

Industry insights

Westpac

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Transport, logistics and distribution

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Summary

This report summarises the recent performance of the Transport, Logistics and Distribution sector, considers risks and opportunities for the sector and discusses the resultant outlook. As well as providing key numbers on the sector and its six key sub-sectors, we include insights gathered through interviews with leading industry players. This ensures a match between the numbers and real-world operations.

Why Transport, Logistics and Distribution?

The Transport, Logistics and Distribution sector gets goods to our stores or direct to our homes. It provides the fuel, and bus, taxi and train services we use to commute. It gets our primary products from the farm or the forest to the manufacturer. Without Transport, Logistics and Distribution, the national economy could not function.

Transport, Logistics and Distribution employed nearly 90,000 full-time equivalent workers (FTEs) across New Zealand in 2014, and produced around 5.4% of New Zealand GDP, or \$12.5 billion. The success of the sector has implications for thousands of workers and businesses across the country, and its fortunes are a strong indicator of the health of the wider economy.

Recent performance of the sector

At an aggregate level, the sector has fared relatively well. But this headline masks highly varied results at the sub-sector level.

The largest sub-sector, Road transport (\$4.3 billion in value added in 2014), has enjoyed strong growth in both road freight and passenger transport value added. Trade has increased and behaviour changes in our largest cities are leading to more bus and taxi use.

Port services and water transport services (\$1.6 billion) have seen moderate growth in activity in recent years as world trade has grown, but strong competition between ports may be hampering growth in value added.

Logistics support services (\$2.9 billion, mostly freight forwarders) have experienced strong growth in value added (up 48% since 2000), employment and business numbers, as trade volumes across and within our borders have increased.

Despite ongoing commercial struggles, Rail transport (\$332 million) has had several years of solid growth in value added. Major investments in Auckland are encouraging passenger service uptake. Rail freight value added is up by 55%.

Oil import, refining and distribution (\$2.1 billion, up 53% since 2000) has enjoyed a stronger New Zealand dollar and some rationalisation, which together have allowed for increased

margins on fuel retailing and refining.

Meanwhile, Postal and courier services (\$1.3 billion) have had very mixed fortunes, with the role of traditional postal services falling away sharply even as courier services have grown.

Outlook and what this means for New Zealand

A number of emergent trends will lead to dramatic changes in the sector over the next 10-20 years.

- **Bigger ships:** Ships on international routes are getting bigger to improve efficiency. To cope with larger vessels, expensive port infrastructure upgrades will be required. This will mean a reduced number of ports served by international vessels.
- **Port consolidation and alliances:** Ports will need to compete fiercely to remain viable. We expect to see a lot more tie-ups and inland port development in an attempt to secure greater throughput.
- **An ongoing role for rail:** Industry sources were unanimous in believing there was a major role for rail. However, there are ongoing questions over infrastructure reliability, capacity, commercial viability of KiwiRail, and pricing. These factors suggest that rail's role is likely to be limited to a few key routes, with coastal shipping and road freight both growing.
- **Many more trucks on the road:** The nationwide freight task is expected to grow by 48% in tonne-kilometres in the 30 years to 2042. A step-change in capacity within coastal shipping will cover part of this increase. There will be some rise in rail volumes, but the required investment in infrastructure to significantly bolster capacity is unlikely. Much of the additional task will be undertaken by road transport.
- **Changing behaviour and technology:** Changing behaviour will continue to reduce discretionary private travel and increase public transport use. In tandem with constantly-improving technology, behaviour will lead to ongoing growth in delivery services, and uptake of more efficient vehicles.
- **The death of traditional postal services:** Parcel services continue to grow, but traditional document deliveries are rapidly disappearing. New Zealand Post is undergoing a process to reinvent itself as the provider of a number of other services, while courier and delivery aggregation services are expected to continue to grow.

David Norman
Industry Economist

Introducing the sector

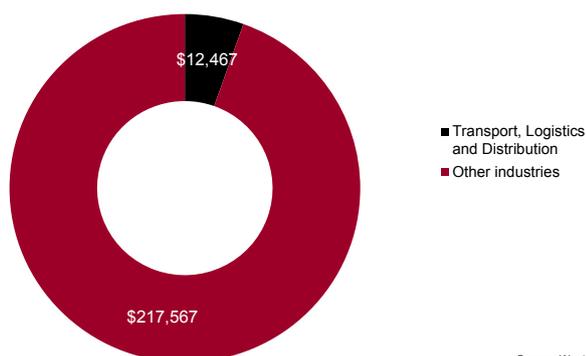
- Transport, Logistics and Distribution is a large employer, but with little overall employment growth in recent years.
- Parts of the sector are capital intensive (e.g. ports) while others are not (e.g. owner-operated courier businesses) meaning different sub-sectors have widely varying investment profiles.
- Most sub-sectors have enjoyed some growth in valued added in the last 14 years, with the exception of Postal and courier services.

The Transport, Logistics and Distribution sector generated around 5.4% of New Zealand GDP in 2014, or \$12.5 billion.¹ It employed nearly 90,000 FTEs, or 1 in 25 New Zealand workers.²

This is the sector that gets goods and services to New Zealanders via truck, train, courier van, mailbox or ship. It is the sector that ensures we can get to work, and that our exports can reach ports where they are loaded for transport overseas. It is also the sector that provides fuel for our commute to work, and the buses, taxis and railway carriages on which we travel. As such, it is fundamental to our economy being able to function.

Share of New Zealand GDP

Transport, logistics and distribution value added, 2014\$m



For the purposes of this study, we classify Transport, Logistics and Distribution into six sub-sectors:

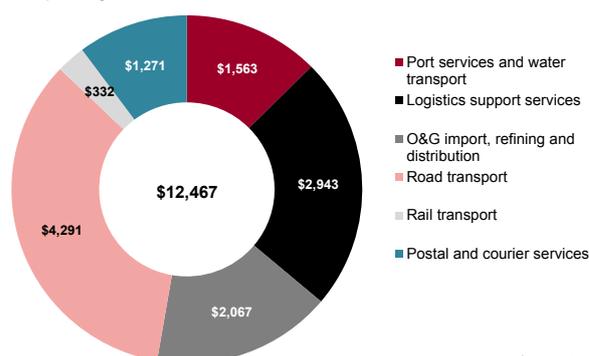
- Port services and water transport, including port terminal operations, support services like stevedoring, ferry and freight vessel services, and towboat and tugboat operations
- Logistics support services consisting largely of freight forwarding, and storage and warehousing businesses
- Oil and gas import, refining and distribution including fuel retailing
- Road transport including freight and passenger transport
- Rail transport including freight and passenger transport
- Postal and courier services.

In terms of value added to the New Zealand economy, Road transport is the largest contributor within Transport, Logistics and Distribution, with nearly \$4.3 billion in value in 2014. Logistics and support services, driven by freight forwarding services, contributed \$2.9 billion.

In employment terms, Road transport is an even more important part of the sector, with 41,000 FTEs in 2014. Logistics support services; Postal and courier services; and O&G import, refining and distribution each also employ more than 10,000 FTEs.

Transport, Logistics and Distribution value added

Transport, logistics and distribution value added, 2014\$m

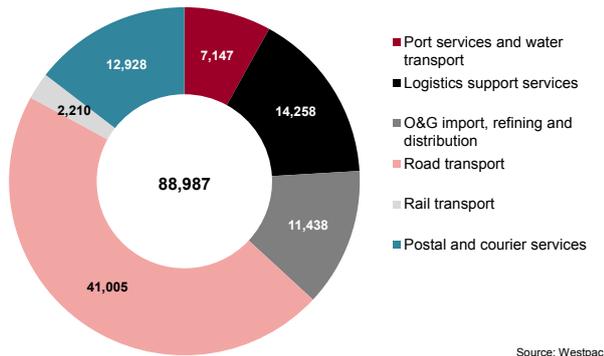


¹ We define Transport, Logistics and Distribution using Statistics New Zealand classification codes. We include almost all of Division I, other than Air transport, Airport operations, Ski lift operators, and Scenic and sightseeing transport. We also include Petroleum product refining and manufacturing, Petroleum product wholesaling, and Fuel retailing.

² New Zealand GDP and the constituent value added by specific sectors or sub-sectors consist predominantly of pre-tax and depreciation profits (economic profits) and salaries and wages.

Transport, Logistics and Distribution employment

Transport, logistics and distribution employment (FTEs)



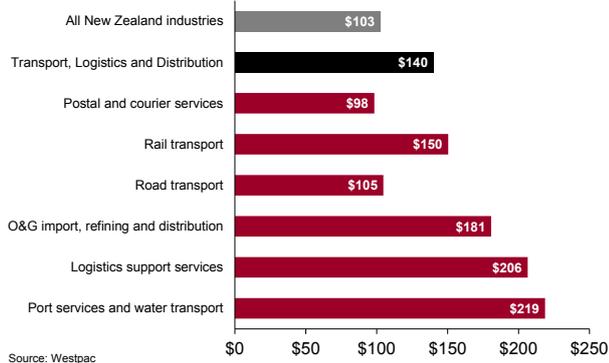
The sheer scale of the sector means it is important to understand. With nearly 90,000 FTEs and 16,000 businesses, changes here have large impacts on the wider economy.

Delivering value

Comparing value added to national GDP and employment allows us to estimate the value added per worker across Transport, Logistics and Distribution and its sub-sectors.

Value added per FTE

Transport, logistics and distribution value added per FTE (2014\$000)



On average, sub-sectors in Transport, Logistics and Distribution generate around 35% more GDP per worker than the average for the whole economy, at \$140,000. Port services and water transport have the highest production per worker in the sector. This is unsurprising given the capital investment required for port services, or for running surface freight and passenger services. High levels of production are required to ensure worthwhile returns on capital, or the ability to service debt.

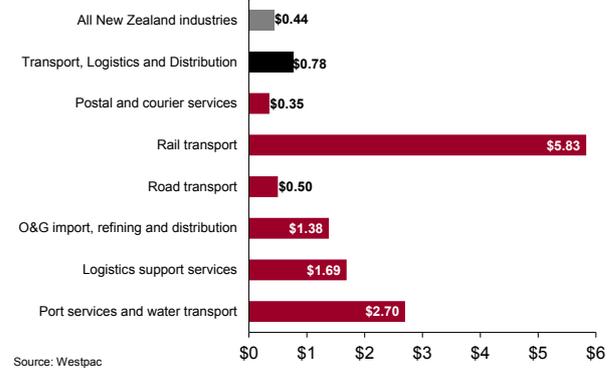
The Postal and courier services sub-sector, which is characterised by smaller businesses often with just one or two staff and a van, had much lower production per FTE, at around \$98,000.

Business size also varies widely across sub-sectors.³

Rail transport and Port services and water transport are characterised by one or a few large players. As a result, they have much higher figures for value added per business (\$5.8 million and \$2.7 million respectively) compared to the national average of \$440,000.

