga (55%). Partial privatisation should dilute the influence of parochialism and other political considerations and help make ports more commercially focused, while retaining majority local and public ownership.
>
> New Zealand Shippers' Council, sub. 43, p. 7

Consistent with the analysis presented in section 3.3, in the Commission's conversations with port managers and others from around the country, it was clear that they generally regard Port of Tauranga as the nation's best-performing port. Tauranga's better performance was generally attributed to three factors:

- ownership structure (an NZX-listed firm with a substantial private shareholding);
- owner behaviour (Bay of Plenty Regional Council treating the port as a financial asset rather than an asset to control); and
- business model (emphasising contestability between service providers within the port).

The Commission is of the view that these three factors are tightly linked, a view supported by submissions. For example:

> It is perhaps no coincidence that New Zealand's best performing port (Port of Tauranga) is also the port with the highest proportion of private ownership (45%).
>
> Federated Farmers, sub. 27, p. 7

> It is very likely that the contestability in services provided and the high level of private ownership at the Port of Tauranga has contributed greatly to its performance, relative to other ports. Most of the smaller ports that have limited or no competition for services provided at the port have had low productivity and limited growth in the volume of cargo.
>
> ISO, sub. 28, p. 14

> Marstel agrees that ownership structure of Ports of Auckland may result in a danger that local authorities may not act in the ports best business interests when weighing up competing funding requirements for the region. A more transparent ownership structure with some private investment could act as an additional check on the investment and funding decision making for the port. Public private ownership as with Port of Tauranga is clearly a better model than 100% council ownership as with Ports of Auckland.
>
> Marstel Terminals, sub. 30, p. 6

While each port can provide specific reasons why their performance lags Tauranga, it is clear that none of the other ports is actively engaged in emulating Tauranga's model.

Auckland Council (owner of Ports of Auckland) offered a different view:

> The evidence from New Zealand and internationally does not suggest that private ownership will of itself increase operational efficiency of ports in New Zealand… Public ownership with commercially focused boards is an efficient operating model for ports in New Zealand
>
> Auckland Council, sub. 53, p. 2

Auckland Council did not specify the evidence on which its claim was based. The international studies considered by the Commission were either equivocal, or generally supportive of the proposition that increased performance is associated with increased private ownership (Box 21).

Box 21 **International empirical studies on port privatisation and performance**

> In the case of British ports we fail to identify ownership as a significant factor of production and the evidence does not establish a clear-cut pattern of efficiency in favour of one or other type of ownership.
>
> Liu, 1995, p. 273
>
> The most efficient ownership structure [for a group of 21 international ports] is indicated to be joint [public/private], followed by private ports… and lastly publicly owned ports…
>
> Valentine & Gray, 2000
>
> …some support exists for the claim that the transformation of ownership [of major container terminals in Asia] from public to private sector improves economic efficiency.
>
> Cullinane, Song & Gray, 2002, p. 743
>
> Results [of a study of Korean container terminals] are consistent and suggest (1) the degree of private sector involvement is positively related to productive efficiency and (2) improved productive efficiency has followed the implementation of privatization and deregulation policies in Korea.
>
> Cullinane & Song, 2003, p. 251
>
> Based on a sample of selected container terminals from around the world, the results of this study have shown that private sector participation in the port industry to some extent can improve port operation efficiency, which will in turn increase port competitiveness.
>
> Tongzon & Heng, 2005, p. 405
>
> This paper [rejects] the hypothesis that greater private sector involvement in the container port sector irrevocably leads to improved efficiency.
>
> Cullinane, Ji & Wang, 2005, p. 433
>
> High levels of technical efficiency [in container ports] are associated with scale, greater private-sector participation and with transhipment as opposed to gateway ports.
>
> Cullinane, Wang, Song & Ji, 2006, p. 354

The question to ask is what has the Bay of Plenty community lost through having New Zealand's best-performing port in their region? What have they gained? To the extent that the Port of Tauranga ownership model has led to better financial performance, then the ratepayers of that community have benefited though lower rates. To the extent that the ownership model has driven efficiencies at the port, attracting increasing volumes of freight, then the regional economy has gained.

The Commission finds the evidence and theoretical arguments suggesting increased performance from increased private ownership of ports to be generally convincing. It emphasises, however, that a decision by any owner to choose this method to improve governance, or simply to raise capital, should follow a thorough consideration of the issues and choices outlined in this section. In particular the decision makers should distinguish between commercial and non-commercial objectives, and design the governance arrangements to achieve the best balance between them.

Local government ownership and control of seaports

It is evident from submissions that councils emphasise their rights to control ports through ownership, as can be seen in Box 22.

Box 22 **Local government views on ownership**

Auckland Council

We believe strongly in the benefit of the continued public ownership of [Ports of Auckland Limited]. The governance arrangements now in place effectively separate operational and governance decisions, with [Auckland Council Investments Limited] acting as the shareholder. This allows the efficient operation of the port business and the effective integration of the port's activities with the growth and development of the city…The current governance model is well suited to meeting the need of generating fair commercial returns without exploiting any potential market power that may exist within the port sector. (sub. 53, p. 1)

Environment Southland

Ports and airports removed from community control lend themselves to "gate keeper" or "highway robber" roles in the economy. They provide the owner control of an essential monopoly with the power to tax the economy dependent on the services of the Port…

The community of Southland holds community ownership of these assets in very high regard. The strong ethic of community ownership recognises the significant indirect economic values that this report fails to recognise. The port was built using community money. The fact that community ownership is not as coherently represented in the market as private investment is, does not mean that it holds any lesser rights. Council also owns its share as a majority holding in a publicly listed entity. This provides the accountabilities that go with public listing but also retains a majority control representing the regional community's interest in the port. (sub. 4, p. 1, 2)

Other participants offered their views on local government ownership of ports (Box 23), many of which emphasise disadvantages of local government ownership.

Box 23 **Other participants' views on local government ownership**

New Zealand Shippers' Council

During the 2000s there was a trend of diminishing private sector investment in port companies (most evident in the removal of Ports of Auckland from the stock exchange and reversion to 100% local authority ownership). This has been coupled by what appears to have been a reduced appetite from port companies' local authority owners to demand significant efficiency and productivity gains. The reason for this lack of appetite is likely to be political rather than economic.

As a result, port companies seem prepared to concede a lower level of performance (and ultimately returns on their investments) in return for:

- keeping port operations in the council's geographic area (ie, resisting rationalisation);
- strengthening or retaining local authority control (eg, Ports of Auckland example above, and the abortive deal for Hong Kong based Hutchison Port Holdings to operate Lyttelton Port operations);
- preserving industrial harmony; or
- containing capital investment levels to ensure a consistent dividend flow to council controlled entities to support general council spending. (sub. 43, p. 5)

Port of Tauranga

There is evidence of local authority ownership having previously inhibited port rationalisation. (sub. 37, p. 4)

Employers' and Manufacturers' Association

We believe that 100% local authority ownership is detrimental to good commercial investment decision making and that where possible at least 49% shareholding should be floated as tradable stock for each port…

Changing the ownership structures would engender cultural and efficiency changes and add to the competitive forces. (sub. 7, p. 6, 7)

Democrats for Social Credit

…it is proper that natural monopolies be owned by a democratic state, where all citizens benefit - in social as well as dollar dividends. By way of example, ratepayers in Hawkes Bay Regional Council area were told how their rates would have been higher had it not been for HBRC major ownership of the Port of Napier Ltd. What Democrats for Social Credit strongly object to is the way those benefits are generously shared with private (usually overseas) investors, be they pension funds, banks or insurance companies. We maintain that our ports and the public infrastructures supporting them must be publicly owned… (sub. 26, p. 1)

It is apparent from submissions that local authorities may desire control for a number of reasons, including to:

- balance the financial benefits of owning the port against regional economic development objectives;
- resist control from outside the region, which conceivably might include closure of an uneconomic port (or a reduction in the scope of activities at such a port);
- avoid or reduce monopoly pricing (that presumably would be applied by others in control of the company); and
- balance the financial benefits of owning the port against other amenity values of the port's location and surrounds.

The exercise of control in the pursuit of any of these reasons may come at the cost of reduced financial returns from the port. For example, the allocation of port land to public amenity will, in general, reduce the land available for port operations. Supplying freight services using a smaller land area may require increased labour and/or more expensive equipment – increasing the port's costs.

Externalities

Council control via ownership should not be required for the general prevention of activities by ports that adversely affect ratepayers or the local environment. Councils already have substantial powers to prevent actions within their territory through their regulatory powers over land use and resource consents. It is noted, however, that the Lyttelton/Mt Herbert Community Board contends that despite such regulatory powers, their community is subject to adverse effects from port operations. Nor does majority (79%) ownership of Lyttelton Port Company by Christchurch Council help in their view:

> In the experience of the [Community] Board it is impossible to persuade Lyttelton Port Company to make any decision which its managers see as inconsistent with its short or long term operational efficiency.
>
> Lyttelton/Mt Herbert Community Board, sub. 16, p. 2

Regional economic development

> Many local authorities' shareholders view their port shareholding as a long term strategic investment assisting regional economic development.
>
> Port of Napier, sub. 10, p. 8

The pursuit of regional economic development via port ownership raises the question as to whether 'economic development services' might be more efficiently purchased via some other means – or indeed whether the benefits received exceed purchase costs. Without transparency around the purchase, it is nigh impossible to answer these questions.

There is a significant risk that councils are purchasing regional economic development – perhaps with large amounts of money – in a way not captured by financial statements of the port or the council. Such 'purchases' do not meet expected standards of public sector procurement.

The pursuit of regional economic development can be a negative-sum game, in which regions compete through paying to 'attract' enterprises away from locations in which they would otherwise be most efficiently located. This risk highlights the importance of transparency and accountability around such expenditure.

What is the optimal level of control?

It is ultimately up to individual councils to determine their own aims with respect to local seaports, and to determine the level of shareholding required to achieve those aims.

> A bigger question [about council port shareholdings] could be whether more shareholder value could be derived from a wider public/private shareholding mix.
>
> Port of Napier, sub. 10, p. 8

Different levels of ownership provide different control rights. Some of the key relationships are listed in Table 10.4. It is apparent from this table that the desirable level of shareholding for a particular owner is determined by exactly what it is that they wish to control.

Table 10.4 Control rights available at different levels of company ownership

% Ownership	Act	Significance
100%		Full control
90%	Takeovers Code	The owner of 90% of shares can initiate compulsory acquisition of remaining shares.
75%	Companies Act	Shareholder support required to pass a special resolution. Special resolutions are required to make changes to the company's constitution, and to approve major transactions (those involving more than half the company's assets).
>50%	Companies Act	Unilateral ability to appoint or remove a director.
>50%		Unilateral ability to pass any normal resolution.
50%	Local Government Act	50% or more ownership by one or more local authorities makes that organisation (excluding a port) a *council-controlled organisation*.
50%		A 50% shareholder can unilaterally block any normal resolution.
<50%	Port Companies Act	A port company with <50% ownership by local authorities can request the Minister to exempt them from specific responsibilities (associated with public ownership) specified in the Act.
<49%	Port Companies Act	A port company with <49% ownership by local authorities can request the Minister to exempt them from preparing a statement of intent as specified in the Act.
>40%	Takeovers Code	A shareholder with more than 40% of shares can generally prevent another shareholder increasing their shareholding above 20%.
25%	Overseas Investment Act	25% or more ownership or control by an 'overseas person' requires Ministerial approval under the Act.
20%	Takeovers Code	A shareholder wanting to increase their shareholding beyond 20% must launch a takeover bid and gain the agreement of remaining shareholders.
10%	Takeovers Code	A shareholder with 10% or more of shares can prevent compulsory acquisition of a company by the majority shareholder

% Ownership	Act	Significance
5%	Companies Act	Shareholder support required to call a special meeting.

Notes:

1. Some of these limits may be different if specified in the company's constitution.
2. This table assumes a 1:1 relationship between ownership and control rights. Some companies have multiple share types (eg, non-voting shares) or other arrangements which can affect these limits.

Table 10.5 discusses the reasons for council control of ports identified above in view of the control right levels identified in Table 10.4.

Table 10.5 Control levels required for specific reasons

Aim	Control level required	Control level requirements
Brake on monopoly pricing	50-100%	Given that minority shareholders might reasonably insist that a port set its pricing in order to maximise its profits, a council would require 100% ownership in order to insist on lower prices. The ability to appoint and remove directors does, however, allow councils with 50% control some (albeit indirect) influence over issues such as pricing. It should be noted that the exercise of monopoly power may also be limited by one or more of: countervailing power of shipping lines; competition from other ports; Part 2 of the Commerce Act; and the threat of potential price regulation under Part 4 of that Act.
Optimise financial vs. amenity values	0%-100%	To the degree that community amenity and port financial performance are in conflict, some transfer of value is required in order to achieve the trade-off. How this operates at different control levels is: 100% – the council can make such trade-offs in a non-transparent way by directing the port company to undertake a particular action while accepting a lower financial return from the port (to the extent that this is consistent with the port being a 'successful business' under the Port Companies Act). >50% – the council can make the trade-off in a transparent way by directing the port company to undertake a particular action and providing direct compensation for any financial costs. (In effect, the council is procuring the wider benefits.) <50% – the council can only make the trade-off *with the agreement* of the port company, and paying compensation (presumably with sufficient premium to make the deal attractive).
Optimise financial vs. regional economic development	0%	The same considerations apply as for the previous case. In many cases the council has the alternative of directly subsidising importers and exporters to achieve the same aim without any control of the port. (This is another, and arguably more transparent, way of procuring the desired benefits.) 25% control would permit the council to veto major transactions by the company, ie, the acquisition or disposal of assets whose value is more than half of the company's existing assets.
Resist control from outside the region	>40%	The Takeovers Code means that a shareholder can be prevented from gaining more than 20% ownership by a simple majority of other shareholders. 40% ownership would be a near guarantee of such veto power. The constitution of a port company could embody any of a number of mechanisms that restrict the identity and control rights of non-council shareholders.

Notes:

1. The specific details above may change if the port company is listed on the NZX.
2. The distribution of shares not held by the primary owner will also affect this analysis. For example, if the share ownership is dispersed (ie, many shareholders, none of whom have a significant stake), then control might be achieved at much lower levels than indicated in this table.

The optimum level of council ownership will depend on the priorities assigned to particular aims by local communities. Full ownership comes with risks of non-transparent actions by councils with consequent risks for ratepayers. On the other hand, 100% private ownership may expose local community to risks they would prefer not to take. In this regard it should be noted that effective veto power over non-local control can be provided with 40% ownership.

With regard to other community control aims, some other possibilities are highlighted:

- For a community that wants to maximise commercial returns from their port, an ownership level below 50% is preferable. This allows other shareholders (presumably motivated by commercial gain as their own funds are at stake) to appoint and remove directors.
- For a community that wants to avoid the risk of potential negative consequences of control from outside the region, an ownership level above 40% is indicated.
- For a community that wants the ability to dictate particular non-commercial activities by the port, an ownership level above 50% is indicated.
- For a community that wants transparency and accountability around actions by their council representatives, an ownership level below 100% is required, and ideally one below 50%.
- For a community that wants veto power over major asset transactions by the port company, an ownership level above 25% is indicated.

R10.6 To improve the efficiency of ports, councils should consider increasing the degree of private ownership in them. Councils should evaluate whether they can still achieve important community aims with lower ownership stakes.

Maintaining control with a lower proportion of ownership

The control aims of councils could potentially be achieved at lower proportions of ownership with the use of one of several mechanisms:

- the issue of non-voting shares;
- restrictions on the identity of shareholders[111] and/or the size of their shareholdings; or
- provisions in company constitutions to provide council control over specific decisions.

The latter two mechanisms are often implemented via 'golden shares' or 'Kiwi shares'.

However, such mechanisms come at a cost – shares with no (or reduced) control or transfer rights are typically valued at a lower price by potential purchasers, thus reducing potential sale proceeds. Councils should carefully weigh up the full costs and benefits of any disconnection between control and other ownership rights.

Landlord port models

Other models of port ownership are commonly found overseas. One popular model is the 'landlord' model in which port land and some common infrastructure remains in public ownership, with long-term leases of port areas to one or more privately-owned terminal operators (Box 24). The larger Australian ports, for example, typically have three competing terminal operators. The landlord port model is discussed further in Chapter 13.

[111] For example, there may concerns about large ownership stakes by a major customer, supplier or competitor.

Box 24 **Port privatisation in Queensland**

The model adopted in Queensland demonstrates an alternative approach to the partial privatisation of an existing publicly-owned enterprise. It involves separating government-owned enterprises into parts:

- commercial assets (ie, those generating a commercial return, and with no demonstrable market or policy failure requiring continued Government ownership); and
- other (non-commercial) assets.

The Queensland Government approach has been to fully divest such commercial assets (eg, port terminal operations) while retaining 100% ownership of the non-commercial assets (eg, port land).

Source: Noon (2011)

It has been pointed out to the inquiry that councils may have a legitimate interest in the large blocks of central city waterfront land currently used for port operations. Concerns about private ownership of the port presumably extend to issues not amenable to resolution via local government zoning power and the RMA.

Council ownership of both the port land and operations is not necessarily the most efficient way to deal with these concerns. It may be more efficient to split the land from the port operations as per the landlord port model described above, and then choose the most appropriate ownership model for each part.

This form of structural separation does involve both transitional costs and ongoing coordination costs. The costs and benefits of this approach would need to be carefully considered.

R10.7 Councils – in particular those with interests in ports occupying large blocks of central city waterfront land – should consider landlord port models in which land ownership is separated from port operations. This may be an efficient mechanism for maintaining control over port land use while benefiting from the efficiency improvements resulting from increased private involvement in port operations.

Ownership of airports

Auckland and Wellington City Councils have minority stakes in their international airports (22.55% and 34% respectively). Auckland Airport is listed directly on the New Zealand Stock Exchange, and Wellington is subject to the exchange requirements through its debt listing and the listing of Infratil, its majority owner. Christchurch Airport is 75% owned by Christchurch Council and 25% by central government.

The issues discussed in this chapter in the context of seaports may also be applicable to airports – in particular to Christchurch Airport. However, the three airports are primarily in the business of providing passenger services and only a small proportion of international air freight goes through Christchurch. While airport governance and ownership are important issues, they are peripheral to this inquiry and hence the Commission makes no recommendations.

Ownership of rail

A wide range of different ownership arrangements have been tried for New Zealand rail, without notable success in dealing with its underlying economic problems (Orr, 1981). The arrangements tried include government-owned corporations (five instances), government departments (four instances), integrated private ownership (one instance), and vertically-separated public/private ownership (one instance) (Heatley, 2009).

Following 15 years largely in private ownership, rail returned to full public ownership in 2008, and these arrangements are expected to continue for the foreseeable future (Heatley & Schwass, 2011).

Rail is often considered to be a natural monopoly; however, this categorisation is incomplete in that it ignores the market in which rail competes:

> A lack of competition within the rail sector does not give a rail operator a natural monopoly. KiwiRail competes with other transport modes – with trucks and coastal shipping for freight, and with aeroplanes, buses and private cars for passengers. It is thus unhelpful to consider rail in New Zealand in terms of a natural monopoly.
>
> (Heatley & Schwass, 2011)

Clark (2010) provides the alternative view that rail is effectively a monopoly provider of certain public policy goals, including regional development, environmental sustainability and road safety.[112] In Clark's view, the desire of government to pursue these public policy goals via the provision of rail services, combined with the fact that rail is not economically self-sustaining, creates the difficult policy challenge of paying a public subsidy to a monopoly provider. Clark argues that private ownership of such business (ie, subsidy-dependent monopoly providers) creates high risks for both the government and the business, and the least-costly arrangement is public ownership.

F10.6 While central government ownership of rail has relatively poor incentives for improved efficiency, history suggests that rail (at least at the current network extent) is unlikely to pay its way under any ownership arrangements.

Legislative impediments to privatisation of port and airport companies

The current ownership arrangements for ports and airports appear to reflect the preferences of current owners, rather than any legislative impediments to change, for example:

> The Mayor has given a strong signal in his 4 August report 'Mayor's high level direction setting for the Long Term Plan 2012-22' on the question of ownership of the port and airport, emphasising strong support for retaining Council's shares in the Ports of Auckland or Auckland International Airport.
>
> Auckland Council, sub. 53, p. 7

Under the Local Government Act, a shareholding of any size in a port or airport company is automatically deemed to be a 'strategic asset'. The sale or purchase of such assets is subject to community consultation via a 'long term plan' as specified in the Act. The intention behind this arrangement would appear to be to increase transparency in order to create better alignment between the presumably shorter-term interests of elected councillors and the presumably longer-term interest of ratepayers. However, it may also have the effect of dampening down trading activity in such shares, with potential dampening effects on dynamic efficiency. Auckland Council (sub. 53) pointed out that these provisions do not appear to be a barrier to ownership changes, citing transactions by Auckland City, Auckland Regional and Manukau City Councils that proceeded under the current Act.

The Commission sees no reason why shares in ports and airport companies are automatically deemed to be strategic assets. Individual councils should make this decision based on their own particular circumstances, as they do for other asset types. On the other hand, community consultation over large transactions made by councils on the community's behalf is desirable. The Commission accepts Auckland Council's arguments that a legislative change would not materially improve the current situation.

Summary: ownership matters

Section 10.1 highlighted the importance of effective governance to the efficiency of publicly-owned enterprises. While there are steps that can be taken to improve governance within current public ownership frameworks, there are natural limits to what can be achieved.

Councils (and the communities they represent) may legitimately have mixed objectives for the assets they choose to own. It is up to them to determine the relative importance of those objectives, and the most

[112] Clark does not argue that rail is the most efficient (ie, lowest-cost) provider of these public policy goals. Instead rail is a monopoly provider of the political benefits associated with a commitment to those policy goals.

efficient way to achieve them. Increasing private ownership can, however, bring increased transparency and accountability to the pursuit of mixed objectives and better returns.

Increased private ownership, on average and over time, also leads to improved financial performance. Improved returns can be used to reduce rates or finance other community objectives. Councils should consider using a proportion of private ownership as a tool to improve governance, efficiency and financial returns.

11 Regulation of international sea freight competition

Key points

- Collaboration agreements between international liner shipping carriers have historically been exempt from the full application of domestic competition laws.
- The policy rationale for these exemptions was that groups of carriers on a route needed an ability to fix prices and/or capacity and pool revenue to ensure reliable freight shipping services. As such, the public benefits of the agreements were so likely to outweigh any anti-competitive detriments that there should be no onus on carriers to prove that they do so.
- This approach is adopted in New Zealand, which has automatic exemptions from the *Commerce Act 1986* for all agreements between carriers concerning international shipping, including price/capacity fixing agreements (ratemaking agreements). This approach is in contrast to most other industries where the onus is on the parties to an agreement to prove to the satisfaction of the Commerce Commission that the public benefits of specific agreements that would otherwise breach the Commerce Act in fact outweigh any anti-competitive detriments.
- Continued developments in international shipping over the past two decades, and in particular the rise of cooperation agreements without price/capacity fixing provisions (non-ratemaking agreements), independent carriers, and individual service contracts, have called into question the need to automatically exempt all types of agreements to ensure adequate and reliable services.
- There are few agreements applying to services to and from New Zealand which involve either price coordination, discussions to establish floor rates or surcharges and other terms and conditions to be applied. Accordingly, it would appear that exemptions for these types of agreements play a limited role in driving the provision of shipping services into and out of New Zealand. Other forms of cooperative agreements appear more prevalent and may have displaced ratemaking agreements as the preferred form of collaboration.
- There now seems to be little evidence to suggest that reliable shipping services are so dependent on the ability to have ratemaking agreements that such agreements should be automatically presumed to be in New Zealand's best interest.
- In relation to non-ratemaking agreements, it is unclear what proportion of these agreements would breach the Commerce Act (absent the exemption) and, if they would, to what extent these are ultimately beneficial for New Zealand. It is also unclear whether beneficial agreements would be deterred if the exemptions were removed. This is particularly the case given beneficial agreements could still be authorised, and may be able to be 'cleared' if the clearance regime for cartel provisions is introduced.
- Accordingly, there seems to be little reason why international shipping should be treated differently to other industries by having an automatic exemption for agreements, without any analysis of the actual impacts of those agreements.
- While removing the exemption can be expected to deliver benefits from increased competition, such benefits are unlikely to be decisive for New Zealand's economy. Moreover, there could be risks for New Zealand to move radically ahead of other countries and, in particular, ahead of Australia which still maintains such exemptions.
- The benefit of removal is most likely to lie in insurance against future carrier collusion. Incentives for collusion will likely increase in the future as the market moves into a position in the international

shipping cycle of more constrained supply.

- Overall, the Commission recommends removing New Zealand's exemptions for the potentially more damaging types of agreements – price-fixing (for freight and port charges) and capacity-fixing agreements – and reliance on the generic Commerce Act authorisation regime (and proposed clearance regime) for these types of agreements. Conversely, New Zealand should retain an exemption for non-ratemaking and/or non capacity-setting agreements.
- However, this change should be conditional upon a transitional period being introduced to allow any existing ratemaking and capacity-fixing agreements to be cleared, authorised or amended to ensure compliance with the Commerce Act.
- In the case of non-ratemaking and non capacity-setting agreements, New Zealand should also:
  - amend the exemptions by having only one exemption (in the *Shipping Act 1987*);
  - strengthen the remedial regime in the Shipping Act by introducing a registration regime for exempted agreements;
  - extend the application of the regime to inwards shipping; and
  - allow exemption only for agreements that permit and protect confidential individual service contracts.

This chapter responds to the direction in the inquiry terms of reference that the Commission investigate the effectiveness of New Zealand's current regulatory arrangements for the carriage of the country's exports and imports by international sea freight. In particular, the question to be investigated is whether these arrangements impede New Zealand exporters and importers from enjoying competitive international shipping services.

11.1 International sea freight exemptions

Background

International 'liner shipping' operators have traditionally operated their services using collaboration agreements.

'Liner shipping' involves regular scheduled sailings between specified ports with cargo generally carried in containers, whereas 'bulk shipping' ordinarily involves non-scheduled shipper specific contracts, often using specialised and dedicated ships to carry unpacked dry commodities or liquid commodities.

Liner shipping operators have employed various types of collaborative agreements including 'conference agreements', 'rate discussion agreements' and other forms of non-rate cooperation such as 'equipment interchange agreements'. These types of agreements are described in Box 25.

Box 25 **Types of collaborative agreements**

Ratemaking agreements (sometimes known as commercial agreements)

- 'Conference agreement': an agreement between a group of ocean carriers to set rates and manage capacity on a specific trade route.
- 'Rate discussion agreement': an agreement between a group of ocean carriers to discuss advised rates and capacity management for a specific trade route.

Non-ratemaking agreements (sometimes known as consortia agreements or operational agreements)

- 'Alliance agreement': an agreement between a group of ocean carriers to jointly operate a network of vessel services.
- 'Co-operative working agreement': an agreement between two or more carriers regarding joint services.
- 'Equipment interchange agreement': an agreement between a group of ocean carriers to jointly use and manage a pool of equipment.
- 'Non-rate discussion agreement': an agreement between a group of ocean carriers to discuss service-related and capacity-management matters.
- 'Sailing agreement': an agreement between two or more ocean carriers regarding coordinated sailings.
- 'Vessel sharing agreement': an agreement between two or more ocean carriers regarding sharing of vessel space (space or slot charters and/or swaps).

Historically, liner shipping has enjoyed a relatively unique position in that liner shipping conferences and, more latterly, other forms of cooperation between liner carriers have been exempt from the full application of domestic competition (anti-trust) laws. Throughout the world, jurisdictions tended to exempt liner shipping from the full scrutiny of anti-trust laws, although each jurisdiction took a slightly different approach (Ministry of Transport, 1983, pp. 74-78).

However, a common feature of the various approaches was a policy judgement that all forms of cooperation between carriers (including conference agreements) were likely to deliver benefits to each jurisdiction that outweighed the detriments likely to arise from restricting competition, regardless of the particular features of the route on which the conference was operating. Because the public benefits were considered so likely to outweigh any anti-competitive detriments, a block exemption was considered more appropriate than requiring carriers to prove the public benefits of a particular arrangement.

This policy judgement is also evident in New Zealand, where the international shipping lines that run freight services to and from New Zealand are exempt from the Commerce Act 1986.

However, over the past decade or so overseas jurisdictions have reviewed the basis for these competition law exemptions, particularly in the light of the emergence of non-ratemaking agreements. In particular, various states have reviewed whether the policy presumption still holds that conferences as a class of agreements should be presumed to deliver public benefits which outweigh the anti-competitive detriments.

The justification for competition law exemptions for international shipping

The historical exemptions were justified on the premise that cartel behaviour in the form of conference agreements was necessary to ensure reliable liner shipping operations.

The reason why many Western jurisdictions have been slow to expose these agreements to general competition law is partly explained by the history and evolution of liner conferences, and an acceptance that the economics of liner shipping, coupled with the importance of shipping to international trade, make it a 'special case' such that the benefits of these agreements presumptively outweigh any anti-competitive detriments.

In New Zealand, the importance of shipping to international trade is well established. Submitters drew attention to the unique nature of New Zealand's economy, and its reliance on international trade (see Box 26).

Box 26 **Submitters' views on New Zealand's reliance on international maritime trade**

International Chamber of Shipping

A nation such as New Zealand, with its relative geographical isolation, and its need to deliver large volumes of exports to trading partners and to facilitate the importation of components and raw materials, is dependent on maritime trade to sustain the wealth of its citizens. (sub. 6, p. 3)

Ports of Auckland

New Zealand is a unique economy, geographically distant from world markets. We are one of the world's most active trading nations, with import-export trade representing around 70% of GDP. (sub. 50, p. 2)

NZ Shippers' Council Inc

According to Statistics New Zealand, approximately 99.6% of New Zealand's trade volume in 2008 was carried by sea to/from overseas markets. (sub. 43, p. 1)

Global Shippers' Forum

The Issues Paper also draws attention to the problems New Zealand faces as a result of its remote location and long, thin routes, resulting in less frequent services. This underlines the importance of ensuring that a highly competitive market for shipping services, devoid of cartel distortions, is established and maintained to meet the needs of New Zealand shippers. (sub. 45, p. 48)

International Container Lines Committee

New Zealand importers and exporters rely on sustainable but more importantly consistent shipping services to allow them to trade internationally. The small volume that New Zealand's trade represents, along with the long expensive trade routes such as NZ-US East Coast, NZ-Europe etc. being serviced by many load ports, means that carriers need to operate sustainable shipping services. (sub. 48, p. 26)

Offering regular and reliable services requires significant investment by a carrier in several ships dedicated to a particular route. Running to a schedule also requires ships to leave on time regardless of whether they are full or not, which (based on the experiences of liner carriers in the late nineteenth century) was said by carriers to result in instability in prices. This instability was due to the seasonal and fluctuating demand and the fact that capacity would be set to meet the maximum demand in either direction, thereby exacerbating capacity surpluses at the port with less outward demand (OECD, 2002, pp. 18-19).

The combination of high fixed costs; the need to maintain a schedule; the consequent excess capacity that could arise; and fluctuating and diverse demand were said to contribute to 'destructive competition' and price wars given the commodity nature of the shipping service. In other words, the long-run marginal costs of providing liner services are high, while the short-run marginal costs are low. As a result, in the presence of excess supply there is a tendency for prices to fall to short-run marginal costs, thereby generating returns below the level needed to cover long-run marginal costs.

The fear was that these conditions would lead to some carriers monopolising the trade, in which case the price wars would be followed by monopoly or oligopoly pricing as most providers would be driven from the market.

> Under open competition in international liner services a monopoly situation may occur because the marginal costs of shipping are much lower than average costs. This leads to marginal cost pricing, which tends to drive out the most inefficient operators and a single monopoly operator can become established. By reducing rates to thwart any intending new entrant, the single operator can preserve its monopoly so long as it remains reasonably cost efficient. Thus, the option of prohibiting conferences, in order to deter cartel practices, needs to be weighed against the prospect of monopoly that arises when legislation requires that open competition must prevail.
>
> (Ministry of Transport, 1983)

Given the importance of shipping for trade, the threat of such an outcome was acute.

It was therefore argued that there was a need for capacity control and rate-fixing in order to ensure stable international shipping services. In its 2002 report, the OECD identified five benefits said to arise from conference agreements:

- Carriers can avoid exaggerated rate fluctuations in the face of supply/demand imbalances and encourage private investment in new capacity and technologies, allowing carriers to earn a compensatory rate of return on investments and continue to provide scheduled shipping services.
- These arrangements avoid destructive competition leading to an ever-dwindling number of super-carriers with much greater potential for monopolistic behaviour.
- Shippers are assured that regular predictable services will always be able to transport their goods.
- Shippers can expect that sufficient capacity will be deployed to transport all of their goods.
- Shippers can expect rates to exhibit greater stability than would otherwise prevail (OECD, 2002, p. 19).

