Logistics Industries ENVIRONMENTAL SCAN

October 2010





Prepared by the Logistics Training Council for the Western Australian Department of Training and Workforce Development

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EXECUTIVE SUMMARY

The Logistics Training Council Inc provides high level strategic information and advice to the Western Australian Government on the vocational education and training needs and priorities of industry in Western Australia. The LTC has taken a leadership role within logistics industries in this respect and has ensured that activities of the Logistics Training Council align with the priorities set by the Minister for Training, the State Training Board and the Department of Training and Workforce Development.

The traditional image of the transport and logistics industry has been one of physically demanding jobs, heavily industrialised workplaces, and an employment destination of last resort. Today, this couldn't be further from the truth.

Transport and Logistics in 2010 is a technologically advanced, dynamic and vibrant industry, with a diverse range of career options, and a highly skilled and professional workforce. The industry has not only embraced new technology but has delivered significant national and international productivity improvements through the integration of new and emerging technologies across its sectors.

The transport and logistics industries have undergone significant changes in the past three years. In 2007 the industry was experiencing boom conditions, and as a result significant constraints were evident in terms of the degree to which existing transport infrastructure could support the country's transport requirements. More recently the effects of the global economic crisis slowed activities in the transport industry, and this has created issues relating to long term labour capacity, and the bleeding out of the current industry workforce into other industries sectors. However, a raft of new projects, especially in the oil, gas and mining sectors has seen the demand for transport and logistics once again at the forefront.

With many new mining, oil and gas, and infrastructure projects planned in WA over the next three years, pressure will be placed further on the transport and logistics sectors, as attracting new entrants has been a problem for many years, and the attraction will be in more high paying occupations, which could put the industry back into the same situation it was in through the last period of economic growth.

The global economic crisis has, however, provided a window of opportunity through which organisations have sought to restructure and re-augment their business processes in anticipation of an anticipated upswing in the global business environment. The businesses that are most vulnerable in the current business environment are those that have lost major transport contracts or have been limited in their capacity to carry out business due to supply chain blockages or infrastructure constraints.

There has also been a series of infrastructure projects either approved or in the pipeline, including the upgrade to Perth Domestic and International Airport terminals, as well as upgrades to a range of regional airports to meet the growing demand for fly in/fly out (FIFO); upgrade to existing ports and the building of new ones, eg Oakajee; a new multi-modal transport hub in Kwinana; and proposed new railways to transport more ore to ports in the North West.

Industry has diversified its operations to sustain its business practices. This has prevented redundancies and allowed employers to maintain their existing workforce. Some businesses that commenced operation during the boom have closed as a result of poor business practices, lack of business experience and reserves to ride out the economic downturn. However, there have been many who were able to consolidate successfully and they are now preparing for the new period of economic growth in a stronger position than they felt faced them a year ago.

In recent years there have been many attempts to quantify transport and logistics workforce numbers. In the main, existing government data relies on definitions of direct employment wholly within a transport and logistics enterprise (ie truck driver working for a freight company). While it is acknowledged that many other sectors of the economy including mining, agriculture, retail, construction and government undertake transport and logistics activities, these employees are not included in government estimates of the entire transport and logistics workforce.

The consequence of this situation is a significant under-reporting of the number of individuals who participate in the transport and logistics workforce. The potential impact of this under-reporting is insufficient focus, particularly at policy level, on the magnitude and composition of transport and logistics skills required to service the Australian economy.

It is the intent of this environmental scan to capture rich data and information that can be used to identify current and future skills and training needs for all transport and logistics industries. This document is a vibrant and ever-changing account for use by Government, training organisations and industry, and we look forward to it becoming the benchmark for future research.

Jillian Dielesen
Chief Executive Officer
Logistics Training Council Inc

INDUSTRY SECTORS

The Transport and Logistics Environmental Scan covers the following Industry sectors:

* Road Transport and Logistics Management
* Warehousing
* Maritime and Stevedoring
* Aviation
* Rail
* Postal

Many of these sectors not only overlap each other, but can be found in many other industries. There has also been a move towards a more multi-modal transport strategy, where all modes of transport are starting to work closer together to ensure a more efficient, cost effective and sustainable structure exists, and this has seen the development of transport hubs, with sea, rail, air and road all working out of the same area to move freight.

Transport and Logistics is one of 17 divisions that comprise the Australian economy. This division is primarily concerned with the provision of transport services via road, rail, water, air and space. The provision of storage services is also covered by this industry. Key markets for this division are primarily other sectors of the economy (ie wholesalers, construction and farm operators etc). This division includes businesses that provide passenger or freight transport by road, rail, water or air; terminal facilities for passengers or freight; services related to transport such as car parking, stevedoring, harbour services, navigation services, airport operation or space port operation; booking, travel, freight forwarding, crating or customs agency services; and storage facilities. Businesses operating pipelines for the transportation of oil, gas, etc., on a contract or fee basis are also included in this division. (IBISWorld)

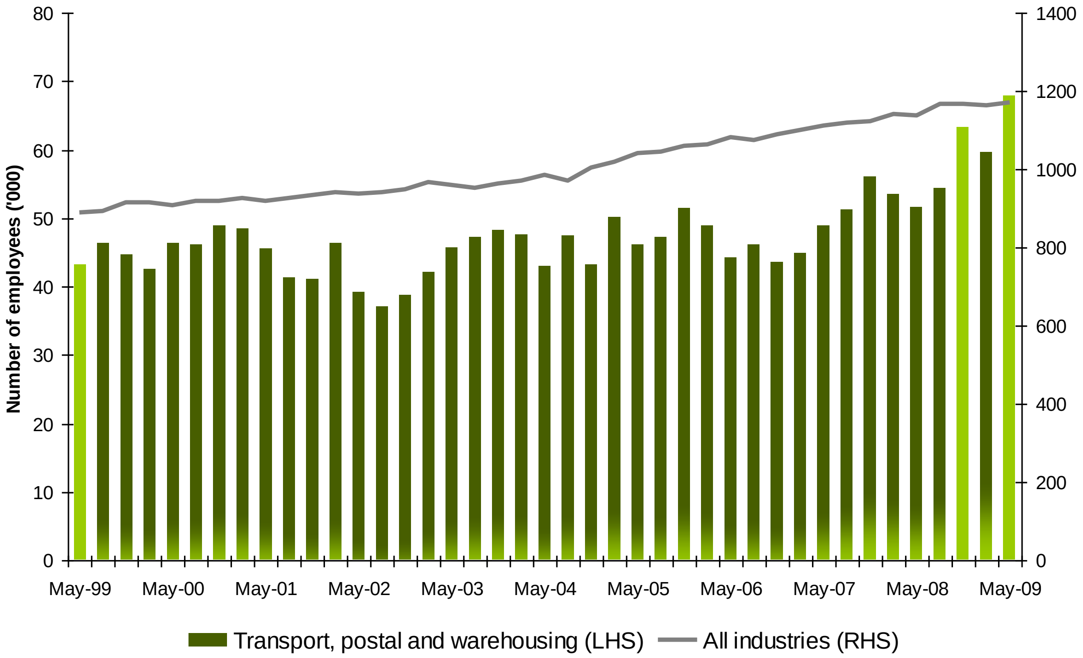
As at May 2009, there were 67,940 employees working in the transport, postal and warehousing industries in WA (5.8% of WA employees). (ABS, *Labour Force, Detailed Quarterly, Australia*, 6291.0.55.003). However, research carried out by a variety of industry organisations shows that much of the data available does not recognise that some of the workforce is incorrectly naming its sector, which has mislead the available data that ABS has been able to provide. The number of support people to every truck on the road is approximately four.[1]

The Australian transport and logistics industry is worth $150 billion to Australia each year; generates 14.5% of GDP; and involves 165,000 businesses. The Australian freight task is estimated to double by 2020[2].

Logistics and warehousing are growth areas that are integral to the future growth of transport, especially in view of new projects such as the Gorgon Project. In the past infrastructure spending has been inadequate and it is important that this is ramped up so that future growth in the transport and logistics industry is not limited.[3]

According to a report by the Bureau of Infrastructure, Transport and Regional Economics (BITRE), between 1972 and 2007 the total interstate freight task (by all transport modes, ie road, rail and coastal shipping) on the East West corridor grew from 3.3 billion tkm to 18.3 billion tkm. This increase was partly driven by the mining boom in WA which in turn has increased demand for project freight and consumables destined for the north west of WA. Between 2008 and 2030 the total interstate freight task on the East-West corridor is projected to increase from 19.1 billion tkm to 38.6 billion tkm, at an average annual growth rate of 3.3%.[4]

Over the last ten years, the transport, postal and warehousing industry in WA has experienced strong employment growth of 4.3% per year (an average increase of 1,850 employees per year) as shown in the table below.[5]



Within these industries, almost one-third of employees worked in road freight transport (31.8%). A further 21.7% worked in postal and courier pick-up and delivery services.

Industry[1]	Number of employees	Percentage (%)
Road freight transport	21,620	31.8
Postal and courier pick-up and delivery service	14,740	21.7
Road passenger transport	5,840	8.6
Rail transport services	5,180	7.6
Warehousing and storage services	5,100	7.5
Other transport support services	3,550	5.2
Air and space transport	3,440	5.1
Water transport support services	1,820	2.7
Airport operations and other airport support services	1,780	2.6
Scenic and sightseeing transport	1,720	2.5
Water transport services	1,240	1.8
Pipeline and other transport	310	0.5
Transport, postal and warehousing not further defined	1,590	2.3
Total Transport, postal and warehousing	**67,930**	**100.0**

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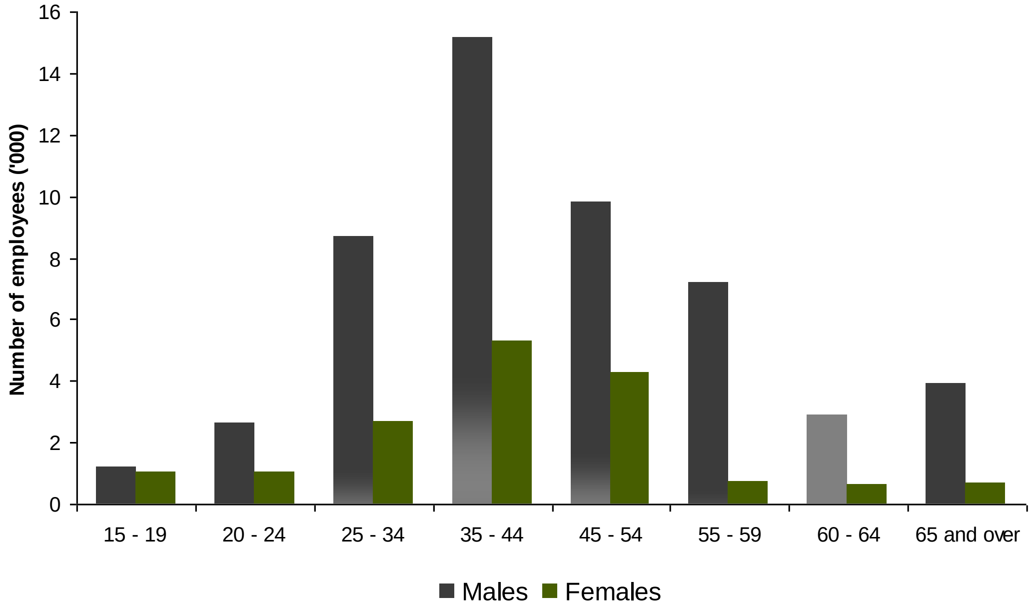
[1] Due to the small sample size collected for industries in WA, data provided by further industry breakdowns into group categories are subject to high relative standard errors and should be used with caution.



* More than three-quarters of employees in the transport, postal and warehousing industry were male (76.0% or 51,610 employees).[7]
* The median age of transport, postal and warehousing industry employees was 42 years (43 years for males and 41 years for females).
* The largest age group for males and females was 35 to 44 years of age.
* More than three-quarters of transport, postal and warehousing employees worked full-time (75.7% or 51,410 employees). The highest number of part-time employees worked in postal and courier pick-up and delivery services (39.3% or 5,790 employees).
* The median number of hours worked per week was 36.8 hours.[8]

Industry[i]	Full-time	Part-time	Total	Median Weekly Hours
Road freight transport	17,150	4,470	21,620	42.3
Postal and courier pick-up and delivery service	8,950	5,790	14,740	29.1
Road passenger transport	3,500	2,340	5,840	38.2
Rail transport	5,180	-	5,180	35.1
Warehousing and storage services	4,030	1,070	5,100	39.1
Other transport support services	2,900	650	3,550	41.7
Air and space transport	3,010	430	3,440	29.1
Water transport support services	1,510	310	1,820	32.1
Airport operations and other airport support services	780	1,000	1,780	36.7
Scenic and sightseeing transport	1,720	-	1,720	49.6
Water transport services	1,240	-	1,240	44.0
Pipeline and other transport	310	-	310	40.0
Transport, postal and warehousing not further defined	1,120	460	1,590	32.0
Total - transport, postal and warehousing	**51,410**	**16,520**	**67,930**	**36.8**

* The average weekly earnings of employees in the transport and storage industry[2] were $1,221.60, below the WA average of $1,338.80[9].

[2] Industry average weekly earnings are based on the 1993 version of the Australian and New Zealand Standard Industrial Classifications (ANZSIC). Some industry classification structures have changed significantly in the new

* Males earned on average $315.50 per week more than females ($1,306.30 compared to $990.80)[3.] The gender pay gap for the transport and storage industry was 24.2% (27.0% for WA).
* Almost half of employees in the transport, postal and warehousing industry had their pay set via registered or unregistered individual arrangements (47.4%)[10]. A further 44.1% were set via collective agreements.
* More than one-third of employees in the transport, postal and warehousing industry were machinery operators and drivers (41.0%), while 23.0% were clerical and administrative workers.[11]

Occupation	Number of employees	Percentage (%)
Managers	6,110	9.0
Professionals	5,220	7.7
Technicians and Trades Workers	3,650	5.4
Community and Personal Service Workers	2,300	3.4
Clerical and Administrative Workers	15,640	23.0
Sales Workers	1,370	2.0
Machinery Operators and Drivers	27,880	41.0
Labourers	5,770	8.5
Total	**67,940**	**100.0**

* In August 2008, 35.2% of transport, postal and warehousing employees were trade union members[12.]
* In 2006, three-quarters of transport, postal and warehousing employees lived in the Perth metropolitan region (75.3%)[13.] However, the largest proportion of transport, postal and warehousing employees lived in the South Eastern region (5.4%).

WA Statistical Division	Usual Residence (a)	Proportion of all industries (%)
Perth	29,720	4.2
South West	3,048	3.4
Lower Great Southern	870	3.7
Upper Great Southern	322	3.7
Midlands	1,163	5.1
South Eastern	1,363	5.4
Central	1,281	5.0
Pilbara	916	4.7
Kimberley	649	5.1
Total	**39,469**	**4.2**

(a) Usual residence is defined by where a person has lived or intends to live for 6 months or more.

* More than half of employees in the transport, postal and warehousing industry did not have a post school qualification (57.2%). A further 19.9% had a Certificate III or IV and 6.9% had a diploma or advanced diploma[14].

2006 edition; therefore average weekly earnings for this industry may not be comparable to industry data represented elsewhere in this overview.

[3] Average earning calculations are based on full-time adult ordinary time earnings (AWOTE)

Highest level of qualification	Number of employees	Percentage (%)
Postgraduate	293	0.7
Graduate diploma or certificate	176	0.4
Bachelor degree	2,117	5.4
Diploma and advanced diploma	2,729	6.9
Certificate III and IV	7,846	19.9
Certificate I and II	578	1.5
Certificate not further defined	676	1.7
Not stated	1,749	4.4
Inadequately described	738	1.9
No qualifications	22,567	57.2
Total	**39,469**	**100.0**

* In 2006, there were 9,130 owner managers of transport, postal and warehousing enterprise businesses in WA[15]. Two-thirds ran unincorporated businesses (67.6% or 6,173) and of these, 78.5% did not employ. Of incorporated owner managers, 90.6% employed between 1 and 19 employees.

Barriers to Training – All Sectors

- Companies are training during the downturn but not continuing through peak times.
- It is difficult and costly for small business to access training that meets their needs.
- There is limited delivery in regional centres, especially for niche industries with expensive training requirements.
- There are limited opportunities and interest through VET in schools, as students not advised or directed into the transport industry by VET coordinators.
- There are not enough trainers in all sectors, as many have been lured back to industry for higher paying jobs.
- It is difficult to train staff who work offsite or away from the base camp, eg drivers who are on the road all day.
- In all industries except warehousing, training is linked to regulatory requirements not qualifications.
- There exists a lack of equity in funding for different industries and programs, especially where extensive practical training is required on top of theoretical component eg 100 hours flying, 6-12 months at sea.
- There is a lack of flexibility with traineeship periods, and reluctance to utilise traineeships.
- There is limited capacity to train due to infrastructure and the high cost of practical skills development. Simulators are extremely costly to purchase and the returns are nominal only.
- There is little interest in higher level qualifications beyond Certificate III. Workers pursue higher salaries, not higher qualifications, and employers want skills, not necessarily qualifications.

- Many employers do not train because they struggle to understand the training system, the funding system, who to contact for information and the bureaucracy of dealing with a number of organisations, and it all becomes too difficult.
- Casual workers struggle to access training and in many instances are not eligible for traineeships.
- For some workers, training in a classroom is intimidating.
- Training is often too expensive to run for small numbers or not on the RTO's scope.
- Whilst many companies pay for upskilling their workers, some expect workers to pay for own training, eg forklift licences. This is due to some workers leaving and working for other companies after completing paid training.

Barriers to Employment – All Sectors

- The transport and logistics industry has a poor image, being seen as dirty with no incentives to join and few career opportunities or pathways. It is imperative that the profile of the industry be raised to attract young entrants, particularly as the industry has an ageing workforce.
- Global demand for workers is seeing local workers poached by overseas companies in the same way industry is bringing in overseas workers.
- Keeping up with rapidly changing technology and the latest legislative, compliance and enforcement changes is an issue for industry, government and Registered Training Organisations.
- As industry picks up, it is looking for more experienced workers, and the demand has caused both a shortage and movement of workers to companies that pay more.
- Transport industries have poor participation rates by under-represented groups, especially women, indigenous people and people with disabilities.
- Non-English speaking workers struggle to have existing skills recognised as they do not understand the process.
- Companies have strict drug and alcohol policies (pre and current employment testing) which puts limitation on entry into industry.
- There is a shortage of high level workers to run the industry and low investment in training of WA managers.
- A reliance on casual labour due to fluctuations in business, peaks and troughs and seasonal work means less job security.
- Movement of workers out of the industry to other, more highly paid sectors, or within the industry, has resulted in a lack of workers or lower quality workers.
- In some instances public transport availability has not kept up with current industrial development.
- It is difficult to attract workers to some country locations due to lack of infrastructure, eg hospitals for children, shortage of land for housing, shortage of facilities, specialist doctors etc.
- Loss of senior people when new companies take over as a changed culture impacts on the work environment.

LTC
LOGISTICS TRAINING COUNCIL

Logistics Industries
ENVIRONMENTAL SCAN

Road Transport

ROAD TRANSPORT

Overview

Road transport is divided into freight and passenger services. Freight services involve all transport companies involved in transporting any type of freight by road, delivery services and furniture removal services via road; truck hire with driver and taxi truck services with driver. Passenger services include coaches, buses, taxis, limousines, and small charter vehicles.

The road transport industry employs approximately 167,000 truck drivers nationally, and has the largest and heaviest road-legal vehicles in the world[16]. With the amount of freight moved expected to double in the next ten years, it is imperative that the skills demands for this industry are met.

The biggest issues facing the road transport industry are an ageing workforce and the lack of experienced and/or qualified staff (eg drivers).[17] Major labour challenges will emerge in the capacity of the industry to find new drivers as the economic climate improves. The mining industry offers huge salaries which will attract drivers from the smallest to the largest trucks. There is also the potential for drivers to become skilled in other areas and lost to the transport and logistics industry.[18]

Transport drivers originate from a broad cross-section of industries and as a result many have other skills that can be applied across a range of occupations. Working conditions in the industry have remained relatively constant throughout the past 18 months and the industry will find it faces the same labour attraction challenges in an improving market as it did prior to the economic crisis, and resources sector downturn. If an improvement in the business market is intermittent it is likely that more sub-contracting driving roles will be created in the industry as a means of insuring business owners against staff surpluses in a volatile business environment.

Trends Analysis

The primary activities of companies in the road freight industry are:[19]

* Delivery
* Furniture removal
* Log haulage
* Road freight transport
* Taxi trucks (with driver)
* Truck hire (with driver)

Approximately half of road transport activity is short distance trips, with long distance intrastate and interstate activity making up the rest.

Truck Drivers[20]

Truck drivers drive heavy trucks, removal vans, tankers and tow trucks to transport bulky goods and liquids.

- Job prospects for truck drivers are good.

- Employment for truck drivers to 2014-15 is expected to grow moderately.
- Truck drivers have a high proportion of full-time jobs (92%). For truck drivers working full-time, average weekly hours are 46.4 (compared to 41.3 for all occupations) and earnings are average - in the sixth decile. However, due to the high demand within the mining industry in WA many drivers have been lured into this sector with earnings exceeding $100K.
- The mix of industries employing truck drivers is favourable for employment growth prospects.

Delivery Drivers[21]

Delivery drivers drive vans and cars to deliver goods.

- Job prospects for delivery drivers are average
- Employment for delivery drivers to 2012-13 is expected to grow slightly. Employment in this large occupation (37,900 in August 2008) rose moderately in the past five years, and remained relatively steady in the long-term (ten years).
- Delivery drivers have a below average proportion of full-time jobs (68%). For Delivery drivers working full-time, average weekly hours are 40.5 (compared to 41.8 for all occupations) and earnings are low - in the second decile.

Freight and Furniture Handlers[22]

Freight and furniture handlers load and unload trucks, containers and rail cars, and transfer cargo between ships and other forms of transport and storage facilities.

Job Titles[23]

- Freight Handler (Rail or Road)
- Truck Driver's Offsider

- Job prospects for freight and furniture handlers are in high demand.[24]
- Employment for freight and furniture handlers between 2012-13 is expected to increase by 10%.[25] Employment in this medium sized occupation has risen very strongly in the past five years, and has risen slightly in the long-term (ten years).
- Freight and furniture handlers have an above average proportion of full-time jobs (84%). For freight and furniture handlers working full-time, average weekly hours are 41.6 (compared to 41.8 for all occupations) and earnings are average - in the fifth decile.
- The industries employing freight and furniture handlers have average employment growth prospects.[26]

Taxi Driver/Chauffeurs[27]

Taxi drivers and chauffeurs, also known as automobile drivers, drive motor cars to transport passengers to destinations.

The primary activities of companies in this industry are:

* Hire car services (with driver), which could include limousines and wedding cars and silver service/luxury sedans
* Other road passenger transport services
* Taxi cab management services (which operate on behalf of the owner)
* Taxi cab services
* Taxi radio base operations (except for taxi trucks)

- Job prospects for automobile drivers are good. Employment growth for automobile drivers between 2012-13 is expected to be moderate.
- Automobile drivers have an average proportion of full-time jobs (74%). For automobile drivers working full-time, average weekly hours are 45.8 (compared to 41.8 for all occupations) and earnings are low - in the second decile.
- The mix of industries employing automobile drivers is favourable for employment growth prospects.

Bus and Coach Drivers[28]

Bus and coach drivers drive buses and coaches to transport passengers over established and special routes.

- Job prospects for bus and coach drivers are good.
- Employment for bus and coach drivers between 2012-13 is expected to grow slightly. Employment in this large occupation (28,400 in August 2008) fell slightly in the past five years, and in the long-term (ten years).
- Bus and coach drivers have a below average proportion of full-time jobs (65%). For bus and coach drivers working full-time, average weekly hours are 41.1 (compared to 41.8 for all occupations) and earnings are average - in the fifth decile.
- The mix of industries employing Bus and Coach Drivers is favourable for employment growth prospects.