Value added per business

Transport, logistics and distribution value added per business (2014\$m)

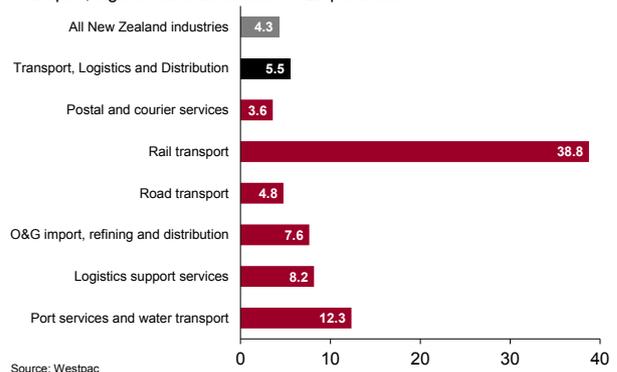


At the other end of the spectrum, Postal and courier services and Road transport, with many small independent operators, have a relatively low level of production per business although this level may be sufficient to sustain these businesses long-term.

Similar patterns are seen in business size, measured by FTEs per business. Rail transport and to a lesser extent Port services and water transport, have higher average sizes than other sub-sectors in Transport, Logistics and Distribution.

FTEs per business

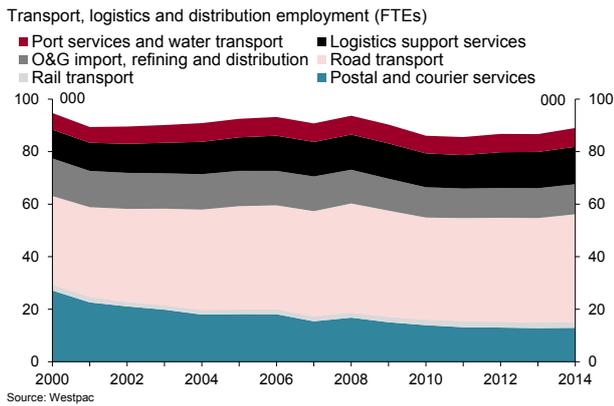
Transport, logistics and distribution FTEs per business



While the average size of Transport, Logistics and Distribution businesses is slightly higher than the New Zealand average of 4.3 FTEs, Postal and courier services businesses in particular are smaller. This is because of the large number of smaller owner-operated businesses in the sub-sector.

³ Rail transport has one major business, KiwiRail, which has a number of regional operations. As the data measures geographic units (or "front doors" – the number of offices or stores within a business) rather than enterprises, it identifies several businesses in Rail transport although many of these may be KiwiRail facilities.

Employment, 2000 to 2014



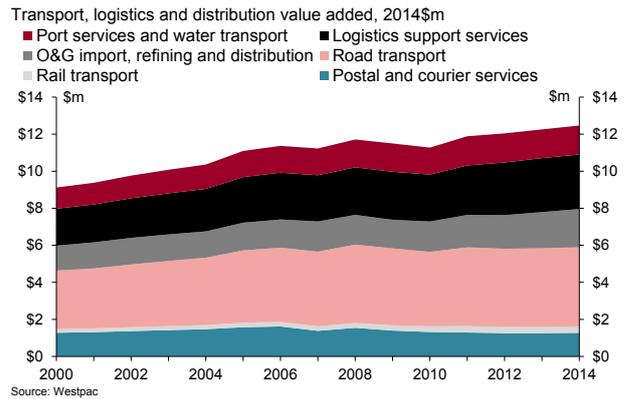
In other words, Transport, Logistics and Distribution has a mix of both small and large businesses, state-owned and private sector, capital-intensive and labour-intensive.

Trucking along

Overall employment in the sector has remained fairly constant since 2000, but the headline figure masks a massive shift away from postal services. The courier services component of the Postal and courier services sub-sector has held up well, but the rise of email and the accompanying decline in printed mail has seen postal services employment fall sharply. In 2000, an estimated 21,800 FTEs were engaged in postal services. By 2014, this had fallen to just over 7,000. Since then, NZ Post has switched to a 3-times-a-week service, meaning employment is likely to fall further in 2016 data.

At the same time, Road transport employment, particularly in intra-city passenger transport and freight services, has risen.

Value added, 2000 to 2014



In part, this is as more people switch to public transport use, but the biggest growth in jobs has been in road freight transport, up 4,000 in 14 years.

Yet even with the internal changes in the sector, value added to national GDP has grown sharply over time. Real growth in value added has been 2.3% a year over the 14 years. Noticeable among these is Postal and courier services, where value added has barely changed despite employment halving. This means that much higher production per worker has been achieved.

In absolute dollar terms, Road transport has grown the strongest since 2000, with value added up from \$3.2 billion to \$4.3 billion as employment grew from 33,800 to 41,000. This has added several hundred new vehicles to the road which, as we discuss later, is not seen by everyone as the best solution to the increasing freight task.

The other sub-sectors such as Logistics support services and Port services and water transport have grown to a lesser degree.

There has been a large increase in road transport and logistics support services employment. Postal services have shed thousands of jobs since 2000.



ChameleonsEye / Shutterstock.com

Rocking the boat

There are a number of challenges and opportunities facing the Transport, Logistics and Distribution sector that may lead to further changes in its composition and fortunes over the next several years.

The freight task will grow

The freight task continues to grow as New Zealand trades more with the world. In the 10 years to 2014, world trade grew by 88% as world GDP grew 46%. A Ministry of Transport study into the freight task in New Zealand found that freight movements through New Zealand will grow 58% in 30 years to 2042 in tonnage terms, and 48% in tonne-kilometre terms.⁴

How will this freight be moved?

Our discussions with industry sources indicate that at present, our rail services simply do not have the capacity or the investment in infrastructure to sustain growth in that sub-sector's share of the task. Should all that growth be covered by road freight, we will see huge growth in the number of large trucks on our roads, even with recent increases in the tonnage these vehicles can carry on some roads.

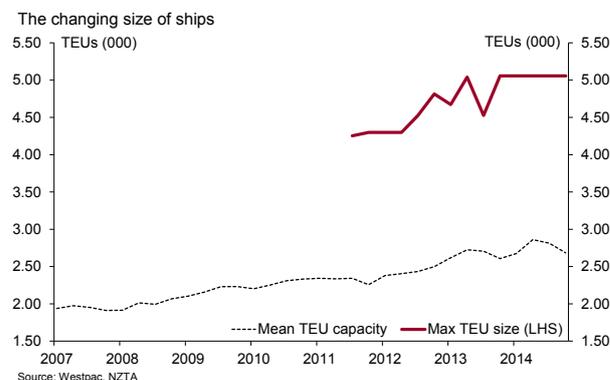
Coastal shipping is a third option (see also the discussion of bigger ships below). Industry sources suggest that along with rail, coastal shipping is a cost-effective way of dealing with longer distance movements of freight. Yet at present, there are a limited number of dedicated coastal shipping services. One would hope that as demand grows for these services, there would be a commensurate increase in service provision.

Bigger ships may not be better

Until recently, world trade has grown at break-neck speed. As a result, there has been a huge increase in the average size of ships being built, in an effort to improve efficiencies. Although world trade is still expected to grow strongly, the rate of growth is expected to be slower than in the last two decades. And in the short-term, a much weaker economy in China means there is an oversupply of shipping capacity.

This over-supply of shipping has accelerated the move to the more efficient larger ships serving inter-country routes. A change in the size of ships passing through New Zealand began in June 2009, as the Global Financial Crisis (GFC) gripped the world.

Ships coming in



Ports report seeing average ship sizes increase significantly in recent times. Ships of 5,000 to 8,000 Twenty-foot Equivalent Units (TEUs) are expected to be the norm within the next 5-10 years, up from 2,500 to 4,000 TEUs today.

This has major implications for port infrastructure investment. New Zealand's 13 export ports, of which 11 are also involved in imports, cannot all expect to upgrade to service these large vessels. It is inevitable that a handful of ports will continue to serve the increasingly large vessels in a hubbing model whereby large ships dock at just a few ports and smaller ships provide coastal shipping connections to smaller ports.

The ongoing viability or otherwise of smaller ports will depend on one or both of the following:

- Their ability to specialise in particular kinds of cargo that will warrant visits by international vessels
- The emergence of a vibrant coastal shipping network.

If instead of a shift to coastal shipping, the reduction in the number of international ships visiting New Zealand is covered by road and rail transporting product to and from a handful of ports, smaller ports will not be viable.

At the same time, council ownership of ports may act as a roadblock to rationalisation that would otherwise take place. The question may become how much councils are willing for their ratepayers to lose before acknowledging that a port is no longer viable, should the switch to the hubbing model not be accompanied by a step up in coastal shipping.

⁴ Ministry of Transport. (2014). National Freight Demand Study.

Regardless, the average overall cost of getting goods to and from ports in New Zealand is expected to rise, but these costs may be offset against a lower per unit transport cost internationally as the more efficient larger ships ply international waters.

Efforts to capture throughput will grow

Several industry sources suggested that competition between ports to grow throughput was fierce, with regular “raids” on customers in neighbouring catchments. The emergence of inland ports, usually connected by rail to a port, also provides a means for ports to expand their area of service beyond their immediate surrounds.

This has in some cases resulted in major customers setting up distribution centres (DCs) near particular ports or their inland ports. Dependent on what sort of deal they have been able to negotiate with their port and freight forwarders, these DCs are at times in surprising places, not necessarily as close to the largest population centres as might be expected.

In other cases, consolidation is underway. An example is Port of Tauranga’s purchase of a share of Primeport (Timaru). Via coastal shipping, Tauranga is able to funnel more containers through its port, while accessing the large hinterland served by Primeport. In particular, through a separate tie-up between Port of Tauranga and the freight company owned by Fonterra and Silver Fern Farms, Primeport has managed to re-secure freight movements from Fonterra’s Clondeboye plant.

Rail is going nowhere

The financial difficulties faced by New Zealand’s rail operator are well-documented. However, rail has grown its share of the freight task, mostly making inroads on the share held by coastal shipping. On certain key routes, rail is crucial to the overall transport network and to bulk commodity transport in particular. Several industry sources suggested that the road freight transport sub-sector would be unable to pick up the freight task should rail cease to operate in certain areas.

An improved rail service with greater capacity on key routes, such as between Auckland, Hamilton and Tauranga (“the Golden Triangle”), and on the main trunk line from Auckland to Palmerston North or Wellington, would be of much benefit to the sector as well as exporters and importers. This increased capacity would require significant ongoing investment in rail.

At the same time, however, politically-unpopular rationalisation of rail routes seems the only way to turn the sub-sector into a profitable operation not subsidised (as opposed to other freight transport modes) by the taxpayer.