Price and service stability appears to remain the justification for the exemptions today:

> It is our view that cooperative agreements permitted by anti-trust immunity contribute to the stability of prices, the availability of regular and reliable services and the promotion of carrier investments in vessels, equipment and related infrastructure to meet expected trade growth and future demand.
>
> Asian Shipowners' Forum, sub. 2, p. 1

While conferences were historically the main form of cooperation, the move to containerised cargo, and the resulting need for carriers to invest in the necessary infrastructure to provide those services, led to the development of non-ratemaking operational agreements. As the OECD noted:

> The development of consortia was a response to the technical requirements needed to launch container services. For example, member lines of the same conference (whether all or only some of them) usually formed a consortium at the beginning of containerisation to smooth the way for the introduction of rationalised conference services. Consortia arrangements also offer advantages to participating shipping companies through cost reductions derived from economies of scale.
>
> (OECD, 2002, p. 25)

Operational agreements are variously termed 'consortia' or non-ratemaking agreements, and include cooperative working agreements, equipment interchange agreements, sailing agreements and vessel sharing agreements (see Box 25). Accordingly, while consortia agreements preclude competition between parties for the particular undertaking of the joint venture, they have the objective of rationalising costs while maintaining the ability for the parties to compete outside the bounds of the cost cooperation.

In this chapter we refer to 'ratemaking agreements' as covering conferences and discussion agreements (as those involve the sharing of sensitive pricing information, which would raise concerns under the Commerce Act as they may directly influence prices) and 'non-ratemaking agreements' as covering all other forms of cooperation.

In addition, the rise of independent carriers (ie, carriers operating outside conferences) was the catalyst for the development of capacity stabilisation and discussion agreements, which tended to replace conferences:

> Discussion agreements are the modern form of the conferences. These promote individual action on rules and freight rates and any collective agreement is purely by consensus.
>
> International Container Lines Committee, sub. 48, p. 6

While independent carriers had an incentive to price based on conference rates (OECD, 2002, p. 23), their existence reduced the level of control that conferences could exert over capacity and prices on a particular route.

F11.1 Cooperation agreements between international liner shipping carriers have historically been exempt from the full application of domestic competition laws. The policy rationale for these exemptions was that price/capacity fixing and revenue pooling etc. were needed to ensure reliable liner shipping operations. As such, the public benefits of the agreements were taken as so likely to outweigh any anti-competitive detriments that there should be no onus on carriers to prove that they do so.

International approaches to international shipping

Before 1998, there was almost universal immunity for all forms of cooperation agreements between liner carriers. For example the US, the EU and Australia all provided immunity from competition law. This approach has been challenged in the last 15 years, given the rise of other less restrictive forms of cooperation and other market changes. The two initial catalysts were the Ocean Shipping Reform Act of 1998 (the OSRA) in the United States and an OECD study (OECD, 2002), both of which challenged the premise that price-fixing agreements are necessary to ensure stable services.

The OSRA for the first time enabled carriers to enter into confidential individual service contracts. Classic cartel theory suggests that the requirement to publish such contracts reduces the incentives for participants to enter into individual service contracts.

This ability to contract confidentially increased the incentive of international shipping lines to 'cheat' on the conference and thereby effectively reduced the importance of conferences. The Federal Maritime Commission reported that the change resulted in more than 80% of liner cargo being carried under individual service contracts (Federal Maritime Commission, 2001).

Importantly, this improved competition was perceived to be achieved without reduced service standards, which called into question the necessity of conference agreements in ensuring reliable liner shipping on US routes. In addition, there was "a dramatic increase in efficiency-enhancing operational types of agreements, such as vessel-sharing and space charters" (Australian Productivity Commission, 2005, p. 127).

The OECD, in its 2002 report, found no convincing evidence that exemptions should automatically extend to price-fixing, as it should not be presumed that the benefits of such agreements outweighed the detriments (OECD, 2002, p. 78). Specifically, the OECD found little reason to believe that liner shipping was more 'unique' than other transport industries and noted that, despite increased competition, many carriers were generating financial returns on a comparable level to other transport industry service providers (OECD, 2002, p. 75).

The OECD concluded that removing competition-law exemptions could reasonably be expected to accelerate trends towards improved service quality, decreasing shipping freight rates and increasing industry concentration (OECD, 2002, p. 73). The OECD therefore recommended that competition-law exemptions should not be allowed to cover price-fixing and rate discussions (OECD, 2002, p. 78).

Publication of the OECD report led other jurisdictions to examine the basis for the continued competition-law exemption for all forms of cooperation between liner carriers, although the result has been different in various jurisdictions.

Some jurisdictions in the Asia-Pacific region, such as Singapore and Japan, have maintained immunity for liner shipping. The Australian Government has not removed the exemption for agreements from competition law, notwithstanding a recommendation by the Australian Productivity Commission (APC) that it do so. In the United States, a Bill was introduced to Congress in 2010 to completely remove anti-trust immunity for liner shipping agreements involving price-fixing, capacity-fixing, and revenue-pooling, while preserving immunity for 'efficiency-enhancing' cooperation (for example, sharing vessels and capacity). The Bill was not, however, enacted before Congress was dissolved.

The most significant move in terms of amending the application of competition laws to international shipping has been in Europe, where the EC repealed the conference block exemption in October 2008,

after a two-year transitional period. The block exemption in the EU for consortia agreements (which cover a narrower set of practices) was most recently reviewed in 2009 and renewed until 2015 on the basis that such agreements were considered to be efficiency enhancing and 'economically desirable'.

Israel took a similar approach, repealing its existing exemption for shipping agreements, and plans to replace it with a block exemption for consortia agreements, set to come into force on 1 January 2012 (OECD, 2011).

Perhaps reflecting the ongoing process of review, in June 2011 APEC (of which New Zealand is a member) adopted guidelines (the Guidelines) on maritime competition laws as recommended practices for member economies (APEC, 2011). The Guidelines, which implicitly accept the distinction between ratemaking and non-ratemaking agreements, recommend formal exemptions remain for non-ratemaking agreements but only where the provisions of general competition law prohibit them, or the general competition laws give rise to uncertainty as to whether such agreements are permissible or not.

Appendix D describes the international experience in more detail.

11.2 New Zealand's current regulatory approach to international shipping

New Zealand's competition laws have not historically applied to agreements between international shipping operators.

Until the enactment of the Commerce Act 1986, the Commerce Act 1975 was not regarded as applying to international shipping and there was no specific regulation of conferences.[113] New Zealand now provides formal exemptions for international shipping in both the Commerce Act and the Shipping Act 1987 from the Commerce Act's competition regime.

At the time they were enacted, these exemptions reflected the prevailing international policy view discussed above that restricting competition between international shipping carriers is very likely to deliver net public benefits to New Zealand and accordingly will be in the best interests of New Zealand as a whole.

The exemptions in the Commerce Act and Shipping Act are cast differently and have different policy goals. The following is a brief description, whereas Appendix E contains a detailed description and comparison with approaches in other countries.

Compared with other approaches, New Zealand's regulatory regime for international shipping is somewhat of an outlier in that the exemptions apply very widely (it does not distinguish between conference and consortia agreements); it does not have a registration regime, any market share thresholds, any requirement for confidentiality of individual agreements, or any provisions for periodic review.

In an international context, New Zealand's regime is closest to Australia's, albeit without the registration regime that exists there.

The Commerce Act exemption

The exemption in the Commerce Act (s.44(2)) applies widely to types of agreement and to carriage of goods by sea, both inwards and outwards. It does, however, have a restriction on the exemption in that it only applies insofar as a provision of an agreement is 'exclusively for the carriage of goods by sea.' This restriction, in effect, limits the application of the exemption to conduct that occurs on board a ship.

Another section in the Commerce Act (s.44(1)(g)) arguably provides a way to get around this restriction so the exemption would apply in addition to the domestic part of the freight journey, providing full particulars are furnished to the Commerce Commission. Not only is this legislative route unused in practice, but owing to the uncertainties of its application, the s.44(1)(g) export agreement exemption may be of limited use to New Zealand outward shippers.

[113] Until 1979 there was a requirement for New Zealand carriers to obtain approval before increasing prices.

The Shipping Act exemption

The Shipping Act exemption was introduced in 1987 and provides that nothing in Parts 2 (restrictive trade practices) and 4 (regulated goods and services) of the Commerce Act apply to 'outwards shipping'. 'Outwards shipping' is defined as 'the carriage of goods wholly or partly by sea from a place in New Zealand to a place outside New Zealand'. Inwards shipping, in other words importing, is not included in the exemption.

The Shipping Act also contains its own remedial regime designed to protect New Zealand shippers from 'unfair practices' of carriers that could arise from the potentially deleterious impacts of exempting international shipping from normal competition rules. 'Unfair practices' are defined as:

- abuse of dominant position;
- failure to give reasonable notice to shippers of changes to terms and conditions;
- refusal or failure to negotiate with shippers; and
- collusion in tendering.

It is unclear why this regime was regarded as being necessary to protect New Zealand shippers as exporters but not in their role as importers, despite the fact that importers could suffer the same deleterious effects as exporters.

Despite the existence of this regime the Ministry of Transport has confirmed that there have been no formal investigations under the Shipping Act (sub. 46, p. 5).

Compatibility of the two exemptions

The two exemptions are subtly different in a number of ways.

- The exemption for 'outwards shipping' contained in the Shipping Act is wider than the exemption in the Commerce Act. 'Outwards shipping', as defined in the Shipping Act, specifically contemplates conduct or agreements in which only part of the journey is conducted by sea, while the Commerce Act exemption is explicitly limited to the carriage of goods by sea.
- The Shipping Act exemption applies to s.36 (relating to taking advantage of substantial market power) of the Commerce Act, whereas one possible interpretation is that the Commerce Act exemption does not (see the discussion in Appendix E).
- While the Commerce Act exemption applies equally to both outbound and inbound sea freight, the Shipping Act exemption is limited to outbound.

In a globalised world there seems little logic in the different treatments of exports and imports and, in the interests of regulatory clarity and simplicity, there seems little reason why two different exemptions are required.

F11.2 Compared with other approaches, New Zealand's regulatory regime for international shipping is an outlier in that the exemptions apply widely and largely without the limiting conditions that are found elsewhere. Moreover, there seems little logic for having two somewhat different exemptions, which give rise to complexity and uncertainty and to inconsistent treatment of importing versus exporting.

In this inquiry the question for the Commission is whether an exemption remains justified for New Zealand – ie, whether such agreements are so likely to result in public benefits that they should be exempted. The subsequent question is if the exemption does remain justified, in whole or in part, what remedial requirements should be in place to mitigate any adverse impacts that could arise from the existence of that exemption?

The section which follows assesses the extent to which the exemptions are needed to ensure continued service to New Zealand at current levels. If the exemption as currently drafted is not needed to maintain current service levels, then this would suggest that the exemption is not required.

11.3 Is New Zealand's exemption needed for reliable shipping services?

As explained in section 11.1 and 11.2, the foundation on which the exemptions were originally built was the argument that price-fixing agreements were necessary to ensure the continued provision of regular shipping services. In such circumstances an exemption could be presumed to deliver public benefits which outweigh the anti-competitive detriments. Accordingly, it is important to assess whether this presumption remains valid.

Evidence on the use of the exemptions in New Zealand

New Zealand as a whole seems to be relatively well served by liner shipping operators, with six of the largest ten container lines operating services to and from New Zealand (Ministry of Transport, 2010a). Regardless of how well served New Zealand is currently, the relevant question is to what extent agreements entered into under the protection of the exemption have contributed to this outcome.

If the exemptions were necessary and commercially advantageous, then one would expect them to be well used. To the extent they are not being used, or not being used for particular types of agreements, this would suggest that they are of limited commercial and strategic importance.

Because New Zealand's exemptions apply automatically without any need for registration, the Commission has limited information on the prevalence of conference agreements, discussion agreements, and the various forms of non-ratemaking agreements in New Zealand.

Ratemaking agreements

According to the International Container Lines Committee, conference arrangements have not operated in New Zealand since the early 2000s, and have been replaced by non-binding discussion agreements. This apparent movement away from conferences in favour of discussion agreements is consistent with what the Commission understands to be the position in Australia, as recorded in an APC report.[114]

> ...conferences have become less important and, on a number of major trade routes including Australian ones, their key roles have largely been subsumed into discussion agreements and operational agreements... The ability to exchange freely such information, together with the informal structure of discussion agreements, has made them attractive for many carriers, and as a result they have become prevalent on a number of Australia's major trade routes.
>
> (Australian Productivity Commission, 2005)

In respect of discussion agreements, the International Container Lines Committee submitted that:

- Discussion agreements are more general in operation than conference agreements but more specific in geographic scope. They operate to collate the supply and demand features of the specific trade, to establish on a non-binding voluntary basis, floor rates of freight and if applicable, surcharges and other terms and conditions in that trade.
- There are two discussion agreements currently in operation in New Zealand, representing three geographic regions for New Zealand exports and less than 40% of total import and export container volumes into and out of New Zealand:
  - Asia New Zealand Discussion Agreement (ANZDA): operates from ports in North East Asia (Japan, Korea, Taiwan PRC, Hong Kong PRC and China) and South East Asia (Singapore, Indonesia, Malaysia, Phillipines, Thailand and Vietnam) to ports in New Zealand, and from ports in New Zealand to ports in North East Asia and South East Asia; and

[114] A recent report from APEC endorsed the APC's conclusion, commenting that conferences appear to serve fewer routes to or from Australia, and that according to experts, conference rates were seldom applied (APEC Policy Support Unit, 2011, p. 306).

  - Australia and New Zealand-United States Discussion Agreement (ANZUSDA-USADA): operates from ports in Australia to ports in the US (including Alaska, Hawaii, Puerto Rico and the US Virgin Islands), and from ports in New Zealand to ports in the US (including Alaska, Hawaii, Puerto Rico and the US Virgin Islands).

- One discussion agreement is dormant, namely the Pacific Islands Agreement, and has not met for over two years (International Container Lines Committee, sub. 48, p. 10).

A review of publicly available information suggests that New Zealand is, or certainly has been in the past, included as part of a number of other discussion agreements; for example, the Canada/Australia-New Zealand Discussion Agreement (CANZDA), the Australia/New Zealand Discussion Agreement, the Australia/New Zealand Vessel Operators' Discussion Agreement, the Butterfly service consortia agreement, and the US Pacific Coast Oceania Agreement (Australian Productivity Commission, 2005, pp. 249-250).

This suggests that ratemaking agreements are not now overly prevalent in New Zealand but nevertheless the market appears reasonably well served at an aggregate level. That said, there is no information on whether these agreements, despite only covering some markets and some capacity, have enhanced the business case for marginal capacity to be provided to and from New Zealand which may otherwise not have been provided.

The Commission notes the Employers' and Manufacturers' Association (Northern) Inc. (the EMA)'s submission that:

> ...we believe that competition is stronger now than it has been however there remains a limited number of shipping lines that call from New Zealand and without the exports of Fonterra it is likely that not only would these reduce numerically but also the volumes through multiple ports would reduce to a point where the adoption of a hub and spoke would be required using just one or two ports for international shipping.
>
> Employers' and Manufacturers' Association, sub. 7, p. 7

One potentially significant aspect of this submission is the EMA's reference to the importance of Fonterra as a customer in ensuring shipping capacity remains in New Zealand. This suggests that factors other than ratemaking agreements are the key drivers of reliable supply in New Zealand.

Non-ratemaking agreements

The Commission also has limited information on the extent of non-ratemaking agreements, although they appear to be more widespread.

The Ministry of Transport suggests that "collaborative arrangements by international shipping are an international 'fact of life' for global trade," noting that "[t]here are a wide range of such arrangements, some of which have no connotations of market power issues" (sub. 46, p. 5), while the International Container Lines Committee submitted that many trade routes into and out of New Zealand operate joint services and require operational cooperation (sub. 48, p. 9).

Evidence of the importance of the exemptions in New Zealand

The international economy in general, and international shipping in particular, suffered a turbulent period during and after the global financial crisis (GFC) in 2008. The performance of the market and the importance of ratemaking and non-ratemaking agreements during this period may provide a guide as to the extent to which these agreements ensure continued supply in New Zealand.

The Commission notes the EMA's submission that:

> Since the recession downturn following the GFC, we have seen pricing for containers sharper than those available during the previous boom periods. So we believe that competition is stronger now than it has been...
>
> Employers and Manufacturers Association, sub. 7, p. 7

The EMA's submission that container prices have decreased as a result of the GFC is consistent with what one would expect in an industry where short-run marginal costs are much lower than longer-run costs. As

demand declines and excess supply ensues, operators have incentives to reduce price to short-run marginal costs. This is the essence of the 'destructive competition' argument advanced to support the shipping exemptions.

What is significant is that it does not appear from submissions received that even a significant downturn such as the GFC has resulted in this destructive competition paradigm actually playing out in New Zealand. In fact, as noted above, 6 of the largest 10 shipping companies operate regular liner services to New Zealand. Given this and the apparent paucity of use of ratemaking agreements in the marketplace, this may suggest that ratemaking agreements have a limited role in ensuring reliable services.

In this respect it is notable that the Shippers' Council submitted that "capacity has diminished in the previous two years as carriers have formed sharing arrangement[s]" (sub. 43, p. 8), which suggests that carriers used non-ratemaking agreements to respond to the excess supply situation created by the GFC.

The Commission would appreciate further information on the means that carriers have used to respond to the shipping excess supply created by the GFC.

Q11.1 What means have carriers used to respond to the excess supply of shipping capacity created by the prolonged downturn following the global financial crisis?

Evidence on impact of removing exemptions on reliable shipping services in other jurisdictions

The reforms in the US and the EU provide natural experiments which are at least indicative of whether the removal of the New Zealand exemptions for ratemaking agreements would undermine regular services.

In the US, the key reform was the ability for carriers to negotiate individual and confidential service contracts. As noted above, the FMC reported that the change resulted in more than 80% of liner cargo being carried under individual service contracts. Individual contracting provided carriers with an incentive to enter into long-term contracts with shippers for large, recurrent services as a way to boost profitability. Smaller shippers were able to pool their needs through freight forwarders and shipping associations to benefit from these incentives (Stewart, Inaba & Blatner, 2003 in (Australian Productivity Commission, 2005, p. 127)).

There is no evidence of these reforms leading to any material degradation in service quality, and indeed the FMC credited this change as supporting the use of efficiency-enhancing (and more competitively benign) cooperation agreements such as vessel-sharing and space charters (Stewart, Inaba & Blatner, 2003 in (Australian Productivity Commission, 2005, p. 127)).

The above impacts suggest that conference agreements were not indispensable to the provision of reliable liner shipping on US routes.

The EC's approach was more radical, removing the exemption for ratemaking agreements but retaining the exemption for non-ratemaking agreements. There appears to have been little in the way of published empirical research on the impact of the EC's decision to remove block exemptions for ratemaking agreements.

The Japanese Shipowners' Association highlighted a difference in shipping rate volatility before and after the removal of the EC conference exemption, submitting that:

> At the time of its repeal, the whole container shipping industry (like most other industries) was in a global economic downturn, facing a sharp decline in cargo volumes and rates with operating losses of more than 15 billion dollars in 2009. While, it is therefore difficult to assess what changes in the industry during this time were specifically attributable to the EU's repeal of the block exemption under such severe economic conditions, the overall negative impacts of the EU's decision on liner shipping rates and services in the EU trades are still recognizable. It has been well documented over the past few years that there has been considerably more rate and service level volatility in EU trades than in comparable trades where there is still anti-trust immunity for rate agreements.
>
> Japanese Shipowners' Association, sub. 49, p. 2

Similarly:

> This significant change in modus operandi for the market saw substantial volatility in freight rates and service offerings as a consequence. The number of carriers operating in the various trade lanes is significant and the number of strings operating for example in the Asia-Europe trades as well as the TransaAtlantic and South Atlantic, always ensured that the market was competitive from a price perspective. However the inability of the lines to meet and consider supply & demand, market growth conditions and ultimately formulate 'floor prices' had a significant impact on the commercial stability of these trades.
>
> International Container Lines Committee, sub. 48, p. 25

> …in particular, concluded that the EU prohibition of liner conferences in 2008 had led to increased volatility of freight rates in European trades, a rise in surcharges levied by individual carriers, and contributed to tighter market conditions following the rationalisation of services by individual carriers that ensued as a partial result.
>
> International Chamber of Shipping, sub. 6, p. 2

> Since the repeal of [the] block exemption for liner conferences in the EU in October 2008, it has been well documented that there has been considerably more rate and service level volatility in EU trades than in comparable trades where there is still antitrust immunity for commercial agreements. The ASF supports the view of the liner consultancy Alphaliner which published its report in May 2011 mentioning "the repeal of conference block exemption in European liner trades in October 2008 has coincided with increased rate volatility on European trades", based on freight rate movements shown by the China Containerised Freight Index. Alphaliner concluded "evidence suggests that the EU's repeal of the conference block exemption has had a negative impact on the industry. Overall, it has diminished the stability and transparency on the trade, while rate volatility has been increased to the detriment of shippers and carriers alike."
>
> Asian Shipowners' Forum, sub. 2, p. 2

In contrast, the Global Shippers' Forum submitted:

> ...since the removal of the EC liner shipping block exemption the liner shipping industry has continued to perform well under the normal application of competition policy, in spite of the considerable disruption caused to international trade due to the current world financial crisis and the 'unprecedented drop off in trade'.
>
> Global Shippers' Forum, sub. 45, p. 3

The Commission has limited information about the impact of the removal of the EU conference exemptions, and has not been able to locate any academic work that isolates the impact on freight rates. Given that the Japanese Shipowners' Association acknowledges it is difficult to assess the effects of the removal of the exemption, it is unclear whether the removal materially contributed to any volatility in freight rates experienced on EU trade routes.

The Commission is interested in further information in relation to this, although at this point it is not satisfied that the removal of the EU exemption for ratemaking agreements has led to material detriments to services.

F11.3 The balance of the limited evidence that exists following the changes in shipping regulation in the US in 1998 and the EU in 2008 appears to favour the view that these changes have not led to material degradation in the quality of shipping services, and may have resulted in some improvements as a result of greater competition.

Attitudes of industry participants to potential removal of the exemptions

The attitudes of various parties to the impact of removing the exemptions vary according to their position in the market. However, if the underlying premise that an exemption is necessary to enable carriers to provide reliable services to shippers (i.e. exporters and importers) was valid, then one would expect that shippers would support the retention of the exemption.

This does not appear to be the case. As a general comment, based on similar reviews of liner shipping exemptions undertaken in other jurisdictions and by the OECD, shippers support the removal of the

exemption, indicating that shippers do not believe that the exemptions are necessary for them to receive reliable and stable shipping services and are willing to risk a competitive market.[115]

Would removing the exemptions deter beneficial agreements?

Removing the exemptions would open up ratemaking and non-ratemaking agreements to scrutiny under the Commerce Act. S.1A specifies that the purpose of the Commerce Act is "to promote competition in markets for the long-term benefit of consumers within New Zealand."

The primary means to achieve this is by promoting workable or effective competition in markets in order to promote economic efficiency. However, this should not be read to mean that competition is the overriding objective; rather, the Commerce Act is an enactment which, as part of New Zealand's economic legislation, has the ultimate purpose of enhancing New Zealand's economic welfare.

To this end, the Commerce Act provides a mechanism for parties to seek authorisation for agreements that may otherwise breach the Commerce Act, provided they deliver net public benefits to New Zealand. As such, authorisations embody Parliament's intention that the long term benefit of consumers is the primary objective underlying the Commerce Act and would remain available for international shipping even if the exemption were removed.

Authorisation under the Commerce Act

Specifically, s.61(6) of the Commerce Act provides that the Commerce Commission shall grant authorisation for an agreement that would otherwise substantially lessen competition (or be deemed to do so) if it is satisfied that the agreement:

> …will in all the circumstances result, or be likely to result, in a benefit to the public which would outweigh the lessening in competition that would result, or would be likely to result or is deemed to result therefrom.

Therefore, removing the exemptions would not mean that beneficial, but anti-competitive, agreements could not be implemented. However, it would place the onus on carriers to demonstrate that the agreements they wish to enter into are in the public interest; they would no longer be presumed to be so.

It should be noted at this point that there is an important distinction between New Zealand's 'agreement-specific' authorisation process and the 'block exemptions' available in other jurisdictions (as apply for international shipping in the EU and Singapore). It is not possible under the Commerce Act to issue a block exemption so as to provide a regulatory safe harbour for categories of agreements.

The Commission acknowledges that relying on an authorisation introduces an element of uncertainty and cost for parties that is not present with the current exemptions in place. Parties will not know from the outset whether their agreement will be authorised by the Commission. Furthermore, the process is public and can be lengthy.

There are also material costs associated with the authorisation regime, both for the applicants and for the Commerce Commission. While there is an authorisation fee, the level is not sufficient to cover all of the Commerce Commission's costs.

For applicants, the direct cash costs by themselves of an authorisation are likely to run to several hundreds of thousands of dollars, covering legal fees and economic consultancy fees (given the need to satisfy the Commerce Commission of the net public benefit and the requirement for the Commission to quantify, insofar as it can, the costs and benefits of an agreement). However, perhaps of more significance is the management and business time required to navigate an authorisation process, which can be disruptive for businesses. Prospective applicants will need to balance these costs against the commercial benefits to be derived from an agreement.

There is a risk, therefore, that some parties may be deterred from entering into these agreements because of these costs and risks. However, it is not clear how many of those agreements would be deterred by the

[115] Similar views were expressed in submissions received by the Productivity Commission from both shippers and ports: Global Shippers' Forum, sub. 45, p. 2; Port Companies of New Zealand, sub. 31, p. 4; CentrePort Ltd, sub. 33, p. 3.

prospect of seeking an authorisation, or of those deterred, how many agreements would actually be beneficial to New Zealand (ie, pass the net public benefit test required to obtain authorisation). To the extent that agreements that do not pass the net benefit test are deterred, this is an argument in favour of the authorisation regime (as opposed to the current regime where these agreements would be exempted).

Nevertheless, even to the extent that the former agreements are deterred, the Commission notes that parties in all other industries face these same issues. The Commission accepts that shipping is an important industry for New Zealand's economic wellbeing, but as the analysis above demonstrates there is little reason to consider it is more important than other large industries in New Zealand. In respect of those industries, the policy decision has been made that the benefits of competition with the backstop of an authorisation process outweigh any deterrent impacts associated with that authorisation regime.

Proposed clearance regime under the Commerce Act

Also relevant to assessment of the potential deterrent effect is the proposal in the *Commerce (Cartel and Other Matters) Bill 2011* (the Bill) to criminalise cartel conduct. The intention of this change is to provide greater deterrence of cartel conduct.

However, the Bill also provides for a 'clearance regime' for 'collaborative activities'. A clearance for collaborative activities will be available where the agreement contains a 'cartel provision' and where the collaborative activity will not have, or would not be likely to have, the effect of substantially lessening competition in a New Zealand market.

Many cooperative agreements between carriers may fall within the category of 'collaborative activities' as defined in Box 25.

Box 27 **The Commerce (Cartels and Other Matters) Amendment Bill 2011**

The Commerce (Cartels and Other Matters) Amendment Bill was introduced to Parliament on 13 October 2011. The Bill proposes to repeal the current sections 30-34 of the Commerce Act (which contain the provisions relating to price-fixing conduct) and substitute a new regime which prohibits a person from entering into or giving effect to a 'cartel provision'.

A 'cartel provision' is defined to include:

- 'price fixing', which is defined as a provision which fixes, controls or maintains the prices at which competitors sell or acquire goods or services in competition with each other;
- 'restricting output', which is defined as a provision which prevents, restricts, or limits the capacity of competitors to offer competing services, or the supply of those competing services, or the acquisition of services in competition;
- 'market allocating', which is defined as being the allocation of customers or geographic areas between competitors; and
- 'bid rigging' which means a provision between competing bidders which restrains a party from making a bid, or requiring a party to make a bid in a certain way, and which is not disclosed to the person conducting the bidding process.

The Bill introduces criminal sanctions for individuals and companies for entering into and giving effect to 'cartel provisions'; the criminal regime is proposed to be run concurrently with the existing civil regime.

The Bill also amends the existing joint venture exemption for 'cartel provisions'. The Bill proposes that a provision which would otherwise be a cartel provision will not be a cartel provision if:

- the parties to the relevant agreement of which the cartel provision forms part are involved in a 'collaborative activity', ie, an enterprise, venture, or other activity, in trade, that:

- is carried on in cooperation by the parties; and
- is not carried on for the dominant purpose of lessening competition between the parties; and

- the 'cartel provision' is 'reasonably necessary' for the purpose of the collaborative activity.

The Bill retains an exemption for joint buying and promotion agreements, although this is amended.

The 'collaborative activity' exemption is intended to capture a wider range of pro-competitive initiatives than the current joint venture exemption. To aid certainty, the Bill proposes to introduce a voluntary clearance regime which will enable persons to apply to the Commission for clearance that the collaborative activity exemption applies. A clearance would immunise the relevant provision from challenge under s.30 or s.27 of the Act.

Clearance can only be obtained for agreements giving rise to the collaborative activity that contain a cartel provision. A cartel provision is defined in the Bill as broadly including price-fixing provisions, provisions that involve restricting output, market allocation provisions and bid rigging.

Many ratemaking and non-ratemaking agreements will involve a 'cartel provision' under this definition and so could be 'cleared' under this system if the overall collaboration did not substantially lessen competition. Such a process would be more straightforward than proceeding by way of authorisation and this would mitigate any deterrent effect. Of course, where competition would be substantially lessened, authorisation would still be available.

If a non-ratemaking agreement does not include a 'cartel provision', then it will not be amenable to clearance. Such agreements are likely to be the most competitively benign yet the requisite certainty may not be obtained other than via an authorisation. This may seem to create a perverse incentive to ensure that non-ratemaking agreements include a 'cartel provision' (or something resembling one) so as to enable parties to seek clearance.

Of course, if the agreement does not substantially lessen competition, then it will be permissible under the Commerce Act albeit without the certainty of a clearance. Again, the Commission acknowledges that the fact parties may need to take advice on whether agreements comply (or otherwise) with the Commerce Act is not something that is peculiar to either the shipping industry or the Commerce Act.

The clearance process should be cheaper (both in terms of direct and indirect costs) and more timely than an authorisation process.

Impact if conduct actually deterred

It is certainly possible that the costs of applying for authorisation (or clearance if the Bill is enacted) would deter some conduct that would otherwise be beneficial for New Zealand. However, as discussed above, this is true for all industries.

Hence the question defaults to why international shipping is different and whether there is reason to believe that more shipping agreements would be deterred than in other industries, and/or that the opportunity costs from these deterred shipping agreements are greater than in other industries.

In its 2002 report the OECD found that there was little reason to believe that liner shipping was more 'unique' than other transport industries (OECD, 2002, p. 75).

The evidence above suggests that ratemaking agreements no longer appear necessary to ensure reliable supply, although there may be more of a case to suggest that at least some non-ratemaking agreements are needed to ensure reliable supply.

If such beneficial agreements were deterred, then this would have adverse consequences for New Zealand, although whether and to what extent this is the case remains unclear. However, given New Zealand's

geographical isolation, small population and large dependence on imports and exports, the impacts could, arguably, be greater than in other industries.

While the absence of clear evidence may suggest there is no case to treat international shipping differently, the reality is that an exemption exists and the question is whether there is a case for change. In such circumstances, uncertainty of impact may suggest that New Zealand should be risk averse and be slow to remove or amend the exemptions in the absence of compelling evidence that another alternative will materially enhance New Zealand's productivity.

> New Zealand importers and exporters rely on sustainable but more importantly consistent shipping services to allow them to trade internationally. The small volume that New Zealand's trade represents, along with the long expensive trade routes such as NZ-US East Coast, NZ-Europe etc. being serviced by many load ports, means that carriers need to operate sustainable shipping services.
>
> International Container Lines Committee, sub. 48, p. 26

The Commission accepts, however, that it could be argued that the importance of the industry to New Zealand is a factor that enhances the case for removing the exemptions.

> The Issues Paper also draws attention to the problems New Zealand faces as a result of its remote location and long, thin routes, resulting in less frequent services. This underlines the importance of ensuring that a highly competitive market for shipping services, devoid of cartel distortions, is established and maintained to meet the needs of New Zealand shippers.
>
> Global Shippers' Forum, sub. 45, p. 4.

Nevertheless, the Commission also notes that while there was support among a number of non-carrier submitters for the exemption to be removed, an emerging theme was a reluctance to see New Zealand 'leading the charge', particularly in advance of Australia.

> If New Zealand were to impose requirements on international shipping that were more restrictive than those applied elsewhere in the world, it would in effect be expecting international lines to change their standard ways of operating throughout the rest of the world for the sake of relatively minor cargo volumes in New Zealand.
>
> Ministry of Transport, sub. 46, p. 6

> ...should an international prohibition of international shipping conference occur then it would [be] logical for New Zealand to follow suit once such prohibitions took place in major markets such as the EU and the US... Our largest trading partner is Australia and we should be looking to ensure we do not get out of line by making rules more difficult for shippers or shipping lines that would apply in Australia.
>
> Employers' and Manufacturers' Association (Northern) Inc., sub. 7, p. 9

> ...the Commission should be mindful of policy trends offshore as it may be in our best interests not to lead the world.
>
> Port Companies of New Zealand, sub. 31, p. 4; CentrePort Ltd, sub. 34, p. 4

The general concerns cited were about a fear of discouraging carriers from servicing New Zealand and making New Zealand a more onerous country to deal with. In addition to Australia, the analysis of overseas jurisdictions indicates that a number of Pacific Rim countries retain exemptions and these are likely to act as important trade-hubs for New Zealand's imports and exports.