Regulatory requirements

Road Transport

- Heavy vehicle operators in WA are regulated by the Road Traffic Act 1974 with subsidiary legislation such as the Road Traffic (Licensing) Regulations 1975 and the Road Traffic (Vehicle Standards) Regulations 2002. These regulations are administered by Main Roads WA.
- Transport operators must be accredited by Main Roads WA and comply with two assessment modules: Fatigue and Vehicle Maintenance.
- The Australian Transport Council (ATC) has proposed a national heavy vehicle driver licensing scheme to include a national competency framework governing the licensing of heavy vehicle drivers around Australia. The framework will encompass a consistent approach to training and assessment of heavy vehicle drivers and regulation of heavy vehicle driver trainers and driving schools.[29]
- Pilot Vehicle Operator accreditation can be obtained through completion of an accredited course. However, the code of conduct is currently not enforceable by Main Roads WA.[30]

- Fatigue Management System FMS Code of Practice (enforceable under Duty of Care sections of Occupational Health and Safety Act (1984) regulated by:
  - WorkSafe
  - The Department of Transport
  - Main Roads WA (for heavy vehicles requiring permits)
- Working conditions through the established regime of fatigue management are currently acceptable with proper rest periods being gazetted and enforced.[31]
- Regulations relating to minimum vehicle configurations and amount of time for a given class of licence are regulated by the Department of Transport.
- Furniture removals sector has accredited system in place for operations. A commercial goods vehicle licence regulated by the Department of Transport is required.
- The new Dangerous Goods Code DG07 introduced in January 2010 is regulated by Department of Mines and Petroleum

Bus and Coach Transport

Governed by Omnibus Standards Scheme and co-regulated by:

- The industry
- Department of Transport

Fatigue Management System FMS Code of Practice

Enforceable under Duty of Care sections of Occupational Health and Safety Act (1984) and regulated by:

- Department of Transport
- Main Roads WA (for heavy vehicles requiring permits)

Taxi Services

- Metropolitan taxi services are governed by the Taxi Act 1994 and country taxi services by the Transport Coordination Act 1966, and regulated by the Passenger Services Business Unit of the Department of Transport.
- T extension (metropolitan and country) – Department of Transport
- Metropolitan taxi plate ownership conditions and taxi plate lease for Government plates – Department of Transport
- Metropolitan taxi plate ownership conditions for privately owned plates – Department of Transport
- Taxi Dispatch Service Provider Registration – Department of Transport

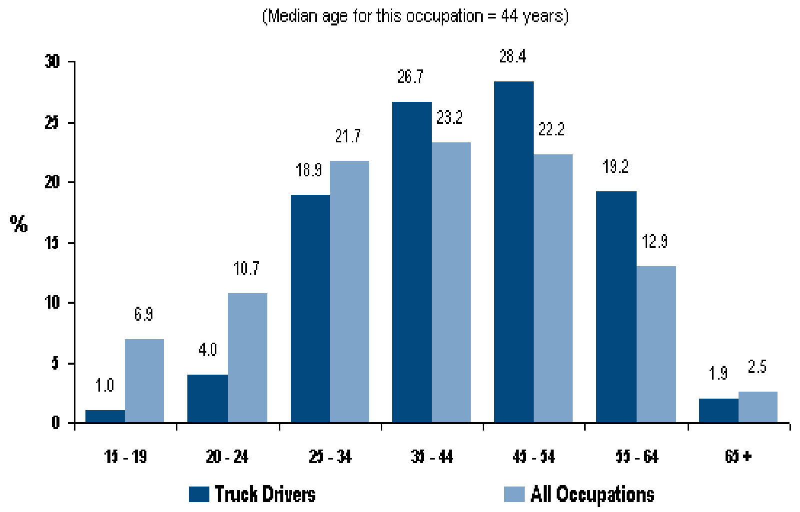
Licence – Authority

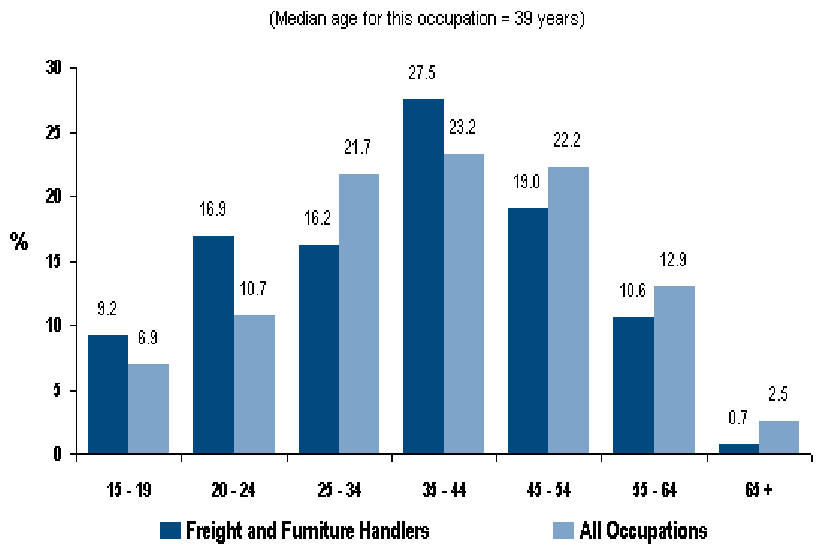
- Metropolitan Taxi Car Drivers Licence – Department of Transport
- Country Taxi Car Licence – Department of Transport
- Taxi Car Operation – Department of Transport
- Taxi Dispatch Service Registration – Department of Transport

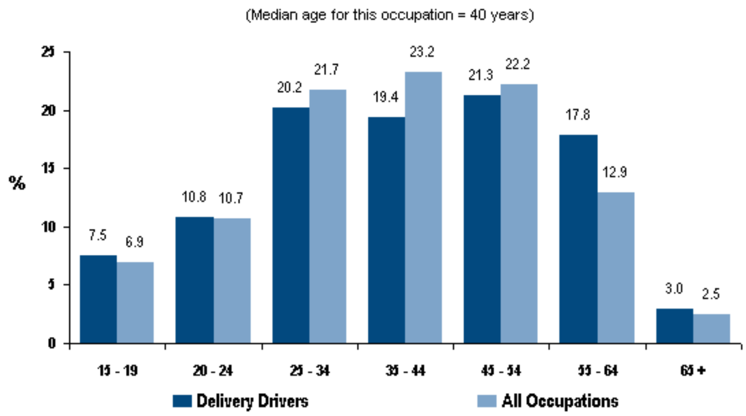
Demographics of Workforce

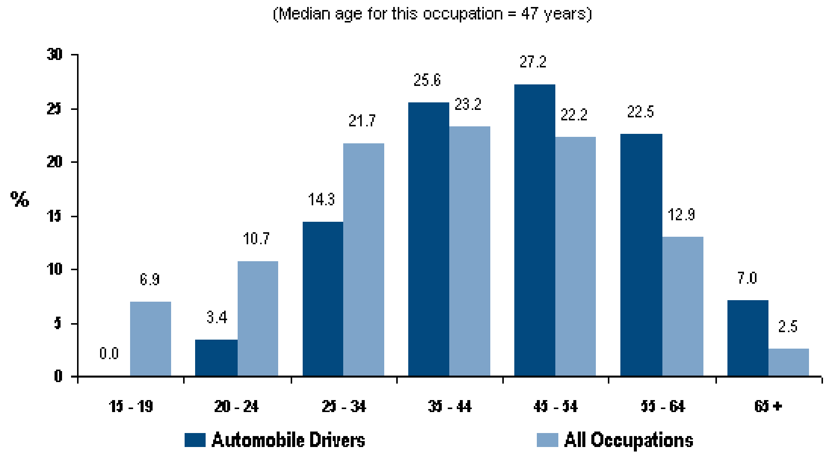
The following graphs show the share of employment (per cent) by age group for a range of road transport occupations, compared with all occupations.[32]

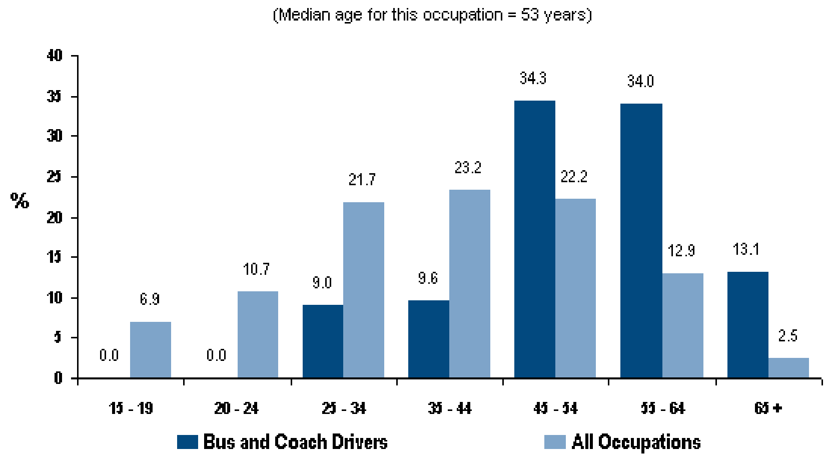
Age Profile (per cent share)[33]







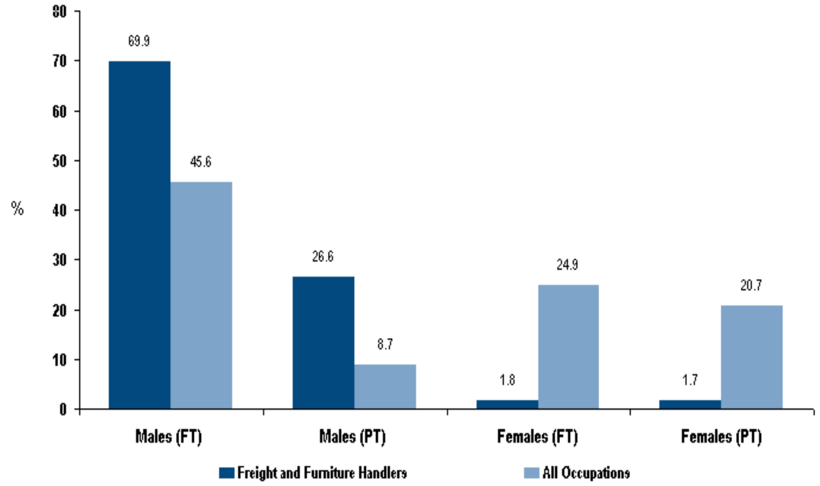


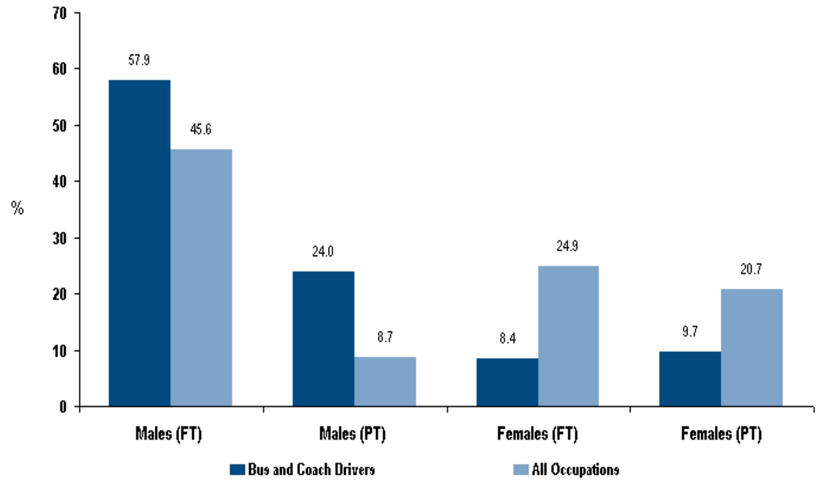


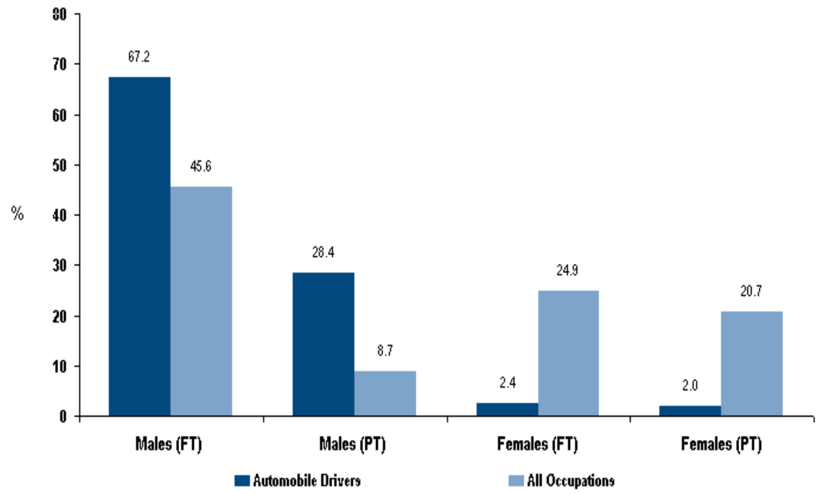
- The average age of workers for all occupations except freight and furniture handlers is over 40, with bus and coach drivers being the oldest, at 53 years.
- On average, workers entering the road transport sector are older, which is leaving the industry with an ageing demographic, and not enough workers to replace them.
- Licencing, regulatory and insurance issues remain the greatest barriers in employing young people in this sector. Progression through the licences can take up to three years to attain an MC licence, and there have been major difficulties with insurance companies to insure drivers under 25 years. Discussions are currently being held with the Australian Trucking Association (ATA) and other peak bodies for movement through licences to occur at a faster rate. The major insurance companies are also preparing to amend their policies regarding insurance for under 25 year olds.

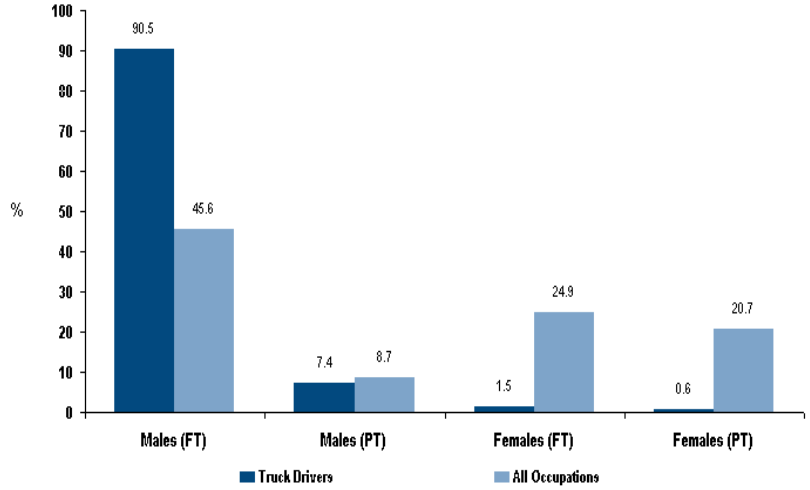
Gender (per cent share)

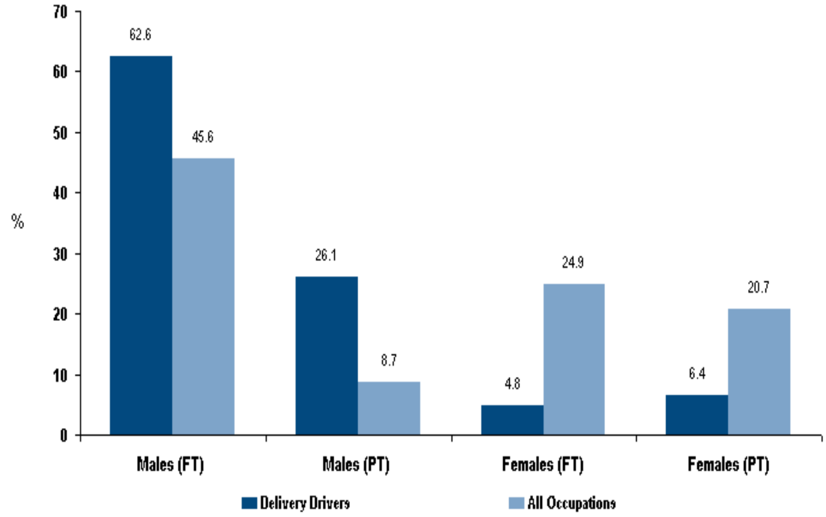
The following graphs show the share of employment (per cent) for males and females, employed full-time and part-time, for this occupation compared with all occupations. Source: ABS Labour Force Survey, Australia (cat no 6203.0), average 2009, Australian Government. (2010) *Job Outlook.*











* Male workers dominate all occupations, with female participation well below the national average, while male participation is well above the average.
* The strongest female participation occurs in bus and coach drivers and delivery drivers.
* Approximately one-quarter of the workforce in the road transport sector is part-time, except truck drivers.

Impact of Globalisation

Overseas trade has slowed down to 2008 levels[34,] however it is expected that a future increase in overseas trade will result in increased road traffic in and out of the port, particularly in relation to containerised transport, which will exacerbate the traffic problems currently being experienced.

Many companies have streamlined their operations following the economic crisis in a bid to remain competitive.

Impact of Government Policy/Decisions

Government initiatives to seek a greater percentage of containers on rail from metropolitan locations to the Fremantle Inner Harbour will reduce road congestion, particularly at the port. Whilst there will be reduced heavy haulage of containers by road, it is expected that this will not have a major impact on the road transport industry. Rather it will shift truck transportation patterns to intermodal terminals rather than travelling direct to port. Containers are subsidised at $45 per Twenty Foot Equivalent Unit (TEU) for transportation to the port by rail. Currently about 11 % of containers to the Fremantle Inner Harbour from the Kewdale area travel by rail.[35]

The introduction of a national heavy vehicle regulator by the Federal Government is aimed at streamlining the regulatory requirements for operators, reducing business costs and improving efficiency. Currently each State and Territory has a different set of heavy vehicle regulations, making compliance difficult for interstate transport operators. Taking into account the distances and remoteness experienced in WA, a range of measures is being pursued by the WA Department of Transport and Main Roads WA NHVR Project Team to ensure that WA's industry and regulatory benefits are protected and loss of benefits are minimised. WA is of the view that WA's state-based occupational health and safety legislation caters sufficiently for management of driver fatigue. The National Heavy Vehicle Regulator, which will be based in Queensland, is expected to be operational by 2013.[36]

Heavy vehicle charges levied by the Government have increased in recent years due to high spending on major roads. Trucks and buses pay road and bridge costs through a two-part federal fuel-based charge and state-based registration fees.[37]

The establishment of new minimum standards for taxi drivers by the Federal Government from 1 July 2010 means that potential drivers will need to pass eight competency units before they receive their taxi licence. As well as these new National Taxi Driver Competency Units, new taxi drivers will need to pass an English language test. The competency units and standards were developed under the leadership of the Western Australian Government and complement broader Council of Australian Government reforms to improve occupational licensing across Australia. [38]

Technological

There has been increasing use of technology in all areas, including vehicle tracking systems and the use of GPS, on-board communications and computer systems, computerised dispatch system for taxis etc, as well as changes to the size and configuration of trucks, increased horsepower and wider use of B-double and multi-combination vehicles.

Such vehicles will include Euro fourth and fifth generation trucks which are very cheap to run and super B-doubles which are higher productivity vehicles which, if approved by the government, will reduce the number of vehicles on the road. However, there are still many older trucks on the road.[39]

Economic Drivers

The major economic driver is overall cost of operation, which includes cost of fuel, insurance premiums, licensing requirements, loss of staff and difficulty in attracting staff resulting in park up of trucks. There is also a growing demand for quick, just in time deliveries, which pushes up freight rates in order to offset increased operator costs.

Other costs include ongoing delays in getting permits approved and a curfew in the Swan Valley for one classification of truck, both of which are passed on to the end user.[40]

The industry is also affected by the overall economic climate and current trends, eg mining boom, government works programs, grain production and drought, depending on the product being carried.

Transport Forum prepares a fuel levy guide which provides an established rationale that can be used by industry if necessary, to verify why fuel costs are passed on to the end user.41 However, many owner truck drivers currently face rising fuel costs that are eating into their bottom line.

Size and Distribution

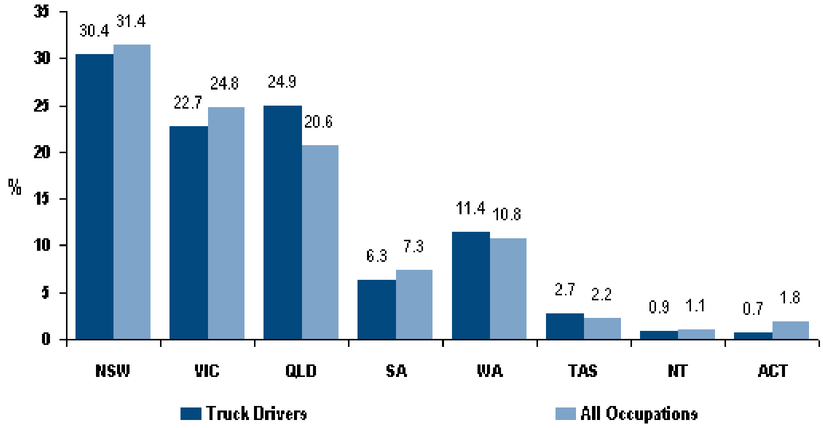
Although large national companies dominate the road transport industry, there is a high percentage of owner drivers and small to medium enterprises. 95% of the road transport industry in WA is intra-state[42]. Perth is the major hub of the industry with many companies concentrated around the Kewdale, Welshpool and Canning Vale areas. There are numerous depots at major rural centres throughout the State, particularly in the North West, due to the mining boom, and a high percentage of north/south travel as well as east/west travel.

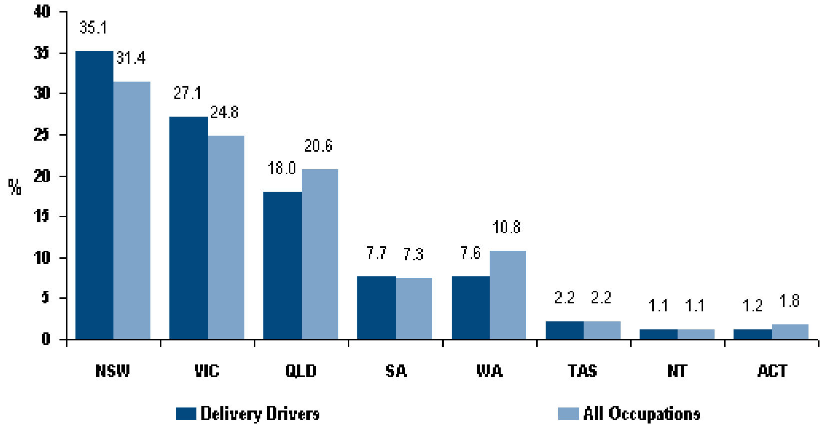
As at December 2009 there were 2,196 taxis registered in WA, which represents 10.9% of Australia's taxis[43].

Employment by Region (thousands)

The following graphs show the State share of employment (per cent) for this occupation, compared with all occupations. Source: ABS Labour Force Survey, Australia (cat no 6203.0) - average 2009, Australian Government (2010) Job Outlook.

WA is the fourth largest State for employment of road transport workers.





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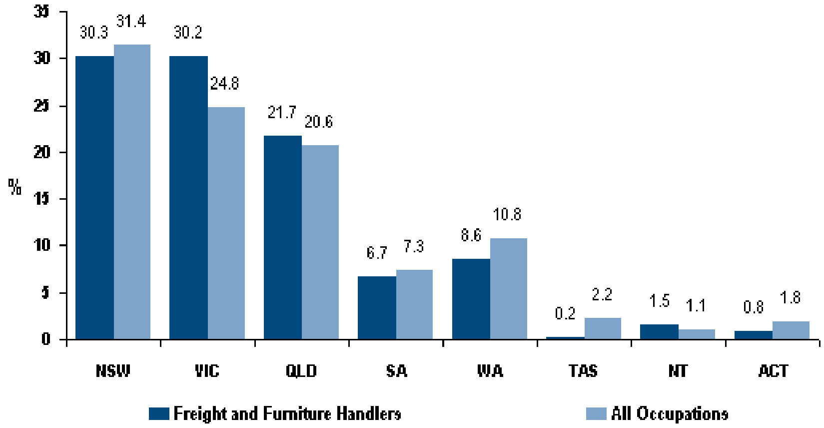
Delivery Drivers
All Occupations



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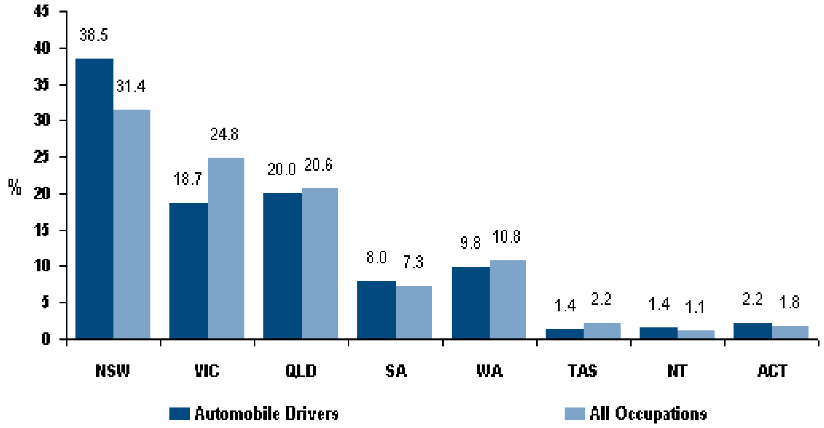
Freight and Furniture Handlers
All Occupations



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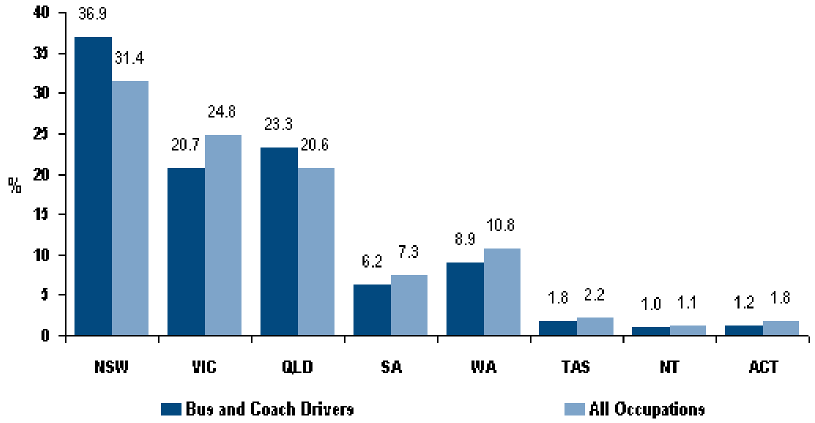
Automobile Drivers
All Occupations



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VIC
QLD
SA
WA
TAS
NT
ACT
Bus and Coach Drivers
All Occupations

Main Employing Industries (per cent share)

The transport, postal and warehousing industries are still the largest direct employers of road transport workers, but as the table below demonstrates, these workers can be found in nearly every other industry area. This means that a skills shortage of road transport workers in one sector will have a flow-on effect to all other sectors.