Yet some industry sources saw rail as a far bigger part of the future logistics solution. They wanted increases in the number of lines. The rationale was that as bigger ships reduced the number of port calls in New Zealand, rail may be the most effective way of getting products to and from the reduced number of ports dealing with overseas trade.

Disruptive technology, a revolution by stealth

Disruptive technology is playing a major role in the sector. Examples and their impact on sub-sectors within Transport, Logistics and Distribution include:

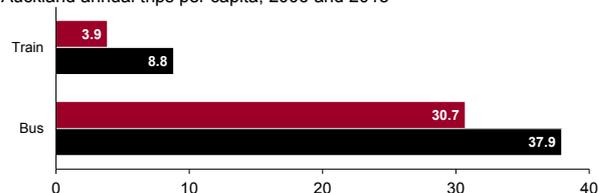
- Uptake of technology at trucking companies and in port services, leading to better optimisation of space and distances travelled. This places smaller firms, which cannot afford the technology, at a distinct price disadvantage.
- Electric vehicles are expected to become increasingly mainstream and are expected to account for 10-20% of the vehicle fleet by 2040. These will lead to a slow reduction in demand for fuel retail services.
- Communication options like Skype, which have led to a decrease in discretionary travel, with a resultant fall in demand for fuel. Again, these are already leading to lower demand for fuel retail.
- Online purchasing platforms, which have further eroded private vehicle travel, as courier and delivery services replace the numerous vehicles required for people to travel to the shops to purchase goods. Further, the number of services that can be consumed from home (e.g. online banking and travel agencies) reduce the need for travel. This behaviour change, facilitated by technology, is leading to lower fuel demand, but also to expansion of the courier services sub-sector.

Passenger transport is changing

The last 10 years have seen huge increases in passenger transport patronage, both on road and rail. This growth has also extended to greater uptake of taxi services. At the same time, as already mentioned, technology changes are allowing people to undertake less discretionary travel.

Growth in Auckland bus and train patronage

Auckland annual trips per capita, 2006 and 2015



Source: Westpac, Auckland Transport

The change is driven by increasing density in urban centres (which make public transport routes more viable), changing attitudes to driving, and higher fuel prices. We would expect to see further growth in public transport use, particularly in Auckland, as the central rail link (construction of initial work slated for late 2015) and additional bus lanes are expected to support uptake there. Renewed apartment construction activity in the central city also points to reduced vehicle ownership and greater use of public transport including taxi services.

Port services and water transport

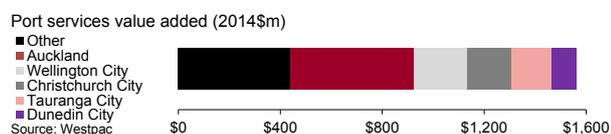
- New Zealand has a large number of international ports (13) given the nation's population.
- We expect that within the next 10 to 20 years, the number of international ports will fall as the move to larger ships will mean expensive infrastructure upgrades will not make sense for some ports.
- There will be a shift to a hubbing model whereby coastal shipping, road and rail will ferry exports and imports to a smaller number of international ports.
- We expect larger ports to continue to develop inland port operations and seek tie-ups with other ports as they try to grow throughput and improve efficiency of container use, and to ensure their continued viability as bigger ships make their way to New Zealand.

A geographically discrete sub-sector

Port services and water transport employed over 7,000 FTEs, and generated nearly \$1.6 billion in value in 2014. The sub-sector includes all port terminal operations, support services such as stevedoring, and water transport such as ferry services.

Employment and value generated by the sub-sector are widely dispersed across the country. This is in part because of the large number of ports operating. Thirteen ports recorded exports in the year to August 2015, and 11 reported imports.

Port services value added



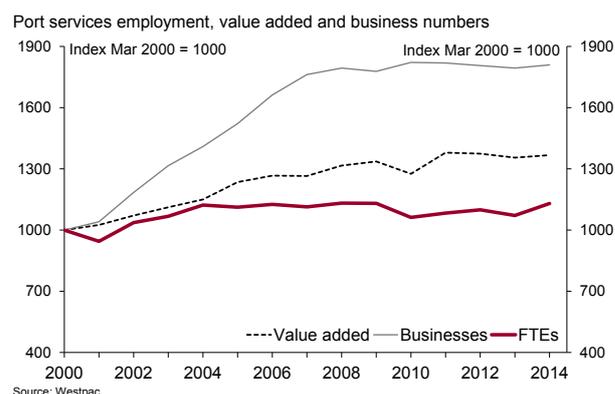
Auckland accounted for around 30% of all Port services and water transport value added in 2014. This is unsurprising given it hosts the country's largest port by value of throughput, and third largest in volume terms. As New Zealand's largest city, Auckland also hosts the headquarters of businesses offering port-related services that may operate at several other ports.

Christchurch (including Lyttelton Port), Tauranga, Dunedin (including Port Chalmers) and Napier round out the top five in terms of value generated.

Steady as she goes

Port services and water transport have seen a large increase in the number of businesses operating, and smaller rises in the value added by the sub-sector, and in employment. What is particularly noticeable is the steadiness of growth in the sub-sector. Dips have been minor, with the long-term trends clearly upward.

Port services growth, 2000 to 2014



Since 2000, the number of businesses in Port services and water transport has grown by 81%, or 4.3% a year. In the same time, employment has been largely flat, up just 13%. Workers are being more productive though, with value added growing a more solid 37% over the same period.

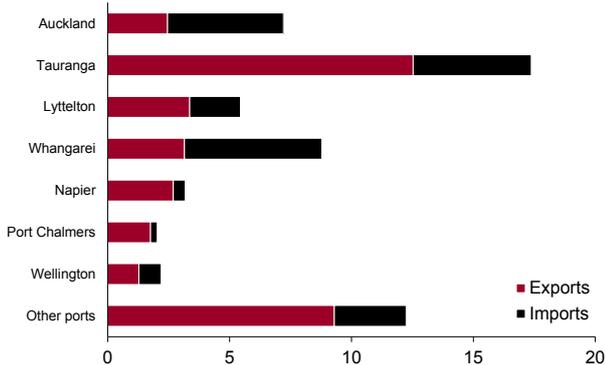
Businesses are now smaller on average than they were 14 years ago. This may well be the result of outsourcing of a number of services to new stand-alone businesses. Smaller businesses tend to be more susceptible to changes in economic fortunes. Yet in the case of Port services and water transport, value added per worker has risen, probably split across profits and salaries. This may indicate that these businesses are more profitable and thus better protected against downturns.

The differing roles of ports

Some interesting differences across ports emerge when we examine the value of products passing through New Zealand's largest ports.

Export and import volume mix

August 2015 year export and import volumes by seaport (thousand tonnes)



Source: Westpac, Statistics New Zealand

Key points include:

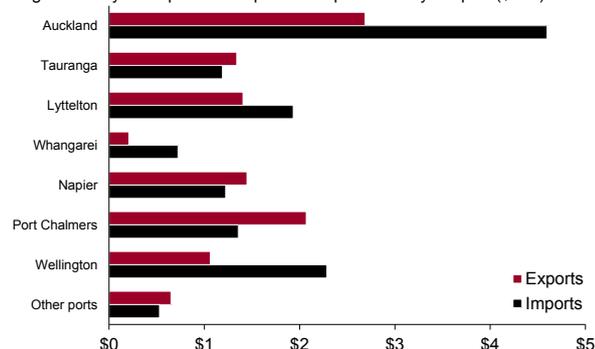
- Most ports are mismatched across export and import volumes.
- Auckland and Whangarei are predominantly import centres.⁵
- Tauranga, Lyttelton, Napier, and Port Chalmers are export centres.
- Although Auckland's volumes (gross tonnes) are much lower than Tauranga, its throughput is valued the highest, implying a very different mix of throughput.

These mismatches create significant challenges for ports in terms of managing container flows for instance. NZTA estimated that around 29% of containers imported into, and 15% of containers exported from New Zealand in the year to June 2015 were empty. This mismatch has resulted in the establishment of targeted businesses that try to better match containers with product, to reduce the number of empty containers transported around New Zealand.

The types of product that pass through each port vary widely, resulting in significantly different average product values.

Export and import value mix

August 2015 year export and import value per tonne by seaport (\$000)



Source: Westpac, Statistics New Zealand

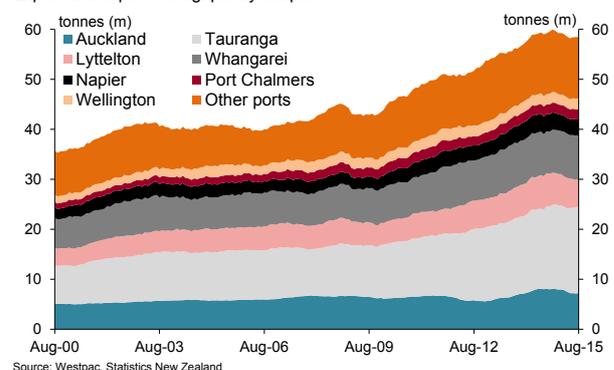
Auckland has the highest value exports (\$2,700 a tonne) and imports (\$4,600). The latter will be skewed by, for example, the large volume of electronics and vehicles imported there. Tauranga and Napier have similar, lower value profiles. This is because of the dominant role of wood product exports through those two ports. Wood products are high weight, lower value products. Other ports where wood dominates exports include Wellington and Northport, which explains the lower export values per tonne there as well.

Lyttelton, as gateway to the South Island, along with Wellington and Tauranga, plays a smaller role than Auckland as distribution centre for imports, with relatively high average import values.

Over the last 15 years, the largest growth in export and import volumes passing through New Zealand ports has been in Tauranga.

Exports and imports by seaport

Export and import throughput by seaport



Source: Westpac, Statistics New Zealand

Tauranga's share of the total workload has risen from 22% to 30%. It has accounted for 42% of all growth in throughput. Growth has been particularly strong since a port worker strike in Auckland led to large numbers of diversions to Tauranga in 2012.

As a 2012 study highlighted, there has also been an increasing role for coastal shipping and trans-shipment at New Zealand's ports. That said, accurate volumes for these two components of port services are sometimes hard to estimate on a national level or even a port-level at times.⁶

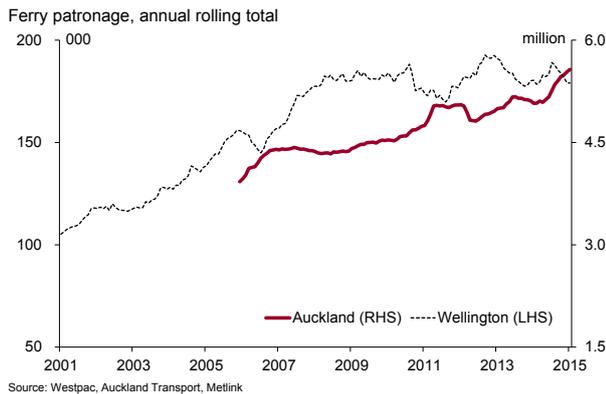
The rising tide of ferry transport

Passenger transport by water is a relatively small component of Port services and water transport, estimated to generate around \$176 million in value across New Zealand in 2014. The gains in this industry appear to have been mostly in the growth of metropolitan ferry services in Auckland and, to a lesser extent, Wellington.