In this respect, it is important to note that even in the EU (which is the jurisdiction that has taken the most pro-competition stance), non-ratemaking agreements continue to have the benefit of a block exemption.

11.4 What are the benefits of removing exemptions?

As recognised by the APC, and set out in Table 11.1, given the large range of agreements relating to shipping, some agreements will have a high risk of anti-competitive detriment and some will have a low risk.

Table 11.1 Risk of anti-competitive detriment from carrier agreements

		Market share	
		Low	High
Agreement provisions	Supply-side: Provisions for joint scheduling and supply of services (eg, consortia)	Lowest anti-competitive risk	Medium anti-competitive risk
	Demand-side: Provisions for route pricing and capacity (eg, discussion agreements and conferences)	Medium anti-competitive risk	Highest anti-competitive risk

Source: (Australian Productivity Commission, 2005, p. 145)

The benefit of removing the exemption would be to ensure that all agreements are subject to scrutiny such that only those agreements that result in net benefits or do not substantially lessen competition are permitted.

described above, the OECD found no convincing evidence that exemptions should automatically extend to price fixing as it should not be presumed that the benefits of such agreements outweighed the detriments (OECD, 2002, p. 78), and nor did the APC in 2005.

However, whether removing exemptions will deliver significant and immediate benefits to New Zealand depends on the persistence of agreements that are not beneficial and the extent to which the market is already competitive. If the market is already competitive, then the real gains from a marginal improvement in competition may be small.

The Ministry of Transport considered that the market was currently competitive:

> …the observed behaviour of international shipping lines in New Zealand shows a lot of competitive activity. These observed behaviours include the following.
>
> At least half of the world's top international container lines are doing business in New Zealand, despite New Zealand's total international trade being a mere 0.2 per cent of total international trade.
>
> Many international lines visit multiple ports in New Zealand (to gain as much market share as possible), rather than making better use of their vessels by calling at only a few ports.
>
> Lines chase more business by offering more economical supply chain solutions for New Zealand businesses through moving ships to cargo instead of cargo to ships.
>
> Whenever lines reduce or cease services to a port, it is common place for other lines to commence services ("fill the vacuum") to that port within about three to nine months.
>
> There have been increased shipping services to New Zealand recently by four international lines.
>
> Ministry of Transport, sub. 46, p. 5

The Ministry's reference to carriers being quick to respond to market opportunities as they arise was consistent with carrier submitters that highlighted low barriers to entry and expansion in the market:

> …there is generally completely free access to shipping markets. New entrants can come in, and established shipping companies can extend their activities to new markets.
>
> International Chamber of Shipping, sub. 6, p. 3

> There are no barriers to entry for new carriers and prices react very quickly to movements in the supply and demand equation.
>
> International Container Lines Committee, sub. 48, p. 3

> The current legislative regime means there is no barrier to entry, creating an open market for liner carriers to establish new services or expand on existing ones should they desire.
>
> International Container Lines Committee, sub. 48, p. 12

The International Container Lines Committee submitted:

> The international shipping market is highly competitive to the extent though that freight rates have declined over the past five years. Individual shipper negotiations and the wide range of carriers operating in the markets, both on a direct and relay basis to all markets ensures the competitiveness of the industry.
>
> International Container Lines Committee, sub. 48, p. 22

The views of shippers on the competitiveness of the industry were more restrained. The Employers' and Manufacturers' Association (Northern) Inc. (the EMA) noted that "some of our members do claim poor competition," although it went on to say "we believe that competition is stronger now than it has been" (EMA, sub. 7, p. 7). The EMA also went on to say that there was no evidence that arrangements between carriers were contributing to this outcome:

> The EMA has no evidence of such arrangements causing competition issues between shippers although the effect of some arrangements may have the effect on the use or non-use of some ports.
>
> EMA, sub. 7, p. 7

To similar effect, the Ministry of Transport submitted:

> We are not aware of any evidence in New Zealand's situation that these types of collaborative arrangements have increased freight rates above market levels, as opposed to simply reflecting changes in market rates. We believe, in any case, that changes in global shipping markets (as seen with the 2008/09 global economic recession) have far more impact on freight rates for New Zealand shippers than the particular collaborative arrangements for the international trade lanes involving New Zealand's exports and imports.
>
> Ministry of Transport, sub. 46, p. 5.

In contrast, Kotahi Logistics LP Ltd submitted:

> At a national level nominally shippers have choice between carriers however choice is increasingly cosmetic as most vessels are shared across multiple carriers limiting choice in service delivery (transits etc). Carrier ability and propensity to constrain supply has meant in reality choice has been negated particularly during the peak demand period. At an individual port level shipper choice is significantly more limited or non-existent e.g.: Bluff is only served by 1 carrier. Only shippers with ability to present cargo to the "hub" ports of Auckland, Tauranga, Lyttelton and to a lesser extent Port Chalmers and Napier enjoy significant choice in carrier and vessel.
>
> Kotahi Logistics LP Ltd, sub. 29, p. 7

The Kotahi Logistics LP Ltd submission acknowledges the benefits from collaborative arrangements but suggested that there may be limited pass-through of cost savings:

> Collaborative vessel sharing agreements between shipping lines have enabled an increase in the average vessel size calling New Zealand, reducing the average cost per unit of capacity to the carrier. However, this has been at the expense of freight owner choice in service delivery creating an environment whereby a reduction in the cost to serve has rarely translated directly to a price to serve reduction for freight owners.
>
> This has been at the expense of freight owner choice in service delivery and while there is little evidence of deliberate price fixing between carriers, cost to serve reductions have not necessarily translated to a price to serve reduction for freight owners as under the exemption carriers have been able to artificially constrain capacity further limiting choice.
>
> Kotahi Logistics LP Ltd, sub. 29, p. 7

Overall, the submissions suggest that the industry is generally competitive at present, albeit that some submitters raised concerns about a lack of choice at certain ports, sometimes as a result of vessel-sharing agreements (VSAs).

It is not clear to the Commission whether this lack of choice reflects a competitive and cooperative response to the level of demand at a port (ie, service is at or above the level that would occur in the absence of VSAs), or the result of non-competitive capacity management by competitors (ie, service is below the level

that would occur in the absence of VSAs), which may or may not be in the public interest. Assessing whether the agreement is in the public interest is the very role the Commerce Commission would play.

However, the conclusion that the market is competitive should be tempered by the fact that the current market environment is subdued. In a boom phase of the market, where extra capacity is limited, the impact of the exemptions may not be so benign.

In summary, the evidence on competitiveness of the industry, when combined with the evidence which suggests that ratemaking agreements are not widespread, indicates that removing the exemptions is unlikely to result in a decisive shift in shipping services serving New Zealand. The benefit of removing the exemptions is more likely to lie in insurance against a future degradation of outcomes for New Zealand via the use of carrier cooperation as the market moves into a position where the capacity may become constrained.

F11.4 Most evidence suggests that the international shipping industry serving New Zealand is competitive. This, combined with evidence that ratemaking agreements are not in widespread use, indicates that removing the exemptions is unlikely to result in a decisive improvement in shipping services. The benefit of removal is more likely to lie in insurance against a future degradation of outcomes for New Zealand through carrier collusion as the market moves into a position of more constrained supply.

Finally, a further benefit of the removal of the exemptions might be that it would reduce the asymmetry between ports and carriers, the latter being able to work together in negotiating with individual ports. This asymmetry was highlighted by some submitters:

> …it would appear that there might be asymmetry due to port companies being subject to the Commerce Act while shipping lines are exempt.
>
> New Zealand Shippers' Council Inc, sub. 43, p. 16.

> There is asymmetry of bargaining power because:
> 1. The lines are generally larger entities than port companies and they can collude to negotiate with exporters and importers [Commerce Act s.44(2)] which further strengthens their hand; and
> 2. The container lines can easily change ports and move containers around the country whereas ports are immobile.
>
> Port Companies of New Zealand, sub. 31, p. 9; CentrePort Ltd, sub. 33, p. 10

In contrast, the International Container Lines Committee submitted:

> There is currently no asymmetry of bargaining power between ports and shipping lines in conducting negotiations over rates, apart from the possibility that some influential cargo interests may seek to conduct separate negotiations with ports, that may thereby restrict the latter's room to manoeuvre.
>
> International Container Lines Committee, sub. 48, p. 29

In theory, asymmetry of bargaining power would be an issue where it allowed foreign-owned carriers to obtain extra rents from New Zealand port companies without passing these on to New Zealand shippers in the form of lower tariffs/better services.

There is certainly an asymmetry in terms of the application of the Commerce Act; however, it is less clear how this translates into market practice. For example, Federated Farmers noted that the NZIER had found that the Commerce Act exemption was "only one of eight factors influencing bargaining strength" (Federated Farmers of New Zealand, sub. 27, p. 14), while Kotahi Logistics LP Ltd submitted:

> Asymmetry between ports and the carriers will vary; the actual position will sometimes favour a port, sometimes the carrier. In reality determinants will include factors such as availability of land side solutions unlocking alternatives, the attractiveness of the ports hinterland cargo profile, other carrier support for the port. The key point is that there is not a simple one size all answer and each case needs to be comprehensively understood before conclusions can be drawn.
>
> Kotahi Logistics LP Ltd, sub. 29, p. 13

It should also be recognised that even if the exemption were removed, the carriers would still be able to rely on the exemption to price fixing in the Commerce Act for collective acquisitions (and its application will be clarified following the Commerce (Cartel and Other Matters) Amendment Bill), which is likely to mean that collective acquisition – and the 'asymmetry' associated with it – may remain a feature of the market.

Conclusion on whether the exemption is needed to ensure reliable services

There appears to be little evidence to support the proposition that automatically exempting ratemaking agreements from the application of the Commerce Act is necessary to ensure continued services to New Zealand. Accordingly, there seems no basis to presume that this class of agreements should be presumed to be in the public interest.

Non-ratemaking agreements are more likely to generate net public benefits for New Zealand than ratemaking agreements. Nevertheless, there is no concrete evidence to suggest that an automatic exemption is required from the Commerce Act in order for them to be pursued, particularly given the existence of the authorisation regime.

It is certainly possible that removing the exemption would deter some beneficial agreements as parties would not seek authorisation. However, this is true for any industry. Furthermore, the proposed new clearance regime may reduce the burden of seeking approval for agreements (both ratemaking and non-ratemaking).

Nevertheless, the comments from submitters that New Zealand should not lead the way in reforming the exemptions does suggest a level of concern that some beneficial shipping services would be deterred if the exemption were removed.

Having said that, the Commerce Act authorisation process exists to allow arrangements that have a net benefit to society, and there is little to suggest that international shipping is different from other New Zealand industries. While having to proceed to obtain clearance may deter some parties, it is not clear the extent to which parties will be deterred or whether the most beneficial agreements will be deterred. Moreover, the potential introduction of a clearance regime will provide a lower-cost option which should mitigate any deterrence effects.

11.5 Recommendations

Conditional repeal of some exemptions

The Productivity Commission's draft recommendation is that New Zealand's exemptions for the types of agreement with the higher risk of anti-competitive detriment – ratemaking and capacity-limiting agreements – should be removed. Such agreements could still be authorised or 'cleared' (if the clearance regime for cartel provisions is enacted) under the Commerce Act.

This proposal retains an exemption for non-ratemaking agreements while exposing the types of agreements that have direct or indirect influence on prices and capacity to competition regulation under the Commerce Act.

The Commission's conclusion rests on a number of considerations:

- There appears to be no strong reason to conclude that the shipping industry is more important than other major industries in New Zealand which are currently exposed to the Commerce Act and the authorisation regime.
- There appears to be little evidence that automatically exempting all ratemaking agreements from the application of the Commerce Act is necessary to ensure continued services to New Zealand.
- While current market conditions for international shipping services to and from New Zealand appear to be competitive in spite of the existence of the exemptions, there is merit in being armed with a regime that can cope well with other stages of the business cycle when supply relative to demand is a lot tighter.

- Removing the exemptions and relying on the Commerce Act and the clearance and authorisation regimes for ratemaking and capacity-limiting agreements is consistent with EU law, with the APEC Guidelines, and with the 2005 Australian Productivity Commission recommendations in relation to Part X of the CCA.
- The cost of seeking authorisations from the Commerce Commission is considerable and seems unjustifiable in the case of agreements having low risk of anti-competitive detriments. The cost also risks deterring agreements with net value to New Zealand shippers.
- The case for removing the exemption for ratemaking agreements will become stronger if:
  - the proposed clearance regime for cartel conduct is introduced (which is expected in the current parliamentary term); and
  - the APC's recommendations in relation to Part X of the CCA are enacted – either full removal of the current exemptions (the APC's first recommendation) or partial removal with respect to the higher-risk agreements (the APC's alternative recommendation).

In the Commission's view, the concerns expressed by submitters about New Zealand moving too far ahead of its major trading partners, especially Australia, are unlikely to be justified if the exemption removal is limited to ratemaking agreements.

Coordination between New Zealand and Australia in relation to the proposed change would be desirable (and may reduce the potential costs of removing the exemptions for each party), but the Commission does not judge it to be essential.

A further issue is that any change will need to provide a transitional period to allow the continuation of agreements in place at the time the exemption is repealed pending them being authorised, cleared, or amended to ensure compliance with the Commerce Act.

R11.1

Exemptions for the types of agreement with the higher risk of anti-competitive detriment – ratemaking and capacity-limiting agreements – should be removed. These arrangements should have access to the authorisation and clearance mechanisms in the Commerce Act.

There should be a transitional period to allow the agreements in place at the time the exemption is repealed to continue until their compliance with the Commerce Act has been tested.

The APC's alternative proposal to amend Part X of the CCA

While the APC recommended the complete removal of the exemptions in Australia, no amendments have yet been made. It is not clear when or indeed if that recommendation will be followed.

As mentioned previously, the APC also put forward an alternative recommendation to amend Australia's exemption. The Commission's draft recommendation for New Zealand is close to this alternative recommendation of the APC in that the basic thrust of each is to remove exemptions for ratemaking and/or capacity-fixing agreements because they carry a higher risk of anti-competitive detriments.

The APC alternative also recommends not exempting discussion agreements.[116]

Additionally, to be eligible for exemption, agreements had to allow and protect confidential individual service contracts.

[116] It should be noted that the APC did not offer a definition of 'discussion agreement'. However, the APC concluded that "discussion agreements add little to the provision of scheduled liner cargo shipping services on Australian trade routes but, by bringing together competing parties to discuss *market conditions, services and freight rates*, they enhance the ability of carriers to act in an anticompetitive manner, thereby limiting competition to the detriment of Australian shippers." (emphasis added) The inclusion of factors such as market conditions and services suggests that both ratemaking and non-ratemaking discussion agreements would be excluded from automatic exemption under the APC's recommendation.

This alternative recommendation is broadly consistent with the EC block exemption for consortia agreements,[117] and the US approach to protecting individual service contracts (as implemented by OSRA).

Should the remedial regime in the Shipping Act be retained?

Given that the Commission's view is that some exemptions for international shipping remain in place, then feedback from submitters and international best practice suggests that the remedial regime in the Shipping Act should be strengthened.

First, the exemption remaining in place for non-ratemaking agreements should apply equally to inwards shipping and outwards shipping. Also there seems no reason in principle why New Zealand importers and exporters should not be similarly protected from the potentially harmful actions of carriers gaining the benefit of the exemptions. The Commission accepts that there is at least potential for this to raise international law issues which, although beyond the scope of this report, would need to be assessed as part of an evaluation of this step. However, the Commission reiterates that there is no reason in principle why importers should not be afforded the same protection as exporters.

Secondly, unlike Australia and the United States, New Zealand does not presently require liner shipping agreements to be registered or negotiations to be entered into between shipper bodies and shipping companies before the exemption can be utilised. For example, the current Australian system requires registration with the Registrar of Liner Shipping before the agreement will be exempted under Part X of the CCA.

Some shippers supported increased protection through means such as registration of agreements:

> Requiring registration and/or public release of agreements might be a useful step in preventing their misuse.
>
> Federated Farmers of New Zealand, sub. 27, p. 9

> …NZ would benefit from additional protection from carriers obtaining unfair advantage.
>
> Kotahi Logistics LP Ltd, sub. 29, p. 7

A registration regime would act in a similar manner to an information disclosure regime or a negative assurance regime, and would enable the Ministry of Transport to validate whether particular agreements met the criteria for exemption. It would enable the Minister of Transport to investigate agreements believed to be problematic more easily. Moreover, the Ministry would have more information on the prevalence and existence of these agreements, which would aid policy decision making in the future.

Noting the recommendation to have only one exemption and given the role the Ministry of Transport is likely to have under this recommendation, it seems sensible that the exemption be retained in the Shipping Act.

R11.2

The exemption for non-ratemaking agreements should be retained in the Shipping Act 1987 and be conditional on filing agreements with the Ministry of Transport for placing on a public register.

The exemption and remedial regime should apply equally to outwards and inwards shipping.

The exemptions for international shipping in the Commerce Act 1986 should be repealed.

To be eligible for exemption, agreements must allow and protect confidential individual service contracts.

[117] Regulation 906/2009 provides that the consortia exemption will not apply to a consortium that has as its object: the fixing of prices when selling liner shipping services to third parties; the limitation of capacity or sales (except for limited capacity adjustment exemptions); or the allocation of markets of customers.

12 Regulation of international air freight competition

Key points

- Competition in international air services is regulated in New Zealand by both the Commerce Act 1986 and the Civil Aviation Act 1990:
  - The Commerce Act regulates competition in markets in New Zealand, including markets for international air services.
  - However, certain international air services trade practices can be exempted from the Commerce Act's prohibitions on restrictive trade practices if they meet certain criteria in the Civil Aviation Act and are authorised by the Minister of Transport.
- An alternative form of regulation of competition in international air services would to rely solely on the Commerce Act regime, and remove the specific industry regime in Part 9 of the Civil Aviation Act.
- The Commission does not consider that there is a case to remove the current competition regime for international air services in Part 9 of the Civil Aviation Act, based on air freight considerations alone.
- However, the Government should make changes to the Part 9 competition regime to improve the assessment of the benefits and costs of proposals to authorise certain trade practices.
- The Government should also provide for public consultation on assessments of the benefits and costs and publication of authorisation decisions.

This chapter considers the regulation of competition between airlines carrying freight to and from New Zealand.

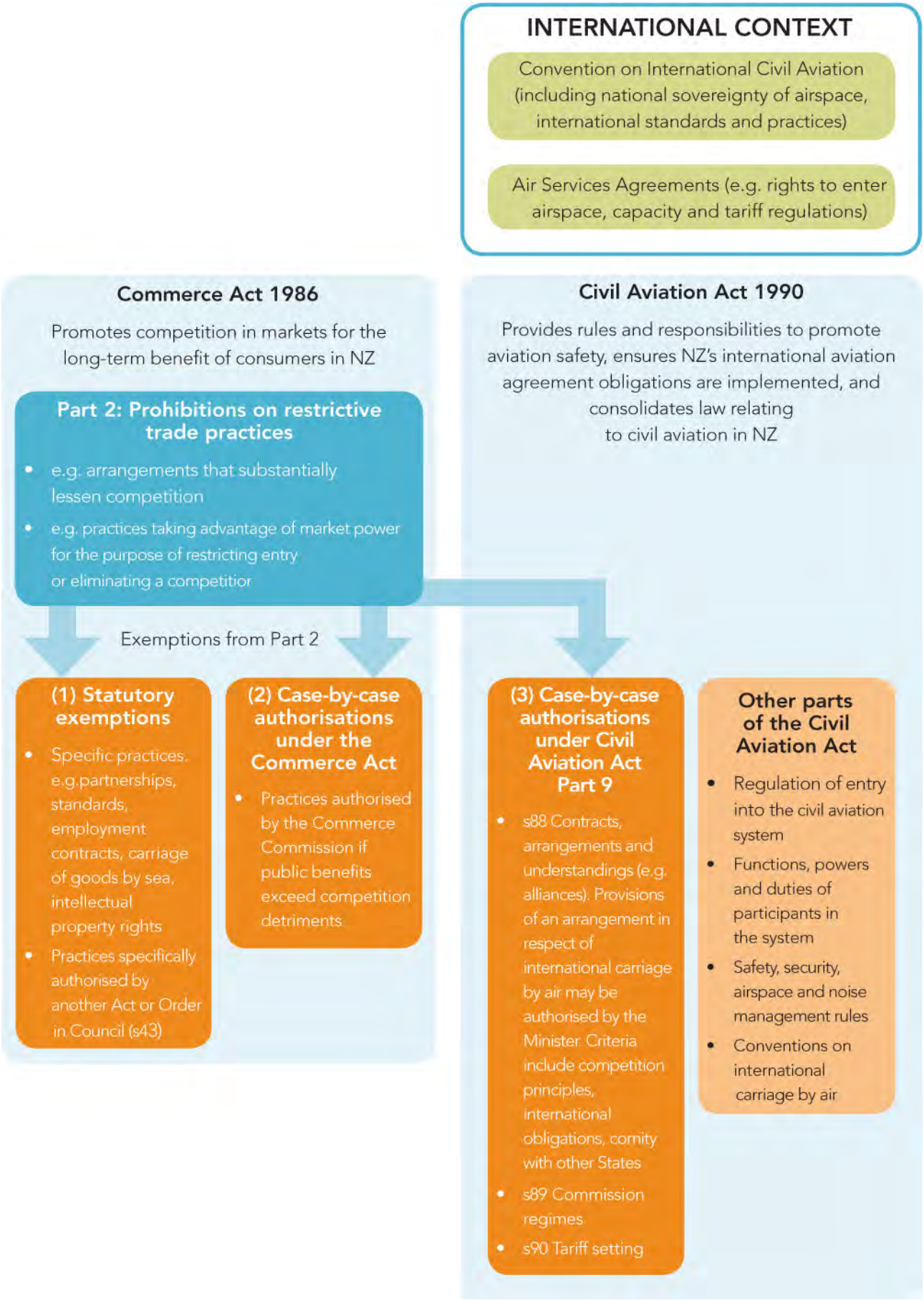
The efficiency of the current competition regime for international air services could be improved. The international air services market and the international regulatory framework for air services have changed significantly since the current competition regime was established. Competition regimes in other countries have evolved over time in response to these market and regulatory developments, but New Zealand's competition regime for international air services has remained the same.

12.1 Framework for New Zealand's regulation of international air services competition

Competition in international air services is regulated in New Zealand by both the *Commerce Act 1986* and the *Civil Aviation Act 1990*. The Commerce Act regulates competition in markets in New Zealand, including markets for international air services. However, certain international air services trade practices can be exempted from the Commerce Act's prohibitions on restrictive trade practices if they meet criteria in the Civil Aviation Act and are authorised by the Minister of Transport. Together, these Acts make up the 'competition regime' for international air services in New Zealand.

Figure 12.1 provides a broad-brush view of the New Zealand competition regime for international air services.

Figure 12.1 Framework for New Zealand's regulation of international air services competition



Notes:

1. Commerce Act authorisations exempt trade practices from certain provisions of Part 2 of the Act, rather than all of Part 2.

Figure 12.1 emphasises the role of New Zealand's international obligations and agreements, with respect to the administration of its airspace and the conduct of its international air services. The objective of the current competition regime is to incorporate consideration of these obligations and agreements into competition assessments.

Appendix B reviews New Zealand's international air services obligations and agreements, but the key points relevant to this section are that:

- There is a well-established international practice of restricting the rights of airlines to carry passengers and freight between countries.
- Countries including New Zealand exchange traffic rights in and out of their territories through bilateral or multilateral agreements, known as 'air services agreements' (ASAs).
- Over the last 30 years, countries have liberalised ASAs to allow more passenger and freight travel between countries and entry by airlines into markets. New Zealand has been one of the leaders of this trend.
- Despite this liberalisation trend, New Zealand's ASAs with key export and import markets such as China, Japan and Hong Kong still impose capacity limits, and ASA negotiations are still an important part of New Zealand's international relations.

12.2 The current competition regime

Part 9 of the Civil Aviation Act regulates three different types of trade practice:

- 'Contracts, arrangements and understandings' relating to international carriage by air, which have typically taken the form of alliances or code-share agreements between airlines.
- 'Commissions' for air travel or air cargo. This refers to the commissions that travel agents and cargo agents charge airlines for booking passengers or cargo onto aircraft.[118]
- 'Tariffs' in respect of international carriage by air. Authorised tariffs can be used to set the price of air carriage (but are not mandatory).

Section 88 regulation of contracts, arrangements and understandings

Section 88:

- defines "international carriage by air" as including the carriage of passengers, baggage and freight;
- provides that the Minister of Transport may from time to time specifically authorise all or any provisions of an arrangement in respect of international carriage by air as far as those provisions relate to the fixing of tariffs, the application of tariffs, the fixing of capacity, or any combination of these;
- provides criteria for the Minister to consider when deciding whether to authorise provisions of an arrangement (including a requirement for the Minister to consider New Zealand's international obligations and comity with other States – see Box 29); and
- states that any such Ministerial authorisation is a specific statutory authorisation for the purposes of section 43 of the Commerce Act, and hence exempt from Part 2 of the Commerce Act.

Box 28 describes how the authorisation procedure has worked in practice, with respect to a 2010 application by Air New Zealand and Virgin Blue to form an alliance.

[118] As an indication of the size of these commissions, IATA Cargo Tariff Coordinating Conference resolutions specify 5% commission rates for IATA registered cargo agents and 2.5% for general cargo sales agents (ACCC, 2010a, p. 45).

Box 28 **Ministerial authorisation process: the Air New Zealand-Virgin Alliance**

In 2010, Air New Zealand and Virgin Blue applied for Ministerial authorisation under Part 9 of the Civil Aviation Act in respect of proposed alliance on trans-Tasman routes.[119] The application explained that the two airlines would:

- fully cooperate and coordinate on all aspects of their international services;
- code-share on a free sale basis;
- coordinate on customer-facing products and systems;
- cooperate in relation to frequent flyer programmes and lounge access;
- cooperate in achieving cost savings and cost sharing and other efficiencies; and
- work together to agree a plan to optimise their operations and networks.

The proposed arrangements did not extend to international air freight services but the example sheds light on the authorisation process.

The Ministry of Transport recommended that the Minister of Transport should authorise the application and the Minister agreed with this recommendation. The Ministry made this recommendation based on an analysis of the following issues:

- *Whether the statutory requirements of section 88 were met*

  The Ministry determined that the statutory requirements in section 88 (see Box 29) were met, and so it was open to the Minister to authorise the application.

- *The likely benefits of coordination*

  The Ministry drew on the views of the applicants and the submissions of interested parties. While the Ministry largely agreed with the applicants that there would be clear benefits for both passengers and the applicants resulting from the coordination, it assessed the extent of those benefits as being more modest than as presented by the applicant (although it does not appear that detailed quantitative analysis was undertaken).

- *Whether the potential detriments of increased market power outweigh the likely benefits of coordination*

  The Ministry considered the potential impact of the proposed coordination on competition in the trans-Tasman market, as it recognised coordination would lead to a reduction in the number of independent decisions being made regarding pricing and scheduling on trans-Tasman services. The Ministry undertook an examination of the likely effect of the proposed coordination on market concentration and performed a counterfactual analysis (a future-focused comparison of how the market would operate with and without the alliance).

Air freight was considered by the Ministry as an ancillary market that might be impacted by any increase in market power in passenger markets. However, any impact on the freight market resulting from the proposed coordination was considered likely to be minimal.

In Australia, coordination between international airlines is subject to general competition law provisions in the Competition and Consumer Act 2010. Under this Act, the Australian Competition and Consumer Commission (ACCC) may authorise coordination between airlines if it considers that the public benefits outweigh the detriments to competition. Given the trans-Tasman nature of the Air New Zealand-Virgin Blue alliance, these companies also sought authorisation from the ACCC. The ACCC reviewed the alliance and granted conditional authorisation until 31 December 2013.

[119] A public version of the application, the Ministry of Transport's assessment and recommendation, and related documents is available at http://www.transport.govt.nz/ourwork/air/airnz-virginblueallianceapplication/.

Box 29 **Ministerial authorisation criteria**

The statutory requirements for considering authorisations under s.88 of the Civil Aviation Act are listed below:

> s.88(2) The Minister may from time to time specifically authorise all or any provisions of a contract, arrangement, or understanding made between 2 or more persons in respect of international carriage by air and related to such carriage so far as the provisions relate, whether directly or indirectly, to the fixing of tariffs, the application of tariffs, or the fixing of capacity, or any combination thereof.
>
> s.88(3) In considering whether to grant authorisation under subsection (2), the Minister shall ensure that the granting of such authorisation will not prejudice compliance with any relevant international convention, agreement, or arrangement to which the Government of New Zealand is a party.
>
> s.88(4) Subject to subsection (5), authorisation shall not be given under this section to any provision of any contract, arrangement, or understanding that–
>
> (a) provides that any party to it may directly or indirectly enforce it through any form of action by way of fines or market pressures against any person, whether or not that person is a party to the contract, arrangement, or understanding; or
>
> (b) has the purpose or effect of breaching the terms of a commission regime issued under section 89; or
>
> (c) unjustifiably discriminates between consumers of international air services in the access they have to competitive tariffs; or
>
> (d) so far as it relates to tariffs, has the effect of excluding any supplier of international carriage by air from participating in the market to which it relates; or
>
> (e) has the purpose or effect of preventing any party from seeking approval, in terms of section 90, for the purpose of selling international carriage by air at any other tariff so approved; or
>
> (f) prevents any party from withdrawing without penalty on reasonable notice from the contract, arrangement, or understanding.
>
> s.88(5) Notwithstanding the provisions of subsection (4), the Minister may authorise any provision of any contract, arrangement, or understanding under this section if the Minister believes that to decline authorisation would have an undesirable effect on international comity between New Zealand and any other State.

Source: Civil Aviation Act 1990

Arrangements or parts of arrangements that are not authorised by the Minister of Transport are subject to the competition regime in Part 2 of the Commerce Act. Part 2:

- promotes competition in markets for the long-term benefit of consumers;
- prohibits anti-competitive conduct and restrictive trade practices; and
- applies to all New Zealand markets unless its application is expressly excluded.

Part 5 of the Commerce Act allows for the Commerce Commission to grant specific authorisations for restrictive trade practices if it is satisfied that the public benefit of the practices outweighs the detriment arising from any potential reduction in competition.

Section 89 regulation of cargo and airfare commissions

Section 89 of the Civil Aviation Act provides for the Minister of Transport to issue, amend or revoke "commission regimes". These commission regimes, once issued, have the effect of exempting cargo commissions from Part 2 of the Commerce Act.

Commission regimes for air freight are not currently an important part of the international freight markets serving New Zealand. The Ministry of Transport's submission notes:

> The Ministry has had virtually no recent involvement in issues relating to the cargo commission regime. Our understanding is that, except for one-off cargo shipments and interlining, cargo rates are largely set by negotiation. This is not surprising given the general surplus of belly-hold freight capacity. Although comprehensive work was done by the Ministry in the early 1990s that led to the approval of the then IATA [International Air Transport Association] passenger-related system, the same was not done with respect to the IATA cargo system.
>
> Ministry of Transport, sub. 46, p. 11

However, Air New Zealand considers that commission regimes may have an important role in the future:

> The current legal proceedings issued by the Commerce Commission have highlighted the divergence in attitude to New Zealand's international obligations between the Commerce Commission and the Minister of Transport. Cargo commission regimes have been referred to in similar proceedings and investigations such as that by the European Commission. In our view, the Ministry of Transport is likely to have need in future of the powers in section 89 to authorise commission regimes. Such regimes are still provided for under a number of ASAs, particularly those that require compliance with IATA tariff setting processes.
>
> Air New Zealand, sub. 47, p. 14

Air New Zealand argues that the Minister of Transport remains the appropriate person to consider commission regimes, but the New Zealand Airports Association disagrees:

> For its part NZ Airports is of the view that the Commerce Commission is the expert party that should be responsible for monitoring any agreements that may potentially affect market competition or include established pricing arrangements (as distinct from unauthorised collusion).
>
> New Zealand Airports Association, sub. 41, p. 23

Section 90 regulation of tariffs

Section 90 of the Civil Aviation Act provides for the Minister of Transport to authorise a tariff (ie, the price and price conditions) in respect of international carriage by air, where the point of departure or destination is New Zealand. As with commission regimes, an authorised tariff is exempt from Part 2 of the Commerce Act. The purpose of section 90 is to provide an authorisation regime that takes account of international air services conventions and agreements, as well as competition matters.