The following table shows, for all road transport sectors, the industries with the largest share of employment, compared with the share for all occupations. The industries are based on the Australian and New Zealand Standard Industrial Classification (ANZSIC 06).

MAIN EMPLOYING INDUSTRIES IN ROAD TRANSPORT - % SHARE

	Truck Drivers	Taxi Drivers/ Chauffeurs	Bus & Coach Drivers	Delivery Drivers	Freight & Furniture Handlers
Transport, Postal, Warehousing	58.9	90.7	87.5	29.8	40.5
Construction	9.8				
Wholesale, Trade	7.4			15.3	9.0
Agriculture, Forestry & Fishing					7.2
Utilities	5.3				
Manufacturing					16.5
Public Administration & Safety		2.2			
Accommodation & Food				13.9	
Health Care & Social Assistance		1.5	3.1		
Retail Trade				12.1	
Education and Training			2.3		
Other Services		1.4	1.5		

Sustainability

Road transport is easily the largest source of Australian transport GHG emissions, accounting for 89% of sectoral emissions in 2008. While aviation emissions are growing faster than those from road transport, the road transport contribution is so dominant that it is still projected to account for 88% of Australian transport emissions by 2020[44]. Identified areas of environmental awareness include fuel usage, carbon emissions, fuel leakages, land and terrain damage.

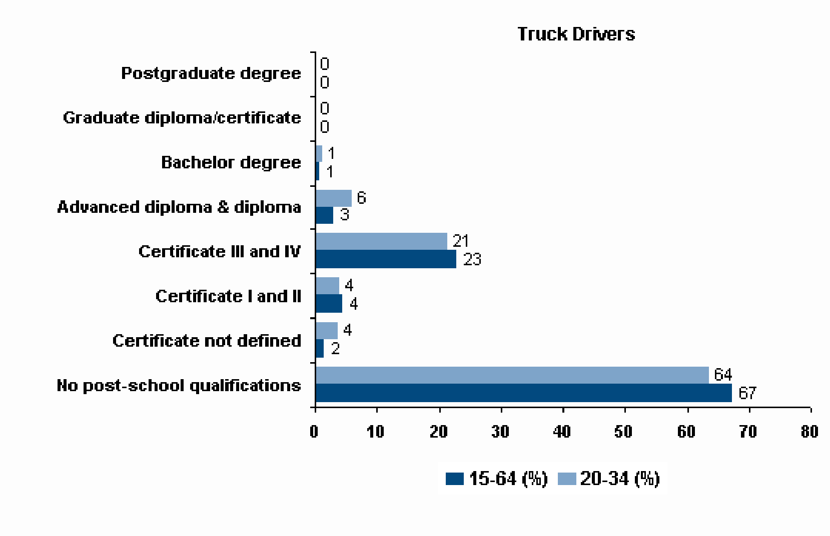
There is an increasing awareness of the importance of sustainability in the transport industry. In 2009 the Australian Trucking Association, with the support of the Australian Government, produced an Environmental Best Practice Guide for the Trucking Industry. Also in 2009 the TLISC ran a series of sustainability workshops around the country. The outcomes of these workshops and supporting surveys have been published in the Green Skills Report which documents the research, development and implementation of additional environmental and sustainability units.

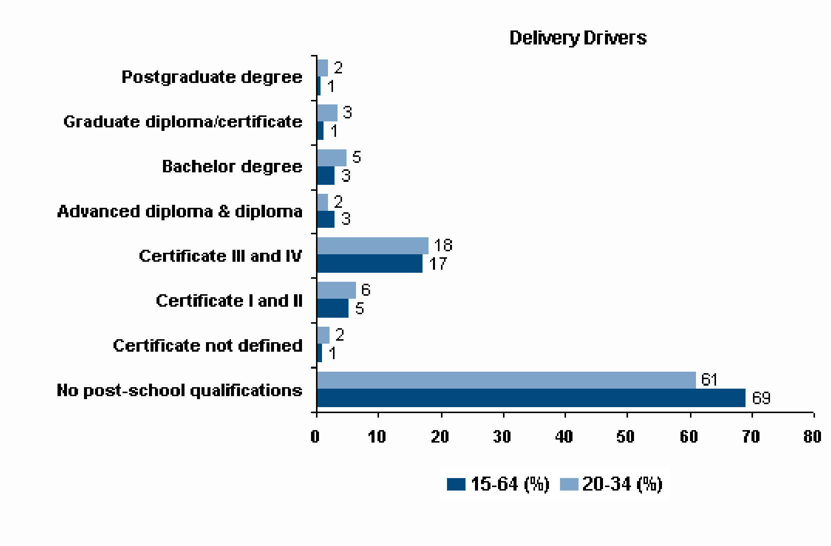
In late 2010 the Department of Environment and Conservation will release a program aimed at improving air quality by reducing vehicle emissions. The ideal target audience is heavy vehicle fleets such as transport companies, public transport providers and local council fleets.

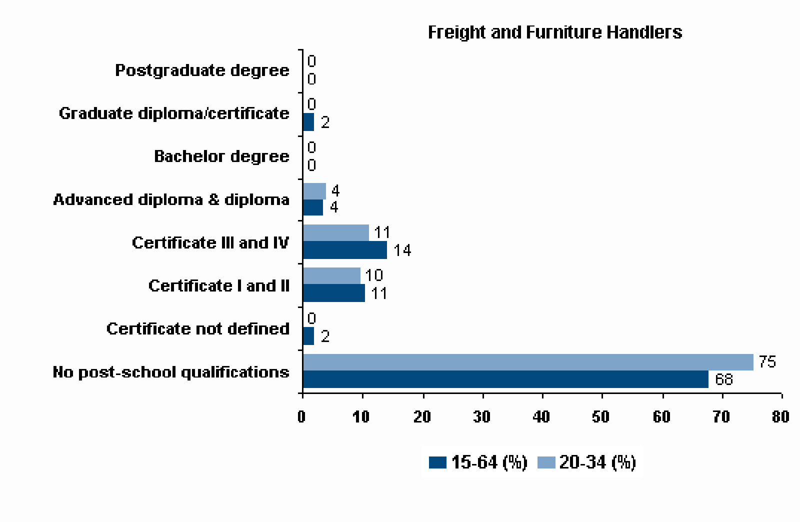
Qualification Profile of Workforce

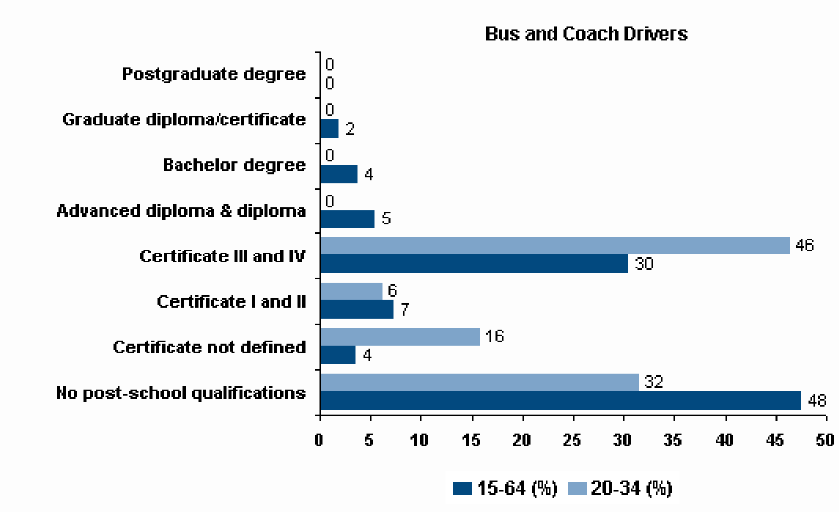
Educational Attainment (per cent of employment)

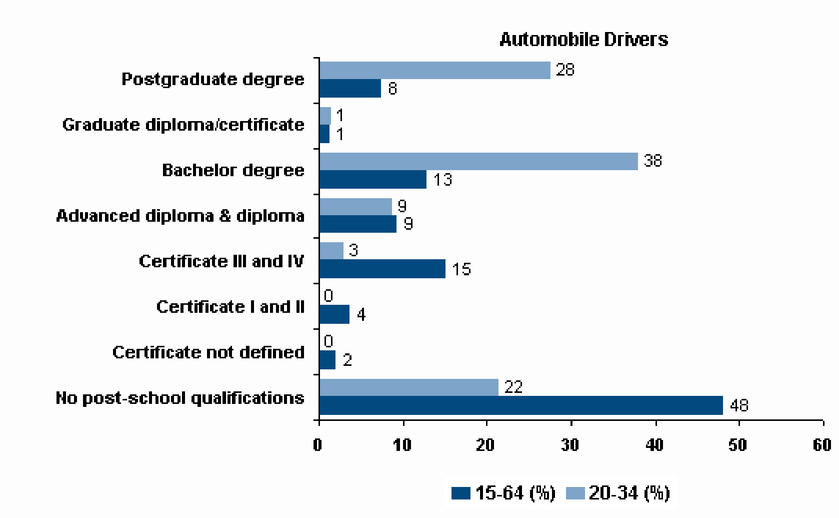
The following graphs show the highest educational attainment (per cent share of employment) for a range of road transport occupations with a comparison for those aged 15-64 and 20-34.[45]











* More than 65% of truck drivers, delivery drivers and freight and furniture handlers have no post-school qualifications, while those that have received training have mainly been at the Certificate III and IV level. This reflects the relationship between licencing requirements and the new training package qualifications that are aligned to them at these levels.
* Older bus and coach drivers are not as qualified as their younger counterparts with nearly half of the 20-34 year old demographic having attained a Certificate III or Certificate IV qualification.

* Taxi drivers and chauffeurs have the most interesting educational demographic, with 67% of the 20-34 year age group having attained a bachelor degree or higher, while only 22% of that age group has no post-school qualification. There are a variety of anecdotal reasons that have been suggested for this. They include:
  - University students use taxi driving as an employment option while studying
  - A high number of immigrant taxi drivers with qualifications not recognised in Australia.
  - Older workers with no formal qualifications move into taxi driving and chauffeuring nearing retirement.
* Although taxi drivers do not require a qualification they do need to pass an English language test and complete eight units of competency before they receive their taxi licence.

Social Impact

The booming economy and increased migration has led to a surge in population and a rise in demand for consumer goods. This has put a huge pressure on existing infrastructure and increased the number of heavy vehicles on the roads, resulting in traffic congestion and bottlenecks, particularly in areas en route from the freight hubs of Forrestfield and Kewdale to the Port of Fremantle (eg Leach Highway). Many motorists feel intimidated when sharing the road with these vehicles, and complaints from the public regarding the driving behaviour of heavy vehicle drivers have resulted in a negative view of the industry. It has also been reported by many heavy vehicle drivers that a percentage of motorists appears inexperienced and uneducated in interacting with large vehicles.

The long distances travelled by many freight operators have resulted in a dislocation of family life and management of family responsibilities due to time away from home. Due in part to an increase in the number of tourists travelling in WA, there is a major issue regarding inadequate rest areas and facilities in rural areas, which are being utilised by the general public. This is compounded by the fact that vehicles carrying dangerous goods are not allowed to park within a set distance of other vehicles, which restricts their access to many overutilised rest areas. These factors, coupled with poor wages in some case, result in diminished job satisfaction, fatigue and high rate of turnover of staff.

Barriers to Training

- There is a high percentage of owner drivers in the industry who cannot access funded training for themselves.
- A lack of qualifications for driving instructors exists compared to other States, where Certificate IV is required, so standards are not high.

Barriers to Employment

- Taxis – due to the increased number of culturally and linguistically diverse (CLD) workers in the taxi industry poor language, literacy and numeracy skills are having a big impact on the industry.
- The accreditation system introduced by Main Roads WA requires training in fatigue management, completion of paperwork etc which deters some older drivers.
- A lack of understanding of legal business practices and obligations by owner drivers and a lack of time to complete training has a negative effect on owner drivers.

- A lack of clear pathways from school in the period leading up to eligibility to drive heavy vehicles deters some young people from entering the industry.
- The long timeframe to progress through licences to become heavy vehicle driver, eg three years to obtain a multi-combination licence has resulted in a lack of drivers progressing through licences. The industry is penalised by heavy excesses and restrictions on young drivers by insurance companies.
- Owner drivers are not being paid for their services within the stipulated timeframe, eg 30 days, as set down in the Act and Code of Conduct, which has forced some companies out of business whilst waiting for payment.
- There is a lack of harmony between States regarding transport requirements for road movement which is negatively impacting on the industry.
- There are concerns that the new regulator will not recognise fatigue arrangements in WA, but they will be recognised across Australia in line with other States. 95% of WA business is intrastate and involves much longer stretches of road between towns than other States.
- Pilot vehicles – Some pilots do not have a good understanding of business practices or enough practical training. Accreditation is not mandatory, resulting in poor quality, inconsistencies in training and many drivers not meeting the requirements of the job.
- Lack of infrastructure exists, particularly in country locations, eg rest and food stops, facilities. Current facilities are overutilised by tourists, so some trucks have nowhere to stop and cannot satisfactorily meet the requirements of Occupational Safety and Health.
- Drivers in the mining industry who only drive on mining leases do not require the relevant truck licence, so cannot transition into the transport industry when they leave the mining industry.

FREIGHT FORWARDING

Road

This class consists of units mainly engaged in contracting to transport goods and using one or more different enterprises to perform the contracted services by way of road freight transport. (In these cases the `forwarding' unit takes on prime responsibility for the entire transport operation, specified in each contract, for a charge or fee which covers the total transport operation and, in turn, pays the actual carriers for the transport services rendered to it.) Express freight services account for approximately 50% of this service followed by general freight services, distribution services, customs brokerage and compliance and warehousing.

Rail, Air and Sea Freight Forwarding

This industry consists of units mainly engaged in contracting to transport goods for other enterprises, and using one or more different enterprises to perform the contracted services by way of rail and/or air and/or sea freight transport. (In these cases the `forwarding' unit takes on prime responsibility for the entire transport operation specified in each contract for a charge that covers the total operation, and in turn pays the actual carriers for transport services rendered to it.) Rail freight forwarding accounts for approximately 40% of this service, followed by sea freight forwarding and air freight forwarding.

Logistics Industries ENVIRONMENTAL SCAN

Aviation

AVIATION

Overview

Aviation is a critical mode of transport in Western Australia, servicing isolated population centres, vast resources operations and important tourism facilities. A variety of issues need to be addressed when considering aviation needs in WA and therefore workforce development. Workforce development will be required for aviation industry personnel available to provide WA populations with regular passenger transport services through the provision of industry personnel for the growing resources sector and resource operations in particular to move their fly-in/fly-out staff from population centres to a mining site. [46]

The vision of any aviation workforce development strategy should be aimed at developing a dynamic and sustainable passenger air transport system to meet the existing and future social and economic needs of Western Australian and other travellers.

Recent figures released by Tourism Western Australia indicate that between March 2009 and March 2010 Perth Airport recorded a 9.8% increase in the number of intrastate travellers to 2,431,701; a 1.8% increase in the number of interstate travellers to 4,919,371 and a 7.5% increase in the number of foreign national travellers to 1,399,855. Intrastate passenger numbers have also grown at Broome airport during the past 12 months by 6.3%. Intrastate air travel is used significantly by the business community, so this growth is likely to be a reflection of business growth in the State.[47]

The aviation industry is global in its activity and in its nature. Downturns are often characterised by the movement of pilots to local or offshore destinations where work can be found. The economic downturn caused a reduction in the use of air transport, primarily for international carriers, with Qantas and other airlines reducing some staffing levels. While pressures remain around airline profitability it is possible that outsourcing of some airline support functions may be initiated; this will have an impact on attraction and retention strategies for airlines. The continued mining and oil and gas exploration in WA has seen local airlines continuing to operate at high levels, although some have experienced periods of slow growth. Many companies have diversified their services to survive the downturn.

Although some regional airlines are experiencing record profits, others are struggling in an increasingly competitive marketplace. It is in these businesses that Australian trainee pilots gain flying hours as a means of moving up the hierarchical flight ladder. Seasonality in some regional areas, especially those relying on tourism for work, means that pilots need to travel to find the work. In an environment where these opportunities are limited it is likely that Western Australia will have a glut of pilots with underpinning qualifications but with limited capacity to find the requisite flying hours to engage fully in the industry. However, the new State development projects planned for WA will see an increased need for FIFO workers, so as long as the pilots are available this need may be met.

Flight instructor quality remains an issue as newly qualified pilots become instructors to increase logged flying hours and senior instructors are lured back to the industry by regional and main-line airlines.

Trends Analysis

The International Civil Aviation Organisation (ICAO) has predicted that more than 800,000 new pilots and engineers will be required globally to meet the needs of the expanding international commercial fleet of planes, with more than double the current fleet expected to be purchased in the next 20 years. ICAO believes the following factors will lead to the predicted shortage of skilled aviation professionals: retirement of current generation of workers; failure to attract suitable people; competition from other industries for workers; lack of training capacity; and lack of international harmonisation of some aviation competencies.[48]

Total air passenger movements in Australia and globally are projected to nearly double by 2025–26. Perth Airport is expected to experience annual growth of 4.7%, the second highest in Australia. This forecast level of growth calls for a significant increase in airline capacity and infrastructure at capital city airports. The major airports are already planning ahead and are in the process of implementing measures to cope with increased future capacity. It is anticipated that growth will occur through increased international traffic, although the major resource projects in WA will certainly be a major part of their growth. This will include increased fly in/fly out (FIFO) from the Eastern States.

Perth Airport has commenced initial stages of a $1 billion redevelopment project to build a new intrastate terminal that will boost capacity for domestic services to remote resource areas. This involves building an aircraft parking apron capable of holding up to 36 aircraft to service the future terminal. However, there has been no increase in runway capacity, and with peak periods at their maximum capacity due to FIFO, there will be restrictions placed on the movement of air traffic which will impede future growth. Air traffic management is being undertaken to relieve this pressure, and the development of new FIFO airport hubs in Geraldton, Kununurra, Port Hedland and Kalgoorlie will also be vital. There may also need to be planning for a second Perth Domestic/International Airport, but this is conjecture at this stage.

The forecast growth in air traffic also calls for a coordinated response to improve landside transport links between airports and city centres in order to facilitate future increases in passenger movements to and from airports, eg rail.

Passenger travel accounts for more than 80% of effort in the aviation sector, with freight and postal making up the remainder. Airlines that provide scheduled domestic air transportation of mail on a contract basis are also included in this industry.

Note: Air freight is characterised by goods that are time-sensitive or highly valuable, ie cash, mail and medical supplies.

- The changing tourism market and contracting resource sector have impacted on the employment of pilots.
- Changes to regulations are impacting on the needs of regional airports including increased reporting officers, the need for greater use of security screening of passengers, and baggage checking equipment.
- Flight instructor quality remains an issue as newly qualified pilots become instructors to increase logged flying hours and senior instructors are lured back to the industry by regional and main-line airlines.

Domestic airlines operate aircraft on scheduled domestic routes, for the transportation of passengers and/or freight.

The international airlines industry provides air transportation of passengers and/or freight over regular routes and on regular schedules. These include any flights which either originate or terminate internationally.

The primary activities of companies operating international scheduled flights are:

* Aircraft charter, lease or rental (with crew; for use in scheduled international air transport)
* Air transport service (scheduled, international)
* Air transport terminal operation (for scheduled international air transport; except airports)
* Freight transport service (scheduled international air transport)
* Passenger transport service (scheduled international air transport)

Industry participants operate aircraft that are used in the transportation of passengers and freight on non-scheduled flights. These include fixed-wing aircrafts (airplanes), helicopters, balloons and airships. The industry also covers the launching of space vehicles including satellites, which is very limited within Australia.

The primary activities of companies operating non-scheduled flights are:

* Charter air transport
* Air training
* Private air transport
* Business air transport
* Agriculture
* Test and ferry air transport
* Lease or rental of aircraft charters (with crew) for use in non-scheduled air transport.
* Air transport of passengers or freight on non-scheduled routes (including FIFO)
* Running of air transport terminals, excluding airports.

Charter air transport and air training make up nearly 70% of work in the non-scheduled activity, with private and business air transport the next largest. This is expected to increase as the FIFO industry picks up, but may be balanced by capacity at airports for the volume of air traffic.

Air transport professionals fly and navigate aircraft, control and direct air traffic to ensure the safe and efficient operation of aircraft in flight and on the ground, and instruct students in flying aircraft.[49]

Air transport professionals who work in this sector are:

* Aeroplane Pilot
* Air Traffic Controller
* Flying Instructor
* Helicopter Pilot

Job Prospects[50]

- Job prospects for Air Transport Professionals are good.
- Employment growth for Air Transport Professionals to 2012-13 is expected to be strong.
- Air Transport Professionals have an above average proportion of full-time jobs (80percent). For Air Transport Professionals working full-time, average weekly hours are 39.5 (compared to 41.8 for all occupations) and earnings are high - in the tenth decile. Air Transport Professionals are employed across several industries including: Transport, Postal and Warehousing; Public Administration and Safety; Education and Training; and Agriculture, Forestry and Fishing.

Airports

The industry includes businesses which operate international, domestic or regional airports and remote airfields. These include services to air transport such as airport terminals, runways, air traffic control services, aircraft refuelling aerospace navigation and baggage handling services.

The primary activities of companies in this industry are:

* Air traffic control
* Air transport navigation
* Airport baggage handling
* Airport terminal operations
* Aircraft Baggage Handler
* Airline Ground Crew
*

Other airport services include refuelling and hangar rental.

Flight Attendants/Cabin Crew

Job Prospects

- Job prospects for Flight Attendants are average.
- Employment for growth Flight Attendants to 2012-13 is expected to be slight.
- Flight Attendants have a relatively low proportion of full-time jobs (55 %). For Flight Attendants working full-time, average weekly hours are 34.8 (compared to 41.8 for all occupations) and earnings are above average - in the seventh decile. Unemployment for Flight Attendants is low.
- The mix of industries employing Flight Attendants is favourable for employment growth prospects.
- Regulatory changes to Flight Attendant number requirements may have an impact on employment, as it has the potential to reduce the number of Cabin Crew required for some flights and aircraft.

Regulatory Requirements

Stringent regulatory requirements exist for this industry sector.

Civil Aviation Safety Authority (CASA) key licences:

* Private Pilot's Licence PPL
* Commercial Pilot's Licence CPL
* Air Transport Pilot's Licence ATPL (required by Scheduled Domestic and International Air Transport, ie regional, domestic and international airlines – see below)
* Airport Certification and Registration

Airport Operations and Management

Regulated by:

* Civil Aviation Safety Authority -
* Department of Infrastructure, Transport, Regional Development and Local Government

* Department of Transport

Scheduled Domestic and International Air Transport

Regulated by:

* Civil Aviation Safety Authority
* Department Of Infrastructure, Transport, Regional Development and Local Government
* Department of Transport
* Australian Customs and Border Protection Service

General Aviation (non scheduled)

Regulated by:

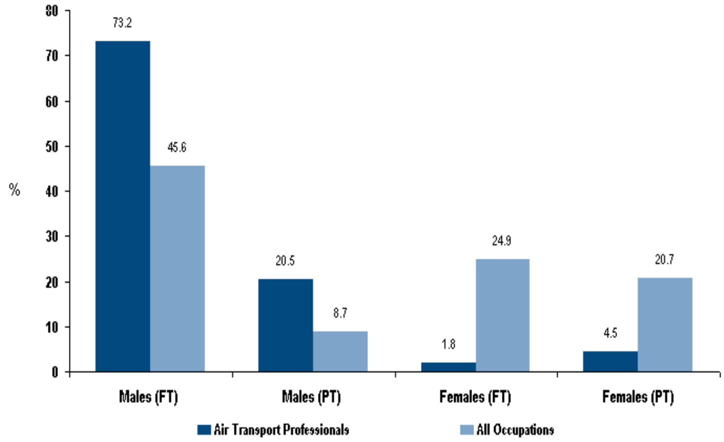
* Civil Aviation Safety Authority
* Department of Infrastructure, Transport, Regional Development and Local Government
* Department of Transport

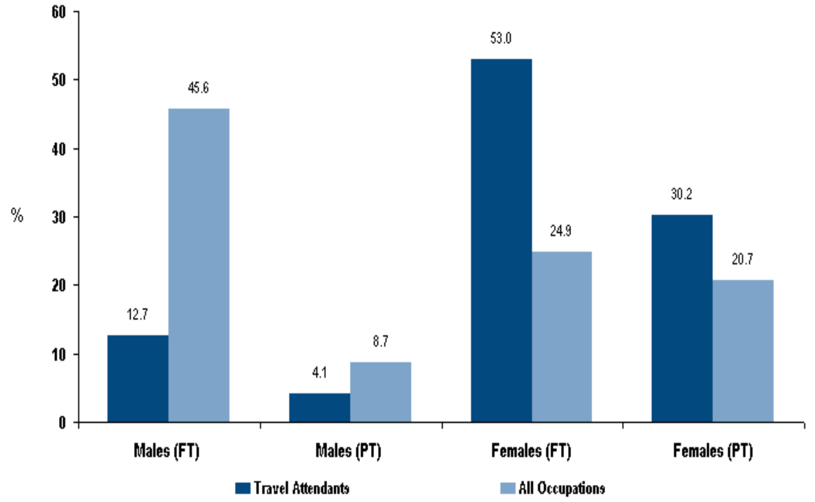
Note: The International Civil Aviation Organisation (ICAO) provides international guidance to CASA, which then regulates accordingly. The International Air Transport Association (IATA) works with the Industry via agreement to ensure best practice is adopted.

Demographics of Workforce

Gender (per cent share)

The following graphs show the share of employment (per cent) for males and females, employed full-time and part-time, for air transport professionals and flight attendants compared with all occupations. Source: ABS Labour Force Survey, Australia (cat. no. 6203.0) - average 2009



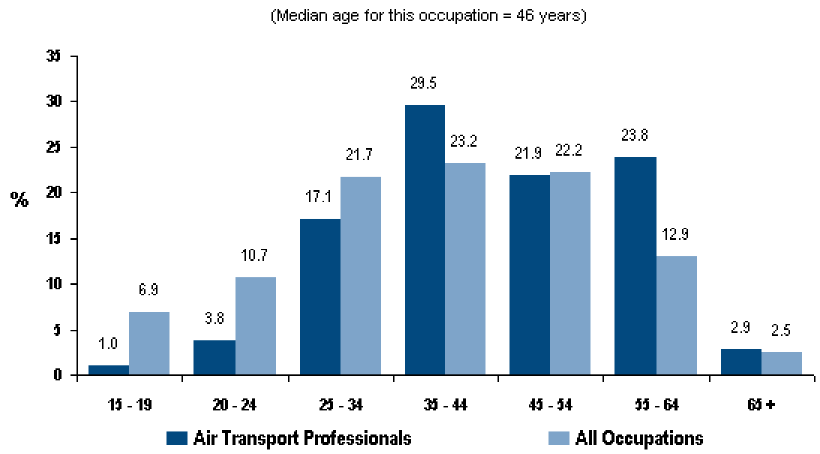


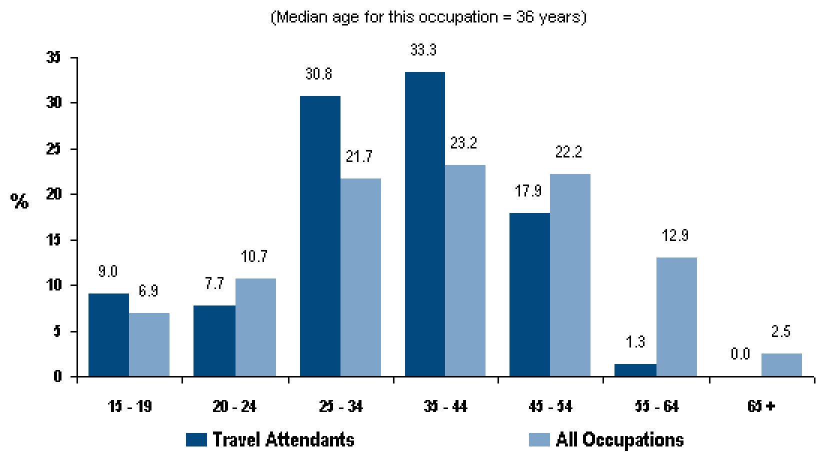
* Pilots and Air Traffic Controllers have a very large male cohort, especially when compared to females and the all occupations average.
* Conversely, there are a large number of females operating as Flight Attendants, although there are proportionally more males entering the sector.
* 75% of all Pilots and Air Traffic Controllers are full-time, while this applies to only 65% of Flight Attendants. This may be due to the high female cohort who are traditionally more active in the part-time workforce.

Age Profile (per cent share)

There is an ageing workforce in all aviation occupations, particularly amongst helicopter pilots, flight instructors and commercial airline pilots.

The following graphs show the share of employment (per cent) by age group for air transport professionals and flight attendants, compared with all occupations.[51]





Impact of Globalisation

With the increase in international air travel, skilled personnel (particularly pilots) are being lured to overseas airlines and airports. This has created a demand for training additional to projected domestic labour requirements, and increased competition from other carriers. Australia's large, relatively clear airspace, especially in WA, has attracted the international student training market, placing further pressure on domestic training availability.

The need for improved air cargo and passenger security arrangements sparked by increased global terrorist attacks has also had major implications for additional security training for staff and increased training for existing personnel.

Impact of Government Policy/Decisions

The Government's plan to encourage international airlines to increase services to Australia's secondary international gateways, will give the regions further potential to grow their inbound tourism markets. By providing airlines which serve regional airports with greater access to the major gateway destinations of Sydney, Melbourne, Brisbane and Perth, the Government will provide further incentives to airlines to better service destinations such as Cairns, Darwin and Broome.[52] (White Paper December 2009)

In April 2010 the Department of Transport released its new Intrastate Aviation Framework for Western Australia. The key features of this framework are:

- all currently deregulated airports will remain deregulated;
- Geraldton will become deregulated;
- existing regulated Regular Public Transport (RPT) air services offered through the Coastal Network, Northern Goldfields Network and Kimberley Subsidised Air Service will be broken up and offered through a Request for Proposal (RFP) process; and
- charter services on regulated air routes will continue to be limited to one service per client per calendar week (Monday-Sunday).

This means that those airlines that have provided the service on regulated routes in the past will need to re-apply, while smaller airlines and charter companies that had hoped to be able to access these regulated routes in the future have still been restricted in their access.

The Government plans to harmonise civil and military air traffic management, and develop a joint operational concept, which will offer significant improvements in safety, efficiency and capacity (White Paper December 2009).

CASA is also investigating its Fatigue Management policies, with its focus now on ground crew as well as maintenance and flight crew.

Technological

As the fleets age, Australian airlines are introducing new more fuel-efficient aircraft, some of which are 20% more fuel-efficient than those they are replacing. However, as the larger carriers introduce the new aircraft, the old planes are picked up by smaller carriers, for use in fly-in/fly-out and general aviation sectors.

Security screening has seen many advances, with body scanners now being used as a tool in major airports to improve safety and remove the increasing threat of terrorism on planes.

The emergence of an increasing Unmanned Aerial Vehicle (UAV) market globally has seen greater use of this technology in Australia.[53] The Defence Forces have been using this technology for decades, but Air Safety Regulations, high cost, public concern and high insurance have limited their use in the civilian marketplace until more recently. Activity in the UAV sector includes aerial photography, telecommunications, coastal patrol, forest fire management, pipeline inspection, power line inspection, agricultural applications, geophysical mapping, surveillance and recreational use. There has also been work done in the safe and cost effective operation of UAVs by the CSIRO, especially in the field of solar power. However, more work needs to be done to ensure the safe use of UAVs in manned airspace, which is still a major impediment to wholesale use.

Economic Drivers

Weakened economies in other countries and a strong Australian dollar have resulted in a drop in travel to Australia. This is expected to change as economic conditions improve.

The large volume of fly-in/fly-out workers in the State has had a huge affect on the airlines, particularly those flying to the North West, with numbers estimated at 70 flights per day and growing as the volume of workers is expected to grow to approximately 7,000 workers. Similarly the volume of migrants settling in Perth has affected all airlines flying in and out of WA.

The global financial crisis has had a severe impact on the amount of air freight being carried as trade declined, however this is expected to improve as economic conditions improve.

The transition to a deregulated market in the regional aviation industry has resulted in increased airport and regulatory charges and higher costs for airlines where growth has been static or in decline on many routes.

Size and Distribution

Australia's global aviation industry has responsibility for 11% of the world's airspace, directly supports nearly 50,000 jobs and contributes $6.8 billion to Australia's GDP.

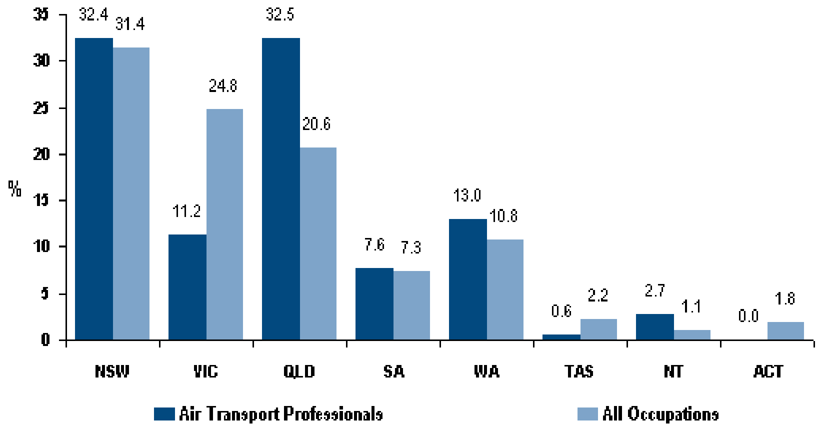
Perth Airport is the major airport for the State, servicing both domestic and international travel. There are a number of airports at major regional centres, and these are administered by local councils or private corporations. Perth Airport experienced a 6.1% increase in passenger numbers for the 2008/2009 financial year, when over 9.7 million passengers travelled through the airport.

Workers at regional airports are more multi-skilled than their city counterparts, and tend to work only when public planes are scheduled, with many having more than one job. Environmental concerns are high on the priority with animal and bird hazard control being uppermost.

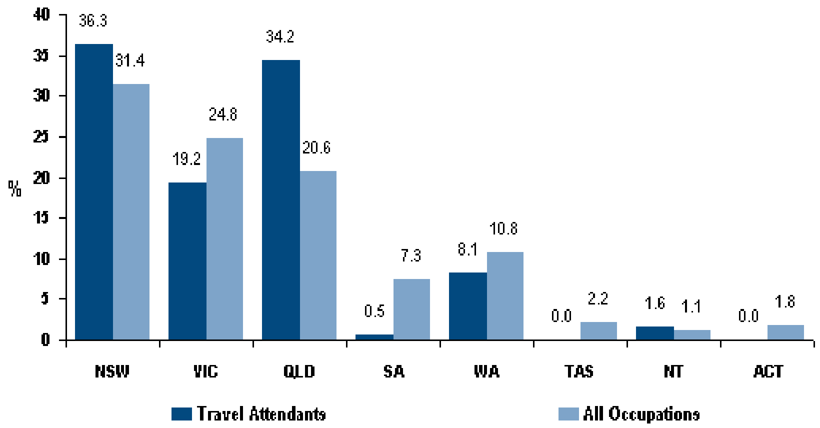
The large volume of FIFO workers in the State has had a huge affect on the airlines, particularly those flying to the North West, with numbers estimated at 70 flights per day and growing as the volume of workers is expected to grow to approximately 7,000 workers. similarly the volume of migrants settling in Perth has affected all airlines flying in and out of Western Australia.

Employment by Region (thousands)

The following graphs show the State share of employment (per cent) for air transport professionals and flight attendants, compared with all occupations. Source: ABS Labour Force Survey, Australia (cat. no. 6203.0) - average 2009.



- * WA is the third largest employer by State of Air Transport Professionals, which is due in a large part to the FIFO workforce of the mining and oil and gas industries' workforces.



Sustainability

Although currently aviation is responsible for only 2% of global carbon dioxide emissions, this will grow as aviation activity continues to grow. Sustainability has become the focus of industry and governments, with industry making substantial efforts to reduce the environmental footprint. New aircraft are much more fuel efficient, less polluting and quieter than planes of ten or twenty years ago, and air traffic management systems are being implemented to reduce fuel and noise, but more will need to be done. The Australian Government is currently working to improve aviation's environmental performance and will pursue a range of measures to manage aircraft noise. These include maintaining existing curfews and aircraft movement caps, and phasing out the operation of older, noisy aircraft.[54]

CSIRO and other major aviation stakeholders are currently looking at future sustainability through the Sustainable Aviation Fuels Road Map. This will articulate the pathways and challenges to accelerate the development and commercialization of a sustainable aviation fuels industry in Australia and New Zealand. A report is expected by September 2010 which will provide input into strategic policy and investment decision making by both Government and Industry.

Biofuels is one part of the process, with work being done globally to find a solution to the looming shortage of a suitable fuel. Both the United Arab Emirates and the Queensland Government, through the University of Queensland, are focused on finding a green alternative, with sea algae and saltwater plants appearing to be viable. There is also a major effort to utilize the jatropha plant, which grows as a noxious weed in Australia, but produces a good source of bio-oil which is renewable.

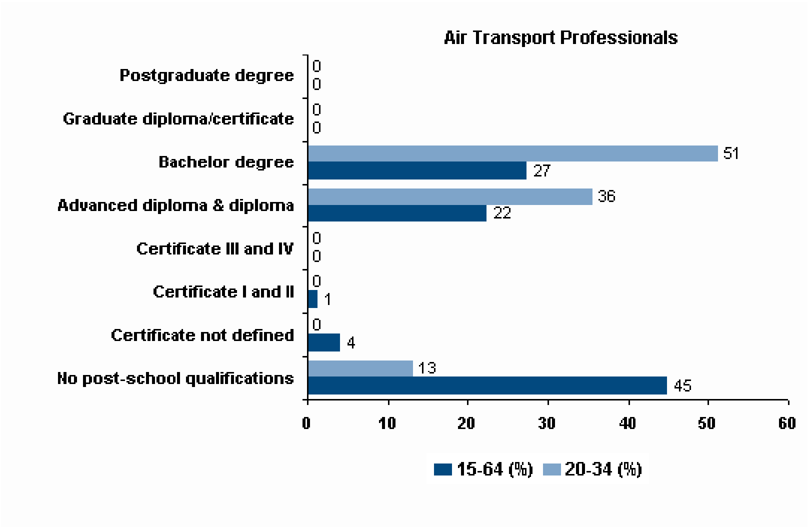
Qualification Profile of Workforce

Training is primarily delivered to meet regulatory requirements. The bulk of training is delivered on the east coast; however commercial pilots are trained in WA. Public funding is available for the theory component of the Commercial and Air Transport Pilot's Licence. The student funds practical training.

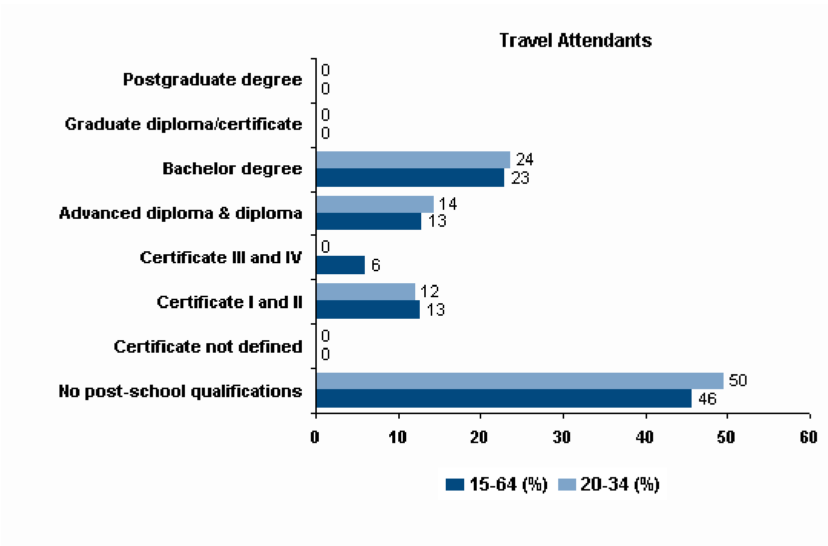
Flexible delivery and distance learning are important for this industry. Through the State Government's Regional Airports Development Scheme (RADS) funding is provided to regional airport owners/leaseholders on a case by case basis to assist in developing airport infrastructure to encourage aviation training in regional WA. In the RADS funding rounds of 2009-10 and 2010-11 more than $2.28 million has been granted to the Shire of Wyalkatchem towards airport infrastructure works to develop aviation training at the Wyalkatchem Airport.

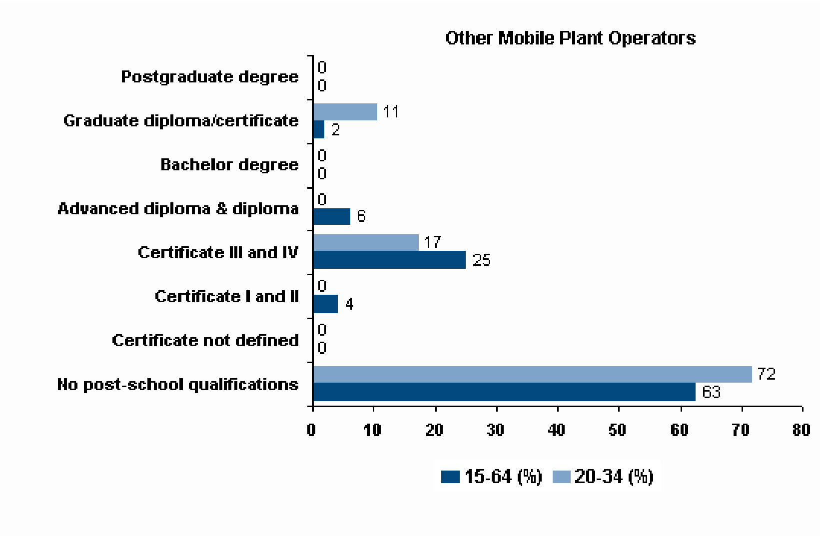
Educational Attainment (per cent of employment)

The following graphs show the highest educational attainment (per cent share of employment) for a range of air transport occupations with a comparison for those aged 15-64 and 20-34.[55]



* It is worth noting that a large number of Air Transport Professionals (45%) do not hold any post-school qualifications. This is due to no minimum education requirement for the granting of a pilot licence; rather CASA only requires that all licence standards are met, which are not currently aligned to a qualification.
* However, the 20-34 year age group does not fit this statistic, with 86% holding a diploma or above qualification. This could be due to a greater focus on training and qualifications, and the aviation industry supporting more formal training as a pathway to fly.
* Under previous the structure students were non-completion as they only did the licensed competencies, not the whole qualification, and these statistics are not available.





* This graph includes baggage handlers and airport ground crew.
* This data is slightly skewed due to baggage handlers and airport ground crew being mixed in with rail track workers; however, it is a good indication of the lack of educational qualification beyond school.
* In the last two years, more companies are delivering training against a qualification to their staff, so this would change the data above, which are dated.

Social Impact

- Many workers work long and erratic working hours, particularly maintenance staff.
- Newly qualified pilots earn very low wages whilst increasing flying hours.
- The working environment can be quite stressful (eg air traffic controllers).

Barriers to Training

- The cost of the practical component of training is prohibitive to many, especially for pilot training.
- No formal training pathway. Pilot training carried out to licensing requirements, not complete qualification, with pilots achieving each level through combination of flying time and theory.
- Training has been primarily driven by regulatory requirements. RTOs delivering the theory component of the Commercial Pilots' Licence may not be in a position to provide a statement of attainment at the completion of the course because the learners my not have been given the opportunity to demonstrate competence in a practical situation.
- Although theory component can be funded if a qualification is used, the most expensive element, flying, is not publicly funded and is very costly, eg helicopter pilot training is approximately $65,000 for full certification.
- A number of secondary schools offer aeronautics training but there is not articulation mechanism to CASA licensing requirements for commercial and private pilots so the training may not meet the Aviation Training Package or regulatory requirements.

Barriers to Employment

- There is a shortage of experienced instructors for pilots as well as a shortage of high level managerial staff in airports due to shift and penalty pay versus managerial salaries.
- It is difficult to keep workers in regional airports when work can be seasonal and drop from full-time to part-time in the off season, eg Broome.

Logistics Industries
ENVIRONMENTAL SCAN

Maritime and Stevedoring

MARITIME AND STEVEDORING

Overview

The maritime industry has been profoundly affected by the by the global economic crisis. In WA where over 95% of imports and exports are transported by sea any shifts in global trade have a profound effect on shipping and associated industries. Limited on-board places for the training of seafarers has become more pronounced due to a severe reduction in the movement of ships in and out of Australian waters and the significant increase in wages growth in Australia making Australia making Australian shipping uncompetitive. The significant reduction in the number of Australian-owned ships over the last decade has contributed to the limited number of seafarer training positions on board Australian ships. Ship owners globally continue to register ships in 'ports of convenience' and, in most cases, source seafaring labour from those regions. There is a general shortage in the industry due to a previous lack of commitment from the industry to train; an ageing workforce and a significant increase in the work available.

Whilst Australian-trained maritime officers and engineers are still sought after internationally, the provision of integrated ratings and other able seamen is often driven by shipping agents seeking to gain the best competitive position by using overseas labour. This is not deemed acceptable for many within the sector, as it does not place Australian marine professionals as the employees of choice. There is also expected to be a shortage of marine pilots as the shipping industry picks up.

There has been a sharp reduction of stevedoring services required to service a smaller maritime activity. This has seen many employees, who are not fully employed by the stevedoring companies, with severely reduced hours or none at all. Significant gains have been made in recent years in the time required to load and unload containers in our ports; this has been brought about largely through the implementation of world-class dockside loading technologies.

Predicted strong demand for seafarers arising from new investment in offshore oil and gas projects will also intensify the need for qualified personnel. It is anticipated that most of this training will occur at the new entrant level, with up-skilling of the existing workforce following current trends. However, access to sea time will still be a major barrier to the successful training of workers, and a greater focus on simulation will need to be investigated.

Trends Analysis

There has been major growth in coastal marine occupations, particularly in marine tourism, chartered vessel operations, public ferry transport, coast guard and emergency services and marine services to the oil and gas industry, as well as increases in the size and complexity of vessels.

More integration of vessels within wider supply chains – multimodal freight transport, tourism, emergency services, integrated passenger services, has also occurred.

* International (cargo ships)
* Coastal, inland water transport of passengers or freight (ferries, charter)
* Pilot and tugboat operations
* Port authority services
* Vessels supporting the offshore oil and gas industry.

* Partial coverage over the fishing industry. The fishing industry is also covered by the seafood industry training package for vessel operations.
*

Up and Down Stream Sectors

* Oil and Gas Production
* Iron Ore Mining
* Shipbuilding
* Marine Cargo Handling

International Water Transport

This industry operates vessels for the transportation of passengers or freight by sea between domestic and foreign ports. The high percentage of service imports as a proportion of demand reflects the dominance of foreign flagged ships servicing Australian ports. The primary activities of companies in this industry are:

* Freight transport service (international sea transport)
* Ocean cruise services (between domestic and foreign ports)
* Passenger transport service (international sea transport)
* Ship management service for international sea transport (ie operation of ships on behalf of owners)

Coastal Water Transport

Companies in this industry operate vessels for the movement of passengers or freight by sea between domestic ports. This also includes companies involved in chartering or leasing ships with crew, for any period, for use in coastal sea transport. The primary activities of companies in this industry are:

* Crewed boat charter, lease or rental for the purpose of coastal water transport
* Freight transport service on coastal sea transport routes
* Island ferry operation in coastal waters
* Ocean cruise services between domestic ports
* Passenger transport services (coastal sea transport)
* Crewed ship charter, lease or rental for the purpose of coastal sea transport
* Ship management service for coastal sea transport (ie operation of ships on behalf of owners)
* Vehicular ferry operation in coastal waters

Inland Water Transport

Organisations in this industry operate vessels which transport freight or passengers in harbours or inland waters (except tug boats or lighters). The primary activities of companies in this industry are:

* Cruise operation (river, harbour or lake; with or without restaurant facilities)
* Freight transport service (river, harbour or lake)
* Passenger ferry operation (river, harbour or lake)
* Passenger transport service (river, harbour or lake)
* Water taxi service (river, harbour or lake)

Marine Transport Professionals[56]

Marine transport professionals control and manage the operations of ships, boats and marine equipment.

Job Titles

* Master Class 4 and 5 - Trading or Fishing
* MED 1 to 3 for smaller Coastal Shipping
* Engineer Officers
* Master Class 1
* Master above or below 3000GRT
* Ship's Officers – Chief Mate and 2nd Mate
* Ship's Surveyor
* Marine Transport Professionals

Job Prospects

Offshore marine professionals are the largest group employed within the marine transport sector, with the following affecting them the most.

- The majority of persons employed, while maintaining an average of working hours that indicates the equivalent of FTE, are in fact casual due to the nature of the work. There are approximately 12 companies active in the industry in WA and they are a pool of labour for the employers or marine professionals.
- Employment for marine transport professionals to 2012-13 is expected to remain steady, but with very small occupations employment estimates can fluctuate. This is because the economic downturn did not impact as strongly on this sector as any projects, especially in the oil and gas sector, were already committed during this period.
- It is expected that there will be an upturn in work within the next 12 months, which will put significant pressure on the need for continuing training during a period where space to do so is extremely limited.
- There will be significant shortages over the next couple of years which cannot be easily filled due to the long lead time to produce professionals, eg three to four years.

Deck and Fishing Hands[57]

Deck and fishing hands maintain ships' equipment and structures, and catch fish, crustacean and molluscs.

Job Prospects

- Job prospects for Deck and Fishing Hands are below average.
- Employment for Deck and Fishing Hands to 2012-13 is expected to fall slightly.
- Deck and fishing hands have an average proportion of full-time jobs (76%). For deck and fishing hands working full-time, average weekly hours are 39.6 (compared to 41.8 for all occupations) and earnings are below average - in the fourth decile.

- Deck and fishing hands are employed across several industries including: Agriculture, Forestry and Fishing; Transport, Postal and Warehousing; Public Administration and Safety; and Construction.

Regulatory requirements

Maritime crews operating in international waters (eg crew on international cargo ships) are regulated by the Australian Maritime Safety Authority which administers the Seafarers' Training, Certification and Watchkeeping Code (STCW 95).

Marine crew operating in coastal waters (eg ferries, charter and fishing) are regulated by the Department of Transport (Commercial Vessel Safety Branch) in accordance with the United Shipping Laws (USL) Code.

Most RTOs are developing their training programs to meet the anticipated AMSA regulation which will operate nationally for all vessels through the "tinny to tanker" proposal.

Marine crew operating in the offshore oil and gas industry (eg tugs, support vessels, barges, rigs etc) are primarily regulated by:

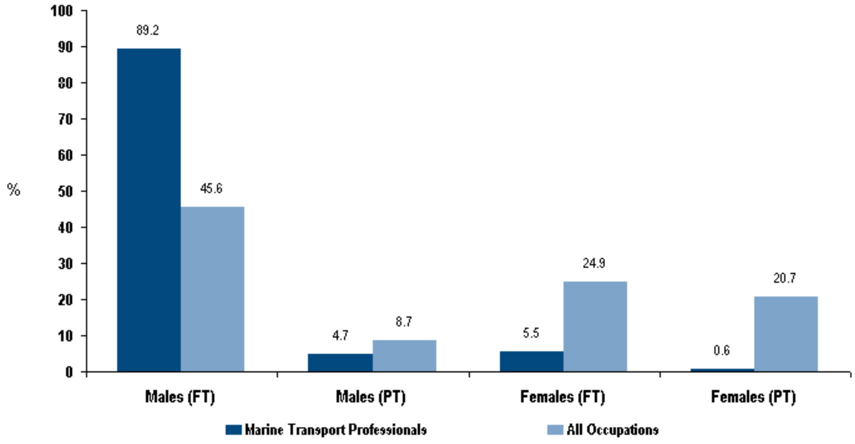
Australian Maritime Safety Authority (primary regulator)

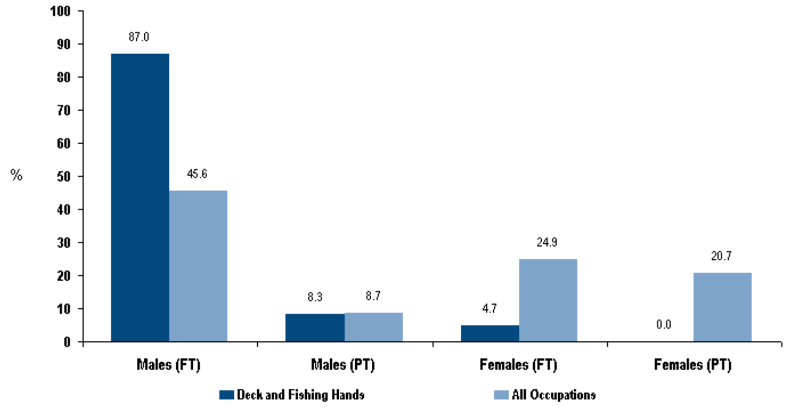
* Department of Mines and Petroleum
* Department of Transport (Commercial Vessel Safety Branch)
* All marine crew working in port are also regulated by WorkSafe WA.

Demographics of Workforce

Gender (per cent share)

The following graphs show the share of employment (per cent) for males and females, employed full-time and part-time, for marine transport professionals and deck and fishing hands compared with all occupations. Source: ABS Labour Force Survey, Australia (cat. no. 6203.0) - average 2009.

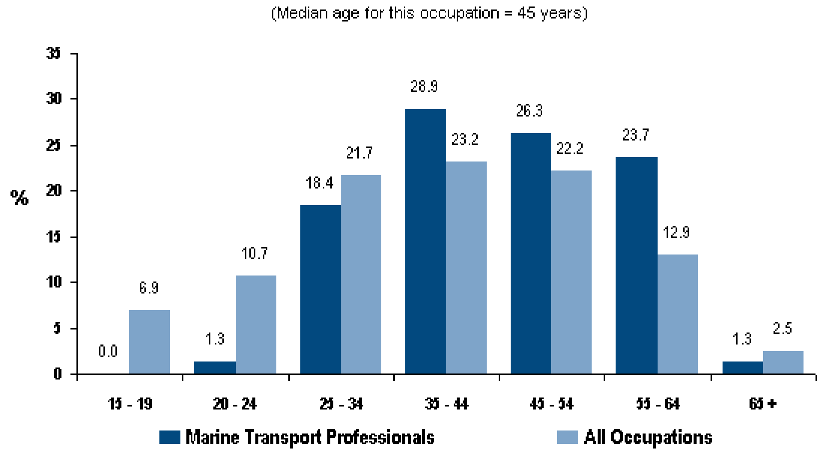


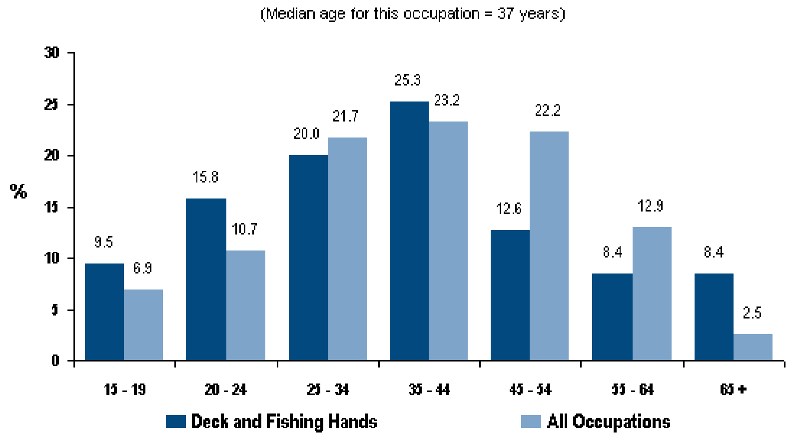


* The maritime sector is a very male dominated industry, with more than 90% of male workers. This stems from a long history of men at sea, with women not entering many maritime professions until the last few decades, when accommodation on vessels became more conducive to a female presence.

Age Profile (per cent share)

The following graphs show the share of employment (per cent) by age group for marine transport professionals and deck and fishing hands, compared with all occupations. [58]





* Marine transport professionals have an ageing workforce, with the average age at 45 years. With very few workers under the age of 25, this could have a major impact on the workforce, especially as nearly a quarter of the workforce is nearing retirement age.[59]
* It is envisaged that the new Tinny to Tanker regulation will enable workers to move between vessels and up the career ladder with more ease, so some of those younger deck and fishing hands may be able to take up some of the vacancies.

Impact of Globalisation

Skilled personnel in marine occupations are being attracted to overseas maritime operators, creating a training demand on top of projected employment growth. There has been an increase in international seaborne trade. Australia's increasing reliance on oil and other imports has increased maritime trade.

Impact of Government Policy/Decisions

AMSA is currently rewriting Marine Order Part 3 to include what has become known as AMSA's Tinny to Tanker plan (T2T).

Alignment of States and Territories should lead more easily to the unlimited certificates without unnecessary barriers to progression. This progression is directly linked to the AQTF/TLISC Maritime Training Package and sea-time has been rationalised to be more attainable. This is in response to the COAG Agenda.

It is hoped by AMSA that T2T will sit within the proposed new Single National Maritime Jurisdiction (SNJ) that is currently under discussion by COAG. Implementation of T2T was scheduled to occur by mid-2010, but this has been delayed while more consultation occurs, particularly at the lower level certificates of competency.

Other current Government policies or decisions impacting on the Maritime Sector include:

- Introduction of recreational skipper's ticket has resulted in more training in the industry.
- Reduction on number of fishing licences granted, restrictions on catches, sizes etc
- Dredging of ports (eg Fremantle)
- Expansion and plans for new ports such as Oakajee.

Technological

The trend is towards larger horsepower vessels with more complex navigation and control technology, requiring higher-level skills and upskilling of existing personnel.

Economic Drivers

These include the cost of fuel, costs and staffing related to compliance with regulatory requirements. The annual domestic shipping task is increasing to an estimated 26.6% by 2013.

There is a critical seafarer labour shortage with the potential to disrupt the price and labour and the development of Australia's energy resources.

Size and Distribution

Shipping accounts for 99% of Australia's international trade. In 2008-09, WA handled more than half of the nation's total trade tonnage. Approximately 40% of activity in the offshore marine (oil and gas) sector is based in WA. The sector employs approximately 2,500 staff hired directly to the vessels operating in the area and supports more than 10,000 staff in affiliated areas.

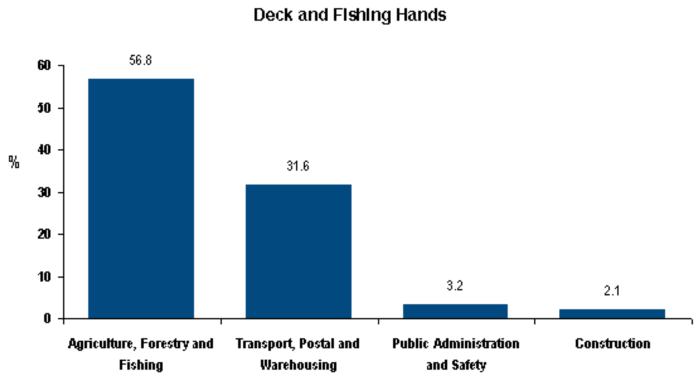
Approximately 40% of activity in the Offshore Marine (Oil and Gas) sector is based in WA. The sector employs approximately 2,200 staff hired directly to the vessels operating in the area and supports more than 10,000 staff in affiliated areas.

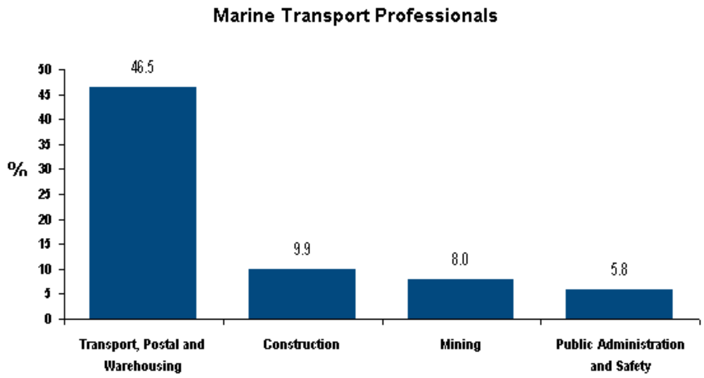
Eight multi-user port authority ports and eight non port authority ports, which for the most part, contain port facilities dedicated to the export of a single commodity by a single operator, are located along 12,500 kilometres of the Western Australian coastline. They handle over 4,000 international trading vessels plus thousands of interstate, intrastate, fishing and recreational vessels every year.

The Port of Fremantle is the capital city port of WA and handles 83% by value of WA's seaborne imports and 25% of WA's seaborne exports, whilst Port Hedland and Dampier are amongst the highest tonnage ports in the world. There is expected to be a significant growth in ports with the planned new facility at James Price Point; the Oakajee Project; expansion of the port at Port Hedland; port development at Cape Preston, about 70 kilometres south west of Dampier; Mount Anketell, which is located within Port Walcott; Ashburton North, which is within the Port of Onslow and the Gorgon gas project on Barrow Island.[60]

Main Employing Industries (per cent share)

The following graphs show, for these occupations, the industries (up to four) with the largest share of employment, compared with the share for all occupations. The industries are based on the Australian and New Zealand Standard Industrial Classification (ANZSIC 06).[61]

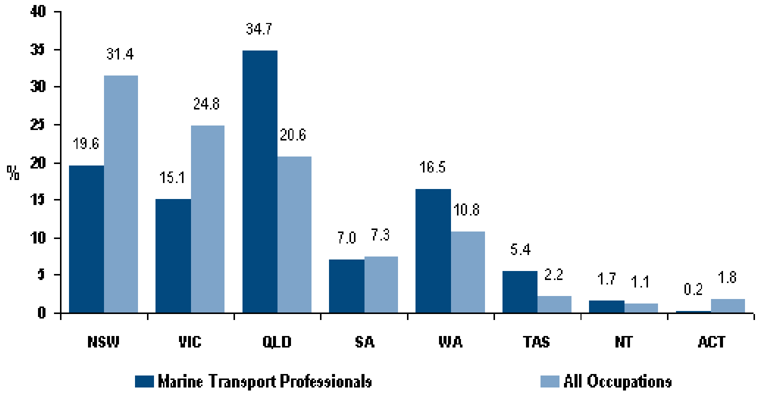


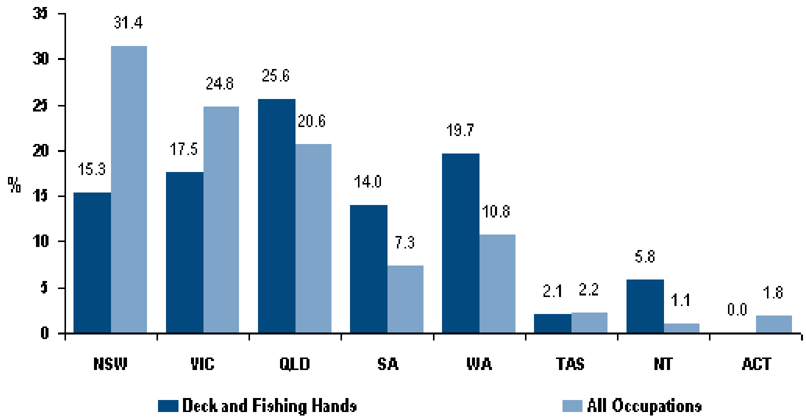


* Nearly two thirds of deck and fishing hands work in the fishing industry, yet there is expected to be a shift towards the maritime sector within transport as the demand for workers in the oil and gas offshore sector picks up.

Employment by Region (thousands)

The graph shows the State share of employment (per cent) for this occupation, compared with all occupations. Source: ABS Labour Force Survey, Australia (cat no 6203.0) - average 2009.





* WA is the third largest employer by State of marine transport professionals, and follows Queensland for the employment of deck and fishing hands. This could change as a renewed freight effort is occurring and the fishing industry drops off to be replaced by the increasing demand from the offshore sector for skilled marine workers.

Sustainability

The shipping industry has high fuel efficiency and low greenhouse gas emissions on a tonne per kilometre basis. The cost of maintaining shipping lanes is negligible.

Qualification Profile of Workforce

Training is predominantly driven by regulatory requirements. The ferry and charter boat sector does not have a strong training culture except to meet regulatory requirements.

Whilst public providers traditionally focussed on providing theory as required by the regulators, current training package regulations required training providers to become involved in the practical component.

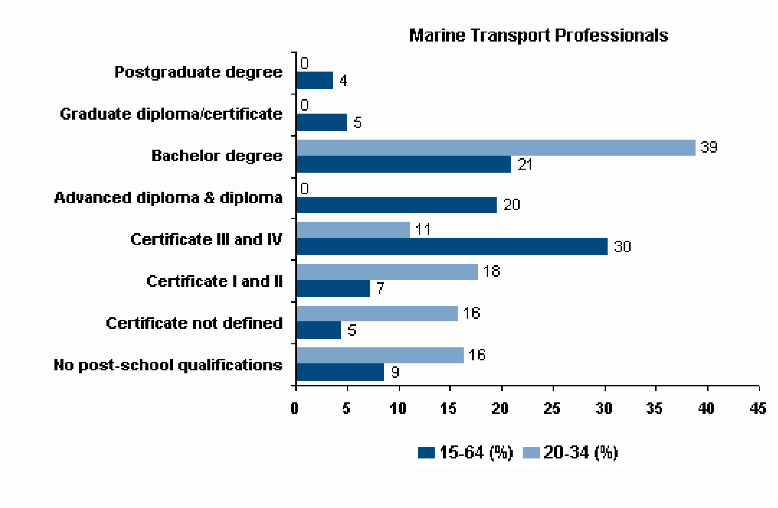
The current training package does not address job roles or occupations, and is in the process of being overhauled. This will be completed by the end of 2010.

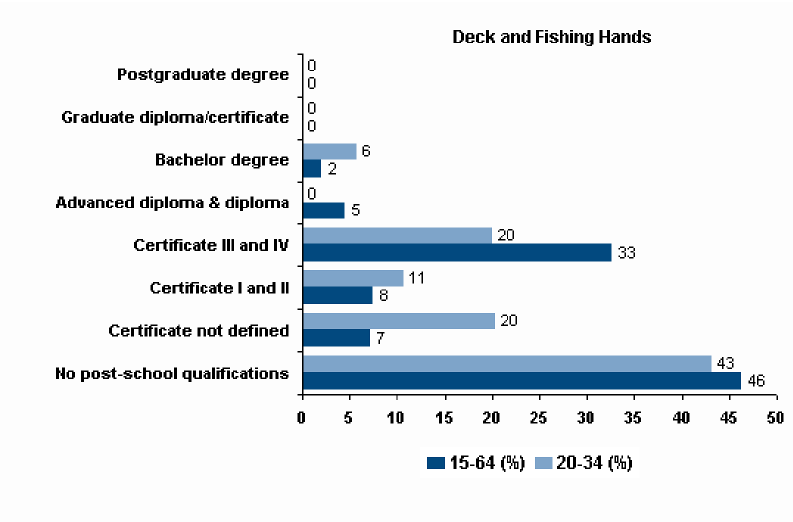
As the Regulator oversees the training that is delivered, there has occurred a disconnect between the training and the national training package that services the sector, with many State differences occurring. This has led to many state-based courses being delivered against the regulatory requirements. Currently, work is being done to harmonise the qualification system, as the current training package does not address job roles or occupations and the regulators and training package developers are in discussion to align qualifications to licences across Australia. This is all part of the T2T Project, and it is hoped that as the Marine Orders 3 are implemented, the qualifications system will align perfectly with them. This should be completed by 2011.

The ability to move towards a more flexible model that allows for recognition of prior learning will be vital for the industry. T2T will also have a major impact, as the new alignment to maritime training package qualifications will see more workers attaining qualifications as they progress through their regulatory requirements which will be aligned to the training package.

Educational Attainment (per cent of employment)

The following graphs show the highest educational attainment (per cent share of employment) for marine transport professionals and deck and fishing hands with a comparison for those aged 15-64 and 20-34.[62]





* Marine transport professionals are generally more highly qualified workers as they progress through training to become ship's masters etc. However, deck and fishing hands are predominantly not formally trained, but access skills through time spent at sea.
* T2T will change this as a pathway will now be created for deck and fishing hands to move into marine transport professional roles.
* T2T will also have a major impact, as the new alignment to Maritime Training Package Qualifications will see more workers attaining qualifications as they progress through their regulatory requirements which will be aligned to the Training Package.

Social Impact

Long periods of time at sea, unsocial working hours

Barriers to Training

- Time spent at sea is an issue because not enough training places are available on ships.
- The focus on a National Training Provider, with Federal Government funding accordingly, has meant lack of focus on State training needs for the maritime sector. There is a high cost for industry to send workers East for training that could be done locally through better auspicing arrangements.
- There is an issue for marine engineering cadets, who do too much theory upfront, then do their sea time. It could be as long as four years before some of the theory is put into practice. They are highly over-trained before they get a certificate of competency.
- There is a huge cost of training plus cost of time lost in job prevents training access, eg a six-week course at $3000 plus $3000/week loss of wages plus accommodation for regional workers means the actual cost is $25,000 plus.
- Traineeships and cadetship are problematic, as the amount of time in college is costly, and workers are being paid even while the college has time off. There is also the issue of time at sea fitting in with training time. Trainees and cadets appear to be spending longer in training, yet a lot of time is wasted through days off or a week free.
- Different qualifications are being delivered throughout Australia for the same outcome, eg engineering cadet. A national qualification exists through the national training package but this is not being used everywhere.

- A long lead time is required to train a maritime worker, with many requiring 3-4 years. With peaks and troughs of industry, commitment to train is a problem, eg putting on workers for Gorgon, yet only a 12 month project.
- All companies are training to capacity, but not enough to meet the future needs of the industry. Oil and gas companies are happy to pay for training, but cannot get berth space.
- There is a lack of suitably trained high-level workers in the Stevedoring industry.

Barriers to Employment

- There are not enough masters and engineers at the higher level to service the industry.
- Differences in regulations between different vessels, blue water, inshore, offshore and fishing, have meant that difficulties can arise for those experienced maritime workers wishing to move from one type of vessel to another.
- Government policy forecast a surplus of workers in maritime due to the global economic crisis, yet did not plan for the lesser impact it has had on WA. As a result industry did not invest in training for the future, and a shortfall now exists. This will impact on the viability of the industry.
- Many regulatory requirements impact on skill requirements of crews, who cannot move vessels which may be only slightly larger than those they trained on because of regulations for each category. This is an obstacle to recruiting from blue water into offshore, as vessels are bigger and require different skills.
- Due to changes in the fishing laws, a shortfall is expected in future workers for the rock lobster and fishing industries, as deck hands will move away from the industry for more secure full-time work.
- Masters and engineers have to take a step back to be able to move up to the next level, which is prohibitive for many as they drop pay and conditions to do so, and this has seen a steady decline in Class 3 engineers.
- When new T2T regulations are approved, there will be a large requirement to assist both industry and RTOs with recognition of prior learning as the new streamlined qualifications come on line.
- The loss of high level workers out of the industry creates gaps as there are not well-developed pathways for them into senior roles.
- The pearling industry has a very transient workforce as work only lasts a couple of months and training is too long for deckhands. Global downturn has had an impact on industry, which has seen many workers lose their jobs.

STEVEDORING

Around 6,000 stevedores/dockside workers are typically employed in Australia, many on part-time and/or contracted arrangements. The two major stevedoring companies operating in WA are Patricks and DP World.

Stevedores were once the supervisors of dockside workers with unskilled labourers performing the bulk of the tasks. Now the stevedoring industry is comprised of highly skilled workers at different levels, performing a variety of tasks that revolve around the loading and unloading of cargo to and from ships.

There has been a sharp reduction of stevedoring services required to service a smaller maritime activity. This has seen many employees, who are not fully employed by the stevedoring companies, with severely reduced hours or none at all. Significant gains have been made in recent years in the time required to load and unload containers in the ports; this has been brought about largely through the implementation of world class dockside loading technologies.

Traditionally not a lot of training has occurred for stevedores. There is also difficulty in accessing training in the North West as registered training organisations in this field are based in Melbourne.

The impact of technology is being felt in stevedoring in Australia. In Brisbane, Patrick's groundbreaking project, the world's first automated straddle carrier (AutoStrad) terminal, is now servicing all Patrick container volume. The automated 10 metre high, 65 tonne straddle carriers are fitted with sophisticated motion control and navigation systems which allow them to operate unmanned – moving and stacking containers from the quay into holding yards and onto vehicles and back to quay cranes with pinpoint accuracy. There has been strong indication that this type of automation will move to other ports throughout Australia within the next few years.

The marine cargo handling industry provides the service of loading and/or unloading cargo from ships (provision of labour only). This involves both crane (approximately 70%) and non crane operations (approximately 30%).

The primary activities of companies in this industry are:[63]

* Ship loading or unloading service (provision of labour only)
* Stevedoring

Water Transport Terminals

This industry consists of units mainly engaged in the operation of ship mooring facilities or of passenger or freight sea transport terminals (including sea cargo container terminals and coal or grain loaders) used for the loading or unloading of vessels.

The primary activities of companies in this industry are:

* Coal loader operation (sea transport)
* Container terminal operation (marine cargo)
* Freight terminal operation (sea transport)
* Grain loader operation (sea transport)
* Passenger terminal operation (sea transport)

* Ship mooring service
* Terminal operation (sea transport)

Port Operators

This industry consists of operations mainly engaged in the maintenance and leasing of port facilities to facilitate the land-sea transition of goods and passengers.

The primary activities of companies in this industry are:

* Port operation
* Wharf provision
* Wharf facility leasing

Services to Water Transport

This industry is comprised of operators who provide navigation services, towage services, and other services to the water transport sector.

The primary activities of companies in this industry are:

* Distressed vessel towing service
* Harbour and port services (other)
* Lighterage service
* Navigation service, water transport
* Salvage service, marine
* Ship registration service
* Shipping agency service
* Ships agency service
* Towboat and tugboat operation
* Waterways, navigable, operation

Barriers to Training

- No high level qualifications, no code of practice, formal training or recognised ticket required.
- Companies train own people, thin markets.
- Heavily regulated industry.
- Age limits to access qualifications.
- Current training is not recognised or publicly funded.

LOGISTICS TRAINING COUNCIL

Logistics Industries
ENVIRONMENTAL SCAN

Rail

RAIL

Overview

The rail industry is made up of freight companies that operate or hire railways for the transportation of freight, terminal or depot facilities for receiving, dispatching or transferring rail freight or cargo, or in providing services allied to railway transport; and companies operating railways for the transportation of passengers. Railways consist of heavy rail (large trains using dedicated rail tracks over long distances) and commuter travel (large trains using dedicated track over short distances), but exclude tramways and monorails.

Like most other industry sectors, the rail industry in WA is driven by supply and demand pressures which in turn are dependent on State and National economic circumstances, as well as the status of their suppliers and competitors. New rail infrastructure projects, specifically to service the mining sector in the regions will see an increased demand for all rail workers. These include train drivers, train controllers and engineers which are currently being sourced from overseas. These positions are in high demand in the mining sector where high salaries are being paid for already trained workers.

Other factors affecting this industry are the world price of energy and crude oil, an ageing workforce and the tourism industry. It is anticipated that nearly a quarter of the workforce will retire in the next decade. It has also been noted that there is a great shortage of tradespeople in this sector, particularly mechanical and electrical fitters.

Significant increases have been witnessed in the use of rail and bus patronage especially in metropolitan areas, which has placed significant pressures on bus and rail transport systems including the capacity to attract the required volume of personnel to work in these sectors. The industry is characterised by a relatively small number of very large organisations, with the remainder categorised as small to medium enterprises. New major projects include the Northbridge hub link which is planned for completion by 2011-12 and the Butler extension on the northern line.

Trends Analysis

Freight

The primary activities of companies in this industry are: container terminal operation (railway); freight transport service (railway) and terminal operation (railway). More than half of product carried consists of mineral bulk freight with a substantial amount of non-bulk freight and a small proportion of other bulk freight.

Passenger Rail

This class consists of companies operating railways for the transportation of passengers. The majority of services run on intra-urban lines with the rural sector making up a quarter and a small percentage of rail in the tourist sector. The primary activities of companies in this industry are passenger transport services (railway); railway station operations and suburban railway transport services.

Railway Track Workers[64]

Railway track workers lay and repair tracks for railways, tramways, quarries and mines, and install and repair signals and other equipment.

- Job prospects are good, and the vacancy level low.
- Employment to 2012-13 is expected to be strong. Employment in this small occupation rose very strongly in the past five years, and rose strongly in the long-term (ten years), but with small occupations employment estimates can fluctuate.
- Railway track workers are employed across several industries including: Transport, Postal and Warehousing; Construction; Manufacturing; and Administrative and Support Services.
- Earnings for the group are average.
- This is a male dominated area, with a small percentage of female workers.
- Workers work an average of 41.7 hours per week.
- The median age for this occupation is 46 years.
- The majority of workers in this area have no post school qualifications.

Train Drivers[65]

Train Drivers drive trains to transport passengers and freight on rail networks.

- Job prospects are average and the vacancy level low.
- Employment for growth to 2012-13 is expected to be slight. Employment in this medium sized occupation has risen moderately in the past five years, and in the long-term (ten years).
- Train drivers are employed across several industries including: Transport, Postal and Warehousing; Mining; Manufacturing; and Retail Trade.
- The mix of industries employing train drivers is favourable for employment growth prospects with a big growth increase over the past two years.
- This is a male dominated occupation with approximately 8% of female workers.
- Workers work an average of approximately 41 hours per week.
- The median age for this occupation is 43 years.

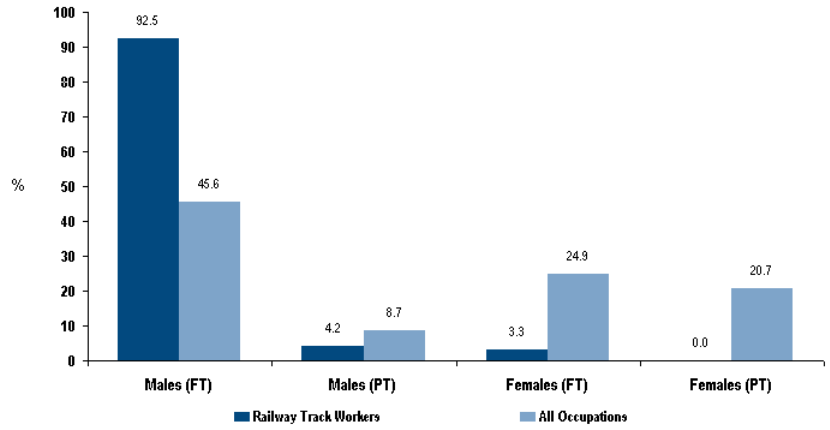
Regulatory Requirements

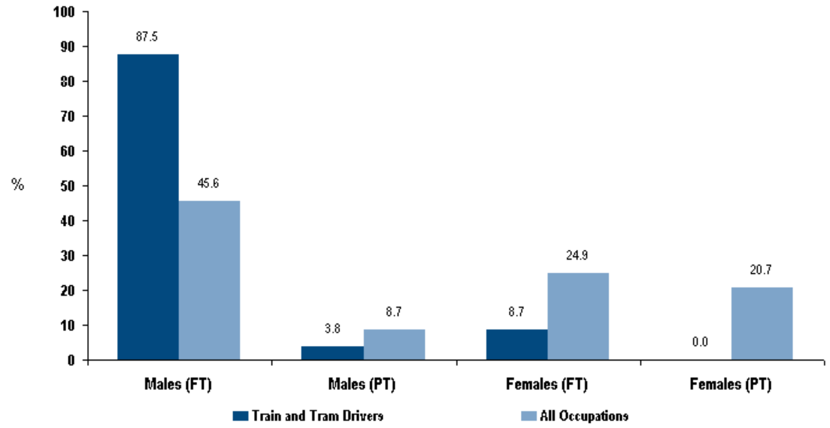
Rail passenger services, rail track work and safe working are regulated by the Office of Rail Safety and WorkSafe WA.

Demographics of Workforce

Gender (per cent share)

The following graphs show the share of employment (per cent) for males and females, employed part-time and full-time, compared with all occupations.[66]

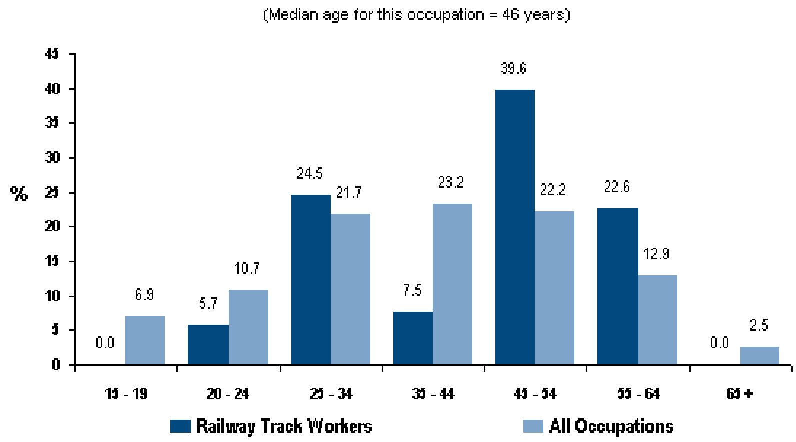


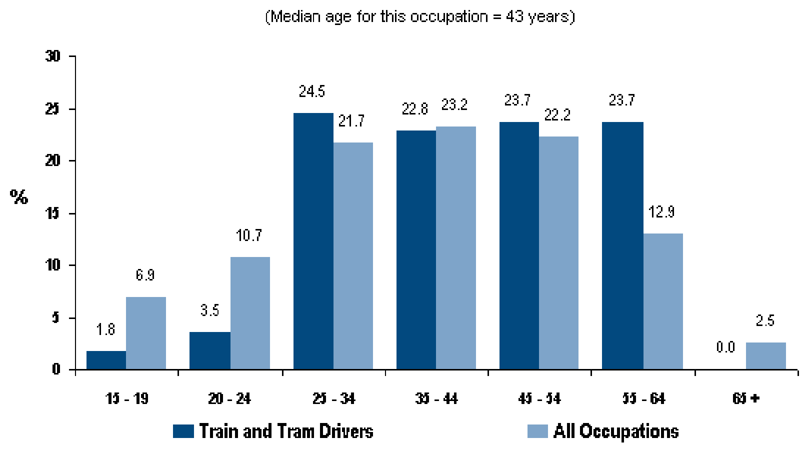


* The rail sector is dominated by male workers, with females entering the workforce as train drivers rather than track workers, however the Public Transport Authority is targeting women and older men as drivers.

Age Profile (per cent share)

The following graphs show the share of employment (per cent) by age group for this occupation, compared with all occupations.[67]





- Train Drivers are facing problems as nearly a quarter of the workforce will retire in the next decade.
- There is a lot of movement in and out of this workforce, so there is a need to attract younger workers.

Impact of Globalisation

The worldwide demand for iron ore has impacted on the workforce, with drivers being sought from Europe, the United Kingdom and South Africa to fill positions in the mining industry. The price of fuel is also a significant factor.

Impact of Government Policy/Decisions

The introduction of a national rail safety regulator by the Federal Government will have a huge impact on the rail industry. The regulator will administer a single national act, the Rail Safety Act, which will encompass all aspects of rail safety such as operations, equipment standards, hours of work, fatigue and worker health. Based in South Australia, the regulator will deliver better rail safety outcomes for Australia, as it will draw on a national pool of knowledge and experience. The National Safety Regulator will be based in Adelaide and is expected to be operating by the end of 2012.[68]

Government initiatives to redirect a significant proportion of freight from road systems to the rail networks will have enormous implications on the infrastructure.

The State Government’s plan to invest $30 million in WA’s grain freight network to fund urgently required rail maintenance work on the Avon to Albany line; and develop a scheme designed to make transporting grain by rail cost-competitive in the Kwinana South Zone will have a positive impact on the transport of grain by rail, which has slowly seen an increase in the amount of grain being transported by truck in recent times.

The WA Government has now approved a $7.2 billion plan to develop a 300 km rail line connecting the Roy Hill mine, about 110 km north of Newman, with port infrastructure. Construction of the railway line connecting the mine to port facilities will now proceed. (Source: Australian Journal of Mining, 01 July 2010).

Technological

The industry relies on a vast range of technologies for engines, communications, track work, signalling, business and customer service which will be paramount to meet the increasing demands over the next thirty years and beyond. Technology affects all aspects of rail business and operations including:

* train protection and control systems;
* alternative propulsion systems;
* rolling stock design;
* track design;
* level crossings; and
* ticketing and customer information systems[69]

A recent development by Rio Tinto has been the opening of a new high-technology, purpose-built Operations Centre alongside Perth's domestic airport. The Operations Centre is now the primary control centre for Rio Tinto's vast network of mines, rail systems, infrastructure facilities and port operations in the Pilbara, and features 200 controllers and schedulers and more than 230 technical planning and support staff, who control operations up to 1,500 kilometres away.

Economic Drivers

Factors affecting this industry are the world price of energy and crude oil, and the tourism industry (passenger rail). There are many new projects planned for the north west of the State including new or upgraded port facilities which will have a huge impact on the rail industry.

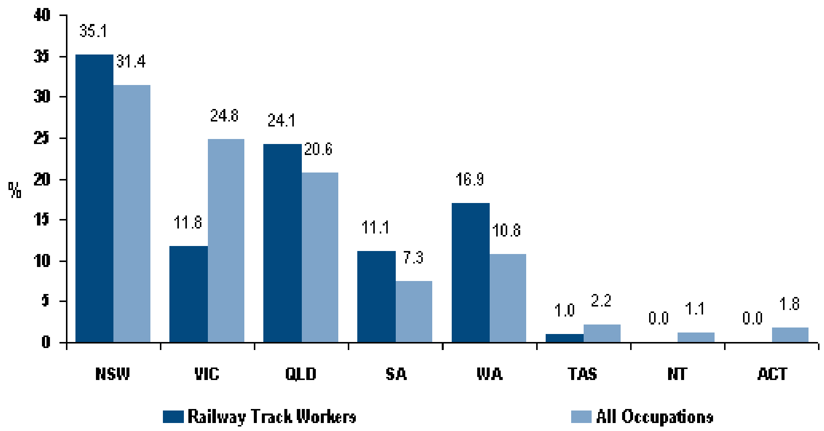
Size and Distribution

Over 40,000 men and women are employed in diverse occupations in rail throughout urban and regional Australia. Many more people work in supporting industries providing goods and services to the industry (estimated at almost 100,000 people).[70]

Rail in WA consists of 5,100 km standard, narrow and dual gauge network in the south west operated by WestNet Rail; the Electrified Urban Passenger Network maintained by the Public Transport Authority, the interstate standard gauge line from Kalgoorlie to Adelaide which is owned by the Australian Rail Track Corporation and the rail lines in the Pilbara which are privately owned and built, managed and maintained by the mining companies. [71]

Employment by Region (thousands)

The following graphs show the State share of employment (per cent) for Railway Track Workers and Train and Tram Drivers, compared with all occupations. [72]



* WA is one of the major employers of train drivers, due mainly to the mining sector. This demand in WA will increase as more rail lines become operational, and the Southern Grain and Timber Tracks are brought back on line.

Sustainability

Rail is considerably more energy efficient than road transport, therefore reducing Australia's dependence on oil imports. Rail line haul freight movements by rail are three times more energy efficient than moving the same freight by truck. Passenger rail is about seven times more efficient than cars for city commuting. Rail is approximately eleven times more efficient than trucks for transporting bulk freight and about three times more efficient for other freight.[73]

According to the Australasian Railway Association (ARA), every additional train takes 150 trucks off the road, saves 45,000 litres of fuel and reduces greenhouse gas emissions by 125 tonnes.[74]

The rail industry is also working to make improvements in the following key areas:

- Optimise rail's economic and environmental credentials,
  * offset railways fuel costs to match the rebate for road transport under the proposed Carbon Pollution Reduction Scheme
  * provide taxation incentives for environmentally friendly rolling stock and infrastructure and
  * provide incentives to use public transport and freight rail.

- Reduce the cost of environmental regulation through consistency and harmonisation
- Apply the Climate Change Action Fund (CCAF) to increase rail use
- Continue investment in passenger and freight rail, tracks, rolling stock, and technology.[75]

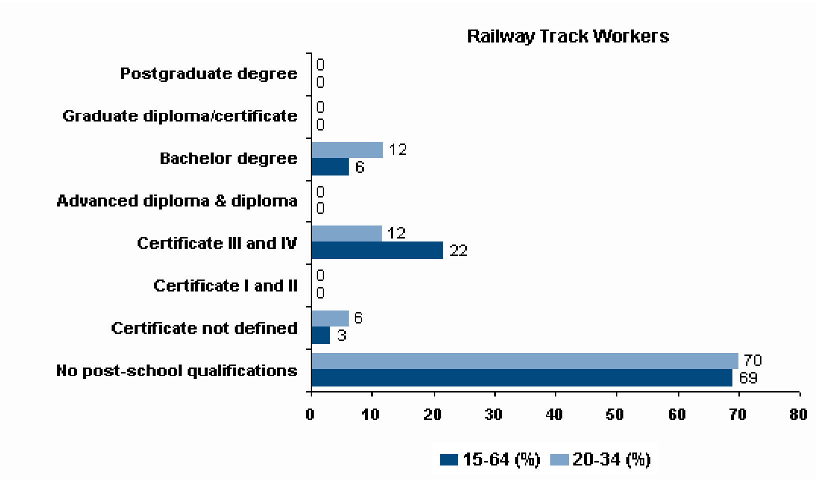
Qualification Profile of Workforce

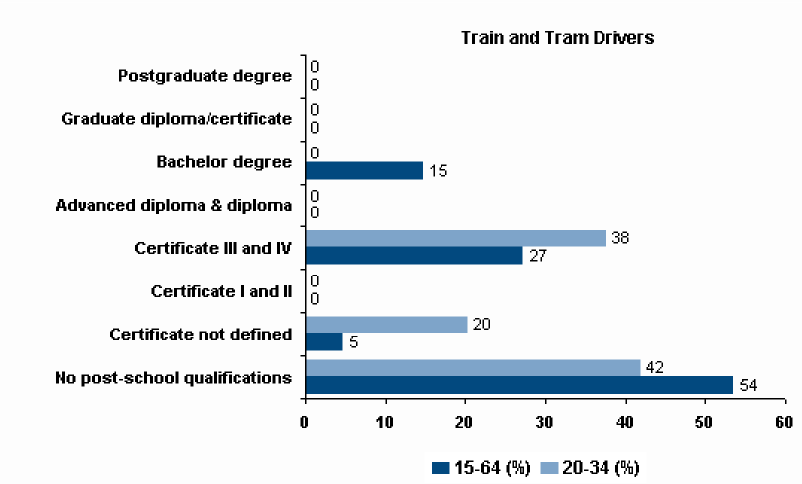
Training in this industry has traditionally been on a needs basis. The industry is heavily regulated, with qualifications linked to regulatory requirements, which is where most training has occurred. The industry has not perceived a need for training at the higher levels for many of its workforce.

The current method of delivery of operational and entry level training is primarily through on-the-job training with some off-the-job or off site training for generic skills. Opportunities exist for entry and operational level training through traineeships. Funding of traineeships for all rail qualifications and the full implementation of the Productivity Placements Program will further enhance the availability of training opportunities within the industry.

The following graphs show the highest educational attainment (per cent share of employment) for railway track workers and train drivers with a comparison for those aged 15-64 and 20-34.[76]

Educational Attainment (per cent of employment)





Social Impact

The industry sees a need for cultural changes at company and industry-wide levels, via communication, involvement and participation, to create long-term sustainability of the industry. It is looking at developing initiatives for more flexible working arrangements and higher levels of diversity, which includes increasing the number of women in the workplace.[77]

Current social factors affecting the industry include shift and weekend work, isolation (eg locomotive driver) and "on call" arrangements. Some rail jobs in the mining sector also involve FIFO arrangements which can be a disruptive influence on families.

Barriers to Training

- Regional training is centred around major rail networks where facilities for training are poor.
- Most RTOs are enterprise-based and struggle to develop their own resources. These rail companies also have to focus on something that is not their core business.
- There is no public funding provision of industry specific training except for implementation of traineeships.
- There is limited capacity to train due to infrastructure - trainees are limited by the number of locomotives and number of qualified drivers available to act as mentors.
- There are currently no dedicated qualifications for train controllers.

Barriers to Employment

- There is a desperate shortage of engineers, drivers, maintainers for new projects, mechanical and electrical tradespeople (expected 500 drivers required in next five years.
- It is difficult to place young trainees in some operational roles due to safety concerns.
- The lack of a nationally recognised track access card makes transfer of jobs between the States difficult.
- Some unskilled jobs, eg track workers, have skill bases at entry point that are easily transferred to other manual and labouring roles, therefore the turnover is high.

LTC
LOGISTICS TRAINING COUNCIL

Logistics Industries
ENVIRONMENTAL SCAN

Warehousing and Logistics

WAREHOUSING AND LOGISTICS

Overview

Warehousing and logistics play a pivotal role in the transport and supply chain. Logistics is an integrated approach to transport, storage and distribution of goods aimed at ensuring that the right products reach the right place in the right quantity at the right time to satisfy customer demand.

Warehouses have developed into high-tech distribution centres which are virtually paperless and use the most sophisticated equipment, including conveyor picking and packing processes, voice activated systems and systems which can scan and track goods anywhere in the world.

Warehousing is one of the primary battlefronts in competition between some of Australia’s biggest companies in reducing costs and the prices consumers pay and therefore increasing profits.

This industry provides third party storage or warehousing services excluding grain storage. The storage activity can be under contract which may include distribution, or on an ad hoc basis such as self-storage. Warehousing services can be private or public, but both services attract a fee for storage of goods.

General warehousing accounts for more than half of all warehousing with cold storage to a lesser extent and bond storage, distribution services and self storage accounting for the remainder.

Trends Analysis

Structural changes are occurring in warehousing and distribution linked to the growth in e-commerce and increasing vertical integration and supply chain management across retailing, warehousing and distribution organisations. Entry level positions are some of the most difficult to fill and return due to the perceived low pay rates and lack of understanding of potential available opportunities.

Occupations in this industry include storepersons, transport and despatch clerks, purchasing and supply logistics clerks, forklift drivers and supply and distribution managers.

Storepersons[78]

Storepersons receive, handle and despatch goods in stores and warehouses.

- Job prospects for storepersons are good.
- Employment growth for storepersons to 2012-13 is expected to be strong. Employment in this very large occupation (120,400 in August 2008) rose very strongly in the past five years, and rose strongly in the long-term (ten years).
- Storepersons have an above average proportion of full-time jobs (80%).
- Storepersons are employed across several industries including: Wholesale Trade; Transport, Postal and Warehousing; Retail Trade; and Manufacturing.
- The vacancy level for storepersons is high.

Supply and Distribution Managers

Supply and distribution managers plan, organise, direct, control and coordinate the supply, storage and distribution of goods produced by organisations.

- Job prospects for supply and distribution managers are good.
- Employment growth for supply and distribution managers to 2012-13 is expected to be moderate. Employment in this large occupation rose very strongly in the past five years, and in the long-term (ten years).
- Supply and distribution managers have a very high proportion of full-time jobs (97%). For Supply and Distribution Managers working full-time, average weekly hours are 46.3 (compared to 41.8 for all occupations) and earnings are high - in the ninth decile.
- Supply and distribution managers are employed across several industries including: Transport, Postal and Warehousing; Manufacturing; Wholesale Trade; and Retail Trade.

Transport and Despatch Clerks

Transport and despatch clerks verify and maintain records of incoming and outgoing goods, prepare goods for despatch, arrange clearance and collection of imported cargo from customs and bond stores, and arrange shipment of cargo for export.

- Job prospects for transport and despatch clerks are average.
- Employment for transport and despatch clerks to 2012-13 is expected to remain steady. Employment in this large occupation fell slightly or remained steady in the past five years, and remained relatively steady in the long-term (ten years).
- Transport and despatch clerks have a high proportion of full-time jobs (88%). For transport and despatch clerks working full-time, average weekly hours are 39.6 (compared to 41.8 for all occupations) and earnings are above average - in the seventh decile.
- Transport and despatch clerks are employed across several industries including: Transport, Postal and Warehousing; Manufacturing; Wholesale Trade; and Retail Trade.

Purchasing and Supply Logistics Clerks

Purchasing and supply logistics clerks prepare and process orders for goods and services, monitor stock levels and supply sources and maintain stock and inventory levels, record and coordinate the flow of materials between departments, prepare production schedules, and administer and coordinate storage and distribution operations within organisations.

- Job prospects for purchasing and supply logistics clerks are below average.
- Employment for purchasing and supply logistics clerks to 2012-13 is expected to decline. Employment in this very large occupation rose strongly in the past five years, and rose moderately in the long-term (ten years).
- Purchasing and supply logistics clerks have an above average proportion of full-time jobs (84%). For purchasing and supply logistics clerks working full-time, average weekly hours are 40.7 (compared to 41.8 for all occupations) and earnings are average - in the fifth decile.

- Purchasing and supply logistics clerks are employed across several industries including: Retail Trade; Wholesale Trade; Manufacturing; and Transport, Postal and Warehousing.

Forklift Drivers

Forklift Drivers operate forklifts to move bulk materials, containers, crates, palletised goods, cartons and bales.

- Job prospects are good.
- Employment growth to 2012-13 is expected to be moderate. Employment in this very large occupation rose moderately in the past five years, and in the long-term (ten years).
- Forklift drivers have a high proportion of full-time jobs (93%). For those working full-time, average weekly hours are 39.8 (compared to 41.8 for all occupations) and earnings are below average - in the fourth decile.
- Forklift drivers are employed across several industries including: Manufacturing; Transport, Postal and Warehousing; Wholesale Trade; and Retail Trade.

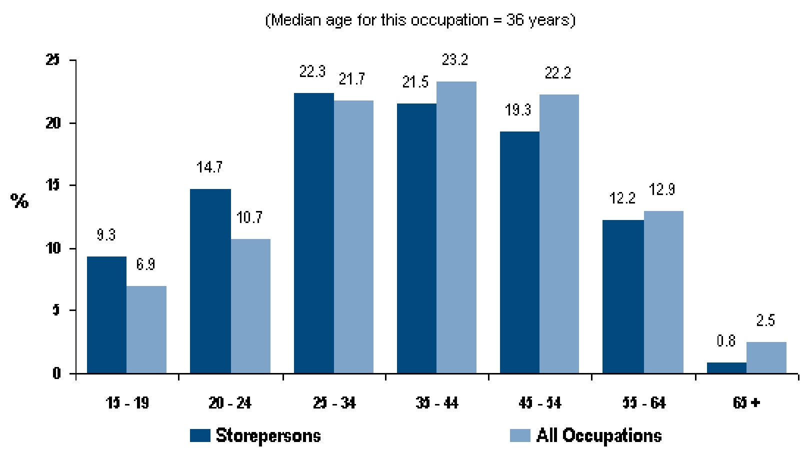
Regulatory Requirements

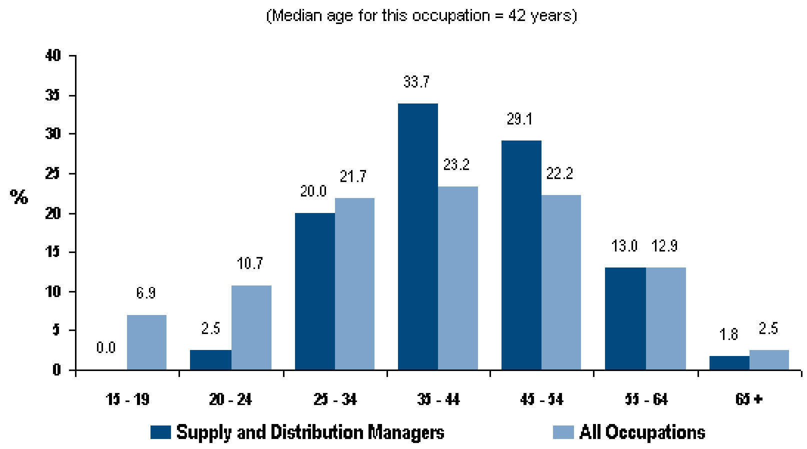
- Bonded warehouses (customs, excise, excise issues) are regulated by the Department of Transport, Australian Customs and Border Protection Service
- Forklift driving training is a regulatory requirement under Occupational Health and Safety regulations 1996 regulated by WorkSafe WA
- The National Licensing Standard requires operators of forklifts to hold a national licence issued by WorkSafe.
- New Dangerous Goods Code DG07 introduced in January 2010 are regulated by Department of Mines and Petroleum.

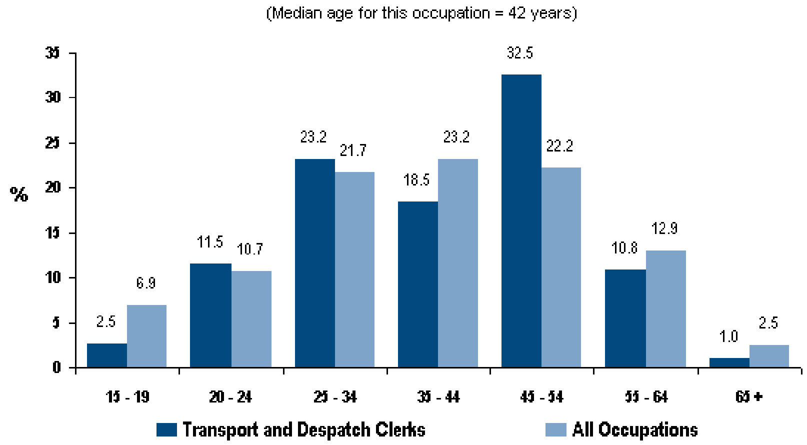
Demographics of Workforce

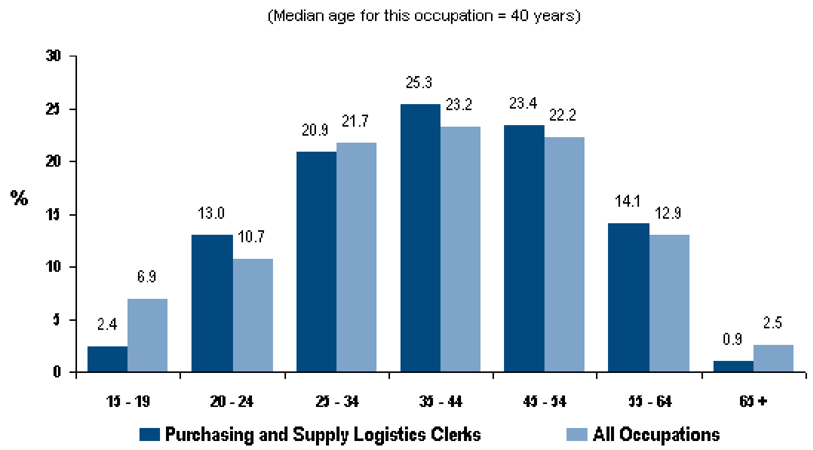
Age Profile (per cent share)

The following graphs show the share of employment (per cent) by age group for several occupations in the sector compared with all occupations.[79]





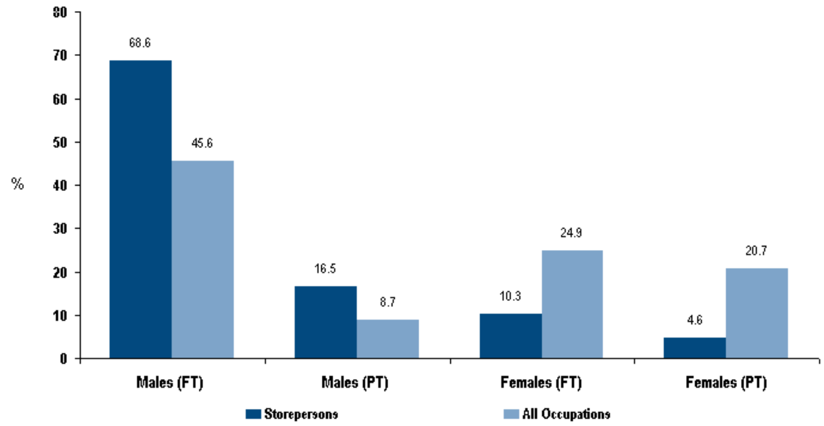




* The age of workers in warehousing is average, with a good range across the job roles.

Gender (per cent share)

The following graphs show the share of employment (per cent) for males and females, employed full-time and part-time, for several occupations in this sector, compared with all occupations.[80]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70
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45.6
16.5
8.7
10.3
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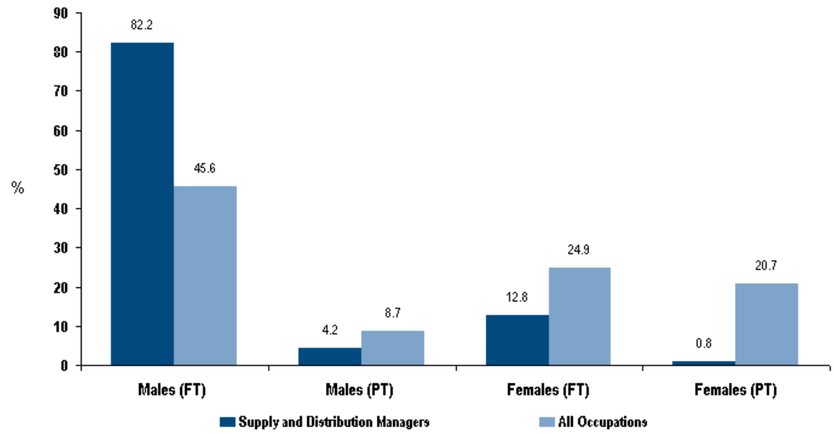
Males (FT)
Males (PT)
Females (FT)
Females (PT)
Storepersons
All Occupations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80
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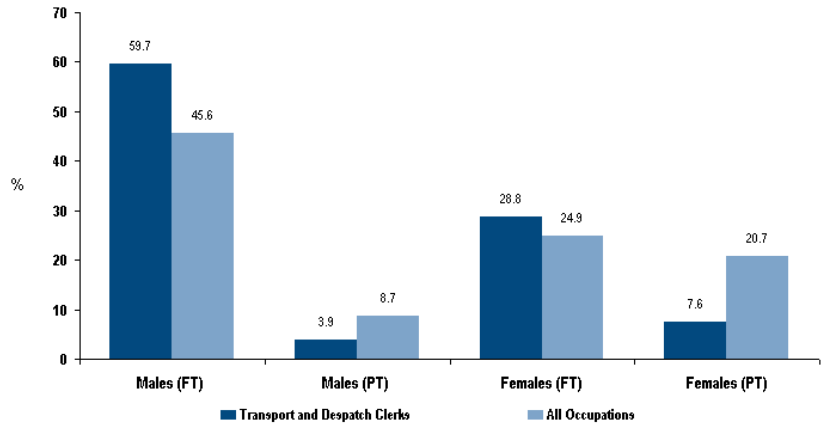
Males (FT)
Males (PT)
Females (FT)
Females (PT)
Supply and Distribution Managers
All Occupations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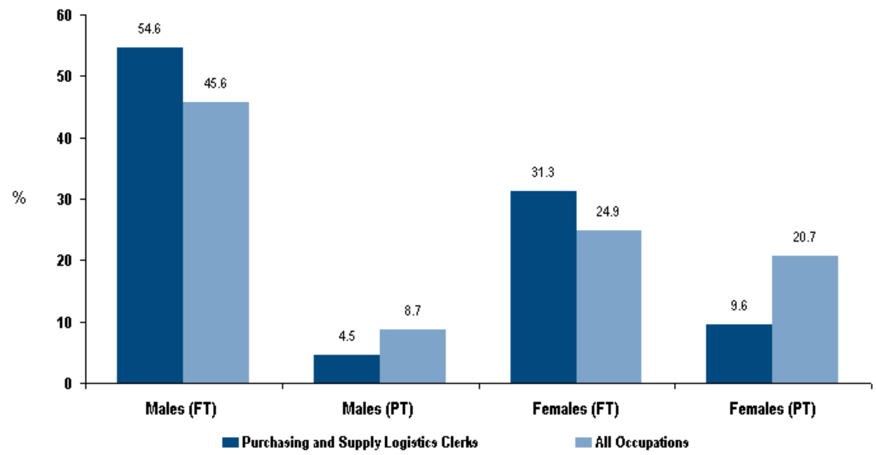
20.7
Males (FT)
Males (PT)
Females (FT)
Females (PT)
Transport and Despatch Clerks
All Occupations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45.6
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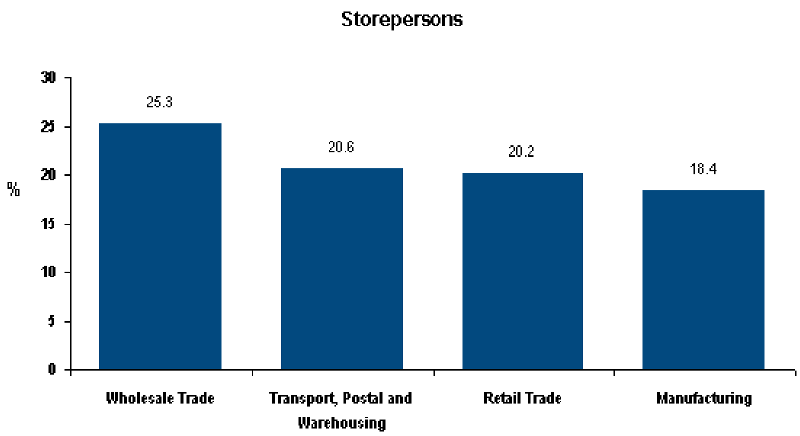
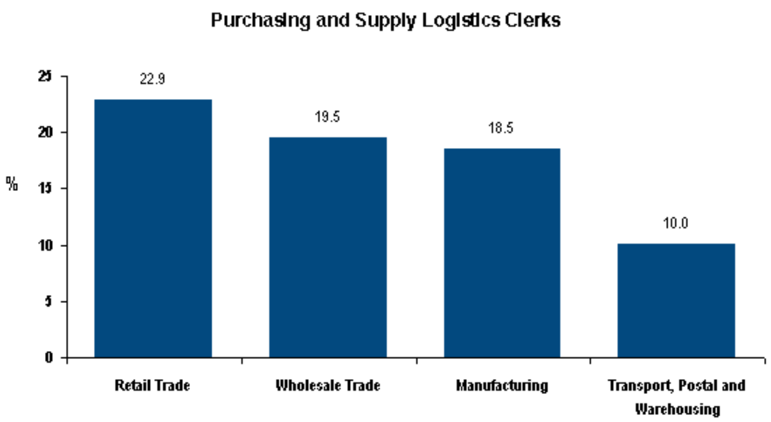
8.7
31.3
24.9
9.6
20.7
Males (FT)
Males (PT)
Females (FT)
Females (PT)
Purchasing and Supply Logistics Clerks
All Occupations

∗ Across all occupations, warehousing is a male dominated workforce. Female participation is highest in office based roles, such as purchasing and supply logistics clerks.

Main Employing Industries (per cent share)

The following graphs shows, for storepersons and purchasing and supply logistics clerks, the industries (up to four) with the largest share of employment, compared with the share for all occupations. The industries are based on the Australian and New Zealand Standard Industrial Classification (ANZSIC 06).[81]





∗ Warehousing workers are spread across a variety of industries.

Impact of Globalisation

There has been an emergence of third party logistics (3PL) providers who provide a one-stop shop service to customers and typically specialise in integrated operation, warehousing and transportation services that can be scaled and customised to customer's needs based on market conditions and the demands and delivery service requirements for their products and materials.

Other factors include the resurgence of regional warehousing to reduce transportation costs in light of oil prices, particularly in the food industry. The increased use of the internet and low cost of products from countries such as China, has also resulted in a huge surge in direct marketing.

Impact of Government Policy/Decisions

Not applicable

Technological

Modern warehousing systems are highly ICT reliant and a growing part of this sector requires individuals with a knowledge and understanding of ICT systems and systems management. New technologies such as the use of logistics management technology and systems, including freight tracking systems, electronic data interchange systems, electronic data interchange system, supply chain management systems, on-board communications and control systems and portable and automated label recognition systems, are constantly evolving. Some companies are planning to introduce automation in the picking process, which requires less staff and will result in lower staff numbers.

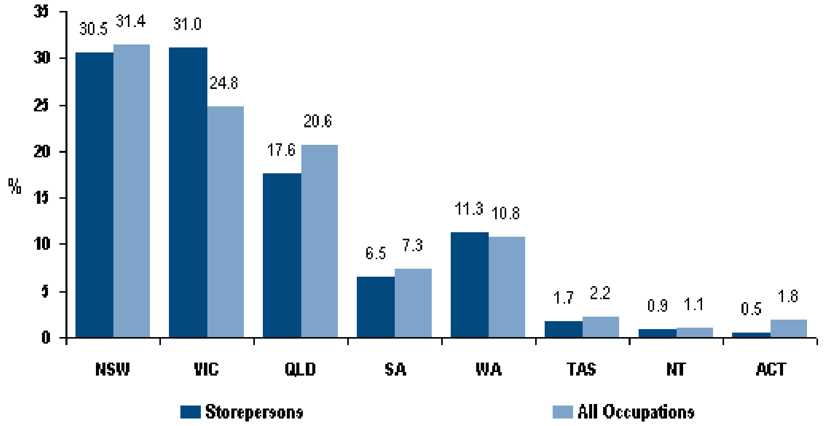
Economic Drivers

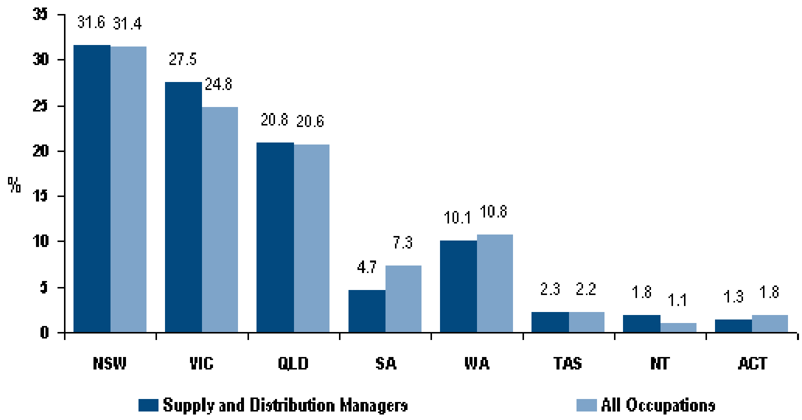
Labour accounts for 55% of the total cost of warehouse operations, with the cost of warehouse space also being a major consideration.

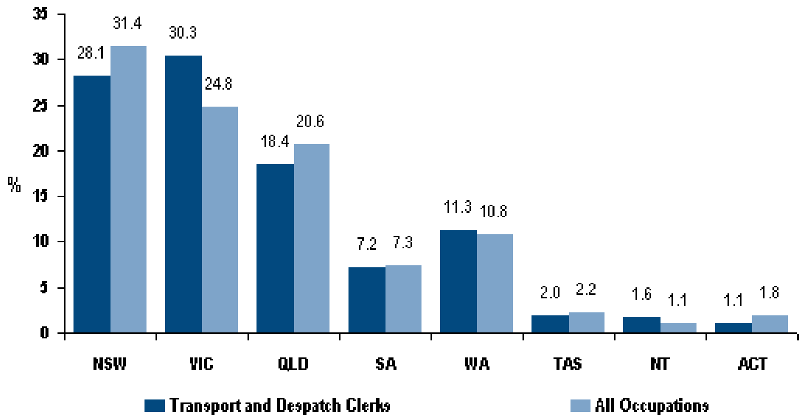
Size and Distribution

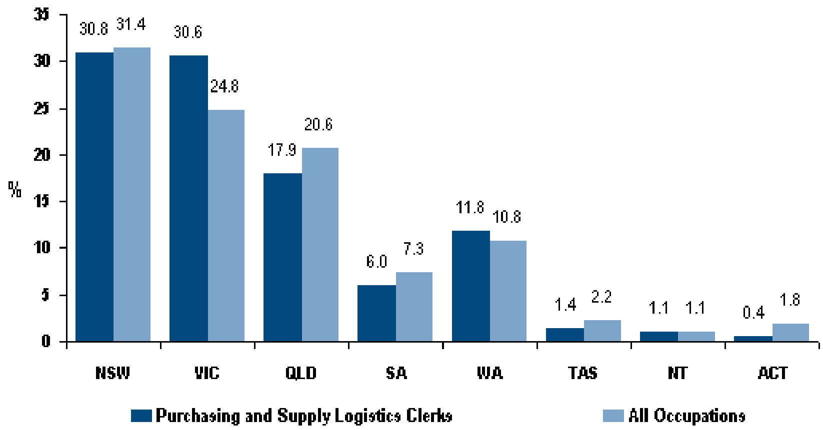
Employment by Region (thousands)

The following graphs show the State share of employment (per cent) for several occupations in the warehousing sector, compared with all occupations.[82]









* WA is the fourth largest State employer of warehousing workers, employing between 10-12% of the national workforce. This is expected to remain steady of the next couple of years.

Sustainability

A recent survey conducted by the TLISC indicates that companies are still coming to terms with the question of sustainability. Warehousing facilities have the largest potential in terms of reducing environmental impacts, with the following areas being targeted in addition to ensuring all employees using the facilities were trained in using them efficiently, especially in relation to company purchasing strategies.

Green Building or Energy Efficient Buildings:

- Reduced energy use and increased energy efficiency of vehicles and in buildings
- Increased water efficiency

Supply Chain Influences:

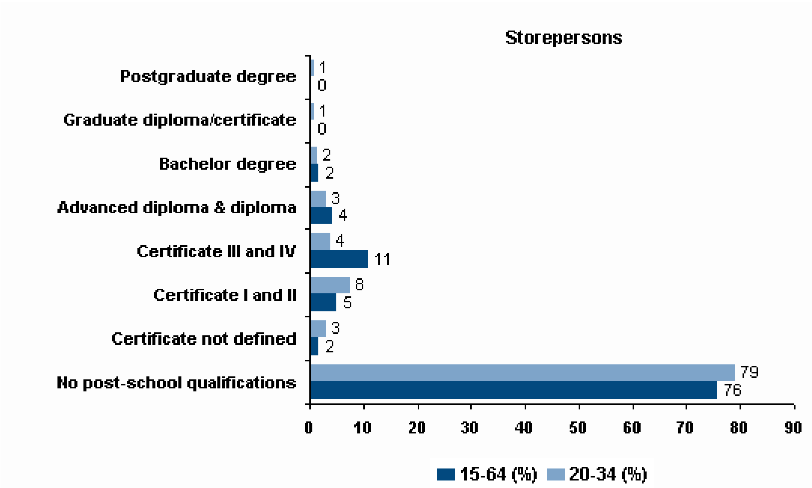
- Purchasing materials, products and services, in addition to hiring power and product selection supporting sustainability, such as:
- Electricity, storage and distribution of goods
- Hiring drivers/distributors
- Sustainable packaging through reuse (CHEP) or minimizing storage and transport materials
- Initiating new sustainability initiatives with your business partners and suppliers, distributors, transporters

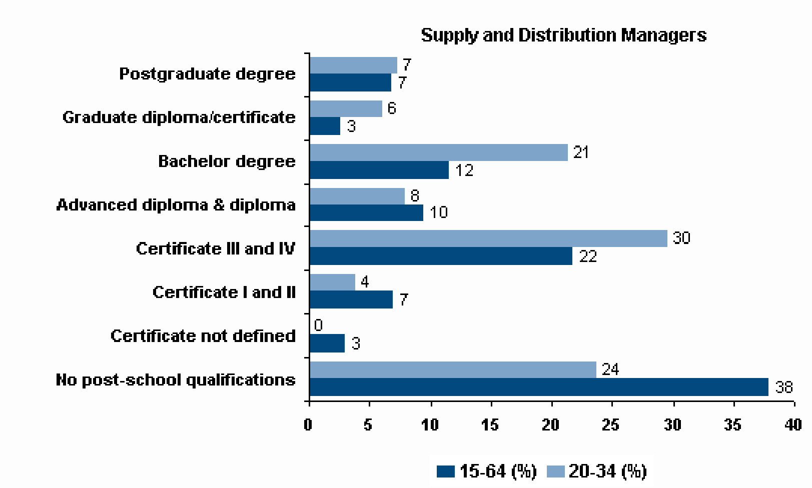
Qualification Profile of Workforce

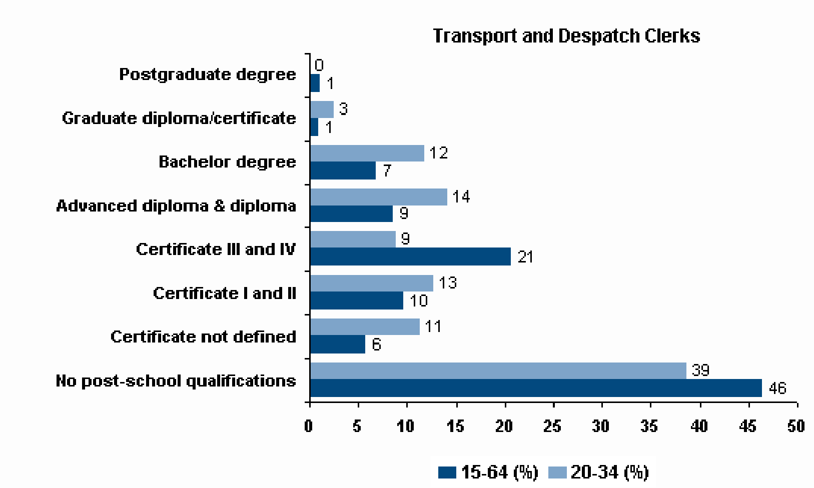
Traditionally warehousing has been considered an unskilled area, however, the introduction of traineeships and qualifications pathways have resulted in an increased uptake of training, and the industry is attracting more educated workers. Whilst some companies provide training to minimal regulatory requirements, there is an emerging training culture involving structured in-house training, traineeships and some pre-employment training being delivered.

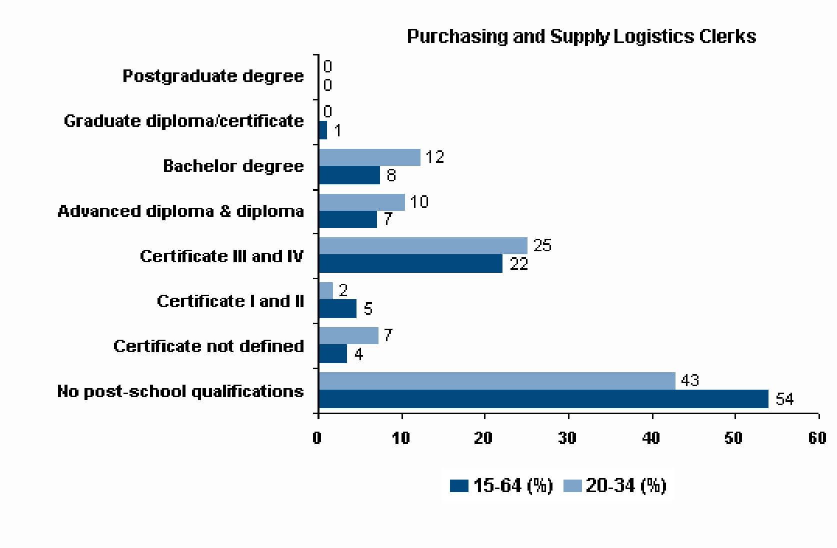
Educational Attainment (per cent of employment)

The following graphs show the highest educational attainment (per cent share of employment) for several occupations in the warehousing sector with a comparison for those aged 15-64 and 20-34.[83]









∗ Nearly 80% of warehousing workers have no post-school qualifications. However, the new training package pathways and take-up of traineeships by industry should see a shift in the data. Many employers have indicated that they would prefer to employ unskilled workers with the required attributes and qualities, whom they can train to their own requirements.

Social Impact

Warehousing was previously considered an occupation for unskilled workers, predominantly male, with women in administration roles or order picking. However, more women are now working in the sector, and qualifications pathways are attracting more educated workers.

Barriers to Employment

- In some instances immigrants and refugees are not getting the continuing support from government in training and health, including mental health. Industry is bearing the cost for such services.

LOGISTICS MANAGEMENT

- Moves towards a more coordinated, vertically integrated, multimodal transport and logistics industry, involving the full supply chains for both freight and passenger transport.
- New trends in the use of logistics management technology and systems, including freight tracking, electronic data interchange systems, supply chain management, onboard communications and control systems, and portable and automated label recognition systems.
- Streamlined systems of compliance, including safety and security management, border security, customs, quarantine, load management and human factors management (including personal safety and security, communications, teamwork, leadership, problem-solving, adaptability and the taking of appropriate initiatives when dealing with critical situations.
- Development of multimodal freight terminals and 'inland ports'.
- Government initiatives to redirect a significant proportion of freight from road systems to the rail networks and the infrastructure implications.
- Increasing consumer demands for goods and services to be provided just-in-time and with exceptional service.
- .

Logistics Industries
ENVIRONMENTAL SCAN

Postal

POSTAL

Overview

Australia Post is the major organisation in the Australian postal industry. Within the private sector, the Major Mail Users of Australia is the peak industry body and represents major mail generators and mailing houses in Australia.[84]

Australia Post is one of Australia's largest employers and has operations encompassing road, rail, air and sea. Australia Post is also a joint venture partner with Qantas in two express delivery businesses: Australian Air Express and Star Track Express.[85] Other companies involved in this sector are captured under the transport and logistics sectors, eg DHL, Toll IPEC, and Australian Air Express.

Due to the changes in the way people now communicate there have been considerable developments in new technology which has allowed postal companies to remain competitive in the global economy and environment. Australia Post has had to encompass the electronic age and has developed a dynamic workforce which relies more heavily on new technologies to assist with the movement of goods. Much of their training is done in house through an intensive program, while private companies are predominantly training on the job, utilising training across logistics, road and warehousing.

Trends Analysis

Australia Post is the major employer of postal workers in Western Australia. There are also a variety of smaller companies involved in courier work and parcel delivery.

Courier and Postal Delivery Officer[86]

- Job prospects for Couriers and Postal Deliverers are average.
- Employment for Couriers and Postal Deliverers to 2012-13 is expected to grow slightly.
- Employment in this very large occupation rose strongly in the past five years, and rose slightly in the long-term (ten years).
- Couriers and Postal Deliverers have an above average proportion of full-time jobs (79%). For Couriers and Postal Deliverers working full-time, average weekly hours are 42.2 (compared to 41.8 for all occupations) and earnings are below average - in the fourth decile.
- Couriers and Postal Deliverers are employed across several industries including: Transport, Postal and Warehousing; Health Care and Social Assistance; Retail Trade; and Wholesale Trade.
- The mix of industries employing Couriers and Postal Deliverers is favourable for employment growth prospects.

Mail Sorters[87]

- Job prospects for Mail Sorters are below average.
- Employment for Mail Sorters to 2012-13 is expected to remain steady. Employment in this medium sized occupation fell in the past five years, and fell markedly in the long-term (ten years).

- Mail Sorters have a below average proportion of full-time jobs (68%). For Mail Sorters working full-time, average weekly hours are 35.3 (compared to 41.8 for all occupations) and earnings are low - in the second decile. Unemployment for Mail Sorters is high.
- Mail Sorters are employed across several industries including: Transport, Postal and Warehousing; Information Media and Telecommunications; Manufacturing; and Professional, Scientific and Technical Services.
- The mix of industries employing Mail Sorters is favourable for employment growth prospects.

Regulatory Requirements

The Department of Broadband, Communications and the Digital Economy provides advice to the Australian Government on postal policy and legislation and on issues affecting the postal industry, including setting the broad strategic policy framework and goals for Australia Post and consultations with industry, consumer groups and other government agencies and stakeholders.[88]

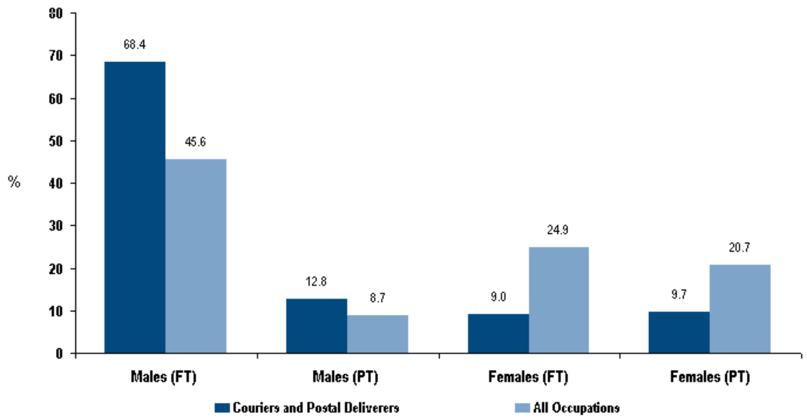
Generally, all goods imported into Australia are subject to customs duty and GST and are assessed for community protection risks. Imported goods are subject to the Australian Quarantine and Inspection Services (AQIS).[89]

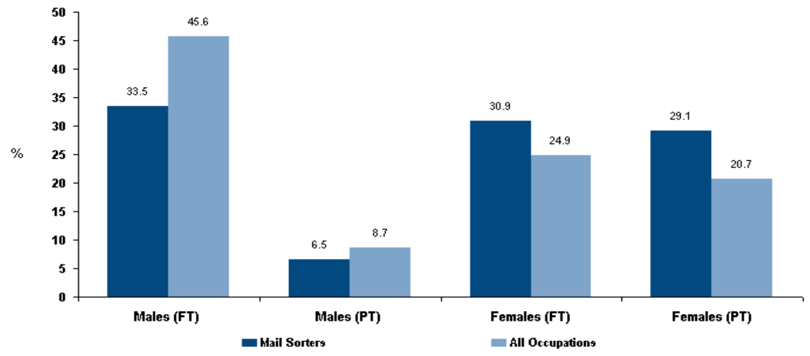
The Postal Industry Ombudsman (PIO) investigates complaints about the provision of a postal or similar service. The PIO is a function of the Commonwealth Ombudsman and is independent of both complainant and postal agency.[90]

Demographics

Gender (per cent share)

The following graphs show the share of employment (per cent) for males and females, employed full-time and part-time, for couriers and postal deliverers and mail sorters compared with all occupations. Source: ABS Labour Force, Survey, Australia (cat. no. 6203.0) - average 2009

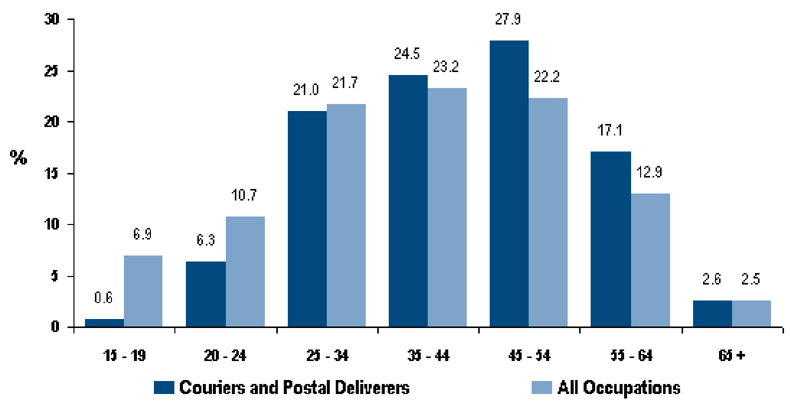




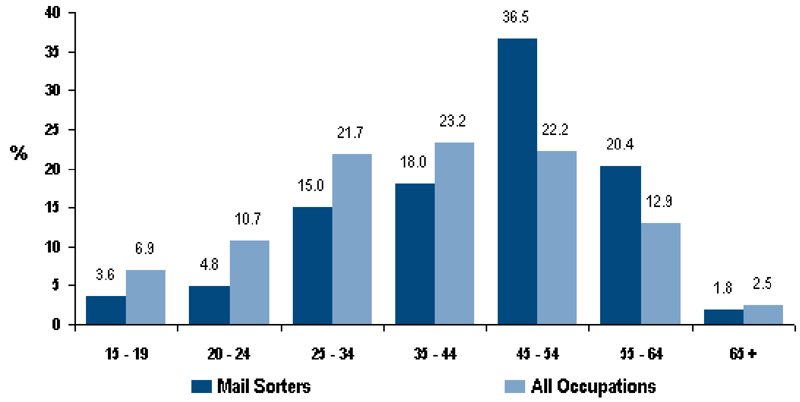
Age Profile (per cent share)

The following graphs show the share of employment (per cent) by age group for couriers and postal deliverers and mail sorters, compared with all occupations.[91]

(Median age for this occupation = 43 years)

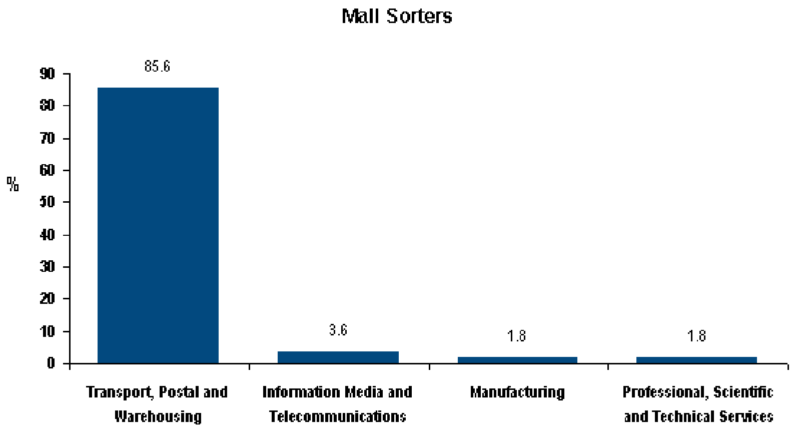


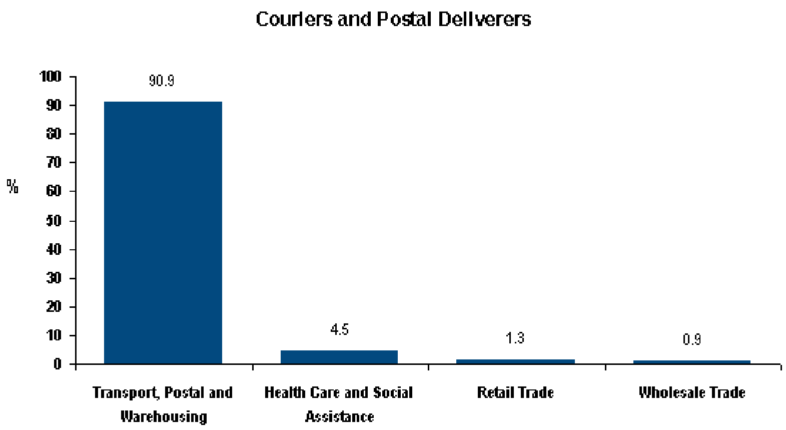
(Median age for this occupation = 47 years)



Main Employing Industries (per cent share)

The following graphs show, for this occupation, the industries (up to four) with the largest share of employment, compared with the share for all occupations. The industries are based on the Australian and New Zealand Standard Industrial Classification (ANZSIC 06).[92]





Impact of Globalisation

Despite a general market downturn, international parcel volumes for Australia Post remained stable during 2008-09. Fluctuations in the exchange rate affected global purchasing patterns, inward delivery revenue and outward delivery costs. As Australia Post is a net importer of international parcels, profitability benefited from the weaker dollar during 2008-09.[93]

The short-term future of parcels and logistics around the world depends on the health of the economy, as consumer spending directly affects demand for the movement of goods. After rapid growth in recent years Australia Post's parcels and logistics portfolio will continue to consolidate its position in readiness for an upturn. [94]

Technological

Australia Post is upgrading its major IT platforms, from HR system to mail production and article-tracking systems. It is also introducing new mail processing equipment and improvements to its transport fleet, as well as upgrading its point-of-sale system and online services. [95]

Other systems used by industry include mobile data terminals (MDTs) to collect and transmit data directly from the point of pick up or delivery; electronic despatch systems which produce compliant bar-coded labels; and automated sort systems.[96] E-Con notes enable customers to create and email consignment notes to their sender.

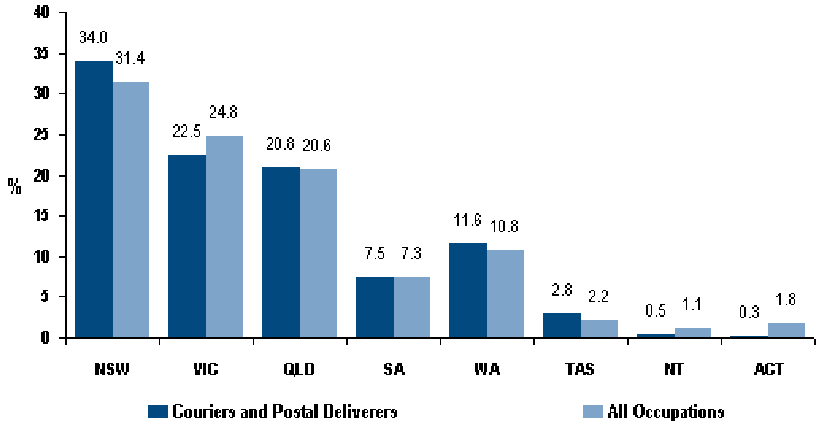
Economic Drivers

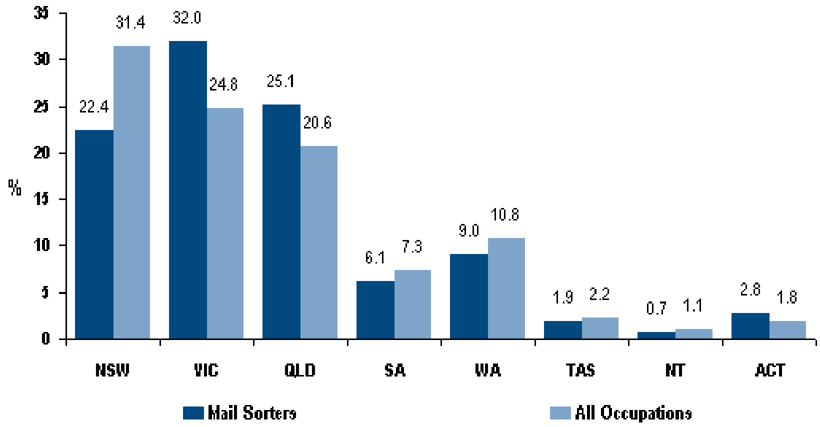
Australia Post is one of the nation's largest employers. In 2008–09, 35,509 staff were paid a total of $2.17 billion in wages and benefits. These direct employment costs account for almost half of the corporation's total expenses. Indirectly, Australia Post employs another 2,941 licensees, 28 franchisees, 637 community postal agents and 5,137 mail contractors.

Size and Distribution

Employment by Region (thousands)

The following graphs show the State share of employment (per cent) for Mail Sorters and Courier and Postal Deliverers, compared with all occupations. Source: ABS Labour Force Survey, Australia (cat. no. 6203.0) - average 2009.





Sustainability

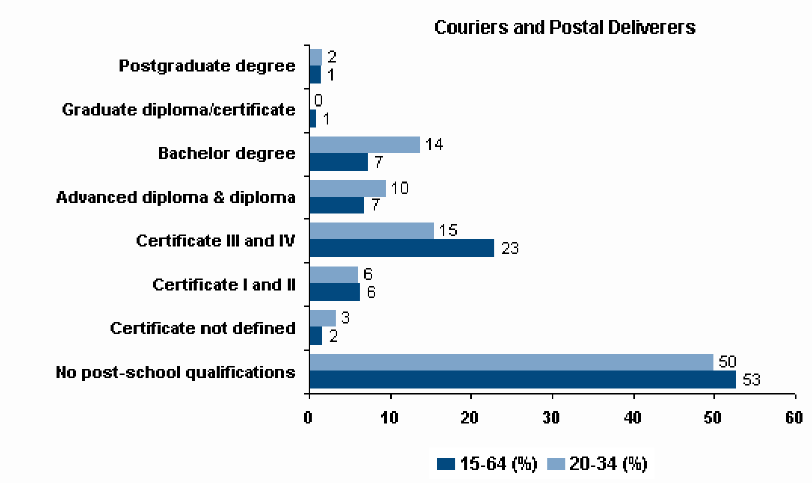
The postal industry is committed to conserving resources, reducing waste and minimising the environmental impact of its business. Initiatives include degradable satchels, carbon emissions programs, projects to reduce waste and increase recycling, and reduction of energy consumption.

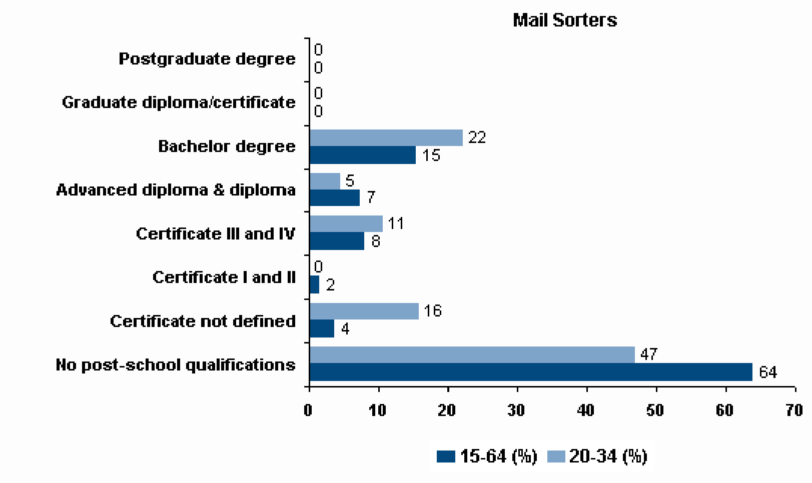
Australia Post has a fleet of over 10,000 vehicles including motorcycles, cars, vans, small and large trucks and prime movers and generates approximately 28% of Australia Post's greenhouse gas emissions. It has committed to reducing its fuel consumption through a number of initiatives including the introduction of hybrid trucks and upgrading the fleet with more emission-efficient vehicles. Australia post is also investigating the potential to introduce electric tricycles and other electric load carrying devices [97]

Qualification Profile of Workforce

Educational Attainment (per cent of employment)

The following graphs show the highest educational attainment (per cent share of employment) for this occupation with a comparison for those aged 15-64 and 20-34.[98]





Data Sources

Information contained within the document has been obtained through extensive consultation with all stakeholders, including the LTC's Board of Management, the LTC's industry working groups, peak bodies and Registered Training Organisations.

Most of the statistics in Job Outlook are based on the Australian Bureau of Statistics (ABS) monthly labour force survey and supplementary surveys, and are subject to sampling variability. Relative standard errors (sampling errors relative to the size of the estimates) are very high for small occupations. Occupational and industry data are only available for the mid month of each quarter (February, May, August and November).

The data presented in Job Outlook are averages for all Australia, and may not represent the characteristics of occupations in particular regions. Projected employment growth for occupations will vary between regions, depending on regional economic growth and the regional industry base. Job prospects will vary between regions and individual workers, depending on the specialised skills and personal attributes being sought by employers.

Historical employment data for ANZSCO occupations have been developed by back-casting the employment figures using a concordance between the Australian Standard Classification of Occupations (ASCO 2nd edition) and ANZSCO based on dual coded estimates from the Labour Force Survey and Census 2006 data. Nevertheless there are discontinuities in the data for some occupations and this may affect employment growth. The time series data have been seasonally adjusted and trended within DEEWR.

Some numbers in Job Outlook have been rounded to whole numbers and apparent differences in figures may reflect this rounding. This may result in figures not appearing on graphs (rounded down to zero), yet the graph indicating a small positive figure.

APPENDIX 1 - ANZIC DIVISION, SUBDIVISION, GROUP AND CLASS CODES AND TITLES

I TRANSPORT, POSTAL AND WAREHOUSING

46 Road Transport

461 Road Freight Transport

4610 Road Freight Transport

462 Road Passenger Transport

4621 Interurban and Rural Bus Transport

4622 Urban Bus Transport (including Tramway)

4623 Taxi and Other Road Transport

47 Rail Transport

471 Rail Freight Transport

4710 Rail Freight Transport

472 Rail Passenger Transport

4720 Rail Passenger Transport

48 Water Transport

481 Water Freight Transport

4810 Water Freight Transport

482 Water Passenger Transport

4820 Water Passenger Transport

49 Air and Space Transport

490 Air and Space Transport

4900 Air and Space Transport

50 Other Transport

501 Scenic and Sightseeing Transport

5010 Scenic and Sightseeing Transport

501 Pipeline and Other Transport

5021 Pipeline Transport

5029 Other Transport nec

51 Postal and Courier Pick-up and Delivery Services

510 Postal and Courier Pick-up and Delivery Services

5101 Postal Services

5102 Courier Pick-up and Delivery Services

52 Transport Support Services

521 Water Transport Support Services

5211	Stevedoring Services
5212	Port and Water Transport Terminal Operations
5219	Other Water Transport Support Services

522 Airport Operations and Other Air Transport Support Services

5220	Airport Operations and Other Air Transport Services

529 Other Transport Support Services

5291	Customs Agency Services
5292	Freight Forwarding Services
5299	Other Transport Support Services nec

53 Warehousing and Storage Services

530 Warehousing and Storage Services

5301	Grain Storage Services
5309	Other Warehousing and Storage Services

nec – not elsewhere classified

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