5 Note that Whangarei actually refers to three ports - Northport (mostly wood product exports), Marsden Point (petroleum imports), and the Portland cement plant.

6 PwC. (2012). How can we meet increasing demand for ports in the Upper North Island?

Growth in ferry patronage



In Auckland, ferry transport patronage has grown by 3.8% a year for the last 9 years, reaching 5.6 million trips per year. In Wellington, where longer-term data is available, patronage has all but doubled in 14 years, at an annual growth rate of 3.9%.

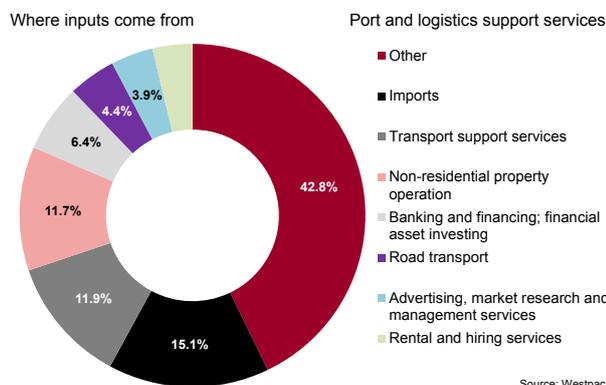
Growth in ferry patronage has been driven by a number of factors:

- Higher fuel costs disincentivising people from driving their own cars to work.
- Increasing congestion on roads, especially in Auckland, making the largely congestion-free ferry service attractive.
- Ferries make it possible for more people living further away from the CBD to access the city, especially in the case of Auckland.

Where inputs come from and outputs go

National input-output tables allow us to examine which industries are major suppliers to a sector of interest, and where the outputs of the sector of interest go. The tables do not split out Port services from Logistics support services, so the analysis below is for a combination of the two. The input and output analysis will be skewed toward Port services as these services dominate the aggregated sub-sector of Port and logistics support services.

Port and logistics services inputs



Inputs that help the Port services and water transport, and Logistics support services sub-sectors produce their outputs are fairly much what one would expect. These include Non-residential property operation, Transport support services, Road transport, and a number of business services such as Banking and financing, Advertising and marketing, and Telecommunications.

Nearly 20% of outputs from the sub-sector are directly consumed in New Zealand. This will include the component of Logistics support services that provides storage facilities direct to the public, and passenger ferry services. A similar proportion of the sub-sector's services are exported, while significant portions feed into other Transport, Logistics and Distribution sub-sectors that draw on Port services and water transport, and on Logistics support services.

Outlook for Port services and water transport

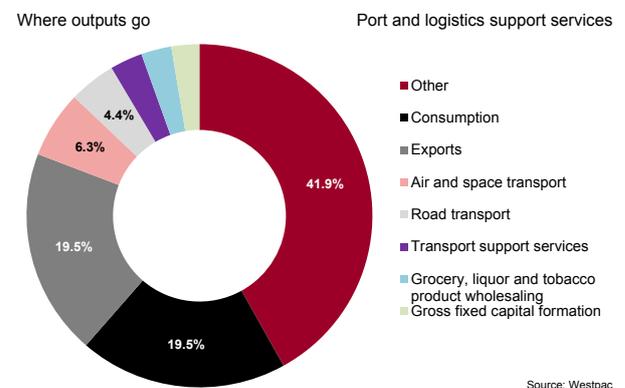
NZTA data indicates that in 6 ports in New Zealand, more than 20% of international port visits were already by vessels of more than 4,000 TEUs in the year to June 2015.

It is possible that **coastal shipping will experience a step-change** in importance as the **trend toward larger vessels** continues. Smaller ports are unlikely to be served by the large vessels, making coastal shipping, road and rail more important as a means of ferrying products to and from a smaller number of international ports.

A potential outcome is 4 to 6 ports in New Zealand able to handle larger vessels, with the rest being served by coastal shipping or other means of bringing products to and from ports.

A further challenge with coastal shipping, over and above the limited number of operators today, is that it does take a lot longer for product to move around the country this way. For instance, a trip that might take 5 hours by road could take a day or two by rail, and 3 to 5 days by sea. This matters if you are an exporter of meat or fruit products, for instance. While we expect to see an increase in coastal shipping, **time-sensitive freight will be served increasingly by road** between areas of production and the smaller number of international ports (or their inland ports).

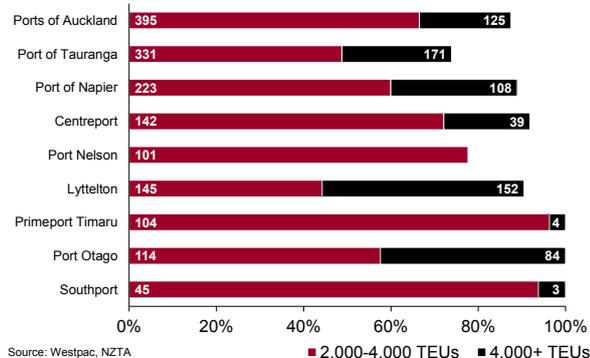
Port and logistics services outputs



One further risk of a shift to fewer international ports is **reduced competition among ports**, which may lead to higher freight costs overall.

The preponderance of big ships

Share of international port visits of vessels larger than 2,000 TEUs



We expect to see **further alliances or cross-ownership structures** emerge as the larger ports seek to ensure growth in throughput, particularly of containerised freight. For instance, both Tauranga and Auckland, the two largest North Island ports, have sufficient capacity to continue to build their container businesses for many years to come by making better use of existing space, **adopting technology to optimise movements**. To maximise the profitability of their businesses, this will mean seeking to grow throughput both naturally (through gains in world trade) and by capturing larger shares of the existing market.

This effort to increase their presence beyond the chain-link fence will see ports continue to look at acquisitions at other ports, and at **developing inland ports** that will not only grow capacity, but will create links closer to areas they seek to target for growth. Inland ports already include Palmerston North, Rolleston, Wiri, and Mt Maunganui.

Inland ports will also be used more to bring product to the container, rather than the opposite, in an effort to minimise the kilometres travelled by empty containers. In the year to June 2015, NZTA estimates that 29% of imported containers were empty, along with 15% of exported containers. This indicates a hypothetical benefit from more containers being full in both directions, with a commensurate reduction in the cost of freight services.

An example is the transport of containers full of imports by rail south from Auckland to Palmerston North. Taranaki dairy product is then transported on the return trip to Auckland, so that the containers are filled in both directions, before being shunted on to Tauranga for export.

As highlighted already, many ports export mostly bulk products, but import containerised products. We expect to see **new approaches to increased containerisation** of previously break bulk exported products such as logs, as ports seek to close the gap between mismatched imports and exports. This is particularly attractive with the current over-supply of container ships meaning better freight rates can be achieved on these vessels than on break bulk vessels.



A potential outcome is 4 to 6 ports in New Zealand able to handle larger vessels. We expect to see further alliances or cross-ownership structures emerge as the larger ports seek to ensure growth in throughput.

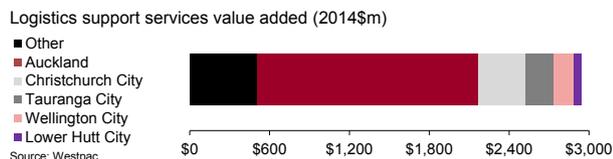
Logistics support services

- Logistics support services have grown strongly over the last 14 years as world trade has boomed, with employment, the number of businesses and most prominently, value added, all rising.
- Value added by the Logistics support services is predominantly from freight forwarding services.
- Looking forward, steady growth in Logistics support services is expected although the speed of international trade growth is likely to slow from the pace it has enjoyed previously. With Auckland dominating the freight forwarding industry, we expect the benefits to be strongest there.

An Auckland-centric sub-sector

The Logistics support services sub-sector, consisting primarily of freight forwarding and storage businesses, employed more than 14,200 FTEs in New Zealand in 2014, and contributed \$2.9 billion to GDP. The bulk of Logistics support services activity was centred in Auckland.

Logistics support services value added



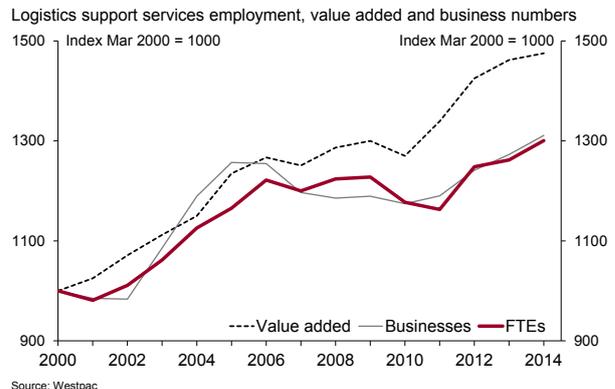
Although Christchurch and Tauranga have large ports and significant demand for logistics support, most larger businesses in this sub-sector are headquartered in Auckland. As a result, Auckland accounts for nearly 60% of all Logistics support service activity.

Smaller shares of activity in the sub-sector are located in the Wellington Region, and around 20% is based outside of the five main centres for Logistics support services.

A pick-up for Logistics support services

Since 2000, there has been steady growth in Logistics support services, apart from a flat period between 2006 and 2011. The value added to the New Zealand economy by the sub-sector has grown 2.8% a year in real terms. Employment and the number of businesses have grown more moderately, both up around 30% in 14 years. This moderate growth has nevertheless

Logistics support services growth, 2000 to 2014

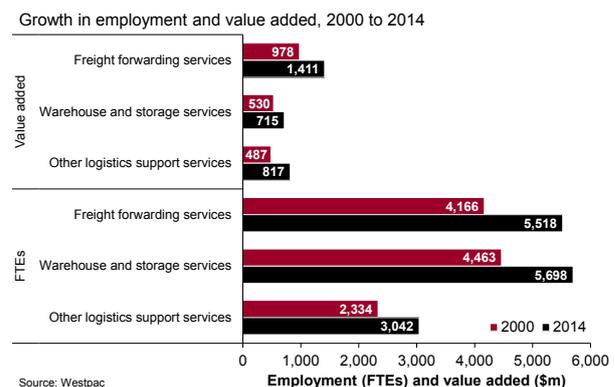


been strongest in Logistics support services when compared with the six sub-sectors in Transport, Logistics and Distribution.