Authorisation of tariffs is not mandatory, and is not currently used very frequently. The Ministry of Transport submission comments:

> Section 90 is still used to approve some tariffs filed by airlines, although these primarily relate to the carriage of passengers rather than cargo. Decisions are generally made under delegated authority by an official in the Ministry of Transport. The section's use is far less than it was in the past.
>
> Ministry of Transport, sub. 46, p. 12

However, Air New Zealand still considers that the authorisation process is important:

> [s.90] is routinely used to approve tariffs which are required by ASAs to be filed with the Ministry of Transport. Such tariffs may represent a small part of airlines' revenues as market driven fares very greatly dominate in the commercial environment. Nevertheless the filing of tariffs approved by overseas regulators remains an obligation of airlines and failure to do so leaves them vulnerable to the kind of technical, capricious proceedings by the Commerce Commission currently being defended at the cost of tens of millions of dollars to New Zealand taxpayers.
>
> Air New Zealand, sub. 47, pp. 14-15

12.3 Alternatives to the current competition regime

An alternative competition regime for international air services would be the Commerce Act regime only, with no recourse to a specific industry regime in Part 9 of the Civil Aviation Act. A Commerce Act-only regime would look like the left-hand side of Figure 12.1, in that it would cover the Commerce Act provisions

but exclude the Civil Aviation Act and specific linkages to New Zealand's international air services obligations.

Under this alternative, airlines and other industry players would need to apply for case-by-case authorisations for alliances, code-share agreements, commission regimes or any other potentially restrictive trade practice via the standard Commerce Commission authorisation procedure.[120]

There are few other models for alternative competition regimes. Most of the competition regimes in other countries are variants of specialist transport authority regimes such as the Civil Aviation Act regime, or general competition authority regimes such as the Commerce Act regime.

Air New Zealand considers that the United States competition regime is "closest to the status quo in New Zealand", and makes the following comparison:

> Under the Federal Aviation Act, the USA Department of Transport has exclusive jurisdiction in relation to international aviation agreements among airlines. The Department is required to consult with the USA Department of Justice [the competition authority] as to the competition aspects of the proposed agreement, but the ultimate decision rests with the Department of Transport. Although not enshrined in regulation, it is understood that the New Zealand Ministry of Transport routinely seeks input from the Ministry of Economic Development as to the competition implications of any agreements – but the decision is ultimately for the Minister of Transport.
>
> Air New Zealand, sub. 47, p.11

Submission comments on the competition regime

A number of submissions provided arguments for and against the current competition regime for international air freight, as described in Box 30.

Box 30 **Assessments of the competition regime in submissions**

Arguments in favour of the Civil Aviation Act regime

There is a need to address international obligations:

> The Civil Aviation Act was drafted to address civil aviation issues specifically and was written in the context of international air service agreements. Such agreements have very different restrictions than normal competition regimes. For example; there are different ownership constraints on who can access rights determined in a bilateral. This is not something the Commerce Act would address.
>
> Aviation Industry Association, sub. 23, p. 9

> The conflict between the respective policy objectives of ASAs and competition law was, we believe the reason for the different legislative treatment of airlines and shipping.
>
> Air New Zealand, sub. 47, p. 10

The Commerce Commission authorisation process is costly and restrictive:

> [Joint venture agreements such as code shares and alliances] are typically required to pass competition hurdles in terms of their effect on competition and net public benefits to each affected state. A "global" net public benefit is insufficient – each state must be satisfied. Such regulatory processes are extremely expensive and frequently do not cross the multi-jurisdiction (but individually assessed by each state) hurdles with the net result that many potential "global" efficiencies are lost. … Proving anticipated economic benefits such as potential trade and tourism growth to the required standard is difficult and expensive. More importantly, "soft" benefits such as improved international relationships, more cultural exchange and enhanced efficiency of

[120] The Commerce Act regime may change shortly. The Commerce (Cartels and Other Matters) Amendment Bill was introduced in Parliament on 13 October 2011. The Bill proposes to replace Commerce Act provisions relating to price fixing with a new cartels regime, with certain exemptions including an exemption for "collaborative activity", and enable persons to apply to the Commerce Commission for clearance that the collaborative activity exemption applies. This Bill is described in more detail in Box 27 of chapter 11.

> international aviation (not accruing directly to New Zealand) are not taken into account.
>
> Air New Zealand, sub. 47, p. 9

The Ministry of Transport has the relevant expertise:

> The Ministry of Transport negotiates ASAs and has a deep understanding of international air transport and the related international conventions and agreements. It equally understands the importance of competition assessment.
>
> Air New Zealand, sub. 47, p. 10

Arguments in favour of a Commerce Act-only regime

There is a reduced need to address international obligations:

> NZ Airports presumes that the historical role of the Civil Aviation Act, and the Ministry of Transport, was derived from the practice of Governments negotiating bilateral air access rights although NZ Airports is uncertain of the direct impact these agreements may have on the carriage of freight. In NZ Airports' view the rationale for such an approach has been surpassed by the liberal air services agreements that have been achieved and the pursuit of airline alliances that directly affect New Zealand.
>
> New Zealand Airports Association, sub. 41, pp. 22-23

The Commerce Commission has the relevant expertise:

> Given the Commerce Commission's recent experience in considering airline alliances of this type and the fact that in Australia such proposals fall within the jurisdiction of the Australian Competition and Consumer Commission … it might be more appropriate if such contracts, arrangements and understandings relating to international carriage by air were dealt with by the Commerce Commission rather than the Minister of Transport.
>
> Auckland International Airport, sub. 38, p. 13

> Economic regulators are tasked specifically with considering whether an alliance or arrangement will lessen competition or if the public benefits of an arrangement outweigh the costs. The Civil Aviation Act does not require the same width of consideration and refers instead to not prejudicing NZ's aviation agreements with other countries and preventing price discrimination. NZ Airports submits that the wider consideration by the economic regulator, the Commerce Commission is the more robust approach and should be the process in New Zealand, as it is Australia.
>
> New Zealand Airports Association, sub. 41, pp. 22-23

12.4 Assessment of the current competition regime and its alternative

The Commission considers that an assessment of whether to retain or amend the current competition regime or adopt a Commerce Act-only regime should be based on the following criteria:

- ensuring the authorisation process for trade practices is based on a good analysis of the costs and benefits of trade practices;
- ensuring the authorisation process has sufficient regard to New Zealand's international air services obligations;
- ensuring the authorisation process is transparent and provides applicants and stakeholders with sufficient opportunities to make their case;
- minimising the direct cost to government;
- minimising the direct cost to affected parties; and

- minimising the indirect cost of chilled commercial activity (ie, efficiency-enhancing commercial activity that is not undertaken because of a concern by businesses that it would fall foul of the competition regime).

For the purposes of this inquiry, the most important criterion is the need to ensure that the authorisation process is based on a good analysis of the costs and benefits of the trade practices. A good analysis will maximise the likelihood that efficiency-enhancing trade practices are authorised, and minimise the likelihood that harmful forms of coordination are authorised.

A Commerce Act-only regime is likely to provide a more comprehensive assessment of the costs and benefits of the trade practices that are proposed for authorisation. In particular, a Commerce Act-only regime would benefit from specialist Commerce Commission resources including:

- guidelines such as the Mergers and Acquisitions Guidelines (which also draw on judicial interpretations of key competition concepts and practices);
- economic and legal staff who specialise in competition assessments; and
- good working relationships with overseas competition authorities.

A Commerce Act-only competition regime would be more transparent than the current Civil Aviation Act regime. Unlike the Commerce Commission authorisation process, the Minister of Transport does not publish draft authorisation decisions under the Civil Aviation Act and seek submissions on these draft decisions.[121]

However, the current Civil Aviation Act regime is more effective than the Commerce Act-only regime in several other respects.

- The Civil Aviation Act competition regime requires the decision-maker to consider New Zealand's international obligations and international comity. While international obligations and international comity are less important considerations for international air services competition on some more liberalised routes, some bilateral arrangements (eg, between New Zealand and Japan) are still highly regulated. This indicates that civil aviation policy considerations are still important in assessing airline coordination proposals on some routes.
- The Civil Aviation Act regime is probably less costly to administer than a Commerce Act-only regime for international air services. The Civil Aviation Act regime may also be less costly for the applicants and other stakeholders participating in the authorisation process. The authorisation process under the Commerce Act is also a lengthy one, which is relatively inflexible to the type of agreement involved.
- Any additional cost of a Commerce Act-only regime would have flow-on effects. It is likely that some air services coordination practices may be beneficial but have a low commercial return compared to the costs of an authorisation regime. These may be deterred under a more costly competition regime.

The cost of changing competition regimes is also an important consideration, and Air New Zealand argues that the cost of changing regimes is not justified:

> The potential for disruption and additional cost in removing the regime and requiring Commerce Act authorisation is not justified. The introduction of the Commerce Act would *probably* require authorisations to be gained under the Commerce Act for all existing arrangements that have been authorised under the Civil Aviation Act after some initial transitional period. This would impose a huge cost on the international airline industry in New Zealand.
>
> Air New Zealand, sub. 47, p. 13

[121] It should be noted that the Ministry of Transport did adopt a transparent process for reviewing two large trans-Tasman alliances. This included an initial round of public consultation but did not include consultation on a draft decision.

The Ministry of Transport also notes:

> Any change of responsibility would require careful consideration of matters such as grandfathering of existing approvals, whether tariff approvals should be subject to different treatment than integrated alliances, and whether categories of arrangements should be considered for block exemptions.
>
> Ministry of Transport, sub. 46, pp.10-11

In addition, there are important passenger-specific considerations in making a judgement about the best competition regime, which are out of the scope of this inquiry. In particular, the international obligations that the Minister of Transport currently considers under Civil Aviation Act authorisation decisions are likely to be focused on air services agreements, and air services agreements are largely driven by passenger traffic considerations.

Conclusion

The Commission does not consider that there is a case to remove the current competition regime for international air services in Part 9 of the Civil Aviation Act, based on air freight considerations alone.

However, the Government should make changes to the Part 9 competition regime to improve the assessment of the benefits and costs of trade practices that are proposed in respect of sections 88 and 90 of the Civil Aviation Act, and commission regimes proposed under section 89 of the Act. This should include an assessment the impact of the proposed trade practices on competition.

Under this revised Part 9 competition regime, the Ministry of Transport would continue to be the principal advisor to the Minister of Transport, and would either undertake its own competition assessment or commission an external assessment. This competition assessment should be consistent with the general procedures and approach of the Commerce Commission, in order to benefit from the Commerce Commission's experience in reviewing competition detriments in trade practices.

The Government should also improve the process for ministerial decisions under Part 9 of the Civil Aviation Act, by providing for public consultation on assessments of the benefits and costs, and by publishing authorisation decisions under s.88 and s.90 (s.89 commission regimes are already required to be gazetted). The requirement to consult on assessments of the benefits and costs of proposals and publish authorisation decisions should provide a strong incentive to undertake rigorous assessments of proposals.

R12.1

The Government should retain the Civil Aviation Act Part 9 competition regime, but should amend Part 9 to:

- require the Minister of Transport to have regard to an assessment of the benefits and costs of trade practices that are proposed for authorisation under s.88 or s.90 of the Act, and commission regimes that are proposed under s.89;
- require an assessment of the detriment arising from any potential reduction in competition as part of each assessment of benefits and costs;
- require public consultation on an assessment of benefits and costs, if the proposed trade practice or commission regime is likely to reduce competition in a market; and
- require the public disclosure of section 88 and section 90 authorisations that are granted under that regime.

13 Other regulatory issues

Key points

- Different subsidy rates across the different modes for domestic freight transport have the potential to distort patterns of use and create inefficiency. Determining subsidy rates is complex and difficult but it is important to estimate them for transparency and to enable decisions that promote efficiency.
- 'Cabotage' for New Zealand coastal shipping should not be reintroduced since the current coastal services provided by international shipping lines are valuable to New Zealand shippers.
- High Productivity Motor Vehicles (HPMV) offer significant opportunities to lift productivity in the road freight sector. However, current regulatory arrangements for designating and upgrading roads for these vehicles, and for road transport operators to access HPMV permits and pay road user charges, appear to be impeding these opportunities.
- Given that airports do not charge directly for international air freight services, and that the information disclosure regime for three international airports under the Commerce Act 1986 has not been in place long enough to be properly tested, the Commission does not believe that there is a case for changing this regime at the present time.
- A key efficiency question is whether existing arrangements for firms to gain access to infrastructure and facilities at New Zealand ports and airports provide adequate scope to harness competitive forces for delivering freight-handling services.
- Most New Zealand ports operate at a small scale compared with overseas comparators and are vertically integrated in contrast to the 'landlord' model in which the owner 'unbundles' port services such as stevedoring, and grants access to competing external suppliers to provide them.
- Infrastructure owners may sometimes have an incentive to refuse access even when this would enhance efficiency. The Commerce Act s.36 sets a high threshold for challenging the decision of an infrastructure owner to refuse access.
- After considering a number of alternatives, the Commission concludes that the transaction costs of an alternative access regime, and the relatively even balance between different types of errors from granting or not granting access, suggest there is no compelling case at this stage for any change in the port or airport sectors.
- There is a case for requiring or promoting some form of information gathering and dissemination to assist in monitoring the performance of freight infrastructure providers and in freight planning and investment. The government should develop a proposal to extend its Freight Information Gathering System.
- The government's management of external costs such as environmental costs can influence the productivity of firms within the freight logistics chain.

The role of government in ensuring efficient international transport services was explored in Chapter 2. One important role of the government is to regulate various aspects of the freight transport industry. How much and how well the government regulates can make a big difference to efficiency. Chapter 2 included a list of questions to be asked of any proposals to regulate in order to help assess whether regulation is really needed, what better options might exist, and what regulatory design would maximise net benefits.

Many key areas in which central or local government regulate some aspect of international freight transport services are examined in prior chapters, including customs, security and biosecurity (Chapter 7), the Resource Management Act (s.8.4), governance and ownership (Chapter 10), and the regulation of competition in international freight services (Chapters 11 and 12).

This chapter covers a range of regulatory issues that do not naturally fit in prior chapters.

13.1 Domestic freight transport

Domestic freight provides the key link at the start or finish of international logistic chains. As indicated in the Commission's International Freight Transport Services issues paper, domestic freight costs can be a significant proportion of overall transport costs (Productivity Commission, 2011). Central and local governments are heavily involved in the provision of domestic transport services and infrastructure, and in the regulation of private domestic transport services providers.

Subsidisation of domestic freight transport modes

To a large extent the nature of road, rail and coastal shipping mean they serve separate markets. Road is best suited to time-sensitive and short-haul freight;[122] however, it also competes with rail and coastal shipping for long-haul freight. It serves customers directly and is the quickest of the three freight modes, as it minimises handling and has high service frequencies. It is also a complement for both rail and coastal shipping, delivering to and from the port or railhead. Rail is best suited to bulky, heavy products and/or long-distance freight. A high proportion of rail tonnage is to and from industrial plants, mines and ports (Booz Allen Hamilton, 2005a, p.38). Coastal shipping is best suited to bulky, heavy, long-distance, non time-sensitive freight. It is not suited to short-distance freight because of handling costs and the inaccessibility of inland routes. The low frequency of services combined with the need for multiple handling means that in general it is the slowest form of transport.

As noted in Chapter 5, only a small proportion (3–7%) of the road freight task is contestable by rail (Mackie, Baas and Manz, 2006). In the other direction, most freight currently traveling by rail is contestable by road. Rockpoint (2009) estimates that only 8% of the overall freight task in tonnage is contestable by coastal shipping. However, for those products and routes on which transport is contestable by the different modes, it is desirable that shippers choose the mode that imposes the least costs on society (for the required service quality). To the extent that subsidies distort these choices, they are a potential impediment to this economic efficiency goal. Explicit subsidies involve payments to providers, lower prices to consumers, or a government-owned entity accepting a low return on capital provided. Implicit subsidies occur when externalities are not priced: examples could include greenhouse gas emissions and water pollution.

Many inquiry participants commented on the existence of subsidies to one or more domestic transport modes. The general view was that coastal shipping was the most disadvantaged by the present arrangements, with less clarity around the relative positions of road and rail. The main arguments put forward are:

- Road freight is subsidised as, under the 'Pay As You Go' (PAYGO) methodology, user charges are insufficient to generate a rate of return on past road infrastructure investment.
- Rail is subsidised by the government as it does not achieve an acceptable rate of return on the capital invested.
- Users of road and rail create externalities for which they do not pay.

Box 31 contains a selection of the views put forward.

[122] "Over two-thirds of all road movements are of less than 200 kilometres, with the Auckland region dominating…" (Booz Allen Hamilton, 2005a, p.73).

Box 31 **Participants' views on subsidies for roads, rail and coastal shipping**

Pacifica Transport Group

Level the playing field for privately-owned transport operators, who compete against state-owned enterprises for the same freight, over the same sector. While the state entity receives huge taxpayer subsidies, the privately owned coastal shipping operator gets zero assistance. Neutralising this anomaly will encourage private enterprise into the coastal market, at minimal start-up cost as compared to rail or road.

Private investment will not occur unless the competitive market place is made more equitable for all transport modes. Currently it is an extremely 'tilted' playing field with rail paying approximately 60% of its actual infrastructure and imposition costs and road paying around 50%. By contrast coastal shipping pays 100% of its costs. (sub. 11, p. 6-7)

Council of Trade Unions

Externalities from road transport substantially exceed those from rail (especially as road rigs become larger and heavier), and both of those greatly exceed those from coastal shipping…

Coastal shipping in New Zealand operates under a number of severe handicaps that limit its ability to play its potential role in raising productivity in the freight transport chain. Coastal shipping is a growing part of the logistics mix and provides a low impact, low overhead and environmentally sound transport mode. (sub. 13, pp. 7, 22)

Customs Brokers & Freight Forwarders Federation of New Zealand

Efficient use of existing infrastructure is paramount regardless of environmental impact. Emissions Trading Scheme and similar schemes mask inefficiency and hinder true multimodal usage. Coastal shipping is the most environmental efficient method of transport; it has far less carbon emissions than alternate methods such as road or rail. The costs to set up infrastructure are less than road and rail. (sub. 17, p. 2)

Port Companies of New Zealand

The Government needs to be certain its investment and pricing policies for road and rail freight are rationally based, otherwise there will be a loss of efficiency. It also needs to ensure that coastal shipping services are able to compete with road and rail on a fair basis. Port companies are not presently convinced that current road, rail and coastal shipping policies have created a level playing field. (sub. 31, p. 8)

New Zealand Shippers' Council

While there may be a case for some government investment in rail infrastructure (at least in the short-term), rail services should operate without the need for operating subsidies. Policies and funding decisions that favour one mode over another should be avoided … policies and funding decisions that favour coastal shipping should be avoided. (sub. 43, p. 12)

Ports of Auckland

POAL does not believe there is a level playing field with regard to investment and pricing policies across the supply chain. At the moment, road does not pay its way. This is to the disadvantage of coastal shipping in particular. (sub. 50, p. 20)

Auckland Council

Coastal shipping should be encouraged / subsidised where feasible given its wider transport and environmental benefits. (sub. 53, p. 17)

Determining the level and direction of subsidies across transport modes is complex and difficult. Assessments of subsidies for road transport are made more difficult by the fact that road infrastructure is used for both passenger and freight transport, and there may be cross-subsidies from one group to another. Furthermore, few externalities are priced, and most are difficult to estimate. The Commission has not examined domestic transport subsidies in detail and confines itself to a few observations in order to aid further analysis and discussion.

The Commission's preliminary view is that it is not correct to argue that road freight is subsidised on account of its PAYGO method of funding, which does not explicitly charge users for past road infrastructure investment. It agrees with the Australian Productivity Commission's response to similar concerns:

> Capital costs are fully recouped under a PAYGO approach. Under a pay-as-you-go approach… capital spending is recovered in the period in which it occurs. This means that users of roads, rather than road providers, effectively fund the investment. In principle, therefore PAYGO does not subsidise freight infrastructure users compared with an approach where users are charged an amount each year that covers asset depreciation and a return on capital.
>
> Australian Productivity Commission (2006), p.xxxii

Another argument put forward is that rail is subsidised by the government as it does not achieve an acceptable rate of return on the capital invested. This view is supported by Booz Allen Hamilton (2005b), who found that for 2001/2002 rail freight revenues were sufficient to cover operating costs (and track and rolling stock replacement), but insufficient to fund an adequate economic return on the total recoverable assets (including land and other infrastructure assets). The financial consulting firm Rockpoint also found that rail has generated an insufficient return on capital (Rockpoint, 2009).

Section 8.2 provides information on the level of government subsidies to rail. The Commission has not undertaken the analysis needed to reach a conclusion on whether current and envisaged levels of rail subsidies are economically efficient, but it is concerned to see the investment of large amounts of public money without the presentation of a full business case. The Commission therefore recommends (see Recommendation 9.1) that a full cost-benefit analysis should be produced for future government investments in rail infrastructure, including those in the KiwiRail Turnaround Plan. Such analysis would make the purposes and amounts of subsidies transparent and help inform public debate.

A further concern raised in submissions is that prices charged do not fully reflect the external costs of different forms of freight transport. Such external costs include greenhouse gas emissions, other environmental impacts, congestion and accident costs. To the extent that these external costs are not incorporated into prices, they are implicit subsidies. For example, coastal shipping has the least greenhouse gas emissions and is the most energy-efficient mode per tonne kilometre, rail lies in the middle and road freight has the highest environmental impact.[123] [124] To the extent that New Zealand's Emissions Trading Scheme does not fully incorporate the impact of greenhouse gas emissions then, this ordering implies a parallel set of subsidies with coastal shipping disadvantaged relative to road and rail, and rail disadvantaged relative to road.

Subsidies and the economics of coastal shipping and rail

If it turns out that public investment in KiwiRail has a large subsidy component and so does not earn an economic return, and coastal shipping has smaller environmental impacts than rail and particularly road, then the playing field is indeed tilted against coastal shipping. Despite freight charges for coastal shipping being lower than for rail and road (see Table 4.6), it attracts relatively low volumes of freight because of slow transit times, infrequent services and other features.

However, on a more level playing field, coastal shipping (both domestic coastal and international operators) would have an even greater price advantage and could attract more custom. In turn this could make it economic for coastal shipping operators to offer more frequent services, which will reduce transit times and further boost custom. Without a good justification for the current pattern of subsidies, such a change might well improve the overall efficiency of domestic freight transport.

As mentioned, coastal shipping is suited to longer routes such as between Auckland and Christchurch. Yet this is just the route that the KiwiRail Turnaround Plan is targeting, including investment in expensive ferries that can carry rail wagons. This deployment of resources does not, on the face of it, seem efficient.

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[123] However, coastal shipping does have some negative environmental impacts. For example, it emits sulphur dioxide and nitrous oxide. There is also the risk of an oil spill like the 2011 Rena incident. The Commission has not attempted to quantify potential impacts from accidents of various sorts, on roads, rail or shipping.

[124] Based on European data the Mode Grams of CO_2 per tonne kilometre are: Road 123.1; Heavy duty road vehicles 92.0; Rail 22.8; and Coastal shipping 13.9 (Ministry of Transport, 2008b, p.10).

F13.1 Different subsidy rates across the different modes for domestic freight transport have the potential to distort patterns of use and create inefficiency. Determining subsidy rates is complex and difficult but it is important to estimate them for transparency and to enable efficient decision making.

Coastal shipping and cabotage

'Cabotage' refers to the reservation of a country's domestic coastal trade to shipping operators of that country. In New Zealand, the *Maritime Transport Act 1994* (s.198) allows international operators to compete on coastal routes against domestic operators, providing they do so as part of an international voyage and do not operate in New Zealand longer than a continuous period of 28 days. An issue raised in some submissions was whether cabotage should be reintroduced in New Zealand.

Cabotage potentially affects four classes of cargos:

1. Domestic port to domestic port.
2. Domestic port then trans-shipped at another domestic port prior to export.
3. Import to domestic port then trans-shipped for another domestic port.
4. Empty container repositioning.

It has been argued that domestic coastal supply operators do not compete on a level playing field with international operators. For example, international operators may be exempt from paying New Zealand income tax (some of New Zealand's double tax agreements exempt profits from coastal cargo); they can employ low-cost foreign labour whose wages are exempt from New Zealand income tax; they have no GST compliance costs; they do not need to adhere to a range of other domestic regulations and are not subject to levies under New Zealand's Emissions Trading Scheme. The Commission agrees that domestic coastal operators face competitors that enjoy lower costs in a number of areas. However, this situation is similar to that faced by other New Zealand industries that compete internationally against foreign-produced goods and services.

Furthermore, international shipping services carry significant volumes of container cargo around the New Zealand coast, much of it at low marginal cost and low prices. They also reposition thousands of empty containers each year. These services are valuable to New Zealand shippers. Reintroducing cabotage would be likely to result in a decrease in competition and an increase in costs and prices. For this reason the Commission does not support the reintroduction of cabotage.

F13.2 Cabotage should not be reintroduced since the current coastal services provided by international shipping lines are valuable to New Zealand shippers.

High Productivity Motor Vehicles regulation

High Productivity Motor Vehicles (HPMV), which can carry longer and/or heavier loads, have the potential to significantly increase the efficiency of road transport. One example is trucks that carry containers of kiwifruit for Zespri from packhouses to ports. The kiwifruit are packed on pallets and 22 pallets fill a 40-foot container. However, without an HPMV the containers – one per truck – are limited to a load of 21 pallets to conform within weight limits. Because of cost, the containers are not repacked to full at ports. The ability to use HPMVs would not only reduce the number of trucks on domestic roads, but also reduce the number of containers that Zespri needs to ship to its overseas markets.

HPMV operators are required to have a permit from road-controlling authorities (mostly local councils for local roads, and the New Zealand Transport Agency (NZTA) for the state highway network).

Waikato Regional Council pointed out that the new vehicles impose pressures on local roads, which were not designed for such vehicles, and both renewal and maintenance needs of these roads are increasing (sub. 5, p. 10).

The Commission heard that the issue of permits and the upgrade of routes to be suitable for HPMVs is constrained by complex processes and risk-averse behaviour by road-controlling authorities (Road Transport Forum, sub. 55, pp. 8-9). A mismatch between increased costs falling on local authorities from HPMVs and increased revenues from Road User Charges (RUCs) that go to the National Land Transport Fund also acts to discourage the issue of permits. Road transport operators are also concerned about the uncertainty around what will happen to the RUC system following proposed legislative changes currently going through the parliamentary process.

The NZTA is investigating how to simplify the HPMV permit process. An independent review commissioned by NZTA and the Ministry of Transport (2011) found that:

- Implementation of the Land Transport Rule (Vehicle Dimensions and Mass Amendment 2010, Rule 41001/5)[125] as at 30 April 2011 was still in a very early phase. Just over half of the 1082 applications were either declined or pending, primarily because of the limited availability of routes with confirmed bridge capacity. The majority (67%) of the 501 approved permits have been for OL (over-length, but not over-weight) vehicles that do not rely on increased bridge capacity.
- Key barriers to operator uptake of permits are network availability, increased RUC payments, uncertainty over proposed changes to RUC, and high infringement costs if permit conditions are breached.

In summary, the implementation experience has highlighted transitional problems, with different degrees of complexity. Some are coordination problems between different agencies, while others can be described as incentive alignment problems (from a local government perspective). The core obstacle to successful implementation of the Rule is the adequacy of infrastructure (mainly bridge capacity), difficulties in obtaining an assessment of whether the infrastructure requires upgrading, and the costs and time required to improve infrastructure where warranted.

13.2 Regulation of airports

As discussed in previous chapters, three New Zealand airports are gateways for international freight: Auckland, Christchurch and Wellington. The main role of airports in the international freight supply chain is to provide infrastructure.

These airports are subject to various laws including the Airport Authorities Act 1966, the Local Government Act 2002 (Christchurch only) and the Commerce Act 1986.

The relationship between airlines and airports appears to be strained, with airlines claiming that airports are using their market power as geographic monopolies to overcharge for services. Airports countered with arguments that their ability to exercise market power was constrained. It is difficult to judge whether these claims and counter-claims represent a serious efficiency problem, or simply vigorous haggling over pricing (through direct negotiations, legal disputes and political manoeuvring).

Following the Commerce Commission's Airport Price Inquiry in 2002, and a review by the Ministry of Economic Development in 2007, the three major airports were made subject to 'information disclosure' regulation under S.56–56A of the Commerce Act in 2008. Information disclosure is the least onerous of the four economic regulation regimes defined in Part 4 of the Commerce Act.

These airports are now required to disclose a significant quantity of tightly specified information about their operations, including some details on international freight activities. Pricing disclosures under this regime

[125] The Land Transport Rule (Vehicle Dimensions and Mass Amendment 2010, Rule 41001/5) came into effect on 1 May 2010. The rule provides for higher-mass (HM) and over-length (OL) permits, or a combination of both, for travel by heavy vehicles on state highways and/or local roads. There is also provision for increased length, as of right, for articulated vehicles, logging trucks, and truck and simple trailers for car and container cartage. See NZTA and Ministry of Transport (2011).

were required by 30 September 2011. Annual performance disclosures for the 2011 financial year are required during the first half of 2012.

A Commerce Commission review of the effectiveness of the information-disclosure regime will be triggered by the first price change for specified airport services during or after 2012.

Given that the regime is yet to take practical effect, it is likely to be a year or more before it is possible to properly assess whether there is a market power problem, and if so, whether the regime has been effective in constraining the exercise of that power. Air New Zealand (sub. 47) and the Board of Airline Representatives (sub. 36) submitted that they believe the regime will be ineffective, and argue that airports should be subject to more onerous negotiate/arbitrate regulation under the Commerce Act:

> BARNZ has serious doubts that the Commerce Commission regulation (which comprises annual information disclosure by the airports and monitoring by the Commission based on pre-specified input methodologies) will be sufficient to restrain monopoly pricing by airports which wish to continue doing so…
>
> BARNZ considers that airports need to be made subject to stronger regulation under Part 4 of the Commerce Act – namely negotiate/arbitrate regulation. Without this, airports are simply able to dismiss the input methodologies as only applying to information disclosure and not needing to be followed for pricing purposes (where airports continue to have the right to set charges as they think fit under s.4A of the Airport Authorities Act) and are able to continue to set charges which enable monopoly profits to be earned.
>
> Board of Airline Representatives New Zealand, sub. 36, p. 5,6

This view can be contrasted with that of the Airports Association:

> Airports have been and remain concerned that at the heart of the Commerce Commission's monitoring of the information disclosure regime for financial information is a de facto price cap approach where the Commerce Commission will assess actual airport outcomes against input methodologies that have been established by the Commerce Commission. The de facto price cap approach arises because the Commerce Commission will compare airports revenues to its own methodologies, which include a methodology for cost of capital which is not required to be applied by airports. This is of concern because price cap approaches have been shown to stifle investment.
>
> New Zealand Airports Association, sub. 41, p. 16

Given that airports do not charge directly for international air freight services (section 3.1), and that the new regime has not been in place long enough to be properly tested, the Commission does not believe that there is a case for changing the information disclosure regulatory regime at the present time.

F13.3

While there is potential for major airports to exert market power over freight services providers, there is insufficient information for the Commission to make a judgement as to whether this is occurring, and if so, whether it reduces the efficiency of freight services.

The forthcoming review of the information disclosure regime for airports under the Commerce Act is likely to be a sufficient mechanism to allow these issues to be addressed.

13.3 Regulation of seaports

As with airports, governments can require information disclosure of ports as a form of regulation, where there are concerns about the market power of ports or for other reasons. Comparative information on prices, costs, indicators of productive efficiency (eg, crane rates in ports) and financial performance can help reveal evidence of excessive prices or operational inefficiencies.

The option to require information disclosure is part of New Zealand's approach to mitigating the abuse of market power, principally under the ambit of the Commerce Commission. Section 13.2 discussed how the

Commerce Commission requires information disclosure by three international airports in New Zealand.[126] The focus of this section is on information disclosure regulation with respect to ports.

In 2002, the Ministry of Economic Development undertook a review of port companies' market power (Ministry of Economic Development, 2002). This focused mainly on concerns raised by port customers including excessive fees, excessive returns, cross-subsidisation, and lack of transparency in port pricing (eg, how these prices related to port costs).

The Ministry's review considered three regulatory options: a Commerce Commission inquiry; a mandatory dispute-resolution regime; and an information-disclosure regime. It noted the following points about information-disclosure regulation:

- A Commerce Commission inquiry, "while having the benefit of providing a rigorous quantitative analysis of port companies' returns and guidance on appropriate valuation methodologies, would also impose significant costs" (Ministry of Economic Development, 2002, p.8).
- Information-disclosure regulation works better in industries where the regulated entity provides a few standardised products to all customers.
- Prices for particular goods are based on a range of matters, and some degree of cross-subsidisation and price discrimination can be efficient. So information disclosed does not necessarily help third parties to determine 'appropriate charges.'
- While information disclosure is one of the more light-handed forms of intervention, it still imposes industry-wide compliance costs.

Partly for these reasons, the Ministry did not recommend introducing industry-specific regulation in the port sector.

