FINAL REPORT

2014 survey of taxi drivers and operators

Survey results for the Sydney metropolitan transport district

Prepared for
Independent Pricing & Regulatory Tribunal

February 2015

THE CENTRE FOR INTERNATIONAL ECONOMICS
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Summary

Each year IPART reviews the fares for taxi services in NSW and recommends new maximum fares to Transport for NSW. IPART also reviews and recommends the number of new annual Sydney taxi licences to be released from July each year.

As part of these reviews, IPART has surveyed taxi drivers and operators on their costs and revenues every 4 or 5 years. The CIE conducted the last survey on behalf of IPART in 2011. The cost and revenue data from the 2011 survey was used to construct a model of the Sydney taxi industry. Since 2013, IPART has recommended licence numbers and fares for Sydney using this model to estimate the impact on taxi trips taken, passenger waiting times, occupancy rates and annual taxi licence costs of different combinations of fare levels and additional licences. (Prior to 2013, IPART used the cost and revenue data to construct cost indices for urban and country taxis, and would recommend fares based on the estimated annual change in financial costs.)

Given the paucity of public information on the taxi industry, IPART's change in approach to regulation and a number of other recent developments in the industry, it is timely to gather new information. IPART has therefore commissioned the CIE to undertake a new survey of drivers and operators. The data will be used to assess changes in the taxi industry since 2011 and to estimate changes in the costs of providing taxi services over time as an input to the taxi industry model.

This report presents results from the survey for the Sydney metropolitan transport district, based on survey responses received to 16 January 2015. A separate report covering the results of the survey for areas outside Sydney has been provided to IPART.

The survey

The survey was conducted by mailing out survey questionnaires to all authorised taxi drivers and accredited operators in October 2014 along with reply paid envelopes. A web-based version of the same surveys was also available to authorised taxi drivers and operators as an alternative means of responding.

Our general approach was to minimise changes from the 2011 survey questionnaires to ensure comparability across time. While there were few changes to the driver questionnaire, we made more significant changes to the operator questionnaire in order to seek more information directly from operators in relation to:

- usage patterns
- network costs
- vehicle costs
- insurance costs.

We have received more than 2200 survey responses (as at 16 January 2015), covering the Sydney metropolitan area, other urban areas and country NSW.

Key findings – changes in revenue/costs per taxi

Of particular interest to IPART is how recent developments in the Sydney taxi industry — including recent licence releases, fare changes and the emergence of alternative point-to-point transport services — have impacted on taxi drivers and operators. We therefore compare the estimated revenue/costs of a standard unrestricted licence taxi in Sydney in 2014 to 2011, using the same methodology (where possible). This analysis suggests that total revenue and total costs per standard unrestricted licence taxi in Sydney may have decreased in nominal terms over the past three years, by around 1.3 per cent (table 1). This is despite fare increases over this period that have broadly kept pace with inflation.

Table 1 sets out the changes for each cost component in nominal terms between the 2011 survey and the 2014 survey, for Sydney taxis only.[1]

1 Change in taxi revenue/costs in Sydney — 2011 to 2014

	Absolute change	Relative change
	$ ex GST	Per cent
Driver earnings	32	0.1
Operator earnings	-2 695	-29.0
Fuel	1 195	8.2
Cleaning/wash	- 320	-11.6
Vehicle costs	448	7.7
Maintenance and repairs	240	3.7
Insurance	904	7.1
Network fees	307	4.2
Operator administration (ex own labour)	- 29	-6.5
Total costs	**82**	**0.1**
Rent to licence owner	-2 079	-7.1
Total revenue	**-1 997**	**-1.3**

Source: CIE estimates.

These estimates suggest a modest decline in revenue per taxi, due largely to lower usage rates. While there appears to have been a modest nominal increase in revenue per shift across most shifts periods, it has not kept pace with inflation. This is despite fare

1 Please note that the published results of the 2011 survey separated results into urban (a category which included Wollongong, Newcastle and surrounding areas as well as Sydney) and country. To ensure like-for-like comparison of Sydney results between 2011 and 2014, we have re-analysed the 2011 data to isolate Sydney data; therefore, the 2011 cost estimates in the data tables in this report may not match the previously published 'urban' estimates.

increases broadly matching general inflation over the period. Several factors have contributed to this real decline in revenue per shift.

- drivers are working shorter night shifts
- there has been a decline in the number of trips during night shifts
- the average fare has decreased in real terms, implying shorter average trips.

While nominal hourly driver earnings have increased over the period, this has also not kept pace with inflation, implying a real decline in driver incomes.

The survey results also suggest that operator margins may have declined, due to both lower nominal pay-ins received per shift and fewer shifts operated per taxi.

Lower revenue per taxi also appears to have put some downward pressure on the value of licences. Survey results suggest that licence lease costs have declined by around 7.1 per cent in nominal terms since 2011.

Taxi industry costs in 2014

We also estimate the revenue and costs associated with operating (and driving) a standard unrestricted licence taxi and a WAT in Sydney based primarily on survey responses (table 2).

2 Total costs

	Standard unrestricted licence	WAT
	$ ex GST	$ ex GST
Driver earnings	58 610	54 533
Operator earnings	2 391	18 096
Fuel	14 735	17 063
Wash/cleaning	2 427	3 197
Vehicle costs	6 999	10 111
Maintenance and repairs	6 720	8 140
Network fees	7 540	9 477
Insurance	12 918	12 918
Administative costs	422	422
Total costs	**112 761**	**133 957**
Rent to licence owner	27 315	1 025
Total costs (including licence)	**140 076**	**134 982**

Source: CIE estimates.

Note that due to some methodological changes, these costs do not necessarily align with the analysis comparing costs across time (see above). Key methodological changes include the following.

- For this survey we asked operators directly for information about which shifts they put taxis on the road. The survey implied significantly lower usage patterns, compared

to 2011 network data. We have not been able to obtain equivalent daily network data for 2014, so we are unable to directly compare like with like and assess how much of the change is due to market changes and how much to the different method.

  - For estimating change in costs over time, we consider that comparing 2011 Sydney costs and revenue using network shift data and 2014 Sydney costs and revenue using survey shift data is not an accurate measure of the changes because of the distorting effect of the difference in methodology. Instead, to ensure comparability between results we have compared the monthly network KPIs for taxis on the road at 9am and 9pm from 2014 and 2011, and used this to adjust the 2011 shift participation rates to get a proxy figure for 2014.
  - For our calculation of absolute costs in 2014, we have used the survey data on shift patterns. This preserves the integrity and consistency of survey results and will allow us to make comparisons between 2014 costs and revenues for Sydney, other urban and country areas on a like for like basis.

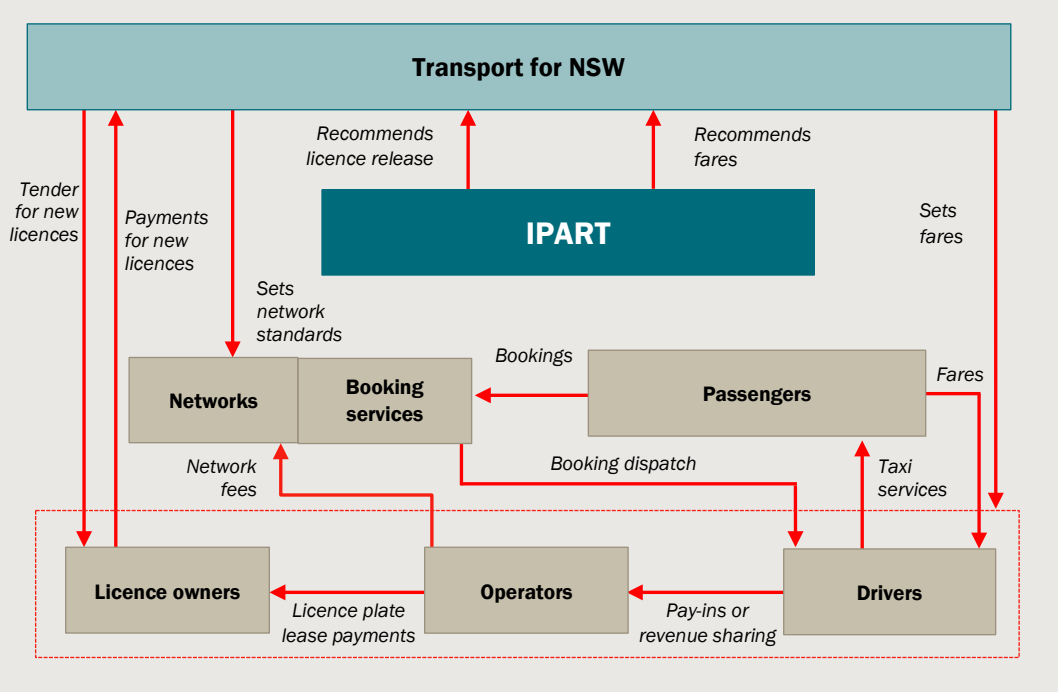
- In the 2014 survey, we directly asked operators how much they paid for insurance, network fees and vehicle costs such as lease and fit-out. In 2011 we obtained quotes from industry suppliers.
  - For estimating change in costs over time, we based our estimates on quotes from industry suppliers.
  - For our calculation of absolute costs in 2014, we have used the survey data on insurance, network fees and vehicle costs.

1 Background and introduction

The Sydney taxi industry

The taxi industry involves many players and the relationships between these players can be complex. In some cases, a single organisation (or individual) can take on multiple parts of the supply chain, while in others it is separated out into distinct components. The relationship between taxi-industry players is summarised in chart 1.1.

1.1 The Sydney taxi industry



Note: The roles of licence owner, operator and driver can sometimes be held by a single person. The functions of taxi booking services will be separated from taxi networks when the Passenger Transport Act 2014 commences.

Data source: CIE.

All taxis are required to be licensed by Transport for NSW. There are several types of taxi licences. Some are temporary, while others are perpetual and transferable. More recently, NSW Transport has moved away from issuing perpetual licences and instead issues 10-year annually renewable licences. There are also time and area restrictions placed on some licences. Perpetual licence transfer values currently reflect economic rent due to restrictions on the number that may operate.

Licence owners can either operate a taxi themselves or earn a return on their asset by leasing the licence to a separate operator. Operators are responsible for various costs associated with operating a taxi, including purchasing or leasing the vehicle, vehicle

maintenance and insurance. The operator is also required to register the taxi with an authorised taxi network and is responsible for paying the network fees.

Operators can drive the taxi themselves or bail their taxi to another accredited driver (or both). Bailee drivers are required to pay the operator for the use of the taxi. The arrangements vary, although most pay a fixed 'pay-in'. The maximum pay-in is determined by the Industrial Relations Commission, although the actual pay-ins may be lower than the maximum. Drivers in the Sydney area are typically responsible for fuel and cleaning costs and keep the remaining fare revenue. Alternatively, some operators enter into a revenue-sharing arrangement with bailee drivers.