Because value added has increased even more substantially than employment, production per worker is up 13.4% since 2000, while production per business is up 12.5%.

Within Logistics support services, growth has been broad-based across freight forwarding and across warehouse and storage services.

Logistics support services sub-sector growth



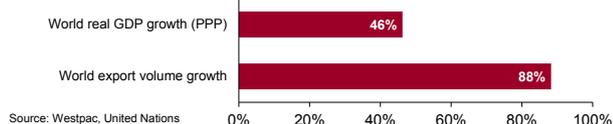
In terms of value generated, Freight forwarding dominates, with \$1.4 billion added in 2014, up more than 40% since 2000. Warehouse and storage services employ a similar number of workers, but generates around half as much value per year as it does not rely on technology and capital solutions to the same extent.

Much of the growth in Logistics support services is the result of the ongoing strength of world trade. International trade has grown rapidly since World War Two, led first by the

rebuild in Europe, and then through the emergence of newly industrialised nations like Japan, Taiwan, and South Korea. Latterly, China has joined this list, and as tariffs on imports have been reduced worldwide, trade has continued to flourish. For most of the last 70 years, world trade grew faster than world GDP growth. And even in the last decade, growth in trade has generally followed the two-to-one rule: trade volumes have grown at twice the rate of the world economy.

The boom in world trade

Growth in trade and GDP, 2004 to 2014



Trade allows both countries involved to benefit from each country specialising in what it is best at producing. Trade has grown as barriers like tariffs, quotas and other protectionist measures have meant that the cost of goods has more accurately reflected their cost of production.

The outlook for Logistics support services

There is less certainty as to how fast world trade, and therefore demand for Logistics support services, will increase. In overall volume terms, there is little doubt that **world trade will continue to grow**. India is just beginning to show the growth patterns China showed 10 or 15 years ago. Both China and India have a lot of growing left to do even though China's rate of growth has fallen and will probably remain lower than it has been in the last decade. Other emerging economies such as Brazil and Indonesia are also expected to drive volume growth over the next decade or more.

For New Zealand, the biggest new opportunity in trade volumes that Logistics support services need to move around the world may come from the Trans-Pacific-Partnership Agreement. New Zealand remains an exporter of products with which rising global wealth has a strong positive relationship – protein products including dairy and meat, and construction materials.

However, these opportunities are offset against other factors that are expected to limit growth in trade:

- Many of the trade barriers between nations have already been removed, meaning many of the gains have already been achieved.
- As economies like China become more developed, they will increasingly be dominated by domestic consumer demand for services, rather than bulk exports or imports of industrial commodities.

These factors are expected to result in slower growth in world trade of goods, meaning slower growth for New Zealand's Logistics support services. Regardless, we do expect to see steady increases in activity across this sub-sector for the foreseeable future, albeit at a slower rate than over the last 10 years.

In terms of day-to-day challenges for the sub-sector, the **growing importance of time sensitivity**, as businesses seek to minimise the requirements for warehousing, will force Logistics support services businesses to change to meet changing expectations even in general freight (B2B) services.

Technology upgrades will continue, to meet these time demands, and to increase efficiency of logistics businesses. This will be an ongoing risk to smaller players who may not have the scale to implement these technologies, leaving them at a competitive disadvantage.

There is little doubt that world trade will continue to grow. Challenges will include the growing importance of time sensitivity and the need for technology upgrades.



O&G import, refining and distribution

- A stronger New Zealand dollar and rationalisation of the sub-sector in recent years has supported improved margins on refining and retail of petroleum, leading to strong growth in value added.
- Widely seen as a “sunset industry”, O&G import, refining and distribution is under threat from a weaker New Zealand dollar, behaviour changes, and the potential threat of electric vehicles that will reduce demand and squeeze margins.
- This may lead to further closures of marginal fuel retailers in the sub-sector, moves into other fuel sources by major oil companies, and a broadening range of goods and services being sold through fuel retailers.

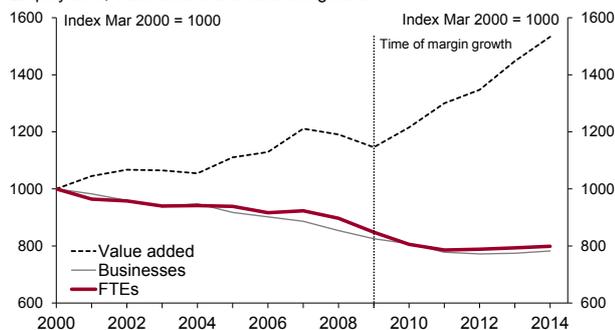
The people mover

The O&G import, refining and distribution sub-sector consists of fuel refining facilities (most notably at Marsden Point in Northland), fuel wholesaling and fuel retail. The sub-sector generated \$2.1 billion in value in 2014, and employed 11,400 FTEs.

Employment in the sub-sector is dominated by its fuel retail component. Fuel retailing employed 8,300 of its 11,400 FTEs in 2014. As a result, much of the economic activity in the sub-sector is linked to where people, or more accurately, vehicles, are located. By this measure, however, Whangarei in particular has a disproportionately important role because of the Marsden Point oil refinery.

O&G import, refining and distribution growth

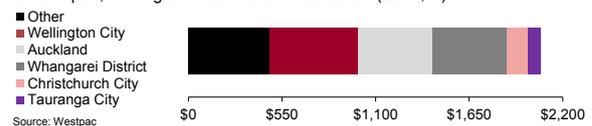
O&G import, refining and distribution
Employment, value added and business growth



Source: Westpac

O&G import, refining and distribution value added

O&G import, refining and distribution value added (2014\$m)



Source: Westpac

Wellington also plays a large role in the sub-sector. This is mostly because the headquarters of one of the largest players in the sub-sector is based there. Almost a quarter of total value added by the sub-sector is based in Wellington, with 20% in both Auckland and Whangarei.

Exchange rates fuelling growth

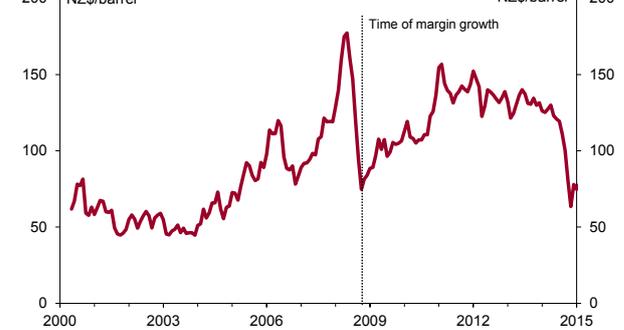
O&G import, refining and distribution has seen remarkable growth in value added over the last 6 years in particular. Margins on fuel sales (at the pump) have grown strongly, in part helped by a strong New Zealand dollar. A stronger New Zealand dollar softened the impact of rising oil prices, meaning at the lower oil prices seen since 2009, retailers have been able to increase margins.

Between 2000 and 2009, growth in value added by the sub-sector was subdued, but since then, value added has grown by 34%. At the same time, there has been some rationalisation in the fuel retail industry. Less competitive businesses have closed and there has been a reduction in the number of workers, each down around 20% since 2000. This reduced competition has also no doubt created the opportunity for surviving retailers to improve margins to more sustainable levels.

At the same time, the ability of the refinery at Marsden Point to improve margins is inversely proportional to the strength

Change in Brent crude oil price, 2000 to 2015

Brent crude oil price
NZ\$/barrel



Source: Westpac

of the New Zealand dollar. This is because the local refinery is in competition with, for instance, Singapore refineries. As the New Zealand dollar appreciates, fuel imported in refined form becomes more profitable, forcing the refinery to reduce margins to remain competitive. Yet because the refinery is owned predominantly by a group of larger industry players, the margins at the refinery are usually either a windfall for, or a subsidy by, the retail networks of those players.

Nevertheless, the overall ability of the sub-sector to improve margins means production per worker and per business have risen sharply. Production per worker is up 92% over the 14 years, and production per business is up 96%.

Where inputs come from and outputs go

Unsurprisingly, the primary input into O&G import, refining and distribution is imports (of petroleum), accounting for 57% of all inputs that go into producing and distributing the fuels purchased across the country. Smaller proportions of inputs come from the industries we would expect – road transport, used to ferry products across New Zealand, and a number of manufacturing industries.

On the outputs side, just under a quarter is consumed as final products by households and government at the pump. A far larger proportion goes to servicing other industries. This list is dominated by air and road transport, as one would expect. Statistics New Zealand estimates that around 12% of production is re-exported.

The outlook for O&G import, refining and distribution

The sharp growth in value added by the industry since 2009 is not expected to continue at the same rate. The depreciating New Zealand dollar, which makes fuel more expensive at the pump, will remove some of the opportunity for fuel retailers to increase margins. This will create a need to improve efficiencies, possibly leading to further employment declines and the closure of petrol stations where returns are not sufficient.

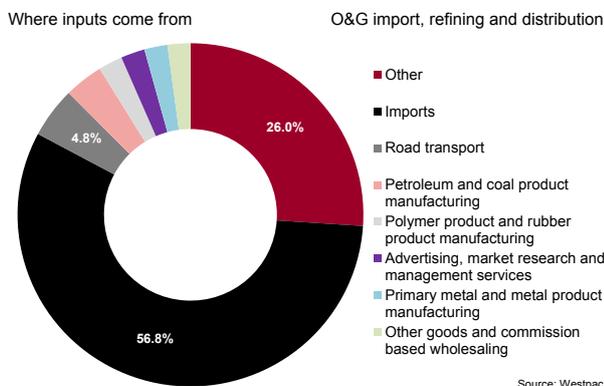
O&G import, refining and distribution is widely seen by a “sunset industry”. However, just how long the sun will take to dip out of sight is up for debate. Fuel refining and retail is effectively a “clip the ticket” type business. For every litre of fuel refined, a margin is added. For every litre sold at retail, a margin is added. Thus any reduction in throughput, all else held equal, affects viability.