Today, the benefits of information disclosure regulation of ports' market power do not appear to outweigh the costs. Each type of cargo – container cargo and the different forms of bulk cargo – has its own handling requirements and often its own specialised port equipment. As a result, information disclosure requirements may need to be tailored to each type of cargo, and this may be costly to both the regulator and the regulated port.

This does not imply that current information reporting by ports is sufficient for more general governance purposes. In Chapter 10, the Commission put the case for improved reporting and transparency by ports to ensure ports are sufficiently accountable to their shareholders.

In addition, future industry developments such as port mergers may shift the balance of costs and benefits more clearly in favour of economic regulation (see section 9.7). If this shift in favour of regulation occurs, the Commerce Act provides for the Commerce Commission to undertake an inquiry – on its own initiative or at the request of the Government – into the case for regulation and what form it should take, including information-disclosure regulation.

F13.4 The Commerce Act allows the Commerce Commission to review the case for economic regulation of ports, if future industry developments shift the balance of costs and benefits more clearly in favour of regulation.

13.4 Access regimes and unbundling

This section explores whether New Zealand ports and airports are realising the potential for higher efficiency and better customer service through unbundling contestable services,[127] and providing access to competing firms to supply them.

[126] Under subpart 9 of Part 4 of the Commerce Act 1986, suppliers of electricity lines services are also subject to information disclosure regulation. The Commerce Commission's determination may require suppliers to disclose certain specified information relevant to their performance (such as financial statements, prices and quality performance measures), including forward-looking information (such as forecasts and asset management plans).

Several parties claim that existing arrangements for gaining access to infrastructure and facilities at New Zealand's ports and airports do not adequately harness competitive forces for delivering freight-handling services such as stevedoring and marshalling at ports, and cargo handling at airports (New Zealand Air Cargo Council, sub. 8; BARNZ, sub. 36; Kotahi, sub. 29; and Aviation Industry Association of New Zealand (Inc), sub. 23). To evaluate whether stronger arrangements to facilitate access might be justified, this section considers:

- Whether sufficient evidence exists to justify intervention. An access problem in New Zealand would mean that opportunities to improve productivity or sector performance are currently being forgone by restrictions on access, and that existing processes for seeking access under s.36 of the Commerce Act 1986 are not sufficient to achieve these outcomes.
- Whether the benefits of stronger access arrangements would be likely to outweigh the costs of introducing and administering any changes.

The general approach is comparative institutional analysis of different access regimes, which seeks to weigh up the effects of different access regimes for port and airport infrastructure in New Zealand, including the transaction costs of monitoring and enforcing any new access regulation.

Are existing access arrangements at ports and airports working in New Zealand?

Infrastructure access issues cannot be assessed in isolation. They need to be considered alongside the industry history, structure and governance, and in relation to the assets that exist and the investments that are proposed. This section considers whether any access problem appears to exist in New Zealand's ports and airports sectors, and if so, whether s.36 of the Commerce Act is resolving these access issues.

New Zealand has small, vertically integrated ports

New Zealand has a history of competition in the ports sector, although the nature of competition varies. The fifteen main trading ports were established around New Zealand's main coastal centres, and each has invested significant capital to develop and maintain their facilities. Competition between the Ports of Auckland and Port of Tauranga is considered to be strong in container cargos, especially given that both have developed inland intermodal freight hubs that extend their reach into an overlapping hinterland (Employers' and Manufacturers' Association, sub. 7; Pacific Marine Management, sub. 51).

New Zealand ports operate at a smaller scale than most international comparators, with lower cargo volume throughput and smaller terminals. The value of intra- and inter-port competition in New Zealand needs to be assessed against the benefits of reaching an efficient scale through consolidation. Some submissions argued that further consolidation in the ports sector would be beneficial, in particular giving support to the much-discussed merger of the Ports of Auckland and Port of Tauranga (Port of Tauranga, sub. 37; Marstel Terminals, sub. 30).

As set out in Chapter 10, the widespread public ownership of New Zealand ports through local government also creates important dynamics, potentially leading to decisions being made on non-commercial grounds (Port of Tauranga, sub. 37; Marstel Terminals, sub. 30; Employers' and Manufacturers' Association, sub. 7).

New Zealand ports are predominantly vertically integrated – the same party that owns the port infrastructure also operates the port terminal. In most New Zealand ports the level of contestability to provide services within the port is limited, with ports using their own subsidiaries to provide most services. In contrast, overseas ports commonly adopt a 'landlord' model, where the port owner offers contestable contracts to terminal operators. This landlord model allows the terminal operators to compete to provide port services, or to contract with specialised service providers to provide services at that terminal.

New Zealand ports have adopted different strategies to provide services, and control costs. Some ports see competitive benefits in the full integration of services, while others achieve cost reductions and competitive

[127] Stevedoring is an example of a port service that can be 'unbundled' from other port activities and provided by a separate firm. Moreover, stevedoring firms could compete with each other to provide the service and in that sense it is a 'contestable' service.

positioning through a degree of vertical unbundling. In part, the opportunity for vertical unbundling depends on the physical configuration of the port. For example, the number of marshalling services may be constrained by the port's layout.

Table 13.1 lists the providers of stevedoring and marshalling at some of New Zealand's largest ports. Stevedoring and marshalling services are generally considered to be potentially competitive activities, whereas other services (such as pilotage and towage) may be more efficiently provided by a single party. The Port of Tauranga, the largest port in New Zealand in terms of gross volume of freight, has the greatest number of competing stevedoring and marshalling service providers. At the Port of Tauranga, stevedoring and marshalling firms compete to obtain contracts with either shipping lines or exporters and importers to load and unload non-containerised freight between ships and inland transport. And the Port itself uses two competing stevedoring firms for container freight.

Other ports have fewer service providers operating. For example, although Ports of Auckland operates at a similar scale, it has only three service providers, including C3 Ltd (a subsidiary of the Port of Tauranga) and a subsidiary of C3. Labour relations and unions play an important role in the provision of stevedoring and marshalling (Port of Tauranga, sub. 37). This issue is addressed in Chapter 6.

Table 13.1 Service providers at New Zealand ports

Port	Stevedoring and marshalling providers
Port of Tauranga	**C3 Limited** (50:50 joint venture between Port of Tauranga and Asciano Group NZ Ltd.)
	Endee Logistics (stevedoring only)
	Independent Stevedoring Limited
	ISO Limited
	NZ Marshalling & Stevedoring
	NZL Group
	Quality Marshalling (marshalling only)
Ports of Auckland	**Auckland Stevedoring** (50:50 joint venture between TLNZ Auckland Limited (subsidiary of C3 Ltd) and Maritime Union Stevedores Limited)
	C3 Limited
	Wallace Stevedoring
Port Lyttelton	**C3 Limited**
	Lyttelton Port Company Limited
	Lyttelton Stevedoring Services (subsidiary of Southern Cross Stevedores (USA))
Port Chalmers	**Port Otago Stevedoring**
Port of Napier	**C3 Limited**
	ISO Limited (stevedoring only)
	Southern Cross Stevedores (stevedoring only)
	Quality Marshalling (marshalling only)

Source: ISO Ltd, sub. 28 and company websites

As discussed in sections 8.2 and 6.6, allowing greater access in the provision of port services may drive better port productivity. However, the link between access and productivity is complicated by other differences between New Zealand's ports (such as ownership and scale).

New Zealand has few international airports, with low freight volumes

There is no vertical integration in New Zealand's air freight services between airports (infrastructure owners) and terminal operators (service providers). International air freight cargo is transported in the hold of

passenger planes flying to and from New Zealand airports. The two Cargo Terminal Operators (CTOs) that provide cargo or ground handling services at Auckland and Christchurch airports are Air New Zealand and Menzies. These CTOs compete to provide services to airlines.

It is unclear to what extent potential CTOs would be provided with access to infrastructure, such as land within the secure area of an airport. The Air Cargo Council states that lack of volume, high costs, and the lack of suitable sites would create significant barriers to a new entrant CTO (New Zealand Air Cargo Council, sub. 8). However, Auckland International Airport advised the Commission that it would welcome a new entrant and would build facilities for them.

Access to airport infrastructure is affected by the prices charged to CTOs. These prices include rents for freight facilities and land in and around the airstrips and terminals, and the access charges or licence fees for airside access. Some parties claim that airports are using their market power to set high charges for cargo services, to the detriment of importers and exporters.[128]

Remedies for refusing access under s.36 of the Commerce Act

In New Zealand, if infrastructure owners are unwilling to grant access to their infrastructure, parties that are refused access may seek remedies (including injunctions) under the Commerce Act if s.36 of the Commerce Act has been breached. S.36 of the Commerce Act states that a party with a substantial degree of market power must not take advantage of that market power to:

- restrict the entry of a person into that market or any other market; or
- prevent or deter a person from engaging in competitive conduct in that market or any other market; or
- eliminate a person from that market or any other market.

S.36 has been successfully used in the New Zealand ports sector. In *Commerce Commission v Port Nelson* the port was found to have breached s.36 by requiring purchasers of pilotage services (a natural monopoly) to also use the port's tugboats (a competitive service) (Port Nelson Ltd v Commerce Commission, 1996).

Despite this finding, significant difficulties remain in using s.36 to require access to infrastructure to provide a competitive service. S.36 requires proof that the infrastructure owner has the purpose and intent of taking advantage of market power, which can provide a difficult threshold for challenging the decision of an infrastructure owner to refuse access. The advantage of regulating access through s.36 is that the regime is less interventionist that alternative access regimes – access arrangements are left to the market unless there is anti-competitive behaviour. However, the consequence of this approach is that s.36 frames access discussions in an adversarial way that is based on a violation of competition law, rather than on the potential benefits that might be unlocked by granting access.

Access regimes

This section summarises possible access and regulatory regimes for ports and airports. It describes access to different aspects of the port and airport sectors, and contrasts the distinct regulatory approaches that might be applied to ports and airports in New Zealand.

Access to infrastructure and facilities can occur in different ways

The debate around access to port and airport infrastructure and facilities focuses on two types of access:

- Access to infrastructure to provide bundled terminal services: This form of access is seen in the landlord port model, where port ownership and port operations are separated. This approach provides an operator with access to a designated terminal at a port or airport, which may or may not compete with other terminals at the same site. For airports, CTOs in New Zealand require access to airport facilities to offer a combination of handling services, including cargo handling, passenger handling, catering and cleaning.

[128] BARNZ considers that airports are often setting high charges based on overstated WACC, overstated land or asset values, and the revaluation of assets without treating revaluations as income. Land charges available to BARNZ suggested that monopoly power may have been exercised (BARNZ, sub. 36; New Zealand Air Cargo Council, sub. 8; Aviation Industry Association of NZ (Inc), sub. 23).

- **Access to infrastructure to provide services within a port/airport**: The services provided within a port may be unbundled and contracted to different service providers through a competitive process. Under this approach, the port owner or terminal operator allows access to third parties to provide services such as stevedoring, marshalling, and storage. At airports, cargo and passenger handling services, catering and other services may be unbundled.

Providing either type of access often involves the provision of land. The airport or port authority/owner may lease the land to different operators, including freight forwarders, logistic operators, stevedores, and CTOs. Alternatively, the land may be used directly by the owner.

Regulated access can be achieved through different forms of intervention

The reluctance of an infrastructure owner to provide access can be overcome either through a regime that mandates access, or through tools to enhance the bargaining ability of access seekers.

One possible tool to improve the bargaining power of access seekers in New Zealand would be to use the information disclosure provisions of Part 4 of the Commerce Act. This intervention would require ports and airports to release information that is relevant to access seekers (in addition to the general information disclosure requirements already applied to airports). In practice, however, making information disclosures relevant to access issues would be difficult. The disclosures would need to contain unbundled charges that identify the charges at different points of connection to infrastructure, and would need to be divided into specific activities (such as passenger and freight transport for airports). The approach would therefore impose significant costs on infrastructure owners, without actually requiring any change in the decisions made in response to access requests.

There are three possible avenues for strengthening access regulation that have the potential to change decisions on access:

- Establishing a general regime that enables the circumstances of each case to be analysed to decide whether access should be granted (a '**general infrastructure access regime**').
- Establishing a regime that presupposes a right of access, either in general or for a specific sector or asset type, with a process for determining the terms of access ('**negotiate-arbitrate regulation**').
- Requiring **structural separation** to eliminate any incentives to deny access.

These three regulatory regimes are described in greater detail below.

General infrastructure access regime

Australia has developed a general access regime for natural monopoly infrastructure under Part IIIA of the Competition and Consumer Act (CCA). This access regime seeks to align private and social interests to ensure that resources are being used efficiently. The general access regime in Australia has been applied to ports and airports. Although the CCA does not impose any specific regulatory decisions in the ports or airports sectors, the general access regime provides the framework for making decisions.

Under Part IIIA, the Australian Competition and Consumer Commission (ACCC) 'declares' infrastructure if the access request meets the following two tests (among others):

- the infrastructure is uneconomical to duplicate (a natural monopoly test); and
- access would promote a material increase in competition in at least one other market.

A decision to declare infrastructure gives parties seeking access to infrastructure and facilities ('access seekers') the right to enter into negotiations with the infrastructure owner. These negotiations are backed up by a compulsory arbitration regime if negotiations are unsuccessful.

The US also has a general access regime through the application of the 'essential facilities doctrine'. This doctrine allows claims that third party access to bottleneck (essential) infrastructure has been hindered by an incumbent exerting monopoly power over the 'essential' facility. The essential facilities doctrine applies

similar tests to Part IIIA of the CCA, although the tests are based on judicial decisions rather than legislation.[129]

Negotiate-arbitrate regulation

A stronger measure to facilitate access would require good faith negotiations, backed up by compulsory arbitration. The rationale for this type of regulation is to require infrastructure owners to provide fair and reasonable access to providers of services at ports and airports.

South Australia and Victoria provide two examples of regulated good faith negotiations. Port operators are required to negotiate in good faith to provide access to port facilities, based on a level playing field between all competing third-party access seekers. If this is not achieved, the state legislation (the Maritime Services Access Act 2000 in South Australia and the Port Services Act 1995 in Victoria) contains an arbitration framework. To date, no disputes have been referred to arbitration in either South Australia or Victoria. Similar provisions have been also used to ensure access to bulk-handling facilities. For example, under s.24 of the Wheat Export Marketing Act 2008, owners of wheat-handling facilities in Australia must comply with an 'access test' that requires them to publish the terms of access, and provide access on reasonable terms.[130]

In New Zealand, sectors with little or no competition (and no likelihood for this to change) can be subject to the application of Part 4 of the Act, which adds specific regulatory measures to the general provisions of the Commerce Act.[131] Part 4 can be applied after an inquiry by the Commerce Commission has been considered by the Minister of Commerce, who decides what type of regulation will apply.[132] Part 4 of the Commerce Act contains provisions for negotiate/arbitrate regulation (Subpart 5), although this type of regulation has not yet been applied to any sector in New Zealand. The practical effect of applying negotiate/arbitrate regulation is to have all relevant infrastructure automatically 'declared' (in the language of Part IIIA in the Australian CCA).

Structural separation of infrastructure ownership and service provision

The strongest intervention would require structural separation of infrastructure ownership and service provision. For example, legislation could be developed to prohibit port owners from carrying out port operations – a port authority or port corporation would then own the port land and infrastructure, and port operations would be carried out by other service providers. Structural separation could be partial (with the port owner retaining an interest in some port operations) or complete (removing the port owner from all interest in port operations).

New Zealand has used structural solutions in other sectors:

- The electricity sector was structurally separated under the *Electricity Industry Reform Act 1988* (EIRA), which forced the unbundling of monopoly electricity transmission and distribution sub-sectors from competitive generation and retail activities.
- A major part of the telecommunications sector has just been separated to facilitate the Government's broadband investment policy. Partnership rules under this policy state that a co-investor in the fibre network cannot also offer retail services. Telecom New Zealand has chosen to separate into two companies, which will offer wholesale services (Chorus) and retail services (Telecom).

Comparative analysis of options for strengthening access regulation for ports and airports

This section compares the regulatory options described above with each other and with the status quo. The purpose of this comparative analysis is to identify whether any of the regulatory options to strengthen

[129] The leading case is MCI Communications Corp. v AT&T (1983).

[130] The Australian Productivity Commission released the findings of an inquiry into wheat export marketing in October 2010. The Commission stated that access to port terminal facilities was the most significant issue in the inquiry, and recommended that the access test remain in force until October 2014, and should then be replaced by the general provisions of Part IIIA of the CCA (Australian Productivity Commission, 2010).

[131] S.52G, Commerce Act 1986.

[132] S.52H-52M, Commerce Act 1986.

access would provide benefits to freight services at New Zealand ports and airports that materially exceed their costs.

Each option is evaluated against the following risks of regulatory error and the associated costs:

- **Type I errors** (false positives) occur when access is granted to a third party when it is inefficient to do so, for example where vertical integration would result in lower costs. Type I errors lead to productive inefficiencies through higher coordination costs.[133] If part of the investment rationale is to provide downstream services without being subject to competition, then type I errors can also reduce the incentives to invest in new infrastructure.
- **Type II errors** (false negatives) occur when access is refused to a third party when it would be efficient to grant access; for example, where competition between service providers would lead to lower costs. Type II errors forgo productive efficiencies from competition driving lower costs. If an investment decision requires access to infrastructure, type II errors can also preclude efficient investment in complementary assets.
- **Transaction costs** include the costs of administering the regulatory regime, monitoring outcomes, and compliance costs. Other transaction costs include dispute resolution costs to examine evidence, analyse the criteria for access, and enforce rights of appeal.

There is an inherent trade-off in different access regimes between the risk of errors and transaction costs. This is because transaction costs guard against the risk of errors by imposing process requirements, such as regulatory hearings or court applications. This means that the appropriate balance of the risk of errors and transaction costs needs to reflect the consequences of making errors. If the costs of making a particular type of error are relatively small, then an approach that minimises transaction costs may be appropriate. However, if the costs of the two different types of error are substantial, then high transaction costs may be justified to minimise the chances of those errors occurring.

Table 13.2 summarises how the three access regimes compare with the status quo across the three criteria of type I errors, type II errors, and transaction costs. S.36 of the Commerce Act currently sets a relatively high threshold for access by requiring evidence that refusing access represents an abuse of market power. This means that there is a low risk of type I errors under s.36, which in turn means that infrastructure owners will feel confident that investment decisions will not be adversely affected by access claims. On the other hand, there is a high risk of type II errors under s.36 because access seekers may not be willing to bring a claim, even if access would unlock efficiencies or lead to investment in complementary assets. Each of the options for strengthening access regulation would increase the probability of type I errors, while decreasing the probability of type II errors. Access seekers face significant costs to establish that access should be granted under s.36.

Table 13.2: Summary of comparison of infrastructure access regimes to status quo

Access regime	Type I error	Type II error	Transaction costs
General infrastructure access regime (similar to Part IIIA of CCA in Australia)	**Slightly higher probability** than status quo because access is considered against different tests • Higher coordination costs (for example, in crane operations at a port) • Lower incentives to invest in new port	**Slightly lower probability** than status quo because of clear tests for access • Improved productivity from competition between providers of port services • Some increased investment in complementary assets,	**Comparable costs** Different process results in a different set of transaction costs, borne by the same parties • Access seeker would apply for a regulatory hearing on access • Infrastructure owner would defend the application,

[133] Organising licences, prices for access and logistical constraints is more costly than if the infrastructure owner had direct management through their own operators/service providers. Such coordination costs were a major factor in denying Fortescue access to the rail lines in Pilbara, Western Australia. Pilbara Infrastructure Pty ltd v Australia Competition Tribunal (2011).

	infrastructure	such as nearby storage or land transport facilities	likely involving similar costs (though different tests) as an action under s.36
Negotiate-arbitrate regulation	Higher probability • Access is 'declared', meaning that any new investment in infrastructure must enable third parties to compete with infrastructure owner to provide services	Lower probability • Ensures competition for all services that rely on infrastructure access • Provides high level of certainty for investments to provide services that rely on infrastructure access	Lower costs • Parties are required to negotiate (no need to examine the merits of access) • Transaction costs will increase if arbitration is required (although still lower than the status quo)
Structural separation of infrastructure ownership and service provision	Complete acceptance • Infrastructure owners are precluded from downstream market, meaning that access will be provided • Forgoes any efficiencies from vertical integration	Complete removal • Ensures that competition in downstream market is not affected by infrastructure owner	Lower costs • Can involve high initial reorganisation costs • Lower ongoing costs because access decisions are not scrutinised by courts

General infrastructure access regime (similar to Part IIIA of the CCA in Australia)

A general access regime similar to Part IIIA of the CCA in Australia would consider each application for access against a set of clear principles, including the natural monopoly test and whether access would achieve a material increase in competition in a related market.

The application of these tests is more likely to lead to a decision to grant access than the tests currently applied under s.36, and is therefore likely to increase the risk of type I errors. Granting inefficient access may lead to high coordination costs; for example, by creating scheduling conflicts for use of the infrastructure such as port cranes. The infrastructure owner may also have reduced incentives to invest in the infrastructure (although this will depend on the prices negotiated with parties that gain access).

Compared with the status quo, a general access regime would reduce the risk of type II errors. This would help to achieve productive efficiencies from competition for services within ports and airports, such as stevedoring, marshalling, storage and cargo handling (provided these efficiencies are not offset by increased coordination costs). As discussed above, there appear to be some productivity gains in the New Zealand ports sector that could be unlocked through this form of competition. For example, the Port of Tauranga has efficiency metrics that are between 20–40% higher than the Ports of Auckland and allows more service providers to compete in downstream markets.[134]

Transaction costs for a general access regime would likely be comparable or slightly higher than the status quo. These costs would, however, be borne through a regulatory process for having the infrastructure 'declared', rather than through litigation under s.36 of the Commerce Act. The general access regime in Australia has been criticised for imposing high costs on the parties to an access application (Ergas, 2009). For example, the application by Fortescue Metals for access to the rail lines owned by Rio Tinto and BHP Billiton in Western Australia has taken more than seven years (without yet being finally resolved), and has cost the parties tens of millions of dollars (Pilbara Infrastructure Pty ltd v Australia Competition Tribunal, 2011).

A general access regime would apply to all infrastructure sectors, and would therefore provide an opportunity to improve productivity in sectors other than ports and airports. For example, current

[134] See Chapter 3: Port of Tauranga has a crane rate that is 39% higher than at Ports of Auckland, and ship rates that are 21% higher than Ports of Auckland.

arrangements for access to the rail network in New Zealand are not well understood, and a general access regime could provide a clearer framework for making any access decisions. General access regimes are also robust to changes within sectors over time. For example, if growth in the ports sector meant that investment in complementary assets emerged as a major productivity issue, then a general access regime could respond to those changes.

Negotiate-arbitrate regime

A negotiate-arbitrate regime would substantially increase the risk of type I errors by establishing a legal requirement for access negotiations. This form of access regulation would eliminate any detailed assessment of particular access cases, effectively requiring infrastructure owners to provide 'open access'. This would mean that any new investment in infrastructure would need to be based on a business case that enabled third parties to compete with infrastructure owner to provide services – potentially reducing the incentives to invest.

For the same reasons, a negotiate-arbitrate regime would virtually eliminate the risk of type II errors – access is effectively declared for all infrastructure that is subject to the regime. This would ensure competition for all services that rely on infrastructure access. It would also provide a high level of certainty for investments in services that rely on infrastructure access.

By removing the need for regulatory hearings or litigation, a negotiate-arbitrate regime would reduce transaction costs. If the terms of access were contentious, then using the backstop arbitration regime would increase transaction costs. However, these costs would still be lower than a dispute over access that is followed by a dispute over terms.

Structural separation of infrastructure ownership and service provision

Structural separation eliminates the risk of regulatory discretion by completely accepting the impacts of type I errors, and completely removing the impacts of type II errors. With structural separation, an infrastructure owner is prevented from competing in downstream markets. This means that any benefits from vertical integration can no longer be achieved. Conversely, competition in downstream markets is not complicated by the involvement of the infrastructure owner as a service provider – and downstream service providers should be able to compete and invest on equal terms.

Structural separation imposes transitional costs (which may be substantial) as the assets and operations of the infrastructure owner are detached from the assets and operations of the related service provider. It may also impose ongoing coordination costs (eg, over complementary investments). However, other transaction costs should be lower once structural separation is complete because access decisions are not scrutinised by courts or a regulatory body.

Conclusions

The available evidence suggests that increased access to port infrastructure and facilities in New Zealand has some potential to enhance efficiency by improving competition, for example in the provision of stevedoring services. However, the relationship between access issues and other features of the ports sectors (such as the high degree of local government ownership of ports and the small scale of operations at most ports) make it difficult to identify the specific benefits that would result from stronger access regulation. There are reasons to suggest that s.36 of the Commerce Act does not effectively facilitate access to infrastructure, primarily due to the difficulty of fitting access issues within the legal tests for taking advantage of market power.

Options for strengthening the access regime for infrastructure at ports and airports include a greater use of the provisions of Part 4 of the Commerce Act (information disclosure or a negotiate-arbitrate regime), or a general purpose infrastructure access regime (as found in Australia and the US). The Commission concludes that:

- A general access regime would provide a more transparent process for parties seeking access to infrastructure by specifying clear tests based on principles of efficient access. This type of access regime should not result in access being granted where other sector arrangements (such as vertical integration)

are more efficient, and still requires the parties to negotiate or arbitrate the terms of access once access has been declared. However, the evidence on the efficiencies that could be gained by enabling access to port and airport infrastructure in New Zealand does not yet provide a compelling case that the benefits of such an access regime would materially outweigh the costs.

- A negotiate-arbitrate regime would bypass any case-by-case evaluation of the costs and benefits of access. In the New Zealand ports and airports sector, the arguments for stronger access regulation are not sufficiently compelling to justify such an intervention. The costs of making type I errors are quite evenly balanced with the costs of type II errors, so any process that presupposes access is unlikely to yield better results than the status quo.
- The evidence on the productivity of New Zealand ports and airports also does not suggest that imposing structural separation would be beneficial. Although such an approach has been adopted in sectors in New Zealand that have stronger natural monopoly characteristics (such as electricity and telecommunications), the costs for ports and airports would likely outweigh any benefits.

If infrastructure access issues are causing concerns in other sectors, then a general infrastructure access regime is worth exploring in New Zealand. Such a regime would need to be designed to be low cost for access seekers and infrastructure owners. It would also need to provide appropriate exemptions if new infrastructure investments might be deferred or avoided due to the requirement to grant access.

F13.5 The generally modest scale of New Zealand ports and airports, together with the transaction costs of an access regime and the relatively even balance between the expected costs of different types of errors, suggest there is no compelling case at this stage for either a general access regime or a negotiate-arbitrate access regime in the port/airport sector.

R13.1 In the interests of their own productive efficiency and service to customers, port and airport companies should periodically review the extent they unbundle activities within their domains and allow access for competing firms to supply them.

13.5 Information gathering and dissemination

Even if the market power of firms in a sector is not regulated, there may be a case for requiring or promoting some form of information gathering to assist in monitoring firm performance or in freight planning and investment. This type of information gathering would not be regulated through the Commerce Commission, as the focus of the Commerce Act is on the regulation of market power. However, the government may be able to require information through transport-sector legislation, or may be able to seek information on a voluntary basis.

The case for information gathering to assist in monitoring is particularly relevant for publicly owned freight-transport organisations such as ports and airports. Reliable and comparable information on performance can help to incentivise boards and management and make them accountable. This aspect of good governance is further discussed in section 10.1.

The case for information disclosure to assist planning and investment depends on the benefits of availability of the information, the costs of its collection, and whether there are any impediments to getting this information through market processes.

Information requirements for freight planning and investment

Chapter 9 argued that 'facilitated discussion' and 'information sharing' among investors in freight infrastructure could result in improved coordination among them (both government and the private sector). The information could include current freight volumes and types, future demand for freight services, and investment plans of infrastructure providers.

Government benefits from better information in its role as transport policy-maker and a major investor in transport infrastructure.

- As a policy-maker, the government needs to be able to determine the effect of policy decisions on the freight industry in order to make the best decisions.
- As an investor in road and rail infrastructure, the government needs to anticipate the demand for this infrastructure and the likely costs and benefits of particular infrastructure projects, and needs to be aware of the plans of other major infrastructure providers such as ports companies and airports. From a national perspective some of the major efficiency challenges pertinent to freight supply chains are around planning and coordination of the land transport networks that link airports and seaports to domestic production and population centres.

Businesses that are investing in ports, airports or other freight-transport components benefit from better information about government infrastructure plans, as well as information about the likely future demand and supply of freight services.

Impediments to getting information through market processes

Leaving the provision of information services to individual firms may lead to underprovision because an individual firm may be unable to capture the benefits from providing the information service (for the reason that information is easily replicated and disseminated). This suggests that there may be a role for government in facilitating information disclosure and dissemination.

Beyond initial set-up costs, information disclosure to assist planning and investment is unlikely to be costly for firms and other entities, provided that the reporting and data requirements are straightforward and stable over time.

National Freight Demand Study

The National Freight Demand Study by Richard Paling Consulting (Richard Paling Consulting, 2008) was commissioned by the Ministry of Transport, the Ministry of Economic Development and Land Transport New Zealand (now part of the NZTA). Its goal was to assist with the planning and development of the New Zealand transport network, and to provide a base for monitoring freight movements over time. It was an important contribution to understanding trends in New Zealand's freight volumes and values by product type, as well as interregional flows. The study was a one-off exercise and was mainly forward-looking from base year 2006/07. It required gathering a lot of primary information. This highlighted not only the challenges in such information gathering, but also the lack of the necessary systems for ongoing collection.

According to the National Freight Demand Study, both the government and some private sector stakeholders consider that a richer information base would improve their decisions:

> The need to provide a more comprehensive understanding of the freight sector and give the government a better basis for developing policies and actions affecting the freight sector, especially now that it has achieved ownership of the railway system, has also been recognised by a number of the major shippers in New Zealand. The specific requirement for a better understanding of the freight sector has also been recognised by the government with the need for a Freight Demands Study being mentioned in a range of documents and policy statements.
>
> (Richard Paling Consulting, 2008, p.5).

Other recent freight information initiatives

The Ministry of Transport's Freight Information Gathering System (FIGS) is the most comprehensive recent initiative to address shortcomings in New Zealand's freight-related data.

The Ministry of Transport describes the FIGS initiative as follows:

> FIGS is a Ministry project to collect detailed information on domestic and international freight movements in New Zealand. Initially the project will collect information on container movements in 10 ports, it will then be expanded to look at bulk freight movements through ports and potentially go

> deeper into the domestic supply chain. The Ministry has also undertaken work compiling container productivity data from six New Zealand ports.
>
> (Ministry of Transport, sub. 46, p. 7)

Unlike the National Freight Demand Study – which was a one-off study to help forecast future demand – FIGS is a continuous freight monitoring programme that involves the ongoing collection of freight volume data. FIGS developed from some initial Ministry of Transport work on freight information in relation to coastal shipping and ports.

To date, FIGS has collected data for container ports. Various submissions have supported the FIGS work, but expressed differing views about whether information gathering should be mandatory.

Pacific Shipping's submission favoured mandatory information gathering:

> [FIGS] is a step in the right direction. However, unless mandatory regulations are put into place it is highly unlikely that road and state-owned rail operators will willingly provide detailed data about their freight movements.
>
> As a coastal ship operator, Pacifica has agreed to submit its cargo statistics to FIGS on a commercially confidential basis…
>
> Certainly for rail that is owned by the Government there should be greater disclosure of its operational components, such as splitting rail ferry freight costs and revenue into separate truck, train and passenger components.
>
> Pacific Shipping, sub. 11, p. 8

PrimePort Timaru's submission argued against mandatory information gathering. It noted that ports already cooperate with the Ministry of Transport and that real-time end-to-end supply chain information helps to increase utilisation of the transport infrastructure, but considered that this was sufficient:

> Mandatory requirements would inevitably lead to unnecessary and costly exercises for ports and other parties and could be commercial damaging. The commercial parties involved in the logistics chain have the ability to ascertain costs at each stage.
>
> PrimePort Timaru, sub. 12, p. 14

In addition to FIGS, there are several other freight information-gathering activities led by the government:

- Both the Ministry of Transport and the New Zealand Transport Agency (NZTA) undertake transport research and maintain transport databases (such as the Transport Monitoring Information Framework).
- The NZTA, in collaboration with the Ministry of Transport, has commissioned research to investigate cost-effective and repeatable ways of collecting information on the freight sector in New Zealand required for effective planning and management within the sector.
- The NZTA has also developed a work programme on freight efficiency called 'Freight Forward'. Through greater engagement with key private and public sector decision-makers, the NZTA is working to achieve better coordination across the freight supply chain as a whole. (NZTA, sub. 22, p. 3). One component of this is development of an Upper North Island Freight Plan facilitated by NZTA in conjunction with members of the Freight Operators' Forum.[135] This type of plan is of relevance to the Commission's discussion of strategic planning in Chapter 9.

Overseas initiatives to gather freight information

The International Transport Forum gathers and publishes a considerable range of freight data for Forum member countries, including annual time series for inland freight since 1970. This shows New Zealand data for road freight from 1992 and for rail freight from 1999 (sourced from the Ministry of Transport).