Passengers can procure a cab in a number of ways. In Sydney, the most common way of procuring a cab is from taxi ranks or by hailing them down on the street. This 'rank and hail' market makes the majority of passenger journeys in the Sydney area. However, in other areas, the majority of journeys are booked. Taxis can be booked by telephone, the internet or a smartphone app. Networks dispatch phone and internet bookings to all affiliated taxis and each driver can decide whether to accept the booking. More recently smart phone apps that are independent of established networks have also emerged. These apps allow passengers to book a trip directly with the driver and often include an automatic payment system. Passengers pay an additional fee for bookings on top of the standard flag-fall and distance/time-based charges.

Networks are required to meet the standards set by Transport for NSW. They are also responsible for monitoring and enforcing minimum standards for all affiliated cabs.

Regulation of the taxi industry

The regulatory arrangements for the Sydney taxi industry include:

- the requirement for all taxis to be licensed
- regulated maximum fares
- the Contract Determination — amongst other things, this sets out the arrangements between operators and bailee drivers.

Restriction on licence plates

As mentioned above, there is a requirement that all taxis are licensed. As there are restrictions on the number of licences issued in each area, taxi licence plates have significant value in some areas, reflecting economic 'rent' (see box 1.2).

1.2 The value of licence plates

In a market with no barriers to entry, competition would normally prevent firms from earning above-normal profits (referred to as 'economic rent') in the long run. If encumbent firms consistently earns an above-normal profit, new firms enter the market and compete away this rent.

In the NSW taxi industry, market entry is restricted by the number of licence plates on issue. The value of the licence plate is therefore derived from its scarcity. If there were no restrictions on entry, licence plates would have no value. The value of the licence plate therefore reflects the future rents earned by licence plate owners.

Maximum fares

Transport for NSW also sets maximum taxi fares that may apply in NSW. This approach to fare regulation allows taxis to offer lower fares, but in practice most, if not all, taxis charge the regulated maximum. Urban fares applicable in Sydney are shown in table 1.3.

1.3 Regulated maximum fares - Urban areas

Flag fall ($)	3.60
Peak time surcharge[a]	2.50
Distance charge ($)	2.19
Night[b] ($)	2.63[b]
Waiting time charge ($ per hour)	56.68
Booking fee ($)	2.50
Maxi taxi surcharge on total fare (%)	50
Waiting time threshold speed (Km per hour)	26

[a] Applies to journeys commencing between 10pm on a Friday, Saturday or day before a Public Holiday and 6am on the next day. [b] This is calculated as a 20 per cent surcharge on the standard distance rate. It applies to journeys commencing between 10pm and 6am daily.

Source: Transport for NSW website, http://www.transport.nsw.gov.au/content/maximum-taxi-fares-and-charges, accessed 4 December 2014.

The Contract Determination

The *Taxi Industry (Contract Drivers) Contract Determination 1984* (the Contract Determination) sets out a range of conditions, including the financial arrangements between operators and bailee drivers in the Sydney area (specifically the Metropolitan Transport District).

As discussed above, bailee drivers pay the operator for the use of the taxi for a shift. Under the Contract Determination, a bailee can choose to operate under either:

- Method 1 (Commission) — under this approach:

  - first year drivers keep 45 per cent of all fares taken, including GST, but not including tips
  - after the first year, drivers keep 50 per cent of all fares taken
  - the operator pays for fuel and car wash.
- Method II (Set pay-in) — under this approach, the bailee drivers pay the operator a set pay-in and are responsible for fuel and car wash (where necessary). The maximum pay-in is specified in the Contract Determination (table 1.4) and is periodically amended by the Industrial Relations Commission. Actual pay-ins may and are often below the maximum.

Most drivers in Sydney operate under Method II.

1.4 Maximum pay-ins — 3 September 2012

	Day shifts	Night shifts
	$ (ex GST)	$ (ex GST)
Monday	102.90	111.70
Tuesday	102.90	113.60
Wednesday	102.90	122.50
Thursday	102.90	138.20
Friday	102.90	156.80
Saturday	102.90	156.80
Sunday	102.90	121.50

Source: Taxi Industry (Contract Drivers) Contract Determination 1984, NSW Industrial Relations website, http://www.industrialrelations.nsw.gov.au/biz_res/oirwww/pdfs/Awards/Award_0103.pdf, accessed 20 February 2015.

Under the Contract Determination, permanent bailee driver is also entitled to annual leave and sick leave. Permanent bailee drivers are those that have completed at least 220 night shifts or 230 days shifts within a 12 month period for the same operator.

Permanent bailee drivers are entitled to five weeks of paid annual leave per year.

- For drivers operating under Method I, holiday pay is set at a rate equal to 5/47 of the driver's total entitlement from chargeable fares during those 12 months.
- For drivers operating under Method II, holiday pay is set at $833.28 per week.

Permanent bailee drivers are also entitled to 8 days sick leave (5 days in the first year).

- For drivers operating under Method I, the average earnings per shift over the preceding three months is used to work out the rate of sick leave.
- For drivers operating under Method II, the sick leave rate is set at $167.22.

Both permanent and casual drivers are also entitled to long service leave if they have worked for the same owner/operator continuously for 10 years.

In practice, however, the 2011 survey suggested that these leave entitlements are rarely paid.

IPART's role in regulating the taxi industry in NSW

IPART recommends maximum taxi fares. Recently it has also been given responsibility for recommending the number of licence plates to be released in Sydney annually.

Up until 2013, IPART's fare recommendations have been based on changes in the cost of providing taxi services, as estimated by urban and country Taxi Cost Indexes (see box 1.5).

1.5 Taxi Cost Indexes

Until recently, IPART used Taxi Cost Indexes for urban and country areas to guide its fare recommendation. The TCIs were designed to measure *changes* in the cost of providing taxi services in urban and country areas over time.

The TCIs were made up of cost items that reflect the major costs (such as the driver's and operator's labour, fuel, insurance, etc) incurred in providing taxi services. To measure changes in the cost of providing taxi services over the year, IPART applied an inflator — a measure that is intended to reflect the *change* in the cost over the year — to each cost item. The change in each inflator was then weighted according to each cost item's share of total costs.

IPART then adjusted fare components (flagfall, distance rate, waiting time rate) such that the average fare changed in line with the change in the index.

More recently, IPART has moved away from the cost index approach. This approach typically delivered fare increases that exceeded increases in general consumer price inflation, as measured by the Consumer Price Index (CPI). This was moving fares further away from an efficient level, making taxis less affordable for passengers. Despite these real fare increases, driver incomes had remained low, while the economic rent going to licence holders had been increasing.[2]

In recent years, IPART has been using a model of the taxi industry — developed by the CIE — to model the outcome of various licence plate release and fare options and guide its recommendations.

Recent developments in the Sydney taxi market

One focus of this report will be compare survey results to the 2011 results. It is therefore useful to consider some recent developments in the NSW taxi industry since 2011 to provide context to the survey results.

[2] IPART, 2013 Review of taxi fares in NSW: Maximum fares from July 2013, Final report, June 2013, p. 3.

Fares

Since the previous survey conducted in October 2011, most components of the regulated maximum fare have increase by ~6-7 per cent, with the booking fee increasing by almost 9 per cent in urban areas (table 1.6). In addition, a peak-time hiring charge of $2.50 — which applies to journeys commencing between 10 pm on Fridays, Saturdays and Public Holidays and 6 am the next days — has been included in the fare schedule.

1.6 Fare comparison — urban areas

	Fares as at October 2011	Fares as at October 2014	Per cent change
Flag fall ($)	3.40	3.60	5.9
Peak time hiring charge ($)	0.00	2.50	n.a.
Distance charge ($ per Km)	2.06	2.19	6.3
Night-time distance charge ($ per Km)	2.47	2.63	6.4
Waiting time charge ($ per hour)	53.33	56.68	6.3
Booking fee ($)	2.30	2.50	8.7
Maxi taxi surcharge on total fare (%)	50	50	-
Waiting time threshold (Km per hour)	26	26	-

Source: 3; Transport for NSW website, http://www.transport.nsw.gov.au/content/maximum-taxi-fares-and-charges, accessed 4 December 2014.

These fare increases are broadly in line with general inflation. The Sydney CPI increased by 6.7 per cent between the September quarter 2011 and the September quarter 2014. Over this period, the private motoring component of the Sydney CPI increased by 1.2 per cent, while the urban transport fares component increased by 10.4 per cent. This suggests that taxis may have become relatively more expensive, compared to private motoring, but cheaper compared to public transport options.

Licence releases

The number of standard taxi licence plates (including peak availability licences) in the Sydney metropolitan area during the survey period has increased by around 4.5 per cent over the past three years, while the number of WAT licences has increased by around 3.8 per cent (table 1.7).

1.7 Number of licence plates on issue

	October 2011	October 2014	Change	Change
	No.	No.	No.	Per cent
Unrestricted	4 757	4 666	- 91	-1.9
PAL	283	602	319	112.7
WAT	606	629	23	3.8
Fringe area	13	12	- 1	-7.7
Total	**5 659**	**5 909**	**250**	**4.4**

Source: Data provided by IPART.

This suggests that the number of standard taxis available for non-peak periods (i.e. 5am to 12pm, which is in the day shift period) has declined by 1.9 per cent. On the other hand, the number of standard taxis available during peak periods (12pm to 5am, which is mostly in the night shift period, but also covers several hours of the day shift period) has increased by 4.5 per cent.

Increased competition

Another major development in the NSW taxi market has been the emergence of smartphone apps. Many of the established networks — particularly in the Sydney area — have been allowing passengers to book taxis through smartphone apps for several years. Since the previous survey, a number of smartphone apps that are independent of the established networks have also emerged, including goCatch, ingogo and Uber. These smartphone apps allow passengers to making bookings directly with the driver and may also include automatic payment systems, reducing the need for cash or separate credit card transactions.

Under the Passenger Transport Act, these services must be provided in a licensed taxi or hire car, by an appropriately accredited driver.[3]

In 2014, Uber introduced its UberX rideshare service in Sydney, allowing private cars with drivers to be engaged via the Uber app. This service does not comply with the Passenger Transport Act, but also competes with taxi services.

This report

There is relatively little public information available for IPART to base its recommendations. In recent years, IPART has used information collected from a survey of NSW taxi drivers and operators undertaken by the CIE in 2011. Given IPART's change in approach to regulating the taxi industry and the developments in the industry outlined above, it was timely to gather new information. IPART therefore commissioned the CIE to undertake a new survey of drivers and operators.

This report focuses on the Sydney metropolitan transport district. A separate report covering areas outside of Sydney has been provided to IPART.

Changes since the draft report

Since the draft report, we have incorporated additional survey responses into our analysis. We have also looked more closely at a number of cost categories, including insurance costs and vehicle costs.

The main changes since the draft report are as follows.

- Once the additional survey responses were included, driver earnings in 2014 were estimated to be slightly higher than suggested by the preliminary estimates.

[3] Transport for NSW, *Transport for NSW statement regarding 'ride sharing' apps*, Media Release, 30 April 2014.

- When compared using a like for like method, insurance costs are estimated to have increased over the past three year, rather than decreased, as estimated in the draft report.

Report structure

The remainder of this report is structured as follows:

- Chapter 2 discusses the survey methodology
- Chapter 3 compares cost estimates to the 2011 survey
- Chapter 4 presents the survey results for driver revenue and costs
- Chapter 5 presents the survey results for operator revenue and costs.