Other pressures for the sub-sector include changing behaviour with regard to the number of private vehicles being used. These changes include:

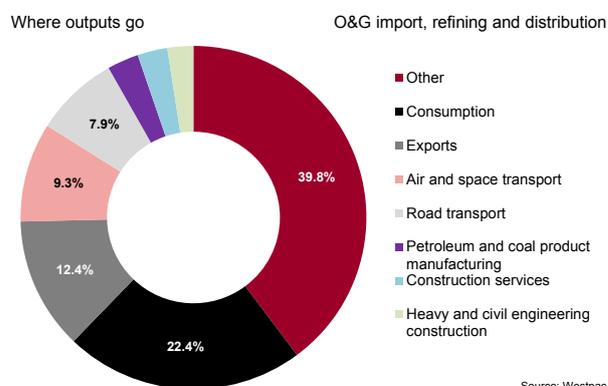
- **Mode shifts:** As highlighted elsewhere in this report, the uptake of bus and train services in New Zealand’s major cities has been far stronger than population growth. This growth was particularly strong as fuel prices rose.
- **A switch away from driving:** In 2014, New Zealand Transport Agency data showed that the proportion of people aged 16 to 19 getting drivers licences is falling as better public transport is making it possible to get by without cars. Wellington, with the most comprehensive public transport network in New Zealand and a compact city centre, saw the biggest declines in people applying for licences.
- **Technology replacing travel:** Industry sources mentioned that there has been a clear decline in so-called “discretionary travel” such as driving to visit friends or family located an hour or two away. In a world of Skype and other communications options, people no longer feel as big a need to travel to see family and friends. On-line shopping and services have also removed the need to “pop out” to the shops. Instead, people rely on commercial vehicles (couriers) who are already travelling to their area, consolidating many trips into one.

A final risk to growth in the sub-sector is changing technology. Vehicles are more efficient than they were, and the further mainstreaming of hybrid vehicles and potentially **electric vehicles** would mean large falls in fuel sales that could decrease the viability of the large network of fuel retailers.

O&G import, refining and distribution inputs

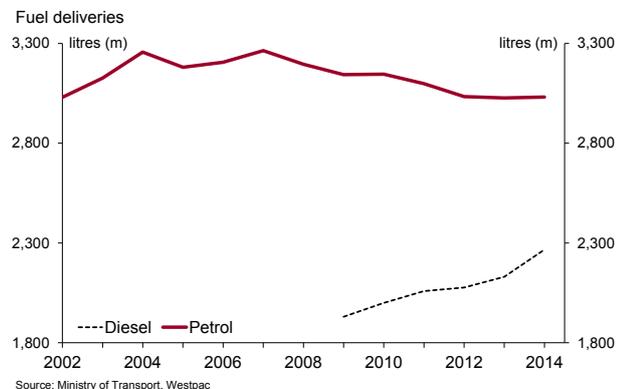


O&G import, refining and distribution outputs



According to the Ministry of Transport, deliveries of petrol have fallen fairly steadily since a peak in 2007. Fuel deliveries are down 7.3%, at a little over 3 billion litres a year, indicating an average annual decline of about one percentage point since 2007.

Fuel demand by type



At the same time, diesel deliveries have grown strongly. Although data is only available from 2009, the slope of the curve indicates that demand has been solid. This can be explained both by a switch from petrol to diesel vehicles in recent years (18.3% of new registrations in the June 2015 year, up from 16.5% in the June 2009 year), and by the ongoing growth in road freight transport and the light commercial fleet.

As of June 2015, there were only 661 electric and plug-in hybrid vehicles registered in New Zealand, in a fleet of 3.5 million. In the June 2015 quarter, electric vehicles accounted for just 0.2% of new vehicle registrations. There has been a step-change in the uptake of electric vehicles, but the overall numbers are still a tiny proportion of the total number of new vehicles registered.

For the technology to become mainstream is expected to take several years as prices of electric vehicles will need to fall significantly, and infrastructure to support these vehicles will need to multiply dramatically. Estimates are that electric vehicles will only account for 10-20% of the fleet by 2030. Even this proportion of electric vehicles implies rapid growth in their popularity over the next 15 years. One reason for this slow growth in uptake is that around half of New Zealand's annual new registrations of vehicles are of second-hand, older imports. Even if a large proportion of newly manufactured vehicles are electric, these will filter into the New Zealand fleet relatively slowly.

One bright spot for O&G import, refining and distribution is the **rise in air travel**. Although newer aircraft are more efficient than older ones, as is the case with road vehicles, the sheer growth in passenger numbers is expected to see demand grow for aviation fuel refined in New Zealand.

However, businesses in the sub-sector will need to look to other fuel types or a wider range of goods and services to ensure long-term viability.

The industry faces a number of risks including behaviour changes and technology improvements, both of which are reducing demand for private vehicle travel.



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Road transport

- Road freight transport employs the largest share of workers in Transport, Logistics and Distribution, and has added 4,000 FTEs in the last 14 years.
- Yet the number of road freight businesses has fallen as sophisticated new technologies became crucial for survival, disadvantaging many smaller businesses.
- Road freight transport will compete with rail and coastal shipping to pick up its share of freight growth. It offers a benefit for time-sensitive freight, but a large number of additional trucks on the roads may be politically unpalatable.
- Road passenger transport has grown strongly as changing consumer behaviour and lifestyle choices have led to an increase in bus and taxi use.
- Road passenger transport is expected to enjoy strong growth for the foreseeable future. This growth pattern will have a geographically broad-based benefit for New Zealand.

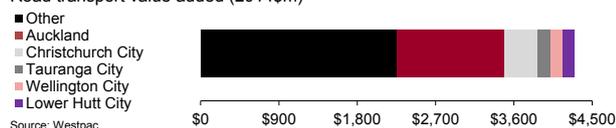
Local matters

Road transport (which includes freight and passenger services) employed 41,000 FTEs in 2014, and generated \$4.3 billion in GDP. The sub-sector is characterised by a few large players, and several thousand smaller businesses. It has nearly 4,600 road freight operators, and more than 3,300 taxi operators (often operating under the banner of a co-operative, but individually owned).

Given the dominance of smaller players, it is unsurprising that employment and value added are widely dispersed across New Zealand.

Road transport value added

Road transport value added (2014\$m)



The largest share of Road transport value is added in our largest city, also home to one of the most important ports in the country. Auckland produced around \$1.2 billion in Road transport value in 2014, or 28% of the total.

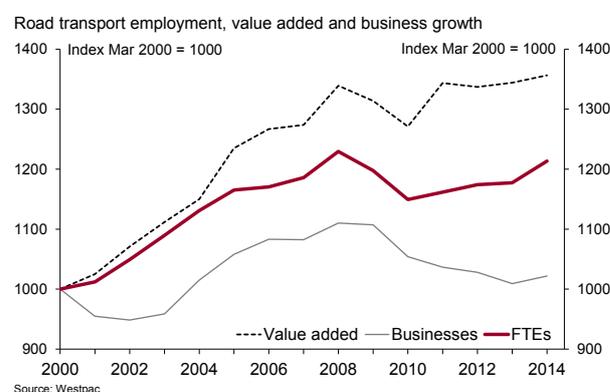
Christchurch, Tauranga, and Wellington Region, all major urban centres and with significant ports, make up the remainder of

the top five, but more than half of all economic activity in the sub-sector is in other parts of the country, highlighting the need for local providers of road transport services.

Pulling together

Strong growth in value added by the sub-sector since 2000, moderate employment growth, and consolidation of the number of businesses in recent years have led to rises in production per worker and production per business.

Road transport growth, 2000 to 2014



Since 2000, value added by the sector has risen 36%, as employment has grown by 21%, the second-fastest growth rate in the wider Transport, Logistics and Distribution sector. As we show later, much of the gain in absolute terms has been in road freight transport, but much of the growth in percentage terms has been in passenger (particularly taxi) transport.

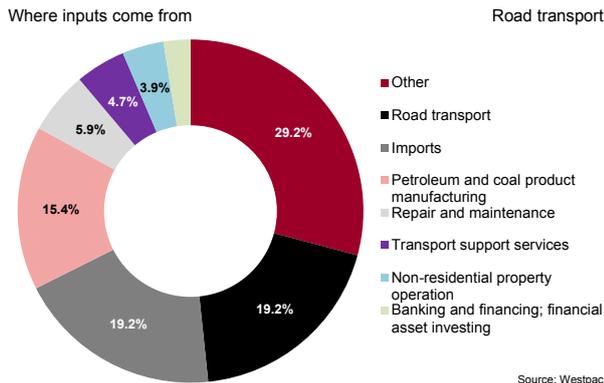
At the same time, the number of businesses in the sub-sector has fallen back to 2000 levels, due to consolidation during the GFC, following a period of growth between 2003 and 2008.

Where inputs come from and outputs go

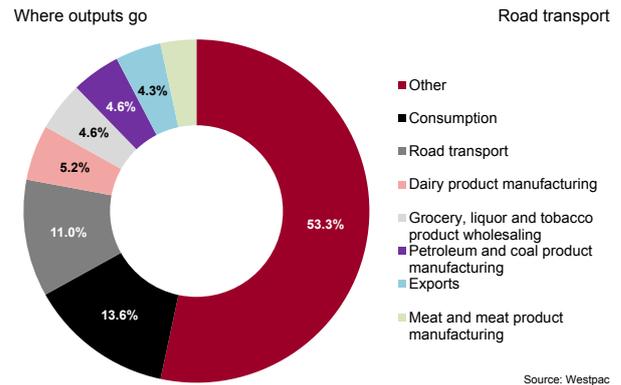
A key characteristic of inputs into and outputs from Road transport is the wide variety of industries the sub-sector is linked to. Its outputs in particular serve a wider variety of industries than the other sub-sectors covered in this study.

Inputs come primarily from within the sub-sector, as well as from imports (of capital machinery like trucks and spare parts). Around 15% of inputs come from petroleum manufacturing, while repair and maintenance, and transport support services also play important roles as one would expect for road freight services.

Road transport inputs



Road transport outputs

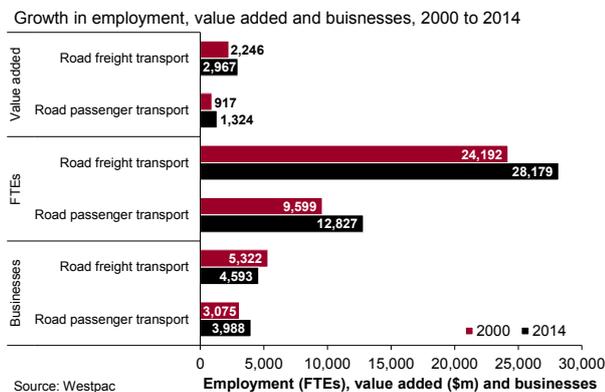


On the outputs side, around 14% of Road transport output is directly consumed (i.e. through road passenger services), but the list of other industries it serves is headed by dairy, grocery wholesaling, petroleum, exports, and meat products. Given the massive role of Road transport in the national economy, more than half of its outputs feed into dozens of other industries captured in the “Other” category, again highlighting the sub-sector’s importance to moving products around the country.

Freight and passenger road transport

Since 2000, there has been strong growth in employment and value added in both passenger and freight road transport. However, the road freight transport industry has been characterised by significant consolidation in businesses, while road passenger transport has many more businesses.