[135] The NZTA has developed the Freight Operators' Forum to bring together the key players in the freight sectors. The NZTA 2011 annual report (NZTA, 2011c) states that "The forums provide a sounding board for testing and developing shared thinking and drawing on a wide range of expertise and knowledge in this sector. The forums are also valuable for obtaining buy-in from the key players in each sector. This buy in is critical where collective action is required to take the sector forward" (p. 27).

Similarly, a UK collection of road freight data provided one of the bases for recommendations in the New Zealand National Freight Demand Study.

> For the road freight sector we would recommend that data be collected by means of a regular survey, possibly following the approach taken in the United Kingdom (UK). In this, road goods vehicles with a Gross Vehicle Weight of over 3.5 tonnes are chosen at random from the lists held by the Vehicle Registration Agency and their owners are sent a questionnaire asking for detailed information on their operations over a specified time period. This information includes:
>
> - details of the vehicle operated
> - journeys undertaken (origins and destinations)
> - the nature and weight of commodities carried for both single point-to-point journeys and more complicated delivery and collection rounds.
>
> (Richard Paling Consulting, 2008, p.218)

The National Freight Demand Study considered that the UK survey provides a comprehensive and reliable picture of freight movements undertaken by UK-registered road freight vehicles.

In Australia, the Bureau of Industry, Transport and Regional Economics (BITRE) publishes a large quantity of transport statistics covering both particular modes (aviation, maritime, road and rail) and the Australian transport system as a whole.

Conclusions on information gathering and dissemination

The Commission considers that additional information on freight movements in New Zealand – collected and made available on a regular basis – would have considerable value. It would assist participants and policy makers in the freight system to make better decisions individually and jointly, and enable better evaluation of policies and regulations. The 'public good' nature of information suggests that a government agency would be best suited to lead the design and implementation of a cost-effective system.

The Commission supports the general intent of the Ministry of Transport's FIGS initiative, including the plans to expand it. It also supports the Ministry's collaboration with the NZTA to investigative cost-effective and repeatable ways of collecting information on the freight sector in New Zealand. This investigation should include a regulatory impact analysis that estimates the benefits and costs of any specific proposals to improve upon existing information collection and dissemination.

R13.2 The Government should develop a proposal to extend the Freight Information Gathering System and subject the proposal to a regulatory impact analysis 'efficiency test' to determine whether it would deliver net benefits beyond existing information collection and dissemination.

13.6 External effects of freight transport

The production of goods and services can impose un-priced costs on people outside the business producing them. These are often referred to as 'external costs' or 'negative externalities'.

The international freight logistics chain can generate a number of external costs – for example, through its impact on the environment (see Table 13.3). These costs are largely managed through government regulations, which have the effect of pushing the external costs (in part or full) onto the firms that produce them, which then may be passed on to end consumers – that is, the external costs are (partially or fully) 'internalised'.

The government's management of external costs can influence the productivity of firms within the freight logistics chain, as well as the efficiency with which factors of production are allocated within the economy.[136]

[136] The presence of an external cost does not necessarily mean that government action is required. In considering the need for action, it is important that governments take into account: a) the cost of developing and implementing policies to manage the external cost; and b) the social benefits that are

If regulation is too stringent, more resources will be dedicated to controlling the external cost than is warranted and productivity will suffer.

If regulations are too lenient, society will be left to carry the burden of the external costs. This can impact wellbeing through, for example, reducing the community's enjoyment of environmental assets or increasing risks to public health. Appendix C provides an overview of the key mechanisms used in New Zealand to address the external costs arising from the major freight transportation modes.

In considering the regulation of external costs, the Commission has focused on issues raised by submitters. These are:

1. The impact of the *Resource Management Act 1991* on investment in transport infrastructure;
2. The impact of the *Climate Change Response Act 2002*, specifically, the impact of the New Zealand Emissions Trading Scheme (New Zealand ETS) on freight activities; and
3. The impact of the European Emissions Trading Scheme (the EU ETS) on New Zealand exports to and imports from Europe.

The Resource Management Act is discussed in detail in Chapter 8. The New Zealand ETS and the EU ETS are discussed below.

Table 13.3 External costs from international freight transport

External cost	Description
Greenhouse gas emissions	Arise from road, rail, sea and air transportation. Consumption of fossil fuels leads to the emission of greenhouse gases that contribute to climate change.
Noise	Arises from road, rail and air transportation. Heavy vehicles, trains and planes can cause noise disturbances, particularly in urban and residential areas. External costs are greater during the night-time than daytime.
Accidents	Arise from road, rail, sea and air transportation. Some of the external costs associated with accidents are internalised through insurance; however, residual costs to society will remain due to 'moral hazard' and other problems.[137] [Note: The 5 October grounding of the Rena on Astrolabe Reef is an example of how accidents can lead to wider environmental and social costs such as a reduction in the amenity value of an area, damage to populations of marine species and commercial damage to businesses. This matter is currently under investigation by Maritime New Zealand and the Ministry of Transport.]
Congestion	Applies mainly to road transport (but can occur at sea, on the rail network and at airports). Both freight and passenger vehicles contribute to congestion. Some of these costs are internalised through time costs and operating costs. However, the costs to other road users are not internalised and can be considered an externality. Due to their large size, transport vehicles have a higher unit congestion effect than, say, passenger cars. This effect is highly dependent on location and time.
Air pollution	Arises from road, rail, sea and air transportation. Consumption of fossil fuels (mainly diesel) leads to the emission of a number of air pollutants including volatile organic compounds, carbon monoxide and nitrogen oxide. Emissions can have harmful impacts on human health. Externalities associated with air quality also increase with congestion and can be highly dependent on the prevailing weather conditions.
Pollution of marine environment	Arises from sea transportation. Ballast water, for example, can result in the spread of exotic marine pest species which can impact amenity values, recreational fishing, commercial fishing and coastal installations. Accidents can result in the spill of toxic cargo or oil.

derived from the goods and services that produce the external cost. Therefore, managing negative external costs involves weighing up the social benefits and costs of action.

[137] Moral hazard problems arise when, due to the presence of insurance, a person takes more risk than they otherwise would (because they do not face the full cost or consequences of their behaviour).

External cost	Description
Water runoff from roads and rail	Arises from road and rail transportation. Heavy metals, released by wear of tyres and brake pads, are washed off roads and rail and can contaminate rivers, streams and harbours. The construction of roads can also result in increased surface runoff carrying sediment and pollutants.

Implications of the New Zealand ETS for international freight

In 2002 the Government enacted the Climate Change Response Act. The central feature of this Act is an ETS covering greenhouse gases.

In theory, an ETS is an efficient mechanism for reducing emissions because it allows market forces to seek out the combination of abatement options that achieves a given reduction target at least cost. An ETS internalises the external cost, and in so doing, provides an incentive for reducing emissions, including through innovation and technological change.

In considering the New Zealand ETS, the Commission has examined those parts of the scheme that directly impact international freight. The Commission has not attempted to review the overall impact of the ETS on New Zealand's export sectors, as this is outside the inquiry's terms of reference. In this context, the Commission notes the following:

- Fuel used by international sea freight and air freight carriers is exempt from the New Zealand ETS under the Climate Change Response Act 2002. Therefore there is no price impact on the international leg of the freight logistics chain. However, notwithstanding the ETS exemption, international carriers are still imposing external costs through their emissions.
- Coastal shipping is covered by the New Zealand ETS through the inclusion of bunker fuels in the Climate Change (Liquid Fossil Fuels) Regulations 2008. Research conducted by the Ministry of Transport suggests that the ETS adds an average of $0.86 per 1000 tonne kilometres (Ministry of Transport, 2011g). The Ministry of Transport estimates that this adds around $3.4 million per annum to the cost of coastal shipping. At least part of this cost is passed through to shippers – for example, Pacifica currently charges a $6 per TEU ETS levy.[138]
- Under existing cabotage laws, international carriers can carry domestic cargo on any leg of an international service. However, these ships are exempt from ETS costs.
- Cost increases per litre of diesel from the ETS are expected to be in the vicinity of 3–5 cents. Assuming an increase of 3 cents, the Ministry of Transport estimate that the New Zealand ETS adds around $1.32 per 1000 tonne kilometre to road vehicle operating costs (Ministry of Transport, 2011g).[139] Given the highly competitive nature of road freight it is it is likely that these costs will be passed through to shippers.
- The Ministry of Transport has estimated that the New Zealand ETS will add $0.45 per 1000 tonne kilometre to the cost of rail freight.

F13.6 A well-designed domestic Emissions Trading Scheme is likely to be an efficient mechanism to internalise the costs of greenhouse gases emitted by freight transport operators within New Zealand. International legs continue to be exempt pending the development of effective international arrangements.

[138] Based on the indicative cost and time to ship a 20-foot container from Auckland port to a Christchurch depot (as given in the example in Table 4.6) this $6 makes up 0.4% of the domestic cost of the freight charge.

[139] The Ministry of Transport notes that these figures are based on 2006 figures and therefore the cost of the ETS could be lower if the heavy vehicle fleet has been gradually been replaced by more efficient vehicles.

F13.7 The New Zealand ETS places coastal shipping at a competitive disadvantage against international ships undertaking coastal voyages since they are exempt from ETS costs.

European Emissions Trading Scheme

From the start of 2012, emissions from all domestic and international flights that arrive at or depart from an airport in the European Union will be covered by the EU Emissions Trading System and therefore subject to an ETS cost.

The Commission estimates that this will impact around 10–15% of New Zealand air freight exports (by value). Given New Zealand's distance from the EU markets, New Zealand exporters and importers are likely to face relatively higher cost increases than their international competitors (who are in general located closer to European markets).

The extent to which these costs will be passed through to New Zealand shippers is unclear; however, an impact assessment undertaken by the EU Commission concludes that airlines are expected to pass on, to a large extent or even in full, the cost of participating in the scheme to their customers (European Commission, 2006a).

The Commission notes that the underlying assumptions used to reach this conclusion have been disputed by the aviation industry. In 2007 a group of aircraft operators commissioned Ernst & Young and York Aviation to review the EU's impact assessment (Ernst & Young and York Aviation, 2007). This study concluded:

a) It is unlikely that aircraft operators will be able to pass through the full cost of allowances to consumers. On the contrary, they will have to absorb a large proportion of costs, with the exact proportion being determined by the individual business model of the operator.

b) Demand for airline services is highly price sensitive.

While acknowledging that the price sensitivity of demand for air freight is uncertain, the Commission expects that at least some of the ETS costs will be passed through to freight customers. This is likely to be in proportion to the additional fuel consumed by airlines as a result of carrying air cargo on passenger services (see Box 32 for a discussion on attributing externalities to international freight).

Information gathered during the inquiry indicated the EU ETS will increase air freight rates from New Zealand to the EU (and in reverse) by around $60–70/tonne. This constitutes an increase of approximately 1.3% on the price of air freight to Germany and around 1.6% on the price to the UK. New Zealand exporters will have a limited ability to pass these costs on.

F13.8 While acknowledging the uncertainties around price sensitivity of air freight, the Commission expects that at least some of the ETS costs will be passed through to freight customers. The Commission expects that air freight prices to Germany will increase by around 1.6%, whereas the price to the UK will increase by approximately 1.3%.

Box 32 **Attributing externalities to international freight**

A relevant question is what are the external costs that can be directly attributed *to international* freight – as opposed to passenger travel or domestic freight? This is particularly important for international air freight, which as noted in Chapter 3, is largely a by-product of passenger services. In this situation the key question is: "Would the external cost be generated if the passenger plane were not carrying freight?"

For some external costs the answer is 'yes' – the external costs are independent of the presence of freight. For example, on take-off and landing a plane makes the roughly same amount of noise

whether it is carrying freight or not. Similarly, a plane is just as likely to be involved in an accident whether or not it is carrying freight (assuming the freight is not dangerous).

In general, most of the external costs associated with air freight on passenger craft can be attributed to the *additional fuel consumed* due to the added weight of the freight. Of course, the same is not true for dedicated cargo flights. For these flights all external costs can be attributable to international air freight.

Summary of questions

Chapter 4

Q4.1 Notwithstanding their limitations, case studies suggest that the ocean transport component of sea freight costs is higher for Auckland compared with Sydney routes. They also suggest that the onshore components of Auckland's sea freight costs, particularly its port handling costs, compare favourably with Sydney's. Is this information representative of the experiences of industry participants?

Chapter 5

Q5.1 Are there impediments to competition in freight forwarding that could be reduced by government intervention, and what would be the costs and benefits of reducing these impediments?

Chapter 6

Q6.1 To what extent are the work practices identified during consultation restrictive in nature and not in the long-term interest of the efficiency of the international freight transport services system? What evidence is there that these practices are, or are not, necessary to ensure desired outcomes, such as with respect to worker safety?

Q6.2 To what extent do the factors identified by the Commission in the course of its investigations explain the continuation of restrictive work practices? To what degree are the factors identified valid and complete?

Chapter 9

Q9.1 Are there any specific examples of impediments to the optimal coordination of freight infrastructure planning between central and local governments, or between adjacent local governments?

Chapter 10

Q10.1 What agency would be best able to host the collective monitoring function for port companies?

Chapter 11

Q11.1 What means have carriers used to respond to the excess supply of shipping capacity created by the prolonged downturn following the global financial crisis?

Findings and recommendations

The full set of findings and recommendations from the draft report are below.

Summary of findings

Chapter 1

F1.1 Despite the global economy becoming more trade-oriented over the last 20 years, the growth in New Zealand's export intensity has lagged well behind that of most of its OECD peers.

F1.2 New Zealand's small home market and distant location pose difficult challenges. The costs of being economically distant from key markets – both in terms of pure transport costs and the opportunity costs of time – are substantial impediments to New Zealand's ability to participate effectively in the global economy.

Improving New Zealand's international freight system will help to mitigate its geographical distance from markets and raise its ability to participate effectively in the global economy. A more efficient and effective freight system can raise the prosperity of New Zealand's businesses and workers and enhance consumers' purchasing power.

Chapter 2

F2.1 The Commission views economic efficiency (broadly defined) as the key yardstick of performance for the international freight transport system. An efficiency approach will take account of harmful effects of freight transport on the environment and of other market failures. Other important influences on wellbeing are best dealt with through other channels than international freight transport.

F2.2 International freight transport can be viewed as a system with a number of distinctive characteristics such as large, lumpy infrastructure investments, tensions between funding to cover costs and pricing to encourage efficient use, and the importance of coordination and transit time along supply chains. These characteristics require both central and local governments as well as the private sector to play their parts to make the system work efficiently.

F2.3 Government has a number of roles in international freight transport. But intervention is only justified where benefits outweigh the costs. In particular, principles of good regulation should be used to design and monitor regulatory interventions, including the decision that regulation is the best option.

F2.4 Access to international freight transport does not mean services being provided to everyone regardless of cost, but their being provided where there is willingness to pay to cover the cost. Some cases, where relatively isolated producers cite a lack of access, are unlikely to fulfil this condition.

Chapter 3

F3.1 Since the end of the 1990s, productivity growth in New Zealand's transport and storage

industry has slowed considerably and does not compare well internationally.

F3.2 Since the end of the 1990s, productivity growth in New Zealand's transport and storage Available indicators suggest that New Zealand's container port performance is no less and possibly better than in Australia. However, within New Zealand there is notable variation between the ports, with Tauranga being the strongest performer.

F3.3 Subject to some caveats, Auckland Airport appears to have high productivity relative to other Asia and Pacific airports, while Christchurch is about average.

F3.4 Compared internationally, New Zealand has low average loads for road freight.

F3.5 Compared internationally, New Zealand has low volumes of freight per kilometre of rail and low maximum axle load.

F3.6 The six port companies analysed by the Commission recorded mostly negative Economic-Value Added from 2008 to 2011, although there was a trend to less negative figures. This suggests that the port companies have not recovered their cost of capital.

F3.7 Subject to some caveats, Auckland Airport appears to have high productivity relative to other Asia and Pacific airports, while Christchurch is about average.

Chapter 4

F4.1 Ad valorem sea freight costs (the freight costs faced by New Zealand importers and exporters as a percentage of shipment value) have been decreasing over the last two decades, even after accounting for such factors as changes in trade composition. This suggests that cost-reducing efficiency and technology improvements have not been outweighed by factors such as fuel price increases.

F4.2 Ad valorem air freight costs decreased in the 1990s, but were flat or even slightly increasing in the 2000s, even after controlling for factors such as fuel price increases.

F4.3 Ad valorem sea import freight costs are higher in New Zealand than in Australia (even after accounting for compositional factors). However, in both countries sea freight costs exhibit a similar decreasing trend over the past two decades.

F4.4 the same extent as in New Zealand. As a result, ad valorem air freight costs are currently higher in New Zealand than in Australia.

F4.5 The onshore components of New Zealand's freight costs compare favourably with Australia and other OECD countries.

F4.6 Case studies suggest that air freight costs for selected international routes into and out of Auckland are less than those for the analogous routes into and out of Sydney.

F4.7 The number of days taken to complete New Zealand's export and import requirements compares well with other countries, but is behind international best practice.

F4.8 While New Zealand is performing reasonably well in areas such as customs procedures and documentation requirements, there may still be scope for improvement in these areas. In addition, continuing to work with trading partners to improve trade facilitation could reduce transit times.

Chapter 5

F5.1 Episodes of significant truck queuing at Auckland Airport suggest poor coordination, leading to low operational efficiency. There is scope for market participants to address this issue, through coordination mechanisms such as a slot booking system with variable charges.

F5.2 Limited air freight capacity in and out of a New Zealand airport does not seem to be a coordination problem, because there are no barriers to entry of a dedicated freighter to increase capacity. If they are willing to pay for a dedicated freighter service, exporters should be able to effectively signal this to airlines directly or through a 'consolidation agent'.

Chapter 6

F6.1 The demand for port services is highly variable, driven by the arrival of ships for loading and unloading. Ports face a challenge in managing their capacity to meet those variable demands for service. Those challenges relate to both optimising investment in capital equipment that may be idle for extended periods between ships, and managing access to labour to meet variable workloads.

F6.2 By and large, collective agreements and individual employment agreements do not codify restrictive work practices. There are several possible reasons as to why restrictive practices may remain, including weak governance arrangements for ports and unions; entrenched cultures; and significant negotiation leverage of organised labour arising from a number of factors, including common law support for 'customary arrangements' that makes changing work practices more difficult.

F6.3	among port service providers.
F6.4	Impediments to competition in the provision of port services can reduce the efficiency and long-term viability of New Zealand ports and undermine broader competition policies and legislation.
F6.5	While subject to further work and discussion with interested parties, there may be scope to remove impediments to improved workplace relationships through improving the governance frameworks applying to ports and unions.

Chapter 7

F7.1	The complete elimination of border risk is neither feasible nor efficient. Rather an optimal balance between costs and benefits needs to be struck.
F7.2	On the basis of submissions to the inquiry, the Commission believes the current level of risk tolerance reflected in the activities of New Zealand's border agencies is in line with the expectations and preferences of stakeholders. As such, the Commission does not believe that the level of border risk management is acting as a barrier to the efficiency of the international freight logistics chain.
F7.3	A risk-based approach is a sound framework for allocating the resources of New Zealand's border agencies.
F7.4	While the second phase of the Joint Border Management System project will largely address coordination issues between the Ministry of Agriculture and Forestry and the New Zealand Customs Service, the introduction of this system is several years away.
F7.5	While the Commission has not been able to locate quantitative evaluations of the net economic benefits of Mutual Recognition Agreements, qualitative evidence suggests that such programmes improve the efficiency of the international freight logistics chain.
F7.6	In general, registration, certification and inspection fees and charges paid by New Zealand exporters are lower than those imposed on Australian companies exporting similar products.
F7.7	Fees and charges imposed on New Zealand importers generally compare favourably with those imposed by Australian border agencies.

Chapter 8

F8.1	New Zealand businesses have little influence over the level of investment and innovation by the international shipping lines visiting New Zealand, but New Zealand ports may have a role in enabling more efficient ships to service New Zealand.

F8.2 Except in specialised bulk shipping, coastal shipping struggles to earn returns on investment. This is partly a consequence of government subsidies to rail.

F8.3 The Commission's EVA analysis poses questions about how well ports use capital resources. The potential impediments to efficient investment and innovation at these ports discussed in this report are ownership and governance arrangements for ports, investment planning processes, and the effects of the Resource Management Act.

F8.4 Contestability of stevedoring and marshalling is only occurring at some ports. Provided there is sufficient scale, greater contestability at other ports would improve incentives for innovation in stevedoring and marshalling at these ports.

F8.5 Other than the possible effect of heavy vehicle regulations on the uptake of higher productivity vehicles (discussed in Chapter 13), there do not appear to be any impediments to investment and innovation in road freight.

F8.6 There are indications of investment by cargo terminal operators in bigger freight-handling facilities and new documentation technologies.

F8.7 Freight forwarding innovation is driven by large New Zealand and overseas-based freight forwarders, and by large exporters and importers using forwarders. There do not appear to be any impediments to further innovation in New Zealand freight forwarding.

F8.8 There appears to be ambiguity around the interpretation of the purpose of the RMA and the extent to which the Act allows the balancing of socio-economic aspirations with environmental outcomes.

F8.9 Central government plays an important role in providing direction on issues that involve balancing local values with regional or national benefits. Without clear signals from central government, national benefits and costs may be assigned a lower priority during the planning and consent process – resulting in the potential reduction of economic, social or cultural wellbeing.

F8.10 Recent reforms to the RMA have led to improvements in the timeliness and cost of the consent process. The full benefits of these reforms are likely to take time to filter through into council plans, and into the perceptions of those whose opinions may have been shaped by previous experiences.

Chapter 9

F9.1 Coordination failures may be exacerbated by the multiple objectives associated with public ownership. Such failures may be better addressed through governance and ownership changes rather than centralised strategic planning.

F9.2 Government service providers, particularly those receiving poor price signals, face a difficult problem in collecting reliable market research on which to base their investment decisions. 'Facilitated discussions' can assist with this important task, and also promote relationship building and information sharing, leading to improved coordination.

F9.3 Leadership models for infrastructure planning need to be based on high-quality information. Leadership in an uncertain environment creates high risks for the leader. Governments should be wary of calls for it to assume the normal commercial risk of other parties.

F9.4 The designation of transport corridors can create valuable outcomes at a relatively low cost. Corridor designation is a worthwhile activity for central and local government.

F9.5 Directive planning, in the sense of a centralised plan imposed on independent parties, has some very large associated costs due to the incentives it creates for non-productive behaviour. It should be avoided in favour of lower-risk mechanisms.

F9.6 'Facilitated discussion' models of cooperation based on information sharing, robust discussion and relationship-building – but with no ability to bind the participants to particular outcomes – do not create strong incentives for the costly behaviours that undermine directive planning models (ie, tactical misinformation, rent-seeking and strategic hold up). There is scope for their increased use by government in coordinating investment planning.

F9.7 Caution needs to be exercised when using publicly available cost figures to reach conclusions on the magnitude of investment needed to support bigger ships.

F9.8 An immediate move to supporting bigger container ships would appear to have high risks and uncertain benefits for New Zealand. These conditions favour an incremental approach in which ports make investments in small stages in response to evolving freight demand and changes in container ship deployment. As well as reducing risk, staged investment reduces the need for explicit centralised strategic planning.

F9.9 While larger container ships servicing one or more New Zealand hub ports would lower voyage operating costs, it is unclear whether these cost savings will be transferred to shippers, or whether the reduced competition between ports (and shipping lines) would result in higher port charges and shipping fees.

F9.10	likely lead to reduced freight costs for some shippers and cost increases for others. These uneven effects make it difficult to determine whether shippers, as a whole, will be better or worse off in a bigger ship scenario.
F9.11	The scenario in which a lack of container ports in New Zealand capable of handling 'bigger ships' forces hubbing through Australia with both higher costs and transit times appears unlikely. The commercial viability of this scenario would be undermined by direct services with smaller, albeit less fuel-efficient, container ships.
F9.12	Port mergers have a number of potentially large benefits and costs. Where a proposed merger would result in a lessening of competition, the Commerce Commission is best placed to evaluate the public benefits relative to the detriments of that proposal.

Chapter 10

F10.1	Effective governance is ensuring that the organisation makes value-maximising decisions across all of its functions and activities. The governance arrangements for publicly-owned enterprises need to be of high quality because publicly-owned enterprises face less discipline from other sources than comparable privately-owned enterprises.
F10.2	The Port Companies Act sets the principal objective of every port company as being to operate as a 'successful business'. However, that objective is unclear. In the case of majority council ownership it may be supplemented with the objectives of a port company's owners.
F10.3	The Airport Authorities Act requires airport companies to be managed as a 'commercial undertaking'. In the case of majority council ownership, that requirement may be supplemented with the objectives of the airport company's owners.
F10.4	A holding company can provide partial, but incomplete, insulation between the wider objectives of a council and the commercial objectives of a port or airport company.
F10.5	One option for public owners seeking to improve governance is to opt out of the relevant public-sector governance regime and into the stock-exchange regime. A stock market listing offers significant potential governance improvements for larger companies with partial council ownership. These benefits arise from an observable share price, reporting and continuous disclosure rules, and external analysis of management decisions.
F10.6	While central government ownership of rail has relatively poor incentives for improved efficiency, history suggests that rail (at least at the current network extent) is unlikely to pay its way under any ownership arrangements.

Chapter 11

F11.1	Cooperation agreements between international liner shipping carriers have historically been exempt from the full application of domestic competition laws. The policy rationale

for these exemptions was that price/capacity fixing and revenue pooling etc. were needed to ensure reliable liner shipping operations. As such, the public benefits of the agreements were taken as so likely to outweigh any anti-competitive detriments that there should be no onus on carriers to prove that they do so.

F11.2 Compared with other approaches, New Zealand's regulatory regime for international shipping is an outlier in that the exemptions apply widely and largely without the limiting conditions that are found elsewhere. Moreover, there seems little logic for having two somewhat different exemptions, which give rise to complexity and uncertainty and to inconsistent treatment of importing versus exporting.

F11.3 The balance of the limited evidence that exists following the changes in shipping regulation in the US in 1998 and the EU in 2008 appears to favour the view that these changes have not led to material degradation in the quality of shipping services, and may have resulted in some improvements as a result of greater competition.

F11.4 Most evidence suggests that the international shipping industry serving New Zealand is competitive. This, combined with evidence that ratemaking agreements are not in widespread use, indicates that removing the exemptions is unlikely to result in a decisive improvement in shipping services. The benefit of removal is more likely to lie in insurance against a future degradation of outcomes for New Zealand through carrier collusion as the market moves into a position of more constrained supply.

Chapter 13

F13.1 Different subsidy rates across the different modes for domestic freight transport have the potential to distort patterns of use and create inefficiency. Determining subsidy rates is complex and difficult but it is important to estimate them for transparency and to enable efficient decision making.

F13.2 Cabotage should not be reintroduced since the current coastal services provided by international shipping lines are valuable to New Zealand shipper.

F13.3 While there is potential for major airports to exert market power over freight services providers, there is insufficient information for the Commission to make a judgement as to whether this is occurring, and if so, whether it reduces the efficiency of freight services.

The forthcoming review of the information disclosure regime for airports under the Commerce Act is likely to be a sufficient mechanism to allow these issues to be addressed.

F13.4 The Commerce Act allows the Commerce Commission to review the case for economic regulation of ports, if future industry developments shift the balance of costs and benefits more clearly in favour of regulation.

F13.5 The generally modest scale of New Zealand ports and airports, together with the transaction costs of an access regime and the relatively even balance between the

expected costs of different types of errors, suggest there is no compelling case at this stage for either a general access regime or a negotiate-arbitrate access regime in the port/airport sector.

F13.6 A well-designed domestic Emissions Trading Scheme is likely to be an efficient mechanism to internalise the costs of greenhouse gases emitted by freight transport operators within New Zealand. International legs continue to be exempt pending the development of effective international arrangements.

F13.7 The New Zealand ETS places coastal shipping at a competitive disadvantage against international ships undertaking coastal voyages since they are exempt from ETS costs.

F13.8 While acknowledging the uncertainties around price sensitivity of air freight, the Commission expects that at least some of the ETS costs will be passed through to freight customers. The Commission expects that air freight prices to Germany will increase by around 1.6%, whereas the price to the UK will increase by approximately 1.3%.

Summary of recommendations

Chapter 6

R6.1 The Government should review whether existing legislation is sufficient to effectively regulate barriers to competition that arise as a result of union activity.

Chapter 7

R7.1 Border agencies should continue to enhance their performance measures and performance review procedures in order to improve the transparency of agencies' performance and increase management accountability.

R7.2 The role of the Border Sector Governance Group should be strengthened. Performance measures for border cooperation should be developed and monitored through joint six-monthly reports to the relevant Ministers. These performance measures should be in addition to, and separate from, those developed as part of the Joint Border Management System project.

R7.3 The Customs and Excise Act 1996 should be reviewed to assess whether it is fit for purpose in light of changes to border management practices and developments in technology since 1996.

Chapter 8

R8.1 Section 5 of the Resource Management Act 1991 should be reviewed to clarify (and elevate) the consideration of net social benefits and costs (including those accruing at a national level).

Should the Government decide not to review s.5, s.6 of the Resource Management Act 1991 should be amended to include specific reference to the development and operation

of regionally and nationally significant infrastructure.

R8.2 The Minister for the Environment should commence development of a National Policy Statement for transport infrastructure, which would provide central government recognition of the importance of New Zealand's transport infrastructure.

R8.3 Section 166 of the Resource Management Act 1991 should be modified to including port companies as network utility operators.

Chapter 9

R9.1 A full cost benefit analysis (ie, including all externalities) should be published for government investments in rail infrastructure, including further investment in the KiwiRail Turnaround Plan. These analyses should be directly comparable to those produced for major road projects.

Proposals for investment in road and rail should be subject to rigorous investment screening in a coordinated way, which enables the best projects to selected – be they road, rail, or a combination of the two. Without this level of transparency, the public cannot be confident that scarce resources are being allocated to the most beneficial projects.

Chapter 10

R10.1 The objectives of council-owned port and airport companies should be brought into line with the objectives for state-owned enterprises; ie, to be as profitable and efficient as comparable businesses that are privately owned.

R10.2 To maintain the separation between wider council objectives and the commercial objectives of port and airport companies, elected representatives and council staff should be precluded from being a director of council-owned port and airport companies. All relevant legislation should embody this provision.

R10.3 In the interests of improved reporting and transparency, and the efficient use of capital in the freight transport system, EVA figures for port companies should be regularly published and reviewed, including disaggregated data for significant business segments.

R10.4 A collective monitoring function should be established for port companies, to create independent information on comparative performance of ports for owners to consider – further strengthening ownership disciplines and optimal port performance.

R10.5 Government should use the s.7 provisions in the State-Owned Enterprises Act (providing for SOEs to receive direct payments for non-commercial activities) with KiwiRail to transparently identify expectations around public-good delivery and the costs incurred in their provision.

R10.6 private ownership in them. Councils should evaluate whether they can still achieve important community aims with lower ownership stakes.

R10.7 Councils – in particular those with interests in ports occupying large blocks of central city waterfront land – should consider landlord port models in which land ownership is separated from port operations. This may be an efficient mechanism for maintaining control over port land use while benefiting from the efficiency improvements resulting from increased private involvement in port operations.

Chapter 11

R11.1 Exemptions for the types of agreement with the higher risk of anti-competitive detriment – ratemaking and capacity-limiting agreements – should be removed. These arrangements should have access to the authorisation and clearance mechanisms in the Commerce Act.

There should be a transitional period to allow the agreements in place at the time the exemption is repealed to continue until their compliance with the Commerce Act has been tested.

R11.2 The exemption for non-ratemaking agreements should be retained in the Shipping Act 1987 and be conditional on filing agreements with the Ministry of Transport for placing on a public register.

The exemption and remedial regime should apply equally to outwards and inwards shipping.

The exemptions for international shipping in the Commerce Act 1986 should be repealed.

To be eligible for exemption, agreements must allow and protect confidential individual service contracts.

Chapter 12

R12.1 The Government should retain the Civil Aviation Act Part 9 competition regime, but should amend Part 9 to:

require the Minister of Transport to have regard to an assessment of the benefits and costs of trade practices that are proposed for authorisation under s.88 or s.90 of the Act, and commission regimes that are proposed under s.89;

require an assessment of the detriment arising from any potential reduction in competition as part of each assessment of benefits and costs;

require public consultation on an assessment of benefits and costs, if the proposed trade practice or commission regime is likely to reduce competition in a market; and

require the public disclosure of section 88 and section 90 authorisations that are granted under that regime.

Chapter 13

R13.1 In the interests of their own productive efficiency and service to customers, port and airport companies should periodically review the extent they unbundle activities within their domains and allow access for competing firms to supply them.

R13.2 The Government should develop a proposal to extend the Freight Information Gathering System and subject the proposal to a regulatory impact analysis 'efficiency test' to determine whether it would deliver net benefits beyond existing information collection and dissemination.