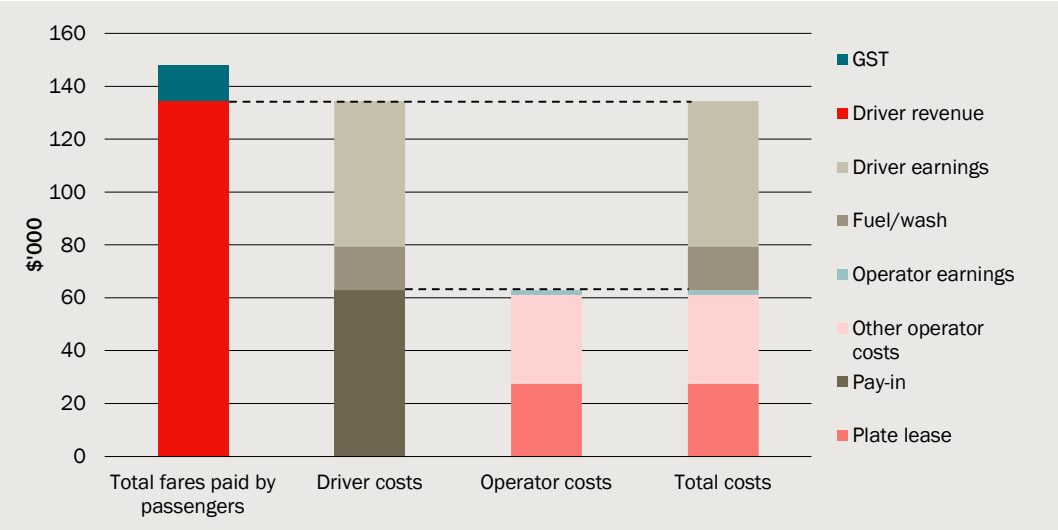
2 Methodology

In this chapter we outline the methodology used to estimate costs and revenue and other details relating to the survey.

Approach to measuring costs

As discussed previously, the relationship between various parties in the taxi industry can be quite complex. Chart 2.1 summarises the distribution of fare revenue among the various parties for a Standard unrestricted licence taxi in Sydney, where the driver operates under Method II (i.e. a set pay-in).

2.1 Distribution of fare revenue — Standard Sydney unrestricted licence taxi



Data source: CIE.

The fragmented nature of the taxi industry in NSW means that the full story cannot be obtained from a single source, particularly in Sydney where most drivers operate under Method II. This means that surveys of both drivers and operators are required.

In general, we have:

- sought information on a per shift basis from drivers and aggregated this up to an annual estimate using information on usage patterns from operators.
- directly sought information on operator costs from operators.

Our general approach to measuring each cost item and the source of information is summarised in table 2.2.

2.2 Summary of approach to obtaining relevant information

Cost item	Information required	Source
Licence lease costs	Annual lease costs for each licence type	Operator survey
Vehicle	Cost of vehicle	Operator survey
	Cost of fit-out	Operator survey
	Useful life of vehicle	Operator survey
Network fees	Network fee costs	Operator survey
Insurance	Insurance purchased	Operator survey
	Insurance costs	Operator survey
Maintenance and repairs	Maintenance costs	Operator survey
	Maintenance time	Operator survey
	Hourly rate for own maintenance	Market estimates
Operator earnings	Pay-ins per shift	Driver survey
	Number of shifts operated	Operator survey
	Operator costs	Operator survey
Driver earnings	Hours worked per shift	Driver survey
	Driver earnings per hour per shift	Driver survey
	Pattern of shifts worked across a year	Operator survey
Fuel	Fuel costs per shift	Driver survey
	Pattern of shifts worked across a year	Networks
Cleaning costs	Cleaning cost per wash	Suppliers

Source: CIE.

The surveys

Development of the survey instrument

Our general approach to the survey was to minimise changes from the 2011 survey instrument to ensure comparability across time. The 2011 survey instruments were developed in close consultation with key stakeholders, including IPART, Transport for NSW, the NSW Taxi Council, the NSW Taxi Drivers' Association and the Australian Taxi Drivers' Association and yielded meaningful results.

While changes to the driver survey instrument were minimal, we made more significant changes to the operator survey. Whereas in 2011 we relied on supplier quotes and other sources of industry information for some cost items, in 2014 we decided to seek additional information from the operator survey in relation to:

- usage patterns
- network costs
- insurance costs.

We also consulted with the same stakeholders listed above. The final survey instruments are provided in appendix A.

Survey details

The survey was conducted through a number of separate channels.

- Mail-out survey — the surveys were mailed out to all authorised taxi drivers and accredited operators in October 2014 along with reply paid envelopes.
- Web-based survey — a web-based version of the same surveys were developed and went live in October 2014. Links to the survey were provided in the letter to drivers and operators and on Transport for NSW's taxi portal.

Responses

We have received more than 2200 survey responses (as at 16 January 2016) across NSW (table 2.3). Of these, nearly 1200 related to the Sydney area; 1030 driver surveys and 167 operator surveys. The remaining responses either relate to other areas of NSW (or did not specify).

2.3 Survey responses

	Driver surveys	Operator surveys	Total
	No.	No.	No.
Responses from the Sydney area	1 030	167	1 197
Other responses received	936	110	1 046
Total	**1 966**	**277**	**2 243**

Note: Includes responses from all of NSW, not just the Sydney region.

Source: CIE.

The number of responses was significantly lower than for the 2011 survey (table 2.4). As the surveys were broadly similar and conducted in a similar manner, it is not clear what accounts for the lower response rate in 2014.

2.4 Response to 2011 survey

	Driver survey	Operator survey	Total
	No.	No.	No.
Responses	2 645	594	3 239

Note: Includes responses from all of NSW, not just the Sydney region.

Source: CIE.

Analysis of survey responses

As expected, there is significant variation in the survey responses, reflecting variation in the experiences of different drivers and operators. As discussed previously, the challenge

is to obtain from the range of responses in the survey sample a single measure that is representative of the average of the taxi industry as a whole. This raises three issues relevant to the interpretation and presentation of survey results:

- the level of disaggregation
- treatment of outliers
- treatment of GST.

Level of disaggregation

Costs can vary significantly across a number of dimensions, including the area the taxi operates, the type of vehicle, the type of licence and the number of shifts. Disaggregating the data across multiple dimensions reduces the sample size and therefore decreases the precision of the estimates. This is of particular concern, given the smaller sample size compared to 2011.

In general, standard unrestricted licence taxis and WATs have significantly different cost structures. Some of the cost items that will vary significantly between standard unrestricted licence taxis and WATs include: licence -related costs; vehicle-related costs; and usage patterns, which will affect driver labour costs, fuel and pay-ins. We have therefore explicitly measured costs for both standard unrestricted and WAT licences. We have not separately attempted to measure the cost structure of premium taxis.[4]

Since the purpose of the 2011 survey was to re-weight the Taxi Cost Indexes, we disaggregated our estimated across urban and country areas to match the areas where the two Taxi Cost Indexes applied. For the current exercise, IPART requested that we separate 'urban areas' into Sydney and 'other urban', which includes Newcastle, Wollongong and a number of other areas. This report focuses specifically on the Sydney area. A separate report on the survey results for other urban and country has been provided to IPART.

Treatment of outliers

There are various measures that can be obtained from the survey sample that can be interpreted as representative of the whole taxi industry. These include:

- the mean — the mean is the average of the survey responses. The mean uses all the information available, but may be influenced by outliers; and
- the median of the survey responses — the median is the middle response of the sample. The median is less influenced by outliers, but uses less information and therefore may not be representative of the whole population.

In general, we prefer to use the mean because it uses more of the information available. However, the mean can be heavily affected by outliers, particularly when the sample is

[4] We use the term 'premium taxis' to refer to taxis that try to differentiate themselves in the market by providing a higher level of service through means such as more experienced drivers, higher quality vehicles etc.

small. Some outliers may reflect an unusually good or bad actual experience (for example, an unusually quiet or busy night). However, others may occur due to misinterpretation of the question or input errors in putting the survey into our database.

Following the approach used in 2011, we present survey results based on a 5 per cent trimmed mean, where the 5 per cent of responses in each tail of the distribution are removed from the sample (where there are sufficient responses). Therefore, unless otherwise stated, survey responses reported are the 5 per cent trimmed mean.

Treatment of GST

Cost models for standard unrestricted taxis and WATs in Sydney are developed in subsequent chapters. Since the Goods and Services Tax (GST) is designed as a tax on consumption rather than on businesses, the cost models developed exclude GST.

Although the cost models are presented exclusive of GST, the survey asked for costs inclusive of GST. This was so that the questions aligned with actual payments to suppliers, which is the figure that is most likely to be at the forefront of drivers and operators minds. Any GST paid on inputs can be subsequently claimed as an offsetting input tax credit.

This means that GST must be subtracted from the costs estimated in the survey and from supplier quotes. This includes the takings retained by drivers, when estimating driver earnings.

3 Comparison with previous estimates

In this chapter, we analyse how costs and revenues per taxi have changed between 2011 and 2014 based on the same methodologies (where possible).

Change in revenue/costs per taxi between 2011 and 2014

Using comparable methodologies, the total revenue of a standard unrestricted licence taxi in the Sydney area is estimated to be around $2000 lower in nominal terms in 2014, compared to a 2011 (table 3.1). This is a decline of around 1.3 per cent. Total costs have changed little over the period, while the rent to licence owners has declined by around 7.1 per cent.

3.1 Change in taxi revenue/costs — 2011 to 2014

	Absolute change	Relative change
	$ ex GST	Per cent
Driver earnings	32	0.1
Operator earnings	-2 695	-29.0
Fuel	1 195	8.2
Cleaning/wash	- 320	-11.6
Vehicle costs	448	7.7
Maintenance and repairs	240	3.7
Insurance	904	7.1
Network fees	307	4.2
Operator administration (ex own labour)	- 29	-6.5
Total costs	**82**	**0.1**
Rent to licence owner	-2 079	-7.1
Total revenue	**-1 997**	**-1.3**

Source: CIE estimates

Comparison with 2011 estimates

Of significant interest to IPART is how costs and the factors that drive those costs have changed since 2011. We therefore compare the estimates from the 2014 surveys with previous estimates from 2011.

Here we focus on standard unrestricted taxis in the Sydney area, as this is the information IPART requires to update its taxi industry model. Note that in 2011 we estimated the costs for all urban areas together, rather than the Sydney area only. To

ensure that the estimates are comparable, we have re-analysed the 2011 surveys to exclude 'other urban' areas. Consequently, the 2011 estimates presented here will not necessarily align exactly with the estimates presented in our 2012 final report.[5]

Usage patterns

The number of shifts a taxi is on the road, and which shifts they are (ie, day or night, weekend or weekday), are key drivers of driver labour and fuel costs. This usage pattern is also a key factor influencing operator revenue and therefore overall returns to operators.

The 2011 cost estimates were calculated using usage patterns derived from daily data on the share of taxis logged onto the network at 9am and 9pm obtained from a network, adjusted for the possibility that some drivers working during that shift period may not be logged onto the network at that particular time. We have not been able to obtain daily network data for 2014 that would enable us to compare the usage patterns on a shift by shift basis.