Road transport passenger and freight growth

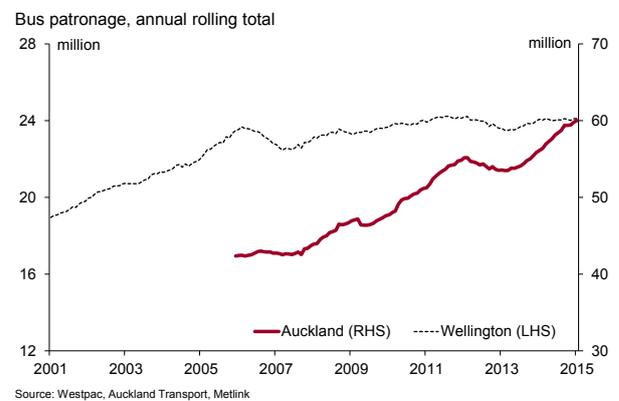


Road freight transport has 730 fewer businesses than it did in 2000 despite growth in employment, which implies the average business size has grown in employment terms. The GFC forced road freight transport operators to become more efficient to stay in business, leading to a large number of closures of less efficient operators. The change in regulations allowing for greater use of High Productivity Motor Vehicles (HPMV), mostly meaning an increase in tonnage per vehicle

on suitable roads, has also had an impact in improving value added per worker. Between the third quarter of 2013 and the second quarter of 2015, the share of heavy truck travel accounted for by HPMVs rose from 13% to 25%, according to the New Zealand Transport Agency (NZTA).

At the same time, road passenger transport has added 910 businesses, mostly in taxi services. Changes, including revitalisation of city centres, a lower proportion of young people learning to drive, and higher fuel prices, have led to higher demand for bus and taxi services. In Auckland, for instance, bus patronage has risen more than 40% in just 9 years, reaching 60 million trips in the July 2015 year.

Growth in bus patronage



In Wellington, growth has been more subdued, but coverage was already significantly more comprehensive given urban Wellington’s compact size. In Wellington, patronage grew from 18.9 million to 24.1 million over 14 years, or 27%. Current patronage equates to 38 trips per Auckland resident per year, and 48 for Wellington residents.

The outlook for Road transport

The estimated **48% increase in freight tonne-kilometre terms** over the 30 years to 2042 is expected to create a lot more work for road freight.⁷ While some of the heavy lifting

7 Ministry of Transport. (2014). National Freight Demand Study.

will be done by coastal shipping and rail, road transport will be central to the task.

How much of the work it undertakes will depend on how well it competes with other modes. In most cases, road offers a distinct time advantage over other modes, and also benefits by offering point-to-point delivery.

Some of the task will be handled by the switch to **larger loads**, but this is unlikely to be sufficient to cover the increase; there will need to be more trucks on the road. However, adding several hundred more trucks to the roads is politically and environmentally sensitive; it will increase congestion, imposing a social cost on the economy. Regulators may seek to push the freight task toward coastal shipping by incorporating more of the social cost of trucking into Road User Charges for instance.

But in many cases, Road transport is the only sensible option. Rail and coastal shipping are far less compelling options over distances of under 200 kilometres, as they are slower and require more handling of the freight between modes than point-to-point Road transport.

Several industry sources mentioned the **ageing workforce** in trucking. While many of the older, more experienced truck

drivers were good at their jobs, it was hard to attract quality younger drivers. This creates a real risk of driver shortages in the medium-term. Truck drivers have been removed from the long-term and immediate skill shortage list maintained by Immigration New Zealand.

As a result, it is much harder to bring in truck drivers from overseas to fill vacancies. We expect that there will be continued pressure on wages in the road freight sub-sector as businesses struggle to attract skilled, reliable workers. This will lead to increases in **road freight costs** if we are unable to train sufficient drivers here or if truck drivers are not relisted as a skills shortage.

At the same time, the efficiencies achieved by larger operations through **technology uptake** will likely lead to further consolidation in the sub-sector.

We expect to see **further growth in passenger transport**, both in bus and taxi services, particularly as Auckland increases urban densities. Density makes bus services more commercially sustainable, while population growth in the CBD area discourages vehicle ownership. We would expect other major centres to also experience growth in public transport use as long as development in those centres is of sufficient density to make it viable.

Most of the large increase in the freight task is expected to be covered by road freight.



Rail transport

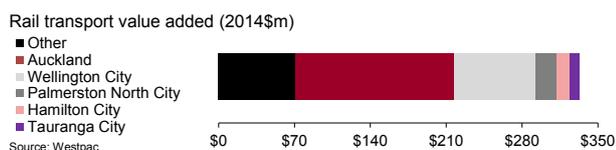
- Rail, although a small player in terms of employment and value added within the wider Transport, Logistics and Distribution sector, plays a vital linking role between, for instance, Auckland, Tauranga and Hamilton.
- Freight and passenger services have seen growth over the last several years despite KiwiRail's continued reliance on government subsidies to ensure its viability.
- The government has stated an ongoing commitment to rail services despite the price-tag, but expectations of improved efficiency remain, indicating that employment may be at ongoing risk.
- Many industry sources see a greater role for rail freight transport, but this will require huge investment in upgraded infrastructure, at a level that seems improbable.

A rail of two cities

Rail transport employed around 2,200 FTEs in 2014, and generated \$332 million in value, making it a small part of the wider Transport, Logistics and Distribution sector by these measures. However, industry sources have highlighted its key role in New Zealand's transport network, as it is a fundamental link in some places, such as between the Kaingaroa forest and the port in Tauranga, or bringing dairy products from Taranaki to ports in the Upper North Island. Further, rail provides commuter services in Auckland and Wellington, which have grown strongly in recent years.

With Auckland and Wellington being the only two cities in New Zealand served by commuter rail services, those two cities dominate rail transport activity. Other parts of the country that have freight rail services have smaller proportions of the economic activity pie.

Rail transport value added



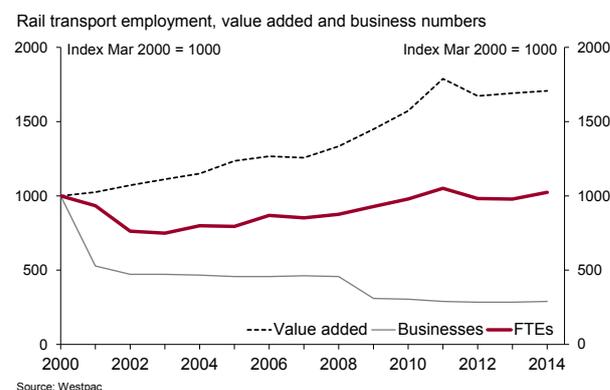
8 Ministry of Transport. (2014). National Freight Demand Study.

Around 44% of value added by rail in New Zealand is in Auckland, with a further 22% in Wellington. Small portions of activity are dispersed across the rest of the country where rail freight services play a role, including Palmerston North, which is a key link between the North Island Trunk Line, the Hawke's Bay and Taranaki.

Building some steam

The rail transport sector, dominated by the national rail company, KiwiRail, has faced a well-publicised list of challenges dating back several years. Nevertheless, by some measures, the sub-sector has done relatively well.

Rail transport growth, 2000 to 2014



Employment has remained largely flat, and the number of businesses (or "front doors" of businesses with multiple locations) has fallen sharply. However, the value added by the sub-sector has risen sharply, up 70% over 14 years. Much of the gains were seen through the difficult years of the GFC (2007 to 2011). With employment staying largely constant over this time, value added per worker has also risen sharply.

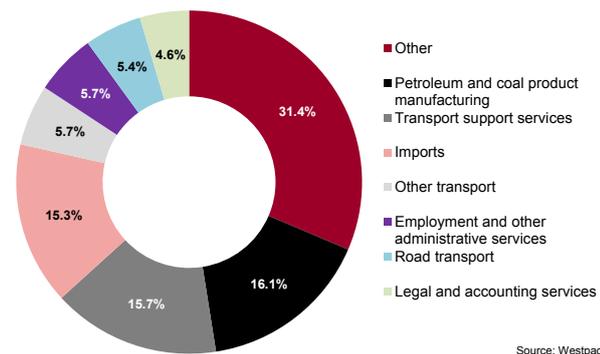
A Ministry of Transport report estimates that rail's share of the freight task (in tonne-kilometres) grew from 15% to 16% between 2006/07 and 2011/12, while its absolute growth in tonne-kilometres grew 8%.⁸ Its inroads were mostly at the expense of coastal shipping, rather than road transport.

Where inputs come from and outputs go

Inputs into the Rail transport sub-sector come primarily from Petroleum and coal transport services (fuel required for rail services), Transport support services, and Imports (of capital machinery and parts).

Rail transport inputs

Where inputs come from



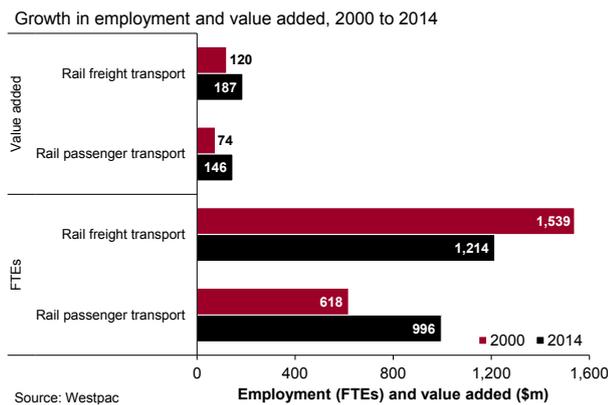
Its outputs support a wide range of industries, as well as directly serving consumers who use rail passenger services. Industries served by Rail Transport are primarily involved in the wholesale and retail trade, as one would expect. These industries account for most of the bulk goods that need transporting around the country.

Passenger and freight rail transport

Strong growth has been seen in passenger rail services on the two commuter networks in Auckland and Wellington, while certain freight services have seen solid growth in throughput.

Both freight and passenger services now add more value to the economy, but despite accounting for only 38% of value added in 2000, passenger services provided 51% of growth to 2014. In employment terms, the relative importance of passenger services has been even more evident. While employment in freight services has fallen since 2000, it has grown significantly in passenger services.

Rail transport passenger and freight growth

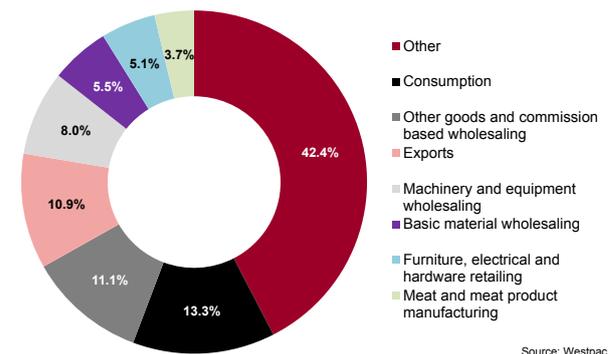


Value added in passenger services may have risen but so has the share of value added spent on salaries. This leaves profits broadly flat.

One would expect to see greatly improved train patronage numbers given this growth in passenger service employment, and this is indeed the case.