Appendix A Public consultation

Submissions

INDIVIDUAL OR ORGANISATION	SUBMISSION NUMBER
Air New Zealand	047
Asian Shipowners' Forum	002
Auckland Council	053
Auckland International Airport Limited	038
Aviation Industry Association	023
Board of Airline Representatives New Zealand	036
CentrePort Limited	033
Christchurch International Airport Limited	039
Commerce Commission	035
Customs Brokers and Freight Forwarders Federation of New Zealand Inc	017
Democrats for Social Credit	026
Employers and Manufacturers Association	007
Environment Southland	004
Export New Zealand	044
Federated Farmers	027
Foodstuffs (New Zealand) Limited	024
Global Shippers Forum	045
International Chamber of Shipping	006
International Container Lines Committee	048
Institution of Professional Engineers New Zealand (IPENZ)	025
ISO Limited	028
Japanese Shipowners' Association	049
Kotahi Logistics LP Limited	029
Local Government New Zealand	042
Lyttelton-Mt Herbert Community Board	016
Lyttelton Port of Christchurch	020
Marstel Terminals	030
Meat Industry Association	052
Ministry of Agriculture and Forestry	032
Ministry of Transport	046
New Zealand Airports Association Inc	041
New Zealand Air Cargo Council	008
New Zealand Council of Trade Unions	014
New Zealand Customs Service	034
New Zealand Maritime School	015
New Zealand Public Service Association	018
New Zealand Retail Association	019
New Zealand Shippers Council Inc	043
New Zealand Shipping Federation Inc	001
New Zealand Transport Agency	022
Oceanic Navigation Limited	009
Pacific Marine Management Limited	051
Pacifica Transport Group	011
Palmerston North City Council	021
Port Companies of New Zealand	031
Port of Napier Limited	010
Port of Tauranga	037
Ports of Auckland	050
PrimePort Timaru	012
Ravensdown	003
Road Transport Forum	055
Tainui Group Holdings Limited	013

Waikato Regional Council	005
Wellington International Airport Limited	040

Engagement meetings

INDIVIDUAL OR ORGANISATION

Andrew Coleman
Air New Zealand
Auckland Council
Arthur Grimes
Auckland International Airport
Aviation Industry Association of New Zealand Inc
Ballance
Bay of Plenty Logistics Advisory Group
Board of Airline Representatives New Zealand
Brent Layton
Business New Zealand CE's Forum
C3 Limited
CentrePort Limited
CMA CGM & ANL Agencies (New Zealand) Limited
Christchurch International Airport
Commerce Commission
Crown Forestry
Customs Brokers and Freight Forwarders Federation of New Zealand (CBAFF)
Department of Internal Affairs
Employers and Manufacturers Association
Expeditors International (New Zealand) Ltd
Export New Zealand Auckland
Export New Zealand Bay of Plenty
Federated Farmers of New Zealand
Foodstuffs New Zealand Limited
Fonterra
GS1 New Zealand
Heart of the City
International Container Lines Committee
Institution of Professional Engineers New Zealand (IPENZ)
ISO Limited
Ken Harris
Kotahi Logistics LP Limited
KiwiRail
Local Government New Zealand
Lyttelton Port of Christchurch
McKay Shipping Limited
Mainfreight
Maersk Line
Meat Industry Association of New Zealand Inc
Menzies Aviation New Zealand Limited
Ministry of Agriculture and Forestry
Ministry of Transport
New Zealand Air Cargo Council
New Zealand Airports Association
New Zealand Bloom
New Zealand Customs Service
New Zealand Council for Infrastructure Development (NZCID)
New Zealand Council of Trade Unions
New Zealand Forest Owners Association
New Zealand Institute of Economic Research

New Zealand Shippers' Council Inc
New Zealand Shipping Federation Inc
New Zealand Trade and Enterprise
New Zealand Transport Agency
New Zealand Wine Growers
Oceanbridge Shipping Limited
Pacific Basin Shipping (New Zealand) Limited
Pacifica Transport GroupNew Zealand
Port Companies of New Zealand
Port of Tauranga Limited
Ports of Auckland
Port of Napier Limited
PricewaterhouseCoopers
Ravensdown
Roger Kerr
Road Transport Forum New Zealand
Rockpoint Corporate Finance Limited
Sealord
Silver Fern Farms
Tainui Group Holdings Limited
The Chartered Institute of Logistics and Transport (New Zealand)
The Treasury – Crown Ownership Monitoring Unit
The Treasury – National Infrastructure Unit
The Treasury – Kevin Guerin
The Warehouse
Wellington International Airport
World Wide Access
Zespri International Limited

Appendix B Air services agreements

Key points

- There is a well-established international practice of restricting the rights of airlines to carry passengers and freight between countries.
- States exchange traffic rights in and out of their territories through bilateral or multilateral agreements between countries, known as 'air services agreements' (ASAs).
- Over the last 30 years, countries have liberalised ASAs to allow more passenger and freight travel between countries and entry by airlines into markets. New Zealand has been one of the leaders of this trend.
- Despite this, New Zealand's ASAs with key export and import markets such as China, Japan and Hong Kong impose capacity limits, and ASA negotiations are still an important part of New Zealand's international relations.
- Negotiations between governments over ASAs are primarily driven by passenger-service access considerations. Bellyhold freight capacity is a by-product of those negotiations.
- The constraints on air freight are an important factor for the government in deciding whether to liberalise ASAs, but must be balanced against the passenger travel and tourism impacts.

This appendix describes how air services in and out of New Zealand are regulated by a set of 'air services agreements' between New Zealand and other countries. This provides an important context for considering the extent to which airlines can compete or collaborate to carry international freight in and out of New Zealand (as discussed in section 11.3).

The international regulatory framework for air services

There is a well-established international practice of restricting the rights of airlines to carry passengers and freight between countries. This practice was established by the 1944 Convention on International Aviation (the Chicago Convention). Article 6 of this Convention states:

> No scheduled international air service may be operated over or into the territory of a Contracting State, except with the special permission or other authorization of that State, and in accordance with the terms of such permission or authorization.

States exchange traffic rights in and out of their territories through bilateral or multilateral agreements between countries, known as 'air services agreements' (ASAs). ASAs cover matters such as the routes that may be flown, the capacity (frequency and aircraft types) that may be offered by airlines, how many airlines may operate, and how tariffs (ie, prices) may be regulated.

The main matters of negotiation in ASAs are 'freedoms of the air'. These freedoms determine what types of routes designated airlines may take when carrying traffic in and out of a country's airspace. Figure B.1 describes each of the freedoms of the air.

Figure B.1 Freedoms of the air

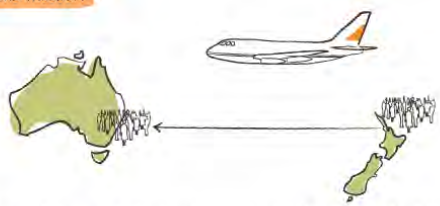
FIRST FREEDOM

The right or privilege, in respect of scheduled international air services granted by one State to another State or States to fly across its territory without landing.

SECOND FREEDOM

The right or privilege, in respect of scheduled international air services granted by one State to another State or States to land in its territory for non traffic purposes.

THIRD FREEDOM



The right or privilege, in respect of scheduled international air services granted by one State to another State to put down in the territory of the first State, traffic coming from the home State of the carrier.

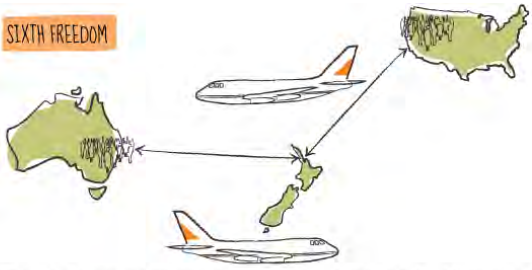
FOURTH FREEDOM

The right or privilege, in respect of scheduled international air services granted by one State to another State to take on, in the territory of the first State, traffic destined for the home State of the carrier.

FIFTH FREEDOM

The right or privilege, in respect of scheduled international air services granted by one State to another State to put down and to take on, in the territory of the first State, traffic coming from or destined to a third state.

SIXTH FREEDOM



The right or privilege, in respect of scheduled international air services, of transporting, via the home State of the carrier traffic moving between two other States.

SEVENTH FREEDOM

The right or privilege, in respect of scheduled international air services, granted by one State to another State, of transporting traffic between the territory of the granting State and any third State with no requirement to include on such operation any point in the territory of the recipient.

CABOTAGE - EIGHTH FREEDOM

The right or privilege, in respect of scheduled international air services, of transporting cabotage traffic between two points in the territory of the granting state which originates or terminates in the home territory of the foreign carrier.

CABOTAGE - NINTH FREEDOM

The right or privilege of transporting cabotage traffic of the granting State on a service performed entirely within the territory of the granting State.

Another important international practice is that of coordinating airline services. This practice was established around the same time as international regulation took hold in 1944, and is closely linked to regulation. It originated with the establishment of two international bodies in air services:

- The International Civil Aviation Organisation (ICAO), a UN agency that was established in 1944 by the Chicago Convention. The ICAO focuses on the development of international standards and recommended practices for non-technical regulation.
- The International Air Transport Association (IATA), which was founded in 1945 to represent interests of airlines, as a counterweight to the ICAO. Amongst other things, IATA provides common standards and recommended practices for selling and distribution of airline services.

Some forms of international coordination include the setting of technical and safety standards for air transport, the establishment of international recommended practices (such as payload limitations for different runway lengths) and IATA's interline debt clearing house facilities.

International trends in air services regulation

Over the last 30 years, countries have liberalised ASAs to allow more passenger and freight travel between countries and entry by airlines into markets. In many cases governments were willing to liberalise cargo rights more rapidly than for passenger services.

The trend towards liberalisation has not been universal. For example:

- Liberalisation of ASAs has been more prominent in the US and the European Union and between Australia and New Zealand, but has not occurred to the same extent on East Asia-Pacific routes.
- Only 'designated airlines' can use the rights to carry traffic on international routes that are granted by ASAs. Some countries only name one 'designated airline', which restricts market entry.
- The US still operates a policy whereby cargo generated as a result of US government contracts has to 'Fly America'.

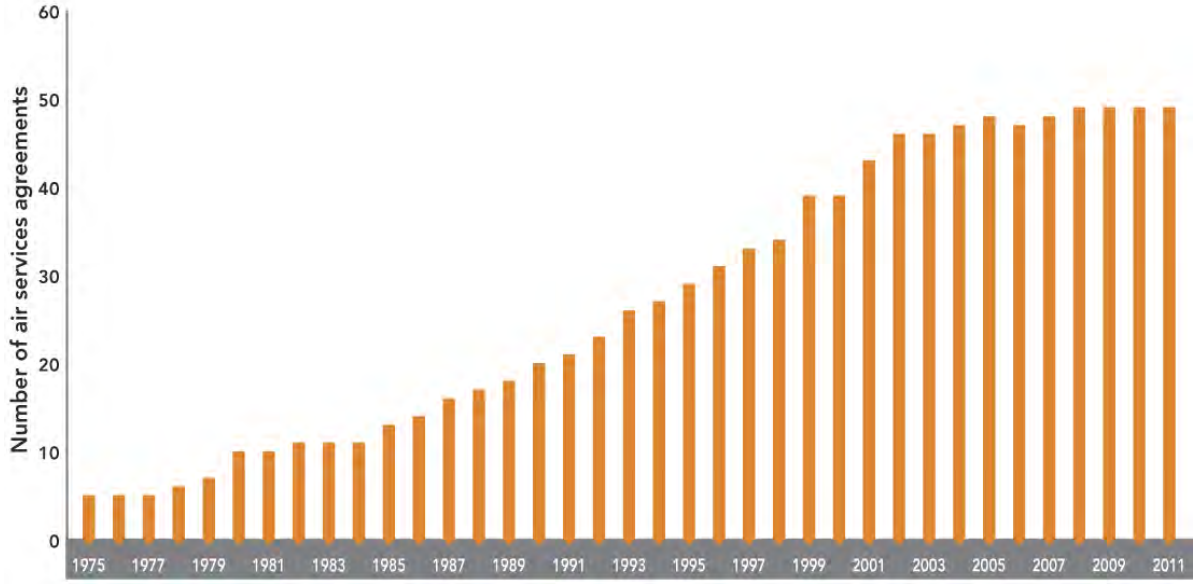
New Zealand's policy on ASAs

The New Zealand Government set out its objectives with respect to its ASAs in 1998, as part of a statement on the international air policy of New Zealand. The Government noted:

> Our key objectives in negotiating such agreements are to achieve comprehensive, reciprocal liberalisation in terms of:
>
> - no route restrictions, including by way of code-sharing, rights of establishment in other countries and cabotage;
> - unlimited capacity, through no constraints on the number of flights or types of aircraft;
> - open investment in airlines; and
> - the ability for airlines to charge whatever prices they wish without having to file such prices for notification or approval with any authorities.
>
> (Minister of Transport, 1998)

This policy is consistent with New Zealand practice before 1998. The following diagram shows that the number of ASAs negotiated by New Zealand has grown significantly in the last 35 years.

Figure B.2 Number of air services relationships between New Zealand and other countries or territories



Source: Ministry of Transport

New Zealand has liberalised air services arrangements with some of its most important trading partners. In August 2002, New Zealand signed an agreement with the Australian Government relating to air services "that has no restrictions on capacity, frequency or routes that airlines of either country can operate to, within or beyond the two countries," provided these airlines meet certain ownership and control eligibility criteria (ACCC, 2010a). This agreement is a continuation of the Single Aviation Market policy between the two countries.

Alongside this, New Zealand is a signatory to the Multilateral Agreement on the Liberalization of International Air Transportation (MALIAT), along with the US, Brunei, Chile, Singapore and others. As indicated in Table 2 below, the MALIAT is quite an open agreement. A Protocol to the MALIAT (a separately negotiated document signed by New Zealand, Singapore, Chile, Brunei and the Cook Islands) provides for 7th freedom passenger and cabotage rights.

As a consequence of this liberalisation, New Zealand's ASAs with Australia, the UK, Singapore, Chile and Brunei are very free by international standards.

The Ministry of Transport is reviewing the policy objectives for initiating and negotiating ASAs. The Ministry expects to complete this review in 2012. It will look at whether it is necessary to update the policy stated in 1998, which is referred to above (Minister of Transport, 1998). In July 2011, the New Zealand Government also announced that it was looking to negotiate new and improved ASAs with countries in East Asia and South America (Associate Minister of Transport, 2011).

As well as traffic rights, the Ministry of Transport's policy review is likely to look closely at the criteria by which an airline can be designated as a national airline for the purposes of ASAs. A country's designated airlines have access to that country's air traffic rights. The right to operate within that country's domestic network is also subject to certain ownership and regulatory requirements.

Air New Zealand is designated under many of New Zealand's ASAs. However, many of these agreements provide for 'multiple designation' where more than one airline from each country can exercise the traffic rights in the agreement.[140]

The focus of ASAs is on passenger traffic. Governments seek rights to carry passenger traffic both because of the benefit for national designated airlines (whose businesses are predominantly driven by passenger traffic) and the tourism benefits of increased international visitors by air. For instance, while there are no

[140] Under the New Zealand–Australia ASA, an alternative to designation is 'Single Aviation Market airline' status. Such airlines can combine Australian and/or New Zealand ownership, control and place of business. New Zealand-based airlines licensed as Single Aviation Market airlines include Vincent Aviation, Airwork and Virgin Australia (NZ) Ltd (formerly Pacific Blue), plus Tasman Cargo Airlines, which operates from Sydney.

constraints on bellyhold freight from China, the greater economic impact is likely to be the constraint on passengers into New Zealand from China, given that China is one of New Zealand's most significant tourism markets.

New Zealand's current ASAs

New Zealand has multilateral or bilateral agreements covering 49 air services relationships with other countries or territories (cf. appendix to Ministry of Transport submission to inquiry, sub. 46). Some of these agreements are more important than others for New Zealand air freight. The following table describes the agreements New Zealand has with its main air freight trading partners.

Table B.1 Information on air services rights for New Zealand, in order of size of import/export markets (as at 1 November 2011)

Country	Combined value of NZ imports and exports by air	% of NZ's trade by air	Nature of NZ's ASA with that country	Airlines operating under the ASA	3rd/ 4th free-dom rights	5th free-dom rights	7th free-dom rights	8th free-dom rights	9th free-dom rights
Australia	$4,038m ($2,577m exports, $1,460m imports)	26%	Open – 7th freedom rights available for cargo-only services for designated airlines.	NZ Other country	✓	✓	✓ (cargo only)	✓	✓
United States of America	$2,629m ($829m exports, $1,800m imports)	17%	Open up to and including 5th freedom (MALIAT) – 7th freedom rights available for cargo-only services	NZ Other country (CS)	✓	✓	✓ (cargo only)		
People's Republic of China	$2,101m ($139m exports, $1,962m imports)	14%	Capacity limited for passengers but less so for cargo. Additional rights available for cargo-only services	NZ Other country	✓	✓			
Singapore	$721m	5%	MALIAT + Protocol – open up to and including 7th freedom and cabotage rights	Other country	✓	✓	✓	✓	
Germany	$629m	4%	Open up to and including 5th freedom rights – 7th freedom cargo-only available	NZ (CS) Other country (CS)	✓	✓	✓ (cargo only)		
United Kingdom	$584m	4%	Open – including 7th freedom rights for passengers and cargo	NZ Other country	✓	✓	✓	✓	✓

Country	Combined value of NZ imports and exports by air	% of NZ's trade by air	Nature of NZ's ASA with that country	Airlines operating under the ASA	3rd/ 4th free-dom rights	5th free-dom rights	7th free-dom rights	8th free-dom rights	9th free-dom rights
				(CS)					
Japan	$547m	4%	Limited routes (no beyond rights) and capacity	NZ Other country (CS)	✓	✓			
Hong Kong	$411m	3%	Prescriptive but additional capacity available for cargo	NZ Other country	✓	✓			
France	$280m	2%	Limited routes and capacity	NZ [5] Other country [5]	✓	✓			
Malaysia	$275m	2%	Open up to and including 5th freedom rights	Other country	✓	✓			
Switzer-land	$266m	2%	Open	NZ (CS)	✓	✓			
Canada	$214m	1%	Open up to and including 5th freedom – 7th freedom rights available for cargo-only services	NZ Other country (CS)	✓	✓	✓ Cargo only		
Taiwan	$180m	1%	Limited routes and capacity	Other country	✓	✓			
Thailand	$178m	1%	Limited routes and capacity (open 3rd and 4th freedom rights)	NZ (CS) Other country	✓	✓			
India	$149m	1%	Limited routes and capacity		✓	✓			
Republic of Korea	$147m	1%	Limited routes (no beyond rights) and capacity (11 services per week each side)	Other country	✓	✓			
Nether-lands	$120m	1%	Code-share only	Other country (CS)	✓				
Fiji	$81m	1%	Open 3rd and 4th freedom rights, limited routes and capacity for 5th freedom	NZ Other country	✓	✓			

Country	Combined value of NZ imports and exports by air	% of NZ's trade by air	Nature of NZ's ASA with that country	Airlines operating under the ASA	3rd/ 4th free-dom rights	5th free-dom rights	7th free-dom rights	8th free-dom rights	9th free-dom rights
United Arab Emirates	$37m	0%	Open route schedule, no predetermination of capacity	NZ (CS) Other country	✓	✓			
Total: countries above	*$13,588m*	*89%*							
Total: All countries	$15,281m	100%							

Sources: Statistics New Zealand Exports for Overseas Cargo (fob NZ$): New Zealand Port by Country of Destination, Commodity (HS2) and Period, 2010 year; Statistics New Zealand Imports for Overseas Cargo (cif NZ$): New Zealand Port by Country of Origin, Commodity (HS2) and Period, 2010 year; Ministry of Transport (ASAs information)

Notes:

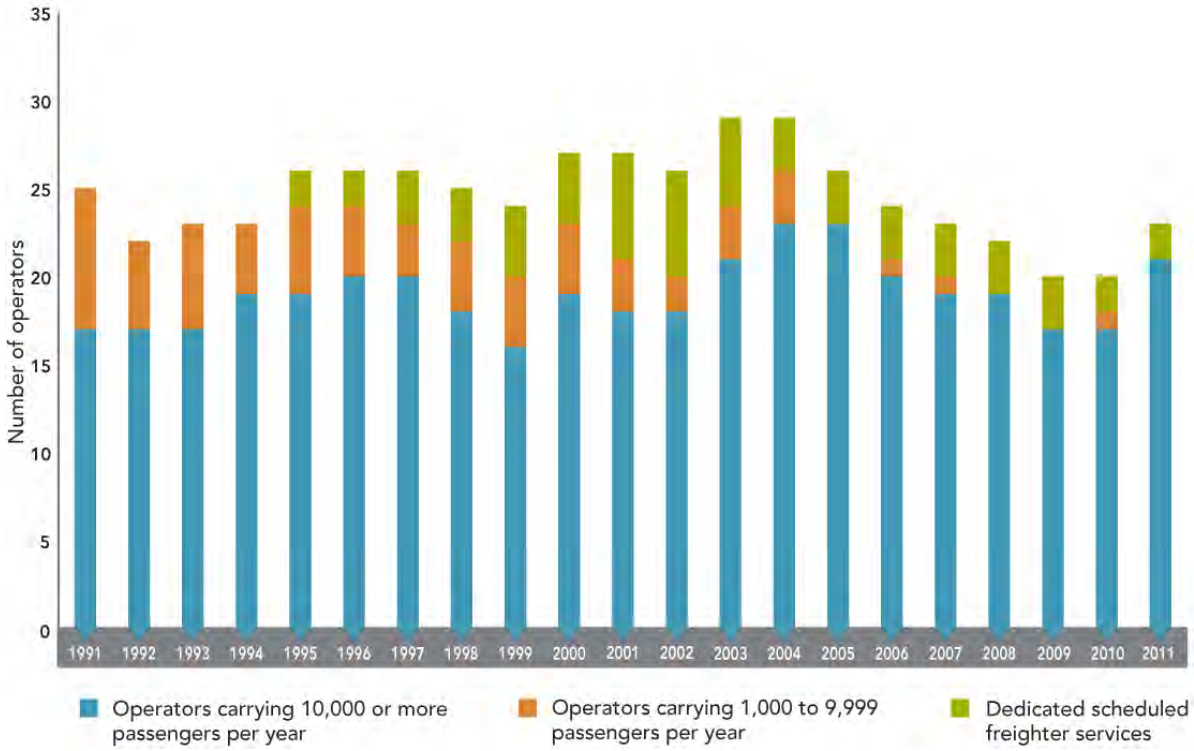
1. Exports and imports refer to cargo going to and from AKL, WLG and CHC airports in 2010 (NZ$)
2. A combination of 3rd and 4th freedom rights will also effectively provide a designated airline with 6th freedom rights (eg, NZ–US–UK as a US airline)
3. CS = code-share services only offered
4. MALIAT = Multilateral Agreement on the Liberalization of International Air Transportation
5. The New Zealand–France ASA also covers services with French Polynesia and New Caledonia

The effect of New Zealand's ASAs on the level of air services

Recent international studies have found evidence that more liberal ASAs are associated with an increase in the amount of passengers and freight that are transported by air (Zhang & Zhang, 2002) and a decrease in transport costs (Micco & Serebrisky, 2006). However, it is difficult to establish whether liberalised ASAs caused an increase in air services, or whether the growth of air services is driving the development of more liberal ASAs. It is likely to be a bit of both.

In addition, the relationship between the number of ASAs and the number of airline operators in New Zealand is not strong. While the number of ASAs has more than doubled since 1991, the number of large operators has not increased (though it has fluctuated), as indicated by the table below.

Figure B.3 Number of airline operators in New Zealand



Source: Ministry of Transport

Notes:

1. Cargo-only carriers operating in New Zealand during this period are as follows: Lufthansa 2001–2003; Singapore Airlines cargo 2001 to present; Tasman Cargo Airlines (formerly Asian Express) 1997 to present; Cargolux 1999–2010; Polar 1995–2003; and Evergreen 1995–2001.

The Commission has heard from several submitters that the current ASAs that New Zealand administers may be constraining the provision of air freight services to and from New Zealand. We consider the possible ways in which ASAs may be playing a constraint below.

Potential for constraints on air freight services from ASAs

Two submissions expressed concerns with the potential constraints imposed by the current ASA policy. The New Zealand Airports Association considered that international ASAs based on reciprocal rights may harm New Zealand if New Zealand cannot provide corresponding benefits to other large countries, resulting in agreements with capacity constraints (sub. 41). Similarly, Auckland Airport's submission considered that the current policy focuses too much on reciprocity and bilateral rights, and noted concerns about limits on competition as a result of ASAs (sub. 38).

Two other submissions argued that there were few if any constraints to international air services as a result of ASAs. The Ministry of Transport's submission noted that there are unutilised traffic rights available in many of New Zealand's ASAs (sub. 46). It also noted that parties to ASAs are often more willing to liberalise for cargo than for passenger services. As an example, the Ministry noted that New Zealand has nine agreements that specify separate cargo rights. Seven specify 7th freedom rights for cargo (eg, cargo from UK to NZ as a US airline) but not for passengers. In a similar vein, Air New Zealand was not aware of any ASAs that create a shortage of supply of air freight (sub. 47).

Some of New Zealand's ASAs have no capacity limits. This is the case for New Zealand's agreements with Australia, the United States, Singapore, Germany, the United Kingdom and Malaysia. However, there are other agreements with capacity limits, including agreements with China, Japan, Hong Kong and France (the French agreement also does not allow a New Zealand designated airline to fly to France).

It does seem that there are certain New Zealand ASAs that are restricting the ability of airlines to expand passenger capacity and therefore freight bellyhold capacity. The New Zealand Government's memorandum of understanding with China allows seven passengers services per week (although there is no limit for

dedicated cargo flights). In recent months, the passenger capacity limits for the ASA with China have been reached, so that no additional flights can be undertaken without an existing airline reducing services, or the ASA being expanded.

The Ministry of Transport has indicated that the Government expects to start negotiations with China on air services rights in April 2012, and that New Zealand has had trouble getting to the top of the priority list for negotiations with Japan, amongst the other countries seeking more liberal arrangements with Japan.

For India, air services rights are available but there are no current airlines operating between New Zealand and India, possibly because the range is too great for the type of service that would operate. However, another factor may be that hubbing is a more cost-effective alternative. There are frequent New Zealand flights to Singapore, and Singapore Airlines/Silk Air operate 80 flights a week to Indian cities. A direct service would have to compete with this.

New Zealand could unilaterally offer foreign-designated airlines rights to carry traffic in and out of New Zealand without reciprocal rights.

However, there are significant downsides to opening up access to New Zealand without reciprocal rights. Drawing on the analysis in the Australian Productivity Commission's 1998 review of international air services, the following drawbacks should be noted in respect of adopting this strategy in New Zealand:

- Under the entrenched bilateral system New Zealand airlines cannot conduct international air services without the approval of other countries. Even if New Zealand opened access to New Zealand airports, other countries could still restrict entry and capacity to their airports.
- Exporters and importers who would have preferred to use New Zealand airlines, but are not able to do so because of restrictions in access to other countries, would bear the costs of having to use less preferred carriers.
- New Zealand can use the rights of foreign airlines to access New Zealand airports as bargaining coin to secure access by air to other countries. It would lose this bargaining power if it opened its airports up to all foreign airlines without reciprocal rights.

The other important consideration is that freeing up access to New Zealand airports or restricting access as bargaining coin are likely to have significant costs and benefits specific to passenger services and New Zealand's tourism markets. These issues are outside the scope of this inquiry.

Appendix C Regulation of external costs

Table C.1 Road freight – external costs

External cost	Description	Government response
Greenhouse gas emissions	Consumption of fossil fuels leads to the emission of greenhouse gases that contribute to climate change.	Climate Change Response Act 2002 Climate Change (Liquid Fossil Fuels) Regulations 2008 Fuel efficiency standards
Water runoff from roads	Heavy metals, released by wear of tyres and brake pads, are washed off roads and can contaminate rivers, streams and harbours. The construction of roads can also result in increased surface runoff carrying sediment and pollutants.	Resource Management Act 1991 land use restrictions contained in regional and local plans Urban design measures aimed at managing stormwater Erosion and sediment control standard for state highway infrastructure under development by New Zealand Transport Authority (NZTA) Stormwater Treatment Standard for State Highway Infrastructure
Noise	Heavy vehicles can cause noise disturbances particularly in urban and residential areas. External costs are likely to be greater during the night-time than daytime.	New Zealand road projects that require a designation under the Resource Management Act are often approved subject to conditions that are developed as part of the consenting process. Noise is commonly one of the effects of roading projects to which designation conditions apply, to ensure these effects are managed and minimised (NZTA, 2011) Land Transport Rule: Vehicle Equipment 2004 Road design and traffic management systems utilised by government and local authorities
Accidents	In 2009, 894 people in New Zealand were injured in road crashes involving trucks.[1] Some of the external costs are associated with accidents are internalised through insurance; however, residual costs to society will remain due to 'moral hazard' problems.[2]	Land Transport Management Act 2003 and associated Land Transport Rules (eg, rules relating to vehicle safety) Land Transport (Road Safety and Other Matters) Amendment Act 2011 Transport Accident Investigation Commission Act 1990 Land Transport Rule: Work Time and Logbooks 2007 Road safety campaigns

External cost	Description	Government response
Congestion	Both freight and passenger vehicles contribute to congestion. Some of these costs are internalised through time costs and operating costs. However, the costs to other road users are not internalised and can be considered an externality. Due to their large size transport vehicles have a higher unit congestion effect than, say, passenger cars. This effect is highly dependent on locational and temporal factors.	Land Transport Rule: Vehicle Dimensions and Mass (under this rule oversized vehicles are restricted during certain times) Improved road design and traffic management
Air pollution	Consumption of fossil fuels (mainly diesel) leads to the emission of a number of air pollutants including volatile organic compounds, carbon monoxide and nitrogen oxide. Emissions can have harmful impacts on human health. Externalities associated with air quality also increase with congestion and can be highly dependent on the prevailing weather conditions.	Resource Management Act 1991 s.43 (regulations prescribing national environmental standards) Resource Management 1991 (National Environmental Standards for Air Quality) Regulations 2004 Land Transport Management Act 2003 and associated Land Transport Rules (eg, Land Transport Rule: Vehicle Exhaust Emissions 2007) Improved road design

Source: Ministry of Transport, available at www.transport.govt.nz

Notes:

1. Figures include all trucks and not only those used in international freight.
2. Moral hazard problems arise in the presence of insurance, as a person may take more risk than they otherwise would (because they do not face the full cost or consequences of their behaviour).