When comparing estimates that rely on usage estimates, it is important that it is compared on a like for like basis. In order to do this, we have considered a different source of information about shift patterns where we have comparable data for 2011 and 2014. The number of taxis logged onto a network at 9am and 9pm is one of the network key performance indicators (KPIs) that is reported on a **monthly** basis to RMS by networks. This gives us information about day shifts and night shifts driven, but not about days of the week. Comparing monthly KPI data for the January to September period in 2014 to the same period three years earlier suggests that the share of taxis logged onto the network at 9am and 9pm was lower in 2014 than three years earlier, by around 2-4 per cent.

3.2 Share of taxis logged onto the network

	2011[a]	2014	Difference
	Per cent	Per cent	Percentage change
Day shifts (logged on at 9am)	68.2	65.8	-3.6
Night shifts (logged on at 9pm)	71.0	69.7	-1.9

[a] Monthly data averaged over the January to September period.

Source: Key Performance Indicator data provided by IPART.

To estimate the shift patterns for 2014, we use the 2011 shift patterns scaled down by the changes in the KPI data (table 3.3). Specifically, we scale down all day shifts by 3.6 per cent and all night shifts by 1.9 per cent, as per the change in the share of taxis logged onto the network at 9am and 9pm (see table 3.2).

[5] Centre for International Economics, *Reweighting of the taxi cost index*, Final report prepared for IPART, April 2012.

3.3 Estimated number of shifts — comparison

	2011	2014 — comparable basis[a]	Difference
	No.	No.	No.
Day shifts			
Monday	41.8	40.3	-1.5
Tuesday	43.0	41.4	-1.6
Wednesday	43.8	42.2	-1.6
Thursday	45.3	43.7	-1.6
Friday	43.5	41.9	-1.6
Saturday	31.6	30.5	-1.1
Sunday	28.5	27.5	-1.0
Total day shifts	277.5	267.5	-10.0
Night shifts			
Monday	33.7	33.1	-0.6
Tuesday	38.4	37.7	-0.7
Wednesday	41.0	40.2	-0.8
Thursday	43.7	42.9	-0.8
Friday	46.3	45.4	-0.9
Saturday	43.4	42.6	-0.8
Sunday	28.2	27.7	-0.5
Total night shifts	274.7	269.6	-5.1
Total	**552.2**	**537.1**	**-15.1**

[a] Estimates derived from scaling down days shifts by 3.6 per cent and night shifts by 1.9 per cent (see table 3.2)

Source: CIE estimates.

Shift information

A comparison of driver earnings per hour from the two surveys is shown in table 3.4. In general, the survey suggests that changes in hourly driver earnings have been modest over the past three years. While driver earnings have increased in nominal terms in most shift periods, the increase has generally been lower than CPI (the Sydney CPI has increased by around 6.7 per cent over this period). This implies declining real incomes for most Sydney taxi drivers. In several shift periods, hourly driver earnings appear to have fallen even in nominal terms.

3.4 Driver earnings per hour

	2011	2014	Change	Change
	$ ex GST	$ ex GST	$ ex GST	Per cent
Day shifts				
Monday	9.32	9.77	0.46	4.89
Tuesday	9.15	9.83	0.68	7.45

	2011	2014	Change	Change
	$ ex GST	$ ex GST	$ ex GST	Per cent
Wednesday	9.42	10.19	0.77	8.19
Thursday	9.96	10.35	0.39	3.91
Friday	10.81	11.03	0.22	2.02
Saturday	10.63	10.58	-0.05	-0.46
Sunday	10.78	11.47	0.69	6.38
Night shifts				
Monday	7.53	7.79	0.26	3.49
Tuesday	8.60	8.54	-0.07	-0.76
Wednesday	9.68	9.51	-0.18	-1.83
Thursday	10.89	11.31	0.42	3.89
Friday	14.37	15.05	0.69	4.78
Saturday	14.47	15.21	0.73	5.06
Sunday	10.50	10.16	-0.34	-3.27

Source: CIE Survey of taxi drivers.

There have been statistically significant changes in the length of shifts since 2011 (table 3.5). Drivers have tended to work slightly longer day shifts and shorter night shifts.

- While the increase in the length of day shifts is only around 4.2 minutes (0.074 hours) on average, this is statistically significant at the 10 per cent level of significance, but not the 5 per cent level of significance
- The decrease in the length of night shifts is estimated at around 12.8 minutes (0.214 hours) on average, which is statistically significant at the 5 per cent significance level.

3.5 Hours per shift

	2011	2014	Change
	No.	No.	No.
Day shifts			
Monday	9.91	10.05	0.13
Tuesday	9.87	10.03	0.16
Wednesday	9.96	10.00	0.03
Thursday	9.97	10.08	0.11
Friday	10.03	10.00	-0.03
Saturday	10.28	10.28	0.00
Sunday	10.53	10.63	0.11
Night shifts			
Monday	9.84	9.55	-0.29
Tuesday	9.94	9.86	-0.09
Wednesday	10.15	10.04	-0.12
Thursday	10.50	10.43	-0.07

	2011	2014	Change
	No.	No.	No.
Friday	11.42	11.24	-0.17
Saturday	11.30	11.16	-0.14
Sunday	9.68	9.56	-0.12

Source: CIE Survey of taxi drivers.

The survey also suggests that pay-ins in the Sydney area are consistently a few dollars per shift lower than in 2011 across most shifts in nominal terms (except Friday nights). This is statistically significant at the 5 per cent level (see appendix C).

3.6 Pay-ins per shift

	2011	2014	Change
	$ ex GST	$ ex GST	$ ex GST
Day shifts			
Monday	116.45	114.59	-1.86
Tuesday	117.09	115.20	-1.89
Wednesday	117.52	114.74	-2.77
Thursday	117.41	115.25	-2.16
Friday	118.65	115.02	-3.63
Saturday	105.86	101.16	-4.70
Sunday	103.54	100.72	-2.82
Night shifts			
Monday	122.96	119.98	-2.98
Tuesday	133.32	129.64	-3.69
Wednesday	140.87	140.66	-0.21
Thursday	150.53	150.25	-0.28
Friday	169.40	170.72	1.32
Saturday	163.87	162.66	-1.21
Sunday	103.57	102.41	-1.16

Source: CIE Survey of taxi drivers.

The survey suggests that fuel costs are consistently around $2-4 per shift higher in 2014 than they were in 2011. This is also statistically significant at the 5 per cent level (see appendix C). This is likely to at least partly reflect higher fuel prices; the automotive component of the Sydney CPI was around 4 per cent higher in the September quarter 2014, compared to the September quarter 2011.[6]

6 Australian Bureau of Statistics, *Consumer Price Index*, Australia, September 2014, Catalogue No. 6401.0.

3.7 Fuel costs per shift

	2011	2014	Change
	$ ex GST	$ ex GST	$ ex GST
Day shifts			
Monday	23.46	26.68	3.21
Tuesday	23.00	25.49	2.49
Wednesday	23.81	26.16	2.35
Thursday	23.85	26.18	2.33
Friday	24.58	27.37	2.79
Saturday	25.55	28.24	2.69
Sunday	27.06	32.01	4.95
Night shifts			
Monday	24.13	26.97	2.84
Tuesday	25.15	27.91	2.76
Wednesday	26.44	29.25	2.81
Thursday	28.28	31.79	3.51
Friday	33.13	35.89	2.76
Saturday	33.66	36.82	3.16
Sunday	24.71	28.10	3.39

Source: CIE Survey of taxi drivers.

The number of paid trips during day shifts has not changed significantly (table 3.8). However, the number of paid trips during night shifts has fallen by an average of 0.6 trips per shift. This decline is statistically significant at the 5 per cent level (see appendix C for details).

3.8 Trips per shift

	2011	2014	Change
	No.	No.	No.
Day shifts			
Monday	12.35	11.80	-0.55
Tuesday	12.16	11.94	-0.22
Wednesday	12.94	12.36	-0.58
Thursday	12.75	12.88	0.13
Friday	13.90	13.45	-0.44
Saturday	13.56	13.82	0.27
Sunday	14.53	14.71	0.19
Night shifts			
Monday	12.24	12.53	0.28
Tuesday	14.33	13.68	-0.65
Wednesday	15.88	15.12	-0.76

	2011	2014	Change
	No.	No.	No.
Thursday	17.44	16.30	-1.14
Friday	22.90	21.67	-1.22
Saturday	22.54	21.84	-0.69
Sunday	15.34	14.18	-1.16

Source: CIE Survey of taxi drivers.

Table 3.9 summarises the change in nominal revenue per shift between 2011 and 2014 (excluding wash costs). This suggests that total revenue is slightly higher on most day shifts (except Saturdays), with higher driving earnings and higher fuel costs more than offsetting lower pay-ins. For night shifts, the picture is more mixed. Fuel costs are higher in all shifts, while pay-ins and driver earnings vary.

3.9 Change in revenue per shift (excluding wash costs) from 2011 to 2014

	Driver earnings	Fuel	Pay-in	Total
	$ ex GST	$ ex GST	$ ex GST	$ ex GST
Day shifts				
Monday	6.00	3.21	-1.86	7.35
Tuesday	8.91	2.49	-1.89	9.50
Wednesday	7.84	2.35	-2.77	7.41
Thursday	4.62	2.33	-2.16	4.79
Friday	1.11	2.79	-3.63	0.27
Saturday	-1.64	2.69	-4.70	-3.65
Sunday	9.40	4.95	-2.82	11.53
Night shifts				
Monday	1.88	2.84	-2.98	1.74
Tuesday	-1.32	2.76	-3.69	-2.25
Wednesday	-3.27	2.81	-0.21	-0.68
Thursday	3.71	3.51	-0.28	6.94
Friday	5.17	2.76	1.32	9.25
Saturday	6.54	3.16	-1.21	8.49
Sunday	-5.57	3.39	-1.16	-3.35

Note: Excludes wash/cleaning costs.

Source: CIE Survey of taxi drivers.

Operator costs

Operator costs in 2014 based on survey estimates compared to 2011 estimates are shown in table 2. These estimates suggest that in aggregate, operator costs have not changed significantly over the past three years. Most cost components are estimated to have increased.

- Fuel, insurance and vehicle costs are all estimated to have increased at a pace slightly above general inflation (i.e. there have been real cost increases)
- Network fees and maintenance and repair costs have all increased at a pace slightly below general inflation (i.e. there have been real cost decreases).

These cost increases have been mostly offset by lower plate lease costs, which appear to have declined by around $2100, or around 7 per cent.

3.10 Comparison of operator costs (excluding own labour)

	2011	2014	Difference	Change
	$ ex GST	$ ex GST	$ ex GST	Per cent
Vehicle costs	5 805	6 253	448	7.7
Maintenance and repairs	6 481	6 721	240	3.7
Insurance	12 649	13 554	904	7.1
Network fees	7 233	7 540	307	4.2
Administration costs (ex own labour)	451	422	- 29	-6.5
Total costs	**32 619**	**34 489**	**1 870**	**5.7**
Licence lease	29 394	27 315	-2 079	-7.1
Total costs (including licence)	**62 013**	**61 803**	**- 209**	**-0.3**

Source: CIE estimates.

Some changes for specific cost items are discussed below. The remaining estimates are generally based on survey responses and are discussed in more detail in subsequent chapters.

Insurance costs

In the draft report, insurance costs were estimated to have decreased significantly. This finding did not align with reports that CTP insurance for taxis had increased rapidly over recent years. This required further investigation.

In 2011, insurance costs were estimated based on supplier quotes, while the 2014 estimate in the draft report was based on survey responses. We therefore re-estimated 2014 insurance costs using the 2011 methodology to ensure comparability. This methodology implies that overall, insurance costs have increased by around 7.2 per cent. A significant increase in the cost of CTP insurance has been partly offset by lower charges for other types of insurance.

3.11 Insurance costs

	2011	2014
Cost of policy ($ including GST)		
Compulsory Third Party	4 489	6 530
Comprehensive	7 492	6 750
Third party property	3 828	3 000
Workers' Compensation	1 908	1 650

	2011	2014
General liability	200	150
Share of operators (per cent)		
Compulsory Third Party	100	100
Comprehensive	96	96
Third party property	4	4
Workers' Compensation	100	100
General liability	86	86
Weighted average cost ($)		
Total (including GST)	13 914	14 909
Total (ex GST)	**12 649**	**13 554**

Source: CIE estimates based on supplier quotes.

Vehicle costs

We also re-estimated vehicle-related costs using the same methodology as in 2011 (table 3.12). This suggested that vehicle-related costs have increased by around 7.7 per cent.

3.12 Vehicle-related costs

	2011[a]	2014
Vehicle life[b]		
Age at purchase (years)	1.5	2.18
Expected life (years)	4.9	4.33
Upfront cost		
Upfront capital cost ($ including GST)		
Purchase price[c]	19 650	19 075
Fit-out cost	6 271	6 221
Total	25 922	25 296
Upfront capital cost ($ ex GST)		
Fit-out cost	17 864	17 341
Total capital cost	5 701	5 655
Total	23 565	22 996
Residual value ($)		
Residual value of assets	700	700
Cost of capital (per cent)		
Nominal interest rated[d]	8.40	7.95
Real interest rate[e]	5.90	5.45
Annualised cost ($ ex GST)		
Annualised cost	**5 805**	**6 253**

[a] See CIE, Reweighting of the taxi cost index, Prepared for IPART, April 2012, p. 47. [b] Estimates based on survey responses. [c] Estimates based on Redbook, http://www.redbook.com.au/ , accessed January 2014. d RBA. e Based on nominal interest rate less 2.5 per cent (the midpoint of the RBA's target).

Source: CIE, Reweighting of the taxi cost index, Prepared for IPART, April 2012; Redbook, http://www.redbook.com.au/ , accessed January 2014; RBA, The CIE.

Operator revenue and operator labour costs

Operator revenue and therefore operator labour costs (which are included in the operator administration costs category) depend on the number of shifts driven. We calculate operator returns by subtracting total operator costs from total operator revenue and in table 3.13 we compare 2011 results with 2014 results. We estimate that operator revenue has declined by around $2900 per year in nominal terms, due to both fewer shifts, as well as slightly lower pay-ins per shift. The return to operator labour could therefore be around $2700 lower than in 2011 in nominal terms.

3.13 Return to operator labour

	2011	2014	Change
	$ ex GST	$ ex GST	$ ex GST
Revenue	71 319	68 415	-2 904
Costs	62 013	61 803	- 209
Return to operators	**9 306**	**6 611**	**-2 695**

Source: CIE estimates.

This implies that operator labour costs may have decreased from around $50.60 per hour to around $36.80 per hour.

3.14 Returns to operator labour per hour

	2 011	2014	Change
Return to operator ($)	9 306	6 611	-2 695
Hours per year (No.)	184	180	- 4
Return per hour ($ per hour)	**50.57**	**36.76**	**-13.81**

Source: CIE estimates.

However, this finding should be treated with caution. Operator margins are estimated to be quite thin relative to revenue and costs, which means that relatively small errors in estimating revenue or costs can have a large impact on the estimated operator margin.

Average fare

The above estimates suggest that the average fare has increased by around 4.7 per cent (table 3.15). As fare components have increased by ~6-7 per cent and a new peak time surcharge has also been introduced, this implies that the average trip is shorter in 2014, compared to 2011.

3.15 Average fare

	2011	2014	Change
			Per cent
Revenue ($ including GST)	165 641	163 444	-1.3
Total trips (No.)	8477	7 989	-5.8
Average fare ($ per trip)	**19.54**	**20.46**	**4.7**

Source: CIE estimates.

Interpretation of changes in taxi revenue/costs

The above analysis suggests that the total revenue earned per taxi has declined in nominal terms between 2011 and 2014, due mainly to lower usage rates.

- While revenue per shift is likely to have increased in nominal terms in most shift periods, it has not kept pace with general inflation, implying a decline in real terms. This is despite fare increases that have been broadly in line with inflation. Several factors have contributed to the real decline in revenue per shift.
  - Drivers are working slightly shorter night shifts.
  - The number of trips during night shifts has declined.
  - The increase in the average fare over the period has not kept pace with fare increases, implying shorter average trips.
- Nominal driver earnings also appear to have increased at a pace below CPI inflation, implying real income decreases for taxi drivers.
- The data suggests that operator revenue has declined due to both fewer shifts and lower pay-ins per shift. As most fixed costs have increased modestly over the period, lower revenue appears to have:
  - squeezed operator margins
  - put downward pressure on the value of licences — licence lease costs have decreased by around 7 per cent over the period.

4 Driver revenue and costs

In this chapter we estimate the revenue received by drivers and how that revenue is then distributed, including the amount paid to operators and the amount retained by drivers as compensation for their labour.

Taxi usage patterns

The revenue each taxi earns in a year and most variable costs depend on how frequently each taxi is 'on the road'. In the survey, operators were asked how many of their taxis were 'on the road' during each shift period, although not all operators responded to this question. The total number of taxis in the sample and the number operating during each shift period are shown in table 4.1.

4.1 Number of taxis operating during each shift period — 2014 estimates

	Standard	WAT
	No.	No.
Total taxis in sample	277	27
Operating during day shifts		
Monday	204	23
Tuesday	209	22
Wednesday	225	23
Thursday	232	25
Friday	233	25
Saturday	159	26
Sunday	121	22
Operating during night shifts		
Monday	126	9
Tuesday	171	9
Wednesday	208	10
Thursday	218	11
Friday	235	14
Saturday	228	13
Sunday	107	9

Source: CIE Survey of taxi operators.

From this sample data, we can infer the average number of shifts in each shift period an 'average taxi' drives per year (table 4.2). This implies that:

- standard taxis in Sydney are 'on the road' for around 502 shifts per year (around 9.5 shifts per week on average), including 260 days shifts and around 243 night shift
- WATs in Sydney are 'on the road' for around 464 shifts per year (around 7 shifts per week on average), including around 320 day shifts and only 144 night shifts.

4.2 Number of shifts per year — 2014 estimates

	Standard	WAT
	No. per year	No. per year
Day shifts		
Monday	38.3	44.3
Tuesday	39.2	42.4
Wednesday	42.2	44.3
Thursday	43.6	48.1
Friday	43.7	48.1
Saturday	29.8	50.1
Sunday	22.7	42.4
Total day shifts	259.6	319.7
Night shifts		
Monday	23.7	17.3
Tuesday	32.1	17.3
Wednesday	39.0	19.3
Thursday	40.9	21.2
Friday	44.1	27.0
Saturday	42.8	25.0
Sunday	20.1	17.3
Total night shifts	242.7	144.4
Total shifts	**502.4**	**464.1**

Note: Estimates based on the proportion of taxis 'on the road' during each shift period (see table 4.1) multiplied by 52 weeks per year.
Source: CIE estimates.

Driver revenue

As shown in charts 2.1, passengers pay the fare to drivers (or in some cases via the booking app). Bailee drivers distribute some of this revenue to the operator in the form of a fixed pay-in or as a share of the fare revenue. Drivers operating under Method II (fixed pay-in) in the Sydney area are also responsible for paying fuel and car wash costs. Drivers retain the remaining revenue as compensation for their labour.

The driver survey asked drivers to report the total revenue earned during each shift over the past week (table 4.3).

4.3 Total revenue per shift — 2014 estimates

	Standard	WAT
	$ ex GST	$ ex GST
Day shifts		
Monday	245.67	284.20
Tuesday	239.08	284.92
Wednesday	241.95	283.52
Thursday	250.71	300.91
Friday	257.40	347.50
Saturday	243.86	288.60
Sunday	252.21	220.48
Night shifts		
Monday	222.07	196.03
Tuesday	237.27	208.60
Wednesday	258.66	211.75
Thursday	290.98	256.34
Friday	370.16	426.82
Saturday	368.30	380.09
Sunday	222.58	262.50

Source: CIE Survey of taxi drivers

To convert these per shift estimates to an annual revenue estimate, we multiply the revenue per shift by the number of shifts each taxi is on the road (table 4.4).

4.4 Total revenue per year

	Standard	WAT
	$ ex GST	$ ex GST
Total revenue	135 635	134 330

Source: CIE estimates.

Driver costs

Driver earnings

To estimate the portion of fare revenue that is retained by drivers, we estimate drivers' hourly earnings from survey responses from bailee drivers only.

Hourly earnings

Drivers' hourly earnings were estimated by dividing total earnings per shift (less GST) reported by bailee drivers by the number of hours worked by bailee drivers per shift, including the time spent on driver administration (around 17.4 minutes per shift for

standard taxi drivers and around 21 minutes per shift for WAT drivers — see table 4.7 below). The survey suggests that taxi drivers' hourly earnings are considerably below the Australian Minimum Wage of $16.87 per hour (table 4.5).[7]

- For standard taxis:
  - earnings for drivers of Standard taxis average around $10 per hour for day shifts for most of the week, up to around $11.50 per hour on Sundays.
  - earnings for night drivers are as low as around $7.80 per hour on Monday nights, but generally increase through the week, up to more than $15 per hour on Friday and Saturday nights.
- On average, WAT drivers tend to earn a few dollars per hour more than (Sydney) Standard taxi drivers during day shifts. There were relatively few responses from WAT drivers working night shifts, reflecting the face that relatively few WATs operate at night. Given this small sample size, it is difficult to draw conclusions on WAT driver earnings relative to standard taxi drivers during night shifts.

4.5 Driver earnings per hour — 2014 estimates

	Standard	WAT
	$ ex GST	$ ex GST
Day shifts		
Monday	9.77	10.20
Tuesday	9.83	10.77
Wednesday	10.19	10.14
Thursday	10.35	11.27
Friday	11.03	13.81
Saturday	10.58	13.56
Sunday	11.47	8.83
Night shifts		
Monday	7.79	2.43
Tuesday	8.54	6.70
Wednesday	9.51	6.03
Thursday	11.31	8.51
Friday	15.05	16.46
Saturday	15.21	15.80
Sunday	10.16	11.90

Source: CIE Survey of taxi drivers

[7] Fair Work Australia website, http://www.fairwork.gov.au/about-us/policies-and-guides/fact-sheets/minimum-workplace-entitlements/minimum-wages, accessed 25 November 2014.

Hours worked

Excluding time spent on administration, drivers generally work for around ten hours per shift (table 4.6), but may work 11-12 hours during peak times, such as Friday and Saturday nights.

4.6 Hours worked per shift — 2014 estimates

	Standard	WAT
	hours	hours
Day shifts		
Monday	10.05	10.95
Tuesday	10.03	11.02
Wednesday	10.00	10.39
Thursday	10.08	10.91
Friday	10.00	10.90
Saturday	10.28	10.47
Sunday	10.63	9.18
Night shifts		
Monday	9.55	7.21
Tuesday	9.86	9.32
Wednesday	10.04	9.13
Thursday	10.43	9.41
Friday	11.24	10.43
Saturday	11.16	9.76
Sunday	9.56	10.00

Source: CIE Survey of taxi drivers

Driver administration

In addition to the hours that the taxis are on the road, standard taxi drivers reported they spend around 17.4 minutes on average on shift administration, while WAT drivers spent around 21 minutes (table 4.7).

4.7 Driver administration — 2014 estimates

	Standard	WAT
Minutes per shift	17.4	20.9
Hours per shift	0.29	0.35

Source: CIE 2014 Survey of taxi drivers.

Annual driver labour costs

To estimate annual driver labour costs, we multiply average hourly earnings during each shift period by the number of hours worked (including time spend on shift

administration) to get the average driver labour costs per shift. This is then multiplied by the number of shifts driven during each shift period throughout the year and summed to get total annual drive labour costs (table 4.8).

4.8 Annual driver earnings — 2014 estimates

	Standard	WAT
	$ ex GST	$ ex GST
Annual driver earnings	58 610	54 533

Source: CIE estimates.

Payments to operators

Bailee drivers pay operators for the use of the taxi. As discussed previously, in the Sydney area, the arrangements between the driver and operator are governed by the Contract Determination.

Pay-ins per shift

The pay-ins per shift estimated below are based on the responses of bailee drivers (table 4.9). As driver-operators simply keep all of the fare revenue generated during a shift (except the cost of fuel and a wash where relevant), it may be difficult for these drivers to distinguish between earnings in their capacity as a driver from their earnings in their capacity as an operator. The responses of driver-operators were therefore excluded from the sample.

- For day shifts, the average pay-in are estimated at around $115 per shift for weekdays and around $100 per shift for weekends.
- For night shifts, the average pay-in increases during the week from around $105 on Sunday nights up to around $170 on Friday nights.
- The survey suggests that pay-ins for WATs are more variable, although this may be a result of the small number of observations for some shifts.

4.9 Pay-ins per shift — 2014 estimates

	Standard	WAT
	$ ex GST	$ ex GST
Day shifts		
Monday	114.59	136.93
Tuesday	115.20	139.46
Wednesday	114.74	122.73
Thursday	115.25	131.88
Friday	115.02	109.09
Saturday	101.16	142.08
Sunday	100.72	125.97

	Standard	WAT
	$ ex GST	$ ex GST
Night shifts		
Monday	119.98	144.09
Tuesday	129.64	115.61
Wednesday	140.66	115.71
Thursday	150.25	123.18
Friday	170.72	154.85
Saturday	162.66	132.53
Sunday	102.41	109.09

Source: CIE Survey of taxi drivers

Annual payments to operators

To estimate the total annual payment to operators, we multiply the estimated pay-in per shift (table 4.9) by the number of shifts in each shift period over the year (see table 4.2) and then sum across all shift periods. This suggests that payments to operators from each taxi is

4.10 Total payments to operators — 2014 estimates

	Standard	WAT
	$ ex GST	$ ex GST
Total pay-ins	64 303	60 189

Source: CIE estimates.

Fuel costs

Drivers in the Sydney area operating under Method II are responsible for fuel costs. While operators are responsible for fuel costs in other areas, we nevertheless estimate fuel costs based on the responses to the driver survey.

Fuel costs per shift

Fuel costs per shift are based on the responses of all drivers, including bailee drivers and driver-operators. Estimated fuel costs per shift are shown in table 4.11.

4.11 Fuel costs per shift — 2014 estimates

	Standard	WAT
	$ ex GST	$ ex GST
Day shifts		
Monday	26.68	40.08
Tuesday	25.49	34.12

	Standard	WAT
	$ ex GST	$ ex GST
Wednesday	26.16	36.18
Thursday	26.18	41.83
Friday	27.37	40.10
Saturday	28.24	34.34
Sunday	32.01	31.72
Night shifts		
Monday	26.97	28.49
Tuesday	27.91	28.54
Wednesday	29.25	28.39
Thursday	31.79	34.09
Friday	35.89	45.87
Saturday	36.82	46.12
Sunday	28.10	33.58

Source: CIE Survey of taxi drivers

Annual fuel costs

As with all the variable costs, survey responses referring to a one week period are scaled up to an annual estimate based on the estimated number of shifts each taxi was 'on the road'. The specific week may vary across drivers, but most surveys refer to a week in the second half of October or November due to the timing of the survey. One weakness of this survey methodology is that fuel prices can vary significantly throughout the year. We also noted that fuel prices have declined in the months since most of the surveys were completed.

Nevertheless, estimated annual fuel costs based on fuel prices that applied during the survey period are shown in table 4.12.

4.12 Annual fuel costs — 2014 estimates

	Standard	WAT
	$ (ex GST)	$ (ex GST)
Annual fuel costs	14 735	17 063

Source: CIE estimates.

Cleaning costs

As with fuel costs, drivers using Method II in the Sydney area are responsible for the cost of washing the vehicle, where necessary. We did not specifically ask drivers or operators about these costs in the surveys. However, discussions with industry stakeholders suggest that Standard taxis are typically washed after night shifts. Since WATs are generally 'on the road' during most day shifts, but much less frequently on night shifts, we assume WATs are cleaned after each day shift.

The cost of a car wash can vary, depending on location and the level of service. Our estimates are based on a cost per wash of $11 (including GST) or $10 (excluding GST).[8] This implies that the annual wash costs are around $2427 (ex GST) for a standard taxi and $3099 for a WAT (table 4.13).

4.13 Annual cleaning costs — 2014 estimates

	Standard	WAT
Washes per year (No.)	243	310
Cost per year ($ ex GST)[a]	2 427	3 099

[a] Based on $11 per wash (including GST), or $10 per wash (excluding GST).

Source: Coles Express website, http://www.colesexpress.com.au/services/car-wash.aspx, accessed 11 December 2014; CIE estimates.

Summary of driver costs

A summary of the driver costs estimated above is shown in table 4.14. Since the driver labour costs (i.e. driver earnings) reflect the leftover revenue after all of the drivers' costs have been deducted, the sum of all driver costs should equal total revenue. While total revenue and cost estimates do not align exactly, the discrepancy is mostly fairly modest in the range of 0.5-3 per cent.

4.14 Estimate driver revenue and costs — 2014 estimates

	Standard	WATs
	$ ex GST	$ ex GST
Revenue		
Fare revenue	135 635	134 330
Costs		
Pay-ins to operators	64 303	60 189
Fuel	14 735	17 063
Wash/cleaning	2 427	3 197
Total costs (ex driver labour)	**81 465**	80 449
Net driver earnings	58 610	54 533
Total costs (including driver labour)	**140 076**	134 982
Discrepancy	4 440	652

Source: CIE 2014 Survey of taxi drivers, CIE 2014 Survey of taxi operators, CIE estimates.

[8] Based on the cost of a Wash Express at a Coles Express car wash. See Coles Express website, http://www.colesexpress.com.au/services/car-wash.aspx, accessed 11 December 2014.

5 Operator revenue and costs

In this chapter we estimate the revenue an average operator generates per taxi and the associated costs.

Operator revenue

Operators earn revenue through bailing their taxi to a bailee driver. Many operators also drive the taxi themselves. Since we are separating the role of drivers and operators, this is effectively bailing the taxi to themselves. Operator revenue will therefore reflect driver pay-ins estimated in the previous chapter (table 5.1).

5.1 Total operator revenue — 2014 estimates

	Standard	WAT
	$ ex GST	$ ex GST
Total pay-ins	64 303	60 189

Source: CIE estimates.

Operator costs

Operators are responsible for a range of costs, including:

- the licence plate
- the vehicle, including the fit-out
- network fees
- insurance
- maintenance and repairs
- administration costs.

Operators where the driver chooses Method I are also responsible for the cost of fuel and car wash (where necessary).

Licence costs

As discussed previously, all taxis in NSW must be licensed. An operator can obtain a licence by either owning it outright or leasing it from either Transport for NSW or another owner.

The survey directly asked operators whether they leased the licence plate and the annual cost. Operators were also asked whether other services were bundled together with the licence plate lease, such as the vehicle, insurance and/or network fees. To isolate the cost of the licence plate lease only, we excluded all responses whether other services where bundled together.

In the Sydney area, the average standard unrestricted licence plate cost was around $30 258 (including GST), or $27 507 excluding GST[9] (table 5.2). The cost of a WAT licence is close to $1000 per year.

5.2 Estimated plate lease costs — 2014 estimates

	Standard unrestricted licence	WAT
	$	$
Plate lease (including GST)	30 046	
Plate lease (ex GST)	27 315	1 025[a]

[a] WAT licences leased from Transport for NSW do not attract GST.

Source: CIE Survey of taxi operators.

Vehicle costs

Operators can either purchase the vehicle outright or lease it. Based on survey responses, it is more common for operators to purchase the vehicle. The operator must also pay for the fit-out. Based on survey responses, the total capital cost of the vehicle is around $29 000 for a standard taxi and around $76 000 for a WAT (table 5.3).

5.3 Capital cost of vehicle — 2014 estimates

	Standard	WAT
	$ (including GST)	$ (including GST)
Purchase cost	23 311	59 896
Fit-out	5 671	16 286
Total capital cost	**28 982**	**76 182**

Source: CIE Survey of taxi operators.

To estimate the annual vehicle-related cost, we amortise the cost of the vehicle plus the cost of the fit-out over the expected life of the vehicle (table 5.4). The estimated life of the vehicle is based on survey responses. The real cost of capital is estimated based on a nominal cost of capital of 7.95 per cent, based on the average lending rate for small business that has applied since August 2013, as reported by the Reserve Bank of Australia, [10] less an expected inflation rate of 2.5 per cent (based on the midpoint of the RBA's target band).

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[9] Note that licences leased from Transport for NSW do not attract GST.

[10] Reserve Bank of Australia website, http://www.rba.gov.au/statistics/tables/index.html#interest-rates, accessed 11 December 2014.

This suggests that the annualised cost of the vehicle is around $7000 for a standard taxi and around $10 100 for a WAT (table 5.4).

5.4 Annualised vehicle-related costs — 2014 estimates

	Standard	WAT
Capital cost ($ ex GST)	26 347	69 257
Expected life (years)	4.33	8.81
Annualised cost ($)a	6 999	10 111

[a] Using a real cost of capital of 7.95 per cent based on the average lending rate for small business.

Source: CIE Survey of taxi operators; RBA website, http://www.rba.gov.au/statistics/tables/index.html#interest-rates, accessed 11 December 2014; The CIE.

Network fees

Unlike the 2011 survey, operators were asked directly what costs they incur relating to network fees. The survey results (table 5.5) were broadly consistent with industry quotes for a standard taxi. Wheelchair accessible taxis also incur an additional fee of around $2131 per year relating to the Zero200 network.

5.5 Network fees — 2014 estimates

	Standard[a]	WAT[b]
	$	$
Network fees (including GST)	8 294	10 425
Network fees (ex GST)	**7 540**	**9 477**

[a] Based on survey responses. See Appendix B for further details. b Estimate based on survey responses for standard taxis plus an additional $2131 (including GST) relating to the Zero200 network.

Note:

Source: CIE 2014 Survey of taxi operators; Industry quotes.

Insurance

Operators could have a range of insurance policies. Some insurance is compulsory. Operators are required to have:

- third party personal insurance (a 'green slip')
- workers' compensation insurance is also required where the operator uses bailee drivers.

In addition, many operators will also have either comprehensive insurance or third party property. Some will also have public liability insurance.

The draft report suggested that insurance costs had decreased significantly since 2011. However, this contradicted reports that the cost of compulsory third party personal insurance (a 'green slip') has been increasing rapidly over recent years. Consequently, we have re-examined the survey data and collected additional information.

To estimate the insurance premium per vehicle, we divided the total premium reported by each operator by the number of vehicles operated. A re-examination of the survey data

suggests that some operators with multiple vehicles may have reported the premium on a per vehicle basis, with not all of these data points excluded when the 5 per cent of responses in each tail of the distribution was trimmed out. This will have biased our estimates downwards. For example, the estimated cost of both CTP and comprehensive insurance for operators with multiple taxis is less than half that for single taxi operators (table 5.6). While some discounts may be available for larger operators, they are unlikely to be of this magnitude.

5.6 Insurance costs — 2014 estimates

	Single taxi operators	Multiple taxi operators	All operators
	$ (including GST)	$ (including GST)	$ (including GST)
Compulsory Third Party	6 235	3 038	5 427
Comprehensive	5 258	2 283	4 586
Third Party Property	2 398	2 185	2 350
Workers' Compensation	1 735	1 170	1 531
General Liability	982	336	686

Source: CIE 2014 Survey of taxi operators.

The estimates for single taxi operators are broadly consistent with industry quotes (obtained in January 2015) for most types of insurance. While the survey estimate of the cost of comprehensive insurance is lower than the industry quotes, the industry quotes related to a new operator. Operators with a good record are likely to be able to get a significant discount. The comprehensive insurance premium suggested by the survey is therefore more likely to be representative of actual premiums paid than the industry quote.

Information obtained from industry sources also suggested that the premiums for some types of insurance policy — specifically comprehensive insurance — can be $2000 to $3000 more for WATs than for standard taxis. Although the survey did not explicitly distinguish between the insurance costs for standard taxis and WATs, we can explore whether this is reflected in survey responses by focusing on those operators that have one type of taxi only (i.e. all standard taxis or all WATs). This suggests that comprehensive insurance is actually a few hundred dollars less for WATs, compared to standard taxis, although this is based on relatively few observations (see appendix B for details). Given these conflicting findings, we base our insurance cost estimates on the survey responses for all single taxi operators. This implicitly assumes that the costs are the same for standard taxis and WATs.

The survey suggests that most operators have comprehensive insurance, while relatively few have third party property only. Our insurance cost estimates assume the operator has comprehensive insurance, with the policy also covering general liability insurance (table 5.7).

5.7 Estimated insurance costs — 2014 estimates

	Premium
	$
Compulsory third party	6 235
Comprehensive	5 258
Workers' compensation	1 735
Total (including GST)	13 229
Total (ex GST)	**12 026**

Source: CIE 2014 Survey of taxi operators.

Maintenance and repairs

The cost of maintenance and repairs for each taxi in any particular year could vary significantly. While all vehicles will undergo some servicing every year, some relatively expensive mechanical repairs may occur less frequently. Similarly, the cost of body repairs will depend on the number of accidents each vehicle has been involved in and the damage caused. The cost to the operator will also depend on whether the vehicle has comprehensive insurance. The survey responses should capture this range of experiences. Averaging across all responses should therefore capture the average experience.

There are various ways that an operator can approach the task of maintaining and repairing the vehicle.

- Own labour — many operators are likely to undertake minor maintenance tasks, such as replacing light globes. In addition, some operators may have mechanical expertise and undertake much of the repairs and maintenance themselves.
- Hire staff — some larger operators may have in-house mechanics to undertake mechanical repairs and maintenance.
- External suppliers — many operators will pay an external mechanic or bodyworks to undertake maintenance and repairs on the vehicle. Operators that undertake repairs and maintenance may also need to pay a supplier for parts, etc.

The total cost of maintenance and repairs on the vehicle is some combination of all of these costs. The survey asked operators for information on each of the above approaches.

Estimating total repairs and maintenance costs from the survey responses requires careful interpretation. Simply estimating the average across each different approach to repairs and maintenance and then summing is likely to over-estimate the true costs.

We therefore exclude all responses that did not answer all parts of the question and then add each category to get the total maintenance and repair costs per vehicle. We valued the operator's own labour at $39.82 per hour, based on the median total salary package of an auto mechanic in Sydney of $65 700 per year (including 9.5 per cent

superannuation)[11] and 1650 hours per year (220 working days per year multiplied by 7.5 hours per day). We then estimate the average across the whole sample (table 5.8).

To test whether maintenance and repair costs vary between standard taxis and WATs, we also separately analyse the survey responses for operators with standard taxis only and operators with WATs only. This suggests that maintenance and repair costs are around $1400 higher for WAT only operators, compared to standard only operators (although the WAT estimates are based on a relatively small sample size (see appendix B).

5.8 Maintenance and repair costs — 2014 estimates

	All operators	Standard operators only	WAT operators only
Own time (hours per year)	23.8	24.6	42.2
Staff costs ($)	183.7	180.5	162.4
Other costs ($ ex GST)	4 949.5	4 478.8	5 702.2
Total ($ ex GST)a	**6 721.1**	**6 719.5**	**8 140.2**

[a] Own labour valued at $39.82, based on the median total salary package (including 9.5 per cent superannuation) and 1650 hours per year (220 working days per year multiplied by 7.5 hours per day).

Source: CIE Survey of taxi operators; Live Salary website, http://www.livesalary.com.au/salary-search-results.aspx?profession=31&role=3125&country=AU&location=1&jobtype=1&frommonths=12, accessed 11 December 2014.

Operator administration

There are various administrative tasks associated with operating a taxi. These tasks include paying bills, organising bailee drivers, organising repairs and maintenance and completing Business Activity Statements (BAS).

Operators can approach these administrative tasks in a range of ways, including:

- use their own labour
- pay staff to undertake these administrative tasks
- pay and external supplier for some tasks.

While the combination may vary across operators, total administration costs will be some combination of these approaches. To estimate operator administration costs, we excluded all survey responses that did not answer all parts of the relevant question.

The survey suggests that on average, operators spend around 3.5 hours per week on administration and $422 per year on staff and other costs (excluding GST) (table 5.9).

[11] Live Salary website, http://www.livesalary.com.au/salary-search-results.aspx?profession=31&role=3125&country=AU&location=1&jobtype=1&frommonths=12, accessed 11 December 2014.

5.9 Operator administration — 2014 estimates

	Value
Own time (hours per week)	3.5
Costs ($ per year ex GST)	422

Source: CIE Survey of taxi operators.

Summary of operator costs

Estimated operator costs (excluding own labour) for a standard unrestricted licence and a WAT in the Sydney area are summarised in table 5.10.

5.10 Summary of operator costs — 2014 estimates

	Standard unrestricted licence	WATs
	$ ex GST	$ ex GST
Vehicle costs	6 999	10 111
Maintenance and repairs	6 720	8 140
Insurance	12 918	12 918
Network fees	7 540	9 477
Administration costs (ex own labour)	422	422
Total costs	**34 598**	**41 068**
Annual licence payment	27 315	1 025
Total costs including licence	**61 913**	**42 093**

Source: CIE estimates.

Net operator earnings

Operators do not get compensated directly for their labour. Rather, they keep the pay-in revenue leftover once they have covered all their costs. The survey results suggest that the operator margin for a Standard unrestricted licence taxi is around $2400 per year, but around $18 100 for a WAT (table 5.11).

5.11 Net operator earnings — 2014 estimates

	Standard unrestricted licence	WAT
	$ ex GST	$ ex GST
Operator revenue	64 303	60 189
Operator costs (including licence)	61 913	42 093
Net operator earnings	**2 391**	**18 096**

Source: CIE estimates.

This operator margin can be interpreted as the return to the operator's labour (table 5.12). The above estimates imply that the return to operator labour is around $13.28 per hour for a standard unrestricted licence taxi and around $100 per hour for WATs. This seems

implausibly high for WAT operators. As there are fewer barriers to market entry for WAT operators, returns of this size are likely to encourage new entrants that would compete away these excess returns.

5.12 Operator returns per hour — 2014 estimates

	Standard unrestricted licence taxi	WAT
Return to operator ($ ex GST)	2 389	18 096
Hours per year (No.)	180	180
Return per hour ($ per hour)	**13.28**	**100.62**

Source: CIE estimates.

Note that operator margins are quite thin relative to total revenue/costs. This means that relatively small errors in estimating revenue and/or costs will have a large impact on operator returns. The true return to operator labour is likely to be somewhere between these two estimates.

A Surveys

Survey of taxi drivers

Survey of taxi drivers

Your response is anonymous — no personal information will be recorded with your response.

This questionnaire is made up of 12 questions. Please answer all relevant questions.

Date questionnaire completed: _____

1. Do you currently drive a taxi? *(choose yes or no)*

☐ Yes

Do you expect to be driving a taxi in 2 years?

☐ Yes

☐ No, why not?

- ☐ Retiring
- ☐ Another job
- ☐ Too hard to get shifts
- ☐ Pay too low
- ☐ Poor conditions
- ☐ Other:_____

☐ Not sure

☐ No, why not?

- ☐ Can't get a shift

Don't want a shift because:

- ☐ Retired
- ☐ Got another job
- ☐ Pay too low
- ☐ Poor conditions
- ☐ Other:_____

If you are not currently driving a taxi please end the survey here and mail to the CIE.

2. Are you: *(choose one)*

☐ a permanent bailee driver (at least five shifts per week for the same operator)

☐ a casual bailee driver (less than five shifts a week or works for multiple operators)

☐ an operator who also drives

If you also operate a taxi please make sure that you also fill out the operator survey as well as this driver survey

3. How many years have you been driving taxis in NSW? *(choose one)*

☐ less than 1 year
☐ 1-3 years
☐ 4-6 years
☐ 7 years or more

4. What type of taxi vehicle do you normally drive? *(choose one)*

☐ Standard taxi
☐ Wheelchair accessible taxi (WAT)
☐ Premium taxi
☐ Maxi taxi (vehicle that carries 5-11 passengers but is not wheelchair accessible)

5. What area do you normally drive? *(choose one)*

☐ Sydney
☐ Central Coast
☐ Newcastle
☐ Wollongong
☐ Other urban. Please indicate:_____
☐ Country NSW. Please indicate:_____

6. Type of fuel used in the vehicle you normally drive? *(choose one)*

☐ LPG ☐ Diesel ☐ Petrol ☐ Hybrid electric

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7. In the space provided, please indicate which shifts you have driven over the past week. If you work a shift that covers part of the usual day shift (3am to 3pm) and part of the usual night shift (3pm to 3am), such as 10am to 10pm, please tick day or night depending on when most of the shift took place. For each shift you have driven please indicate:
   - The number of hours worked — this is the number of hours the taxi you were driving was either hired or available for hire, was being cleaned (including waiting to be cleaned), refuelled or otherwise repaired. Do not include time when you were taking breaks or when you were using the vehicle for private purposes (eg. your own shopping) or time spent on administration.
   - Total fare revenue for the shift including GST, but excluding road tolls.
   - The cost of fuel (whether this was paid by you or the operator) including GST.
   - The amount paid to the operator through a fixed pay-in or percentage of fares (including GST). If you are a driver/operator please write zero in this column and report all takings as takings kept by the driver.
   - Takings kept by the driver (from cash and electronic payment of fares). This is what you receive as earnings after paying all expenses (except for GST). For example, takings would equal all fare revenue (cash and electronic, including GST) less payment to the operator less all tolls paid including tolls not part of a fare less any fuel paid by the driver, less wash costs etc.

Day	Did you drive this shift in the last week?	Number of hours worked	Total fare revenue (incl. GST)	Cost of fuel used during shift (incl. GST)	Amount paid to operator for shift (incl. GST)	Takings kept by driver (incl. GST)	Number of paid trips
	Tick if yes	Number	$	$	$	$	Number
Day shifts							
Monday	☐						
Tuesday	☐						
Wednesday	☐						
Thursday	☐						
Friday	☐						
Saturday	☐						
Sunday	☐						
Night shifts							
Monday	☐						
Tuesday	☐						
Wednesday	☐						
Thursday	☐						
Friday	☐						
Saturday	☐						
Sunday	☐						

8. On average, what share of your paid trips are from bookings, such as radio bookings or apps, compared with rank and hail passengers? *(specify percentage)*

Network/co-operative:_____%

Independent smart phone apps:_____%

Rank and hail:_____%

9. For the vehicle you normally drive, who pays for: *(please tick one)*

a. Daily wash/cleaning costs?	☐ Driver	☐ Operator
b. Fuel costs?	☐ Driver	☐ Operator

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10. If you are a bailee driver do you pay a percentage of fares (rather than a fixed amount) to the operator?	
☐ No	☐ Yes, What share of metered fares do you give to the operator? _____ %
11. This question relates to administrative tasks required of drivers. Please answer parts (a) and (b). *Do not include administrative tasks related to your role as an operator if you also operate your taxi.*	
a. How much time do you spend on administration tasks required for each shift not included in the number of hours worked above (such as filling out timesheets, pre-shift inspections etc)? Number of minutes per shift: _____	
b. There are a range of other less frequent administrative tasks that taxi drivers are required to do from time to time, such as Business Activity Statements, filing police reports, network training etc.	
Do you spend time on these tasks yourself? ☐ No ☐ Yes, how many hours per year? _____hours	Do you pay someone else (such as an accountant) to undertake any of these tasks for you? ☐ No ☐ Yes, what are your costs per year (GST inclusive)? $ _____
12. Are there other expenses that you incur as a taxi driver? (For example, phone, GPS, laundry etc)	
☐ No	☐ Yes How much in total would these expenses typically amount to for a year? (GST inclusive) $ _____

THANK YOU FOR COMPLETING THIS SURVEY!

Please return this survey in the reply paid envelope provided or mail to:

The CIE
Taxi Survey Team
Reply Paid 87720
Sydney NSW 2000

Meter data is also useful as a cross-check against survey responses. If you are able to print out meter data from your most recent shift, please feel free to provide printouts with your survey response. If you are interested in discussing the survey or providing additional information, please provide contact details. These contact details will not be recorded with your survey responses.

Name:	
Telephone:	
Email:	

3

Survey of taxi operators

Survey of taxi operators

Your response is anonymous — no personal information will be recorded with your response.
This questionnaire is made up of 12 questions. Please answer all relevant questions.

Date questionnaire completed: _____

1. Is it easier or harder to find taxi drivers now compared to 12 months ago? *(choose one)*

☐ Easier now	☐ Harder now	☐ Same as before

2. How many taxis do you operate?_____

3. What area(s) do your taxi(s) operate in? *(tick all that apply)*

☐ Sydney ☐ Central Coast ☐ Newcastle	☐ Wollongong ☐ Other urban. Please indicate: _____ ☐ Country NSW. Please indicate: _____

4. This question relates to your taxi **licences/licence plates**. Please answer parts (a), (b), (c) and (d).

a. Do you lease any of your licences (including from Transport for NSW)? ☐ Yes ☐ No

b. If yes, who do you lease your licences from?

☐ Transport for NSW ☐ Directly from private owner ☐ Through a network	☐ Through a licence broker ☐ Other, please specify: _____

c. If yes, what is the annual lease cost for each type of licence on average?

$_____ Standard taxi licence $_____ Wheelchair accessible taxi (WAT) licence	$_____ Peak availability licence

d. Please indicate if the **licence** lease costs reported above include other services? *(tick all that apply)*

☐ Lease of the **vehicle** ☐ Network fees	☐ Insurance ☐ Other, please specify: _____

5. This question relates to your **vehicles**. Please answer parts (a), (b), (c) and (d).

a. Please provide the information requested in the table below.

	Standard taxi(s)	*Premium taxi(s)*	*WAT(s)*	*Maxi taxi(s)*	*Hybrid*
Number of taxis operated (**No.**)					
Average purchase cost of vehicle if owned **($)**					
Average cost of fit-out (if not included in the purchase price) **($)**					
Average age of vehicle at purchase **(years)**					
Expected life of vehicles as a taxi from date of purchase **(years)**					
Average distance per year as a taxi **(Km)**					
If known, average fare revenue per year **($)**					
Type of fuel (LPG/ULP/Diesel)					

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b. Do you lease any of your **vehicles**? ☐ Yes ☐ No

c. If yes, what is the annual lease cost for each type of **vehicle** on average?

$ _____ Standard	$ _____ WAT
$ _____ Premium	$ _____ Maxi taxi (vehicle that carries 5-11 passengers but is not wheelchair accessible)
$ _____ Hybrid	

d. Please indicate if the **vehicle** lease costs reported above include other services? (*tick all that apply)*

☐ **Licence** lease	☐ Insurance
☐ Network fees	☐ Other, please specify: _____

6. Please indicate how many taxis you had on the road during each shift period in the last week. If you work a shift that covers part of the usual day shift (3am to 3pm) and part of the usual night shift (3pm to 3am), such as 10am to 10pm, please tick day or night depending on when most of the shift took place.

   Please report figures in the first four columns for vehicles operating with unrestricted time licences. Use the fifth column for all vehicles operating on time restricted licences, such as peak availability licences.

	Standard taxi(s)	Premium taxi(s)	WAT(s)	Maxi taxi(s)	Restricted time taxi(s)	Average pay-in per taxi
	Number	Number	Number	Number	Number	$
Day shifts						
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						
Night shifts						
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						

7. In the space provided please indicate what insurance you have on your business/vehicles, the annual premium (including GST) and the excess on your policy.

	Do you have this type of insurance?	What is the annual premium?	What is the excess on your policy?
	Tick if yes	$ (incl. GST)	$
Compulsory third party insurance (green slip)	☐		
Comprehensive insurance	☐		
Third party property (if not part of comprehensive)	☐		
Workers' compensation	☐		
General liability insurance (separate to your comprehensive policy)	☐		

2

8. Please tick yes or no for the following questions. If you tick yes, please provide additional information if requested.

Question	No	Yes	If "yes"...
Do you use bailee drivers?	☐	☐	
Do you pay for fuel used by bailee drivers?	☐	☐	
Do you pay for daily cleaning costs for your vehicle(s)?	☐	☐	
Do you also drive your taxi? *If you drive please also fill out the driver survey*	☐	☐	How many hours each week on average? _____
Do you collect a percentage of fares (rather than a fixed amount from the driver)?	☐	☐	What share do you collect?_____%

9. This question is about **administrative tasks** related to your role as an operator. This includes organising drivers, paying bills, organising maintenance for the vehicle, obtaining insurance, completing Business Activity Statements etc. (Do not include administration related to your role as a driver if you also drive your cab.) Please answer all parts of this question —answer **No** if it is not relevant to your business.

a) Do you spend your own time on administration?	b) Do you pay staff to undertake administration?	c) Do you pay other businesses for administration (such as accounting fees)?
☐ No	☐ No	☐ No
☐ Yes, hours per week? _____	☐ Yes, staff costs per year (including overheads)? $_____	☐ Yes, costs per year (including GST)? $_____

10. This question is about costs to access services provided by a network or cooperative. Please answer all parts of this question — answer **No** if not relevant to your business.

a. What is the annual network fee (including GST) that you pay for each taxi that you operate? $_____

b. Please indicate if the network fees reported above includes services other than standard network services (such as radio bookings, lost property etc.) (*tick all that apply)*

☐ Lease of the vehicle	☐ Insurance
☐ Lease of the licence	☐ Other, please specify: _____

11. This question is about repairs and maintenance costs for your vehicle(s). Do not include costs that were covered by insurance. Please answer all parts of this question — answer **No** if not relevant to your business.

a) Do you spend time on repairs and maintenance yourself?	b) Do you pay staff to undertake repairs and maintenance?	c) Do you pay other businesses to undertake repairs and maintenance (mechanics, parts etc.)?
☐ No	☐ No	☐ No
☐ Yes, hours per year? _____ hours	☐ Yes, annual staff costs (including overheads)? $_____	☐ Yes, annual expenses? (including GST): $_____

12. How many permanent drivers (at least five shifts per week) work in your business (include yourself if you normally drive the taxi)? _____

Thank you for completing this survey!

Please return this survey in the reply paid envelope provided or mail to:

The CIE
Taxi Survey Team
Reply Paid 87720
Sydney NSW 2000

If you are interested in discussing the survey or providing additional information, please provide contact details. These contact details will not be recorded with your survey responses.

Name:	
Telephone:	
Email:	

3

B Detailed survey results

In this appendix, we present detailed summaries of the survey results for the key variables used to estimate costs. Note that we present these summaries after the 5 per cent of responses in each tail of the distribution have been trimmed out.

Driver survey

Revenue per shift

The revenue per shift estimates are based on the responses of both bailee drivers and operator/drivers (table B.1 and B.2).

B.1 Revenue per shift — standard taxi

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	260	270.24	56.65	263.35	277.12
Tuesday	263	262.98	52.93	256.59	269.38
Wednesday	270	266.15	50.15	260.17	272.13
Thursday	253	275.79	51.20	269.48	282.09
Friday	261	283.14	58.53	276.04	290.25
Saturday	177	268.24	62.74	259.00	277.49
Sunday	157