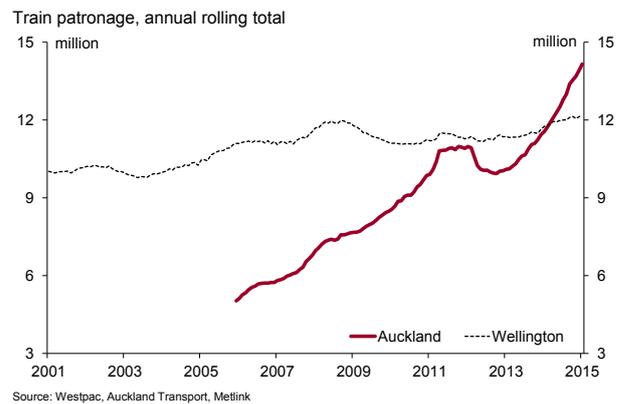
Rail transport outputs

Where outputs go



Large-scale investment including double-tracking, electrification, and new station infrastructure have seen train patronage surge in Auckland in particular. From just 5 million annual passengers in June 2006, Auckland's train patronage grew to 14.2 million by July 2015. The rate of growth in the last two years has reached 18% year on year and shows no signs of stalling.

Rail transport patronage growth



In Wellington, growth has been more subdued albeit off a much higher base. In June 2006, Wellington already had more than twice as many train trips a year as Auckland. But since 2001, train patronage in Wellington has grown 21%, or around 1.4% a year, significantly faster than annual population growth of around 0.9%.

The outlook for Rail transport

KiwiRail continues to rely on significant grants from government for capital investment. The New Zealand government has shown an ongoing commitment to rail. Since the purchase of the rail network from private owners in 2008, the government has supported the sub-sector to the tune of more than \$2 billion. In August 2015, Finance Minister Bill English said KiwiRail would continue to require \$200 to \$250 million a year in government top-ups.⁹ Commuter routes remain commercially unsustainable, relying on rates to supplement the fare box.

Verbal commitments and the New Zealand public's desire for a rail system are likely to ensure the ongoing operation of the sub-sector, but increasing calls for greater efficiency are likely to affect jobs as KiwiRail pares back to its core, most financially viable services. We expect some hard decisions will have to be made on existing routes if the taxpayer is not to continue subsidising rail to the same extent.

Regardless, **volume growth is expected to continue** in both rail freight and passenger services. This will require ongoing investment in the sector. One particular area of **opportunity is for additional rail capacity between the North and South Islands**, which is constrained by the lack of rail capacity on inter-Island ferries. KiwiRail has identified operations in the golden triangle – between Auckland, Tauranga and Hamilton – as its most commercially viable, but the link between North and South Islands for bulk product and container transfers remains crucial and under-served.

With the overall freight task expected to expand sharply over the next 30 years, the question is how much rail will snare. This will largely depend on upgrades to the network and rolling stock, to increase reliability and capacity on commercially sensible routes. We do not see a strong case for expansion of the network, and the **level of infrastructure investment required** to grab a larger share of the freight task on an ongoing basis **is unlikely to eventuate**.

The New Zealand rail network



Source: KiwiRail

Rail will play an ongoing role in the freight task, but this will be limited to a few key routes.



9 See for instance <http://www.stuff.co.nz/business/industries/71426210/KiwiRail-needs-200m-a-year-finance-minister-says>

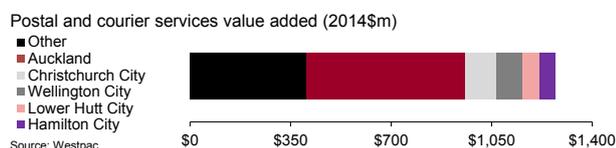
Postal and courier services

- The traditional postal service is undergoing radical change, with employment there falling by two-thirds in the last 14 years.
- Courier services are growing, both on a B2B and Business-to-Consumer (B2C) basis.
- We expect to see more reductions in employment in postal services, and a move toward alliances of postal and courier services across national boundaries.
- There will also be attempts by larger international courier services to further integrate the supply chain, to have greater control over products from end-to-end.

Distribution dominates

Postal and courier services employed around 12,900 FTEs in 2014, generating \$1.3 billion in value across New Zealand.

Postal and courier services value added



Major population centres, which typically have large distribution services, as well as a need for postal delivery and courier services to serve the local population, dominate the list of districts and cities in which Postal and courier services play the largest role.

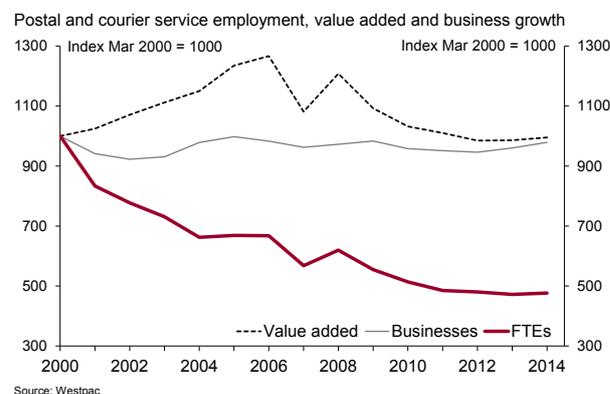
Auckland, the gateway to New Zealand, has an international mail distribution centre in addition to its large population and commercial nature, both of which require Postal and courier services.

Unsurprisingly, Christchurch, Wellington, Lower Hutt and Hamilton round out the top five areas in which the most economic activity occurs in Postal and courier services.

From pillar to post

Over the last 14 years, the Postal and courier services sub-sector overall has struggled to grow in terms of value added, employment or businesses.

Postal and courier services growth, 2000 to 2014



As we examine later, the weak overall performance has largely been the result of declines in use of traditional postal services, even as courier services have grown in importance.

Employment has fallen 52% since 2000, while value added and the number of businesses in the sub-sector has ended the period of analysis flat. There were gains in value added between 2000 and 2006, but these have been largely reversed.

These figures do not include the recent switch to three-times-a-week delivery by NZ Post. We expect this change will be reflected in further employment declines when 2015 data becomes available.

Where inputs come from and outputs go

Almost half of all inputs into the Postal and courier services sub-sector come from within the same sub-sector. This points to the fact that the dominant player, New Zealand Post, controls its supply chain from the point of arrival into New Zealand, to the distribution network. Air transport and Road transport also contribute significantly as the key ways post and parcels move around New Zealand.

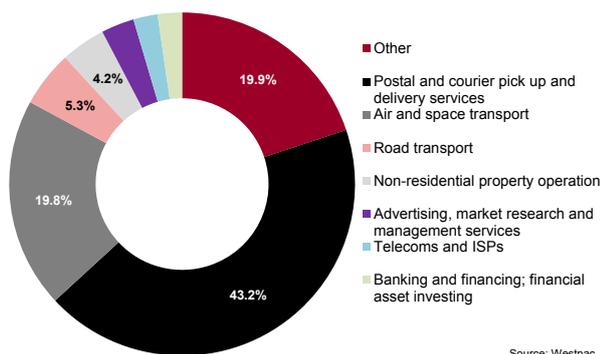
On the outputs side, the sub-sector is clearly skewed toward service industries such as banking, telecommunications and internet services, advertising, and government. This is indicative of the sub-sector's important role in printing and distributing documents on behalf of several major clients in those industries, as well its more general residential postal and courier services.

Need for speed

The rise of high-technology alternatives to physical post deliveries, predominantly email, has been affecting the

Postal and courier services inputs

Where inputs come from



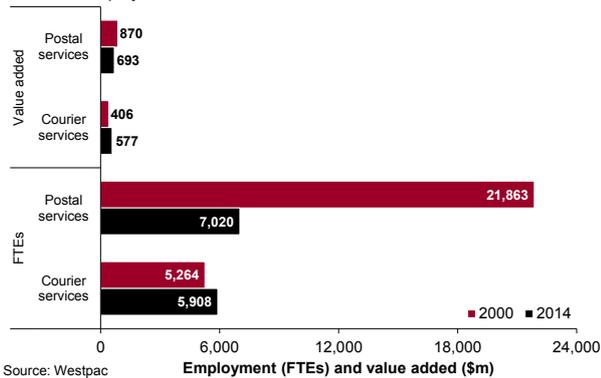
Source: Westpac

fortunes of traditional postal services for several years. But the last 10 years have also seen the rise of consumer-to-consumer trade through the likes of Trademe, and business-to-consumer trade via online purchases. This has, in the case of easily-packaged consumer goods, led to a large rise in demand for courier services, and in the case of bulkier items, led to increased workloads for freight forwarders.

As a result, all headline indicators have been skewed toward courier services over the last 14 years.

Postal and courier services outputs

Growth in employment and value added, 2000 to 2014

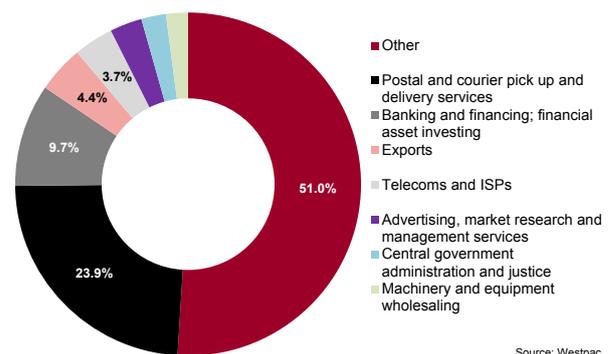


Source: Westpac

The biggest change has been in employment, where postal services workers have been reduced by two-thirds. At the same time, there has been a small increase in courier service workers. Yet the value added by the sub-sector is largely unchanged. A much smaller decline in postal services value

Postal and courier services outputs

Where outputs go



Source: Westpac

added than in employment has been offset by some growth for courier services. This implies that value added per worker in postal services has grown sharply, which is borne out by the numbers; value added per worker in postal services is up 148% in 14 years, compared to 27% in courier services.

There has been a small reduction in the number of “front doors” servicing the industry, but this change is minor relative to the shift in production and employment.

The outlook for Postal and courier services

New Zealand Post is a business in transition. It has recently **reduced post deliveries** to three days a week, which will see employment almost certainly decline further in postal services over the next couple of years. At the same time, the **growth in the parcel business** (Courierpost is the largest courier business in New Zealand) means that opportunities exist for growth there and for other courier businesses.

The line between courier service and freight forwarding (dealt with under Logistics support services) is likely to continue to blur more. For instance, the DHL model used internationally, where the **full supply chain is controlled** via a fleet of aircraft, trucks and even vessels, may increasingly become the norm.

We expect this will pose a risk to some of the smaller courier networks in New Zealand. Some of these businesses may **join an international alliance or establish a joint venture** to ensure access to the resources to compete with larger services with physical capacity and freight forwarding capability.

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