Table C.2 Rail freight – external costs

Externality	Description	Government response
Greenhouse gas emissions	Diesel-powered trains emit greenhouse gases that contribute to climate change.	Climate Change Response Act 2002 Climate Change (Liquid Fossil Fuels) Regulations 2008
Noise	The external costs associated with noise from rail freight are largely borne by those living close to rail infrastructure.	Resource Management Act 1991 Noise provisions
Accidents	Accidents are less common for rail freight than road freight but can have devastating consequences for those involved. In 2010 there were 10 collisions at level crossings between vehicles and trains (thus level crossing are also a road safety issue). As with road accidents, insurance may internalise much of the external cost associated with accidents.	Railways Act 2005, (Part 2 – Safety) Railways Regulations 2008 Transport Accident Investigation Commission Act 1990 Road/rail safety campaigns Land Transport Rule: Dangerous Goods

Externality	Description	Government response
Air pollution	Consumption of fossil fuels (mainly diesel) leads to the emission of a number of air pollutants which can have harmful impacts on human health. These include volatile organic compounds, carbon monoxide and nitrogen oxide.	Resource Management Act 1991 s.43 (regulations prescribing national environmental standards) Resource Management 1991 (National Environmental Standards for Air Quality) Regulations 2004

Source: Ministry of Transport, available at www.transport.govt.nz

Table C.3 Air freight – external costs

Externality	Description	Government legislation covering externalities
Greenhouse gas emissions	The consumption of jet fuel results in the emission of climate-changing greenhouse gases. Water vapour caused by craft in flight also contributes to climate change.	While air freight generates greenhouse gases, international flights are exempt from the New Zealand Emissions Trading Scheme. Domestic flights are covered by the scheme via the Climate Change (Liquid Fossil Fuels) Regulations 2008. Emissions from international air travel are currently being discussed under the jurisdiction of the International Civil Aviation Authority (as directed under Article 2.2 of the Protocol). From the start of 2012, emissions from all domestic and international flights that arrive at or depart from an airport in the European Union will be covered by the EU Emissions Trading System.
Noise	The external costs associated with noise from air freight are largely borne by those living close to airport infrastructure. The external costs attributable to the freight component of a passenger flight will only be a fraction of the noise.	New Zealand Standard NZS 6805:1992 *Airport noise management and land-use planning* Noise issues associated with new airports are generally controlled through the Resource Management Act and District Plans which contain noise rules.
Air pollution	The consumption of jet fuel leads to the emissions of a number of air pollutants such as volatile organic compounds, carbon monoxide and nitrogen oxide.	Vehicle Emissions Rule in 2007 Air pollution from international air travel is currently being discussed under the jurisdiction of the International Civil Aviation Authority
Accidents	While rare, accidents involving planes carrying freight do occasionally occur.	Civil Aviation Act 1990 (includes licensing, registration and standards requirements) Transport Accident Investigation Commission Act 1990

Source: Ministry of Transport available at www.transport.govt.nz

Table C.4 Shipping – external costs

Externality	Description	Government response
Greenhouse gas emissions	The consumption of bunker fuels emits climate-changing greenhouse gases. While only constituting 2.7% of global emissions of CO_2, international shipping is one of the world's fastest growing sources of greenhouse gas emissions. As a result, international pressure to reduce shipping-related emissions is likely to increase in the years and decades to come.	Climate Change Response Act 2002 – specifically, the Climate Change (Liquid Fossil Fuels) Regulations 2008. While international shipping is exempt from the liabilities under the NZ Emissions Trading Scheme, coastal shipping is directly impacted through higher fuel prices In July 2011 the International Maritime Organization adopted an Energy Efficiency Design Index (EEDI), which sets technical standards for improving the energy efficiency of certain categories of new ships.
Ballast water	Ballast water can result in the spread of exotic marine pest species, which can impact amenity values, recreational fishing, commercial fishing and coastal installations.	Import Health Standard For Ships' Ballast Water From All Countries (issued Pursuant To Section 22 Of The Biosecurity Act 1993)
Air pollution	The consumption of bunker fuel leads to the emissions of a number of air pollutants such as volatile organic compounds, carbon monoxide and nitrogen oxide. The social cost of these emissions is higher while in port than when out to sea, where the emissions do not impact on as many people.	Resource Management (National Environmental Standards for Air Quality) Maritime Transport Act 1994 (including Part 19, Protection of marine environment from harmful substances) International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI – NZ is not currently a signatory to this Annex
Accidents	Marine accidents may result in injury or loss of life, and the loss of cargo or fuel into the sea. While some of these costs can be internalised via insurance and governments sanctions, there is likely to be a residual risk (and therefore cost) borne by society (e.g. loss associated with a reduction in amenity value).	Maritime Transport Act (including Part 7, Liability of ship owners and others) Maritime Protection Rules (including Part 22 – Prevention of collisions and Part 91 Navigation Safety Rules) Transport Accident Investigation Commission Act 1990
Oil spills (accidental or otherwise)	The discharge of oil (accidental or otherwise) into the marine environment can directly impact marine wildlife and their habitat, and release toxins that may impact human health.	Maritime Transport Act 1994 (including Part 23, Plans and responses to protect marine environment from marine oil spills) Maritime Protection Rules MARPOL Annex I (Regulations for the Prevention of Pollution by Oil)
Discharge of sewage and other noxious wastes	The discharge of sewage can harm the marine environment and people by contaminating seafood, transmitting diseases to water users and creating conditions unsuitable for marine life.	Maritime Transport Act 1994 (including Part 21 Protection of marine environment from dumping, incineration, and storing of wastes) Maritime Protection Rules (including Part 180, Dumping of Waste or Other Matter) MARPOL Annex II (Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk) and Annex V (Prevention of Pollution by Garbage from Ships) Resource Management (Marine Pollution) Regulations 1998

Source: Ministry of Transport, available at www.transport.govt.nz; International Maritime Organization, www.imo.org

Notes:

1. The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main convention covering prevention of pollution of the marine environment by ships. It is a combination of two treaties adopted in 1973 and 1978 respectively and updated by amendments through the years.

Appendix D International regulatory approaches to international shipping

Pre-1998

Prior to 1998, the international regulatory matrix was characterised by almost universal immunity for all forms of cooperation agreements between liner carriers, as indicated by the approach of the US, the EU and Australia.

United States

Liner shipping was exempt from the application of competition laws pursuant to the Shipping Act 1984.

The exemption covered price fixing, capacity regulation, revenue pooling, scheduling etc. To obtain exemption, agreements were required to be filed with the Federal Maritime Commission (the FMC).

While the 1984 Act enabled individual contracts, such contracts had to be made public. Initially individual contracting led to a reduction in freight rates, but conferences soon moved to prohibit their members from entering into such contracts (Phang, 2009, p. 194).

The European Union

Until 1986, the Treaty of Rome was not applied to maritime transport.

In 1986, the European Commission (the EC) issued a block exemption for conferences (Council Regulation (EEC) No 4056/86),[141] which enabled conferences to fix rates and conditions of carriage, coordinate shipping timetables, sailing dates or dates of calls, determine the frequency of sailings or calls, coordinate or allocate sailings, regulate capacity, and allocate cargo or revenue among members. The block exemption was granted on the assumption that it was necessary to ensure the provision of reliable shipping services.

In 1995, a block exemption for "consortia agreements" was issued, alongside the conference block exemption (Commission Regulation (EEC) No 870/95). The consortia exemption specifically excludes agreements relating to the fixing of prices, limitation of capacity or sale (except in response to fluctuations in supply and demand), and the allocation of markets or customers, all of which were then covered by the conference exemption.

Australia

Part X of the Competition and Consumer Act 2010[142] (the CCA) regulates international liner shipping services in Australia and has been in place in various forms since 1965.

Any provision fixing prices, pooling or apportioning earnings, losses or traffic, regulating capacity etc in relation to liner shipping services, stevedoring services and activities that take place outside Australia is exempted under Part X.[143] To gain an exemption, carriers must register their agreements with the Registrar of Liner Shipping.

Parties to a conference agreement are also required to negotiate minimum levels of shipping services (frequency of sailings, cargo carrying capacity and ports of call) with shippers. They are also required to take part in negotiations with relevant shipper bodies in relation to certain ongoing shipping arrangements (for example, freight rates, frequency of sailings, ports of call) whenever reasonably requested by the shipper body, and must consider the matters raised by the shipper body. However, the parties and shipping bodies are not required to come to an agreement.

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[141] A block exemption can be issued where certain categories of agreements are believed to generate positive effects that outweigh negative effects and a fair share of the benefits are passed on to consumers.

[142] Formerly the Trade Practices Act 1974.

[143] Parties remain subject to the prohibitions regarding third line forcing, misuse of market power, and mergers and acquisitions.

International regulatory approaches (post-1998)

The fundamental premise underlying exemption has come in for increasing challenge in the last 15 years, given the rise of other less restrictive forms of cooperation and other market changes. The two initial catalysts were the enactment of the Ocean Shipping Reform Act of 1998 (the OSRA) in the US and an OECD study which culminated in a 2002 report.

Both the OSRA (indirectly) and the OECD report (directly) fundamentally challenged the premise that price-fixing agreements are necessary to ensure stable services.

The Ocean Shipping Reform Act 1998

The key change resulting from the OSRA was the ability for carriers to enter into confidential individual service contracts. Before this time, such contracts had to be made public. Classic cartel theory suggests that the requirement to publish such contracts reduces the incentives for participants to enter into individual service contracts.

This ability to contract confidentially increased the incentive to 'cheat' on the conference and thereby effectively reduced the importance of conferences. The FMC reported that the change resulted in more than 80 per cent of liner cargo being carried under individual service contracts (Federal Maritime Commission, 2001).

Importantly, this improved competition was perceived to be achieved without reduced service standards, which called into question the necessity of conference agreements in ensuring reliable liner shipping on US routes. In addition, there was "a dramatic increase in efficiency-enhancing operational types of agreements, such as vessel-sharing and space charters" (Australian Government Productivity Commission, 2005, p. 127).

The OECD report

The second major catalyst was the OECD's 2002 report, which examined whether the continuing existence of competition law exemptions for price-fixing and rate discussions in liner shipping was preferable to a move toward more competitive liner markets (OECD, 2002).

> The inquiry challenged head-on the so-called core industry theory that liner shipping was inherently unstable, and that liner conferences provided stable freight rates or guaranteed the provision of reliable shipping services.
>
> Global Shippers' Forum, sub. 45, p. 5

The OECD found no convincing evidence that exemptions should automatically extend to price-fixing as it should not be presumed that the benefits of such agreements outweighed the detriments (OECD, 2002, p. 78). Specifically, the OECD found that there was little reason to believe that liner shipping was more 'unique' than other transport industries and noted that, despite increased competition, many carriers were generating financial returns on a comparable level to other transport industry service providers (OECD, 2002, p. 75).

The OECD instead formed the view that the removal of competition law exemptions could reasonably be expected to accelerate the trends at that time relating to service quality, decreasing rates and increasing industry concentration (OECD, 2002, p. 73). The OECD therefore recommended that limited competition law exemptions not be allowed to cover price-fixing and rate discussions (OECD, 2002, p. 78).

Other recent regulatory developments

The publication of the OECD report has led other jurisdictions to examine the basis for the continued anti-trust exemption for all forms of cooperation between liner carriers, although the result has been different in various jurisdictions.

> These changes mark a turning point and very much underline that antitrust exemption in the liner shipping sector is no longer the norm and is likely to spread as more countries and regions review their existing antitrust arrangements.
>
> Global Shippers' Forum, sub. 45, p. 5

While there has certainly been a move to review the basis of the exemptions, there has yet to be a complete removal of the exemptions internationally.

> The immunity system that currently exists in New Zealand is still the international standard, as it is permitted in virtually all major trading nations around the world, including the United States, Canada, Japan, China, Singapore, Korea, Taiwan, and Australia.
>
> Japanese Shipowners' Association, sub. 49, p. 1

The most significant move in terms of amending the application of competition laws to international shipping has been in Europe. During the period 2003 to 2005, the EC reviewed the basis for the conference block exemption. At the time, it described the exemption as "wholly exceptional," given it exempted agreements involving price-fixing and capacity regulation (European Commission, 2004).

The conference exemption was subsequently repealed in October 2008, after a two-year transitional period. The EC cited the following reasons in support of the repeal of the conference exemption (European Commission Ad-Hoc Advisory Committee Meeting, 2005):

- the alleged causal link between conferences and reliable services was at least unquantifiable and unverifiable on the basis that the growing importance of independent operators and individual service contracts seemed to show that conference price-fixing was not required to ensure reliable shipping services;
- none of the benefits identified by carriers would appear to neutralise the negative effects for consumers of conference price-fixing, and consumers failed to see any benefits of price-fixing;
- there are a number of various alternatives to liner shipping conferences that assure reliable services as liner carriers operate outside conferences on all trades, and confidential service contracts are entered into on every trade, carrying up to 90% of the goods in some instances; and
- the increasing number of links between carriers in consortia, alliances, and vessel-sharing agreements, in addition to discussions on rates and supply carried out within conferences, make it very difficult to establish the extent to which a particular conference is subject to effective internal and external competition.

> Consortia help to improve the productivity and quality of available liner shipping services by reason of the rationalisation they bring to the activities of member companies and through the economies of scale they allow in the operation of vessels and utilisation of port facilities. They also help to promote technical and economic progress by facilitating and encouraging greater utilisation of containers and more efficient use of vessel capacity.
>
> (EC, 2009)

The block exemption for consortia agreements in the EU was most recently reviewed in 2009, and renewed until 2015 on the basis that such agreements were considered to be efficiency enhancing and "economically desirable."

Box 33 **EU Consortia Exemption**

'Consortium' means an agreement or a set of interrelated agreements between two or more vessel-operating carriers which provide international liner shipping services exclusively for the carriage of cargo relating to one or more trades, the object of which is to bring about cooperation in the joint operation of a maritime transport service, and which improves the service that would be offered individually by each of its members in the absence of the consortium, in order to rationalise their operations by means of technical, operational and/or commercial arrangements.

Article 81(1) of the Treaty shall not apply to the following activities of a consortium:

- the joint operation of liner shipping services including any of the following activities:

  - the coordination and/or joint fixing of sailing timetables and the determination of ports of call;
  - the exchange, sale or cross-chartering of space or slots on vessels;
  - the pooling of vessels and/or port installations;
  - the use of one or more joint operations offices;
  - the provision of containers, chassis and other equipment and/or the rental, leasing or purchase contracts for such equipment;
- capacity adjustments in response to fluctuations in supply and demand;
- the joint operation or use of port terminals and related services (such as lighterage or stevedoring services);
- any other activity ancillary to those above which is necessary for their implementation, such as:
  - the use of a computerised data exchange system;
  - an obligation on members of a consortium to use in the relevant market or markets vessels allocated to the consortium and to refrain from chartering space on vessels belonging to third parties;
  - an obligation on members of a consortium not to assign or charter space to other vessel-operating carriers in the relevant market or markets except with the prior consent of the other members of the consortium.

Israel took a similar approach, repealing its existing exemption for shipping agreements, and plans to replace it with a block exemption for consortia agreements, set to come into force on 1 January 2012 (OECD, 2011).

In contrast, other jurisdictions in the Asia-Pacific region have maintained immunity for liner shipping.

Singapore

Singapore enacted a competition regime for the first time in 2006. At the same time, on the recommendation of the Competition Commission of Singapore, the Minister for Trade and Industry granted a block exemption for liner shipping agreements Competition Act (Chapter 50B) Competition (Block Exemption for Liner Shipping Agreements) Order 2006.

The block exemption applies to price-fixing agreements, but the agreement must enable parties to offer individual contracts (at non-conference prices), and to withdraw from the agreement by giving required notice.

The exemption was reviewed in 2010 and its application extended until 2015 on the basis that such exemptions were still the regulatory norm internationally, and that it resulted in net benefits to Singapore given its status as a premier international maritime centre for liner shipping operations (Competition Act (Chapter 50B) Competition (Block Exemption for Liner Shipping Agreements) Order 2006).

Japan

Japan announced in June 2011 that its anti-trust immunity system for all types of ocean carrier agreements would be maintained, subject to a review in 2015 (Japanese Shipowners' Association, sub. 49, p. 3).

The decision to retain the system was based on the inability to find any valid reason for abolishing it, and the concern that a unilateral repeal would have adverse impacts on carriers, shippers, and the Japanese economy, especially in light of the increased volatility of freight rates that followed the EU's repeal of its conference exemption.

Australia

The Australian Productivity Commission (the APC) reviewed the basis for Part X of the CCA in 1999 and again in 2005.

While the APC recommended the retention of Part X in 1999, in 2005 it recommended the repeal of Part X and advocated relying on the general authorisation procedures for exemption of specific agreements, recognising that different types of agreements pose different levels of anti-competitive risk with the net public benefit depending both on the type of agreement and the particular market.

In recommending the removal of the blanket exemption, the APC looked to the recent regulatory developments in the US and EU and the impact of these on service availability, the emergence of discussion agreements with high market shares, tighter market conditions, and the fact that Australian shippers were calling for the abolition of the exemption (a change from the position in 1999).

Despite these recommendations, the Australian Government has not made any changes.

United States

A Bill was introduced to the US Congress in 2010 to completely remove anti-trust immunity for liner shipping agreements involving price-fixing, capacity-fixing, revenue pooling etc, while preserving immunity for 'efficiency-enhancing' co-operation (eg, sharing vessels and capacity).

The Bill was not enacted before Congress was dissolved, and submitters held conflicting views on the likelihood of future reform:

> The bill fell due to the mid-term U.S. elections, but a powerful coalition of U.S. industry interests is supporting a campaign to reintroduce an antitrust bill. We understand that a new bill is likely to be reintroduced in the near future.
>
> Global Shippers Forum, sub. 45, p. 5

> It is likewise understood that there is no current moves in the United States to remove existing exemptions.
>
> International Container Lines Committee, sub. 48, p. 34

APEC Guidelines Related to Liner Shipping

Perhaps reflecting the ongoing process of review, in June 2011, APEC (of which New Zealand is a member) adopted guidelines (the Guidelines) on maritime competition laws as recommended practices for member economies (APEC, 2011).

The Guidelines implicitly accept the distinction between ratemaking and non-ratemaking agreements, commenting in the preamble that:

> …cooperative, non-ratemaking agreements among liner shipping carriers may contain aspects that are in conflict with a competition driven regulatory framework and may need an exemption from that framework if the efficiency gains from such agreements are to be realized.

The Guidelines themselves recommend formal exemptions remain for non-ratemaking agreements, but only where the provisions of general competition law prohibit them, or the general competition laws give rise to uncertainty as to whether such agreements are permissible or not.

Box 34 **APEC Guidelines**

Guideline 1:

Non-ratemaking agreements between ocean carriers may continue to be permitted as a positive form of supplier collaboration for efficiency-enhancement within APEC member economies' competition regulations.

A formal exemption from the relevant provisions of general competition law may be provided for non-

ratemaking agreements in those APEC member economies where:

Either, the provisions of general competition law prohibit the efficiency-enhancing behaviours that are typical of non-ratemaking agreements, or

The provisions of general competition law give rise to uncertainty as to whether, in a particular instance, these behaviours are or are not legal.

Guideline 2:

APEC member economies may collect such information for liner shipping non-ratemaking agreements that enjoy exemption from the application of general competition legislation as each economy deems appropriate for the effective oversight of the agreements. APEC member economies recognise the benefits of information sharing to foster effective oversight of non-ratemaking agreements and may cooperate bilaterally or as appropriate, in a manner compatible with their respective laws and interests, and subject to their availability of resources.

Guideline 3:

APEC member economies may wish to consider a separation of ratemaking and non-ratemaking agreements in the course of their oversight process.

Guideline 4:

Given the difficulty defining the relevant markets, APEC member economies do not subject non-ratemaking agreements to a market share test based on a pre-defined threshold level as a condition for a formal exemption from the relevant provisions of general competition law. However, APEC member economies may use a market share test when deciding the level of oversight to apply with respect to a particular agreement.

Guideline 5:

APEC member economies continue to allow ocean carriers to negotiate the duration of the non-ratemaking agreements to enable the carriers involved to achieve the commercial objectives of the agreements.

Appendix E New Zealand's regulatory approach to international shipping

This appendix examines New Zealand's approach to the economic regulation of international shipping and compares it with the approaches of other countries.

New Zealand's competition laws have not historically applied to agreements between international shipping operators.

Until the enactment of the Commerce Act 1986, the Commerce Act 1975 was not regarded as applying to international shipping and there was no specific regulation of conferences.[144] New Zealand now provides formal exemptions for international shipping in both the Commerce Act and the Shipping Act 1987 (the Shipping Act) from the Commerce Act's competition regime.

At the time they were enacted, these exemptions reflected the prevailing international policy view discussed above: that restricting competition between international shipping carriers is very likely to deliver net public benefits to New Zealand, and accordingly will be in the best interests of New Zealand as a whole.

The two exemptions are cast differently and have different policy goals.

The Commerce Act exemption

S.44(2) of the Commerce Act provides that nothing in Part 2 of the Commerce Act will apply to:

- the entering into of a contract, or arrangement, or arriving at an understanding in so far as it contains a provision exclusively for the carriage of goods by sea from a place in New Zealand to a place outside New Zealand or from a place outside New Zealand to a place in New Zealand; or
- any act done to give effect to a provision of a contract, arrangement, or understanding referred to above.

The exemption is wide in that it applies to carriage of goods by sea both inwards and outwards, and is not limited to specific types of agreements between carriers (eg, it is not limited to liner shipping or liner cargo conferences and could apply to agreements between bulk carriers), or specific types of provisions.

One possible interpretation is that the exemption does not apply to s.36 of the Commerce Act, which relates to taking advantage of substantial market power. In particular, the Commerce Act exemption applies only to the entering into, or giving effect to any provision of, a contract, or arrangement, or arriving at an understanding. The 'contract, arrangement or understanding' language is used in s.27 of the Commerce Act but it does not specifically mimic the language in s.36. This indicates that the Commerce Act exemption contemplates some sort of understanding i.e. between two or more firms. Unilateral conduct not related to entering into or giving effect to an agreement may not be exempted.

The primary restriction on the exemption is that it only applies in so far as a provision is "exclusively for the carriage of goods by sea." S.44(2)(b) provides that a provision is not "exclusively for the carriage of goods by sea" if the provision relates to the carriage of goods to or from a ship or the loading or unloading of a ship. This restriction, in effect, limits the application of the exemption to conduct that occurs on board a ship.

In addition to the s.44(2) exemption, s.44(1)(g) of the Commerce Act provides that nothing in Part 2 of the Act applies to:

[144] Until 1979 there was a requirement for New Zealand carriers to obtain approval before increasing prices.

> …the entering into of a contract, or arrangement, or arriving at an understanding in so far as it contains a provision that relates exclusively to the export of goods from New Zealand or exclusively to the supply of services wholly outside New Zealand, if full and accurate particulars of the provision ... were furnished to the Commission before the expiration of 15 working days after the date on which the contract or arrangement was made or the understanding was arrived at, or 60 working days after the commencement of this Act, whichever is the later.

On one view, s.44(1)(g) may provide an avenue to say that internal aspects of an export contract are exempt, provided full particulars are provided to the Commerce Commission. Despite the existence of this provision, it does not appear to be used in practice.

> …that exemption has seldom been used – largely because it is unknown ... or because firms are reluctant to disclose voluntarily details of their commercial arrangements to enforcement bodies. I have suggested it be tried on a couple of occasions; but clients have always baulked. That is because the Commerce Commission cannot guarantee confidentiality as its refusal of an Official Information Act request would be reviewable by the Ombudsman. There is also no certainty of protection – the Commission simply received the contract, without confirming that the exemption applies.
>
> Kotahi Logistics LP Ltd, sub. 29, p. 7

S.44(1)(g) is almost identical to s.51(2)(g) of Australia's CCA. The Australian Productivity Commission commented in its 2005 investigation of international shipping that the scope of the exemption is uncertain with respect to the international shipping industry in Australia, as there has been no clear judicial statement on whether the term "provision for the export of goods from Australia" would or would not apply to agreements for the carriage of goods for export (Australian Productivity Commission, 2005, p.169).

During the APC's investigation, the Australian Competition and Consumer Commission (ACCC) advised the APC that it believed the exemption, correctly interpreted, applies only to the actual contract of sale in offshore markets. The ACCC's view was that the contract for carriage is the acquisition of services from an Australian market. In the ACCC's publication *Export Agreements and the Competition and Consumer Act*, the ACCC states that to obtain an exemption:

> …the provisions of the contract, arrangement or understanding relate exclusively to the export of goods from, or the supply of services outside Australia. A provision in the same agreement between the exporter and overseas buyer, that covers other aspects of export or supply (for example, a clause in the contract providing that the exporter will transport the goods from the point of manufacture to the point of departure in Australia) could be regarded by a court as being part of the export contract.
>
> Australian Competition and Consumer Commission, 2010b, p.3

As a result, due to the uncertainties of its application, the export agreement exemption may be of limited use to New Zealand outward shippers.

The Shipping Act exemption

The Shipping Act exemption was introduced in 1987. S.14 provides that nothing in Parts 2 (restrictive trade practices) and 4 (regulated goods and services) of the Commerce Act apply to "outwards shipping". Outwards shipping is defined as "the carriage of goods wholly or partly by sea from a place in New Zealand to a place outside New Zealand."

While s.14 provides that the Commerce Act does not apply, the Shipping Act contains its own remedial regime designed to protect New Zealand shippers from "unfair practices" of carriers. Unfair practices are defined as:

- abuse of dominant position;
- failure to give reasonable notice to shippers of changes to terms and conditions;
- refusal or failure to negotiate with shippers; and
- collusion in tendering.

The Shipping Act contains a complaints mechanism whereby the Minister of Transport can investigate alleged unfair practices by carriers. If, following an investigation, the Minister is satisfied that a carrier has engaged in any unfair practice, the Minister can direct a carrier to supply details of agreements, give reasonable notice to shippers who will be or are likely to be affected by impending changes to the terms or conditions, or enter into consultation and/or negotiations with a shipper.

The rationale for this remedial regime is to provide New Zealand exporters with some protection from the potentially deleterious impacts of exempting international shipping from normal competition rules. It is unclear why this exemption was regarded as being necessary to protect New Zealand shippers as exporters but not in their role as importers, despite the fact that importers could suffer the same deleterious effects as exporters.

Despite the existence of this regime the Ministry of Transport has confirmed that there have been no formal investigations under the Shipping Act (Ministry of Transport, sub. 46, p. 5).

Submitters gave differing reasons as to why there have been no investigations under the Shipping Act. For example, the International Container Lines Committee stated:

> ...we believe this is due to the satisfaction of the market place with the both level and cost of services provided by the sector, and the clear preference given to individual contracting between parties.
>
> International Container Lines Committee, sub. 48, p. 34

Federated Farmers commented that:

> The absence of actions might mean that there have been no unfair practices (which might mean the Act could be a deterrent) or it might be that the hurdle for "unfair practices" is too high (in which case the Act might not be a sufficient deterrent).
>
> Federated Farmers of New Zealand, sub. 27, p. 8

Compatibility of the two exemptions

The two exemptions are subtly different in a number of ways.

First, the exemption for outwards shipping contained in the Shipping Act is wider than the exemption in the Commerce Act. Outwards shipping, as defined in the Shipping Act, specifically contemplates conduct or agreements in which only part of the journey is conducted by sea, while the Commerce Act exemption is explicitly limited to the carriage of goods by sea.

For example, in an agreement between two competitors which regulates the price for goods to be carried from Taupo to China, via Tauranga:

- the Commerce Act exemption would imply that only those provisions of the agreement which are exclusively for the carriage of goods by sea from Tauranga to China are exempt;
- the Shipping Act exemption appears to exempt a wider range of provisions, including provisions relating to domestic carriage from Taupo to Tauranga, and potentially any conduct relating to that particular carriage of goods including, for example, port services.

Second, the Shipping Act exemption applies to s.36 of the Commerce Act, whereas the Commerce Act exemption does not.

Third, while the Commerce Act exemption applies equally to both outbound and inbound sea freight, the Shipping Act exemption is limited to outbound. The implications of this for inbound freight can be seen if the Taupo to China via Tauranga example above is reversed. In that scenario, the Commerce Act would apply to provisions exclusively relating to the China to Tauranga portion of the journey, but normal

competition rules would apply from that point on because the Shipping Act would not apply to the arrangements necessary to transfer the freight on the Tauranga to Taupo leg.[145]

> However it is noted that exports and imports are treated differently under the New Zealand Commerce and Shipping Acts. Whereas the through transport of exports including the land transport move under an International contract of carriage is exempt under both acts, imports receive no exemption under the same conditions under the Commerce Act.
>
> International Container Lines Committee, sub. 48, p. 24

The stated reason the Shipping Act exemption applies only to outwards shipping is because the focus of the Shipping Act is to protect New Zealand exporter interests – for example, by safeguarding against unfair practices by a carrier/s and discouraging carriers' practices that have the effect of reducing competition, and secondly because:

> [t]he then rationale for excluding outward freight services was that international shipping gave rise to complex conflict of laws issues (ie., is the service governed by the law of state where carriage originates or ends)…
>
> Kotahi Logistics LP Ltd, sub. 27, p. 7

No submitters provided salient reasons for continuing the differing exemptions (or for why the Shipping Act exemption applied only to New Zealand shippers in their role as exporters but not importers):

> That kind of differential treatment of exports is simplistic and no longer valid in a world where markets are increasingly global and the anti-trust or competition regimes of many countries are claiming jurisdiction well outside their national boundaries.
>
> Kotahi Logistics LP Ltd, sub. 27, p. 7

Accordingly, there seems little reason why two different exemptions are required, although whether or not the regulatory role of the Ministry of Transport in enforcing 'unfair practices' should be retained is a separate issue.

New Zealand's regime in the context of global regulatory trends

Table E.1 below summarises the analysis above, highlighting the differing approaches taken to regulation in New Zealand and around the world. Table E.1 also includes the recommendations made by the OECD, APEC and the Australian Productivity Commission.

Table E.1 Comparison of New Zealand's shipping regulation with other approaches

Jurisdiction	Regime
New Zealand	Formal exemption for all liner shipping agreements from certain provisions in the general competition regime. • Exemption in Commerce Act from Part 2 (restrictive trade practices) of the Commerce Act for inwards and outwards shipping. • Exemption in Shipping Act from Parts 2 (restrictive trade practices) and 4 (regulated goods and services) of the Commerce Act for outwards shipping. Complaints mechanism whereby Minister of Transport can investigate 'unfair practices' and issue certain directions to carriers.
Australia	• Formal exemption for all liner shipping agreements from general competition regime. Part X of the CCA exempts parties to a conference agreement from the prohibitions on collusive conduct (excluding third line forcing, misuse of market power, mergers and acquisitions). • Parties must register their agreements with the Registrar of Liner Shipping.

[145] The Productivity Commission notes that it does not necessarily agree with the International Container Lines Committee's submission that the through transport of exports including the land transport move under an international contract of carriage is exempt under both the Commerce Acts and the Shipping Act.

Jurisdiction	Regime
European Union	• Formal exemption for consortia agreements only from general competition regime. Council Regulation 906/2009 exempts consortia from the prohibitions set out in Article 101(1) of the Treaty. • Consortia agreements include the joint operation of liner shipping transport services (including sailings, vessel sharing, co-operative working and equipment interchange), capacity adjustments in response to supply and demand, and joint operation of port terminals and related services. • Conference agreements subject to general competition regime. Consortia exemption does not apply to fixing of prices of liner shipping services to third parties, limitation of capacity or sales, or allocation of markets or customers. • Market share test of 30% (consortia with a share up to 50% may apply for a specific exemption). • Conditions include giving members the right to withdraw without penalty (subject to notice and withdrawal periods).
United States	• Formal exemption for all liner shipping agreements from certain provisions in the general competition regime. Shipping Act 1984 exempts parties to a liner shipping agreement from the prohibitions on collusive conduct (including price fixing, capacity regulation, revenue pooling, scheduling). • Parties are required to file liner shipping agreements with the Federal Maritime Commission. Where the agreement is oral, a complete memorandum specifying the substance of the agreement must be filed. • Parties are able to enter into confidential individual agreements, which must be confidentially filed with the FMC, and a statement containing the 'essential terms' of the contract (not including price) will be published and made available to the public. • Agreements subject to certain requirements, including allowing members to withdraw without penalty, and allowing members to enter into individual services contracts.
Singapore	• Block exemption for parties to a liner shipping services agreement from the prohibition of restrictive trade practices in the Competition Act 2004 (excluding abuse of power). • Agreements must allow the parties to the agreement to offer, on an individual confidential contracting basis, their own service arrangements, and must allow parties to withdraw without penalty, and must not require liner operators to mandatorily adhere to a tariff and disclose confidential service arrangements. • Limited market share test of 50%.
Japan	• The block exemption under the Maritime Transportation Law exempts shipping conferences from the Antimonopoly Law. • Parties must file their agreements with the Ministry of Transport.
Reports and Reviews	
OECD Report	Principles include: • freedom to protect contracts – shippers and ocean carriers should always be able to protect contractually key terms of negotiated service contracts, including information regarding rates, and confidentiality should have maximum protection; • freedom to negotiate – shippers and ocean carriers should always have the option of freely negotiating rates, surcharges and other terms of carriage on an individual and confidential basis.
APEC Guidelines	• Exemption for consortia agreements where general competition regime prohibits efficiency-enhancing behaviours typical of consortia agreements, or where general competition regime gives rise to uncertainty as to whether those behaviours are legal.

Jurisdiction	Regime
	• Clear separation of conference and consortia agreements. • Collect information for exempted agreements as is appropriate for the effective oversight of the agreements. • No market share test as a condition for formal exemption.
Proposed Australian model APC Report (2005)	• All liner shipping agreements subject to general competition regime. • Where an agreement would be likely to breach Part IV (restrictive trade practices) of the CCA, members can apply for an authorisation, providing immunity from the provisions in Part IV (except misuse of market power). • Applicants must demonstrate that the public benefits arising from the conduct outweigh the detriments constituted by any lessening of competition in the relevant market. • Provisions most likely to breach Part IV include price fixing, capacity management and agreements with high market share. • Alternatively, if Part X was retained, the APC recommended that agreements that contain provisions relating to the fixing or discussion of freight rates or the limitation of capacity should not be eligible for registration under Part X, or in the alternative, discussion agreements should be excluded (together with measures to protect confidential individual service contracts).

As can be seen from Table E.1, New Zealand's regulatory approach is somewhat of an outlier in that it does not contain many features adopted (variously) in overseas countries, namely: providing a blanket statutory exemption that does not distinguish between liner shipping and bulk shipping; not distinguishing between conference and consortia agreements; not containing a registration regime; not containing provisions for periodic review.

It is unsurprising that New Zealand's regime is closest to Australia's, albeit without the registration regime which exists there.

The fundamental question at the heart of all of these regimes is whether and to what extent agreements between liner carriers should be exempt from competition law. Where a decision is made that an exemption should be applied, the subsequent question is on what conditions it should be granted. The existence of market share thresholds (Singapore, EU), requirements for registration (Australia, US, Japan), the application of the automatic exemption for consortia but not conferences (EU), and the requirement for individual confidential contracts to be allowed (US) all implicitly reflect policy choices designed to mitigate the adverse impacts of the exemption. In New Zealand that role is currently filled by the Shipping Act remedial regime.

Where an exemption is not present (eg, EU in relation to ratemaking agreements), no such remedial requirements are necessary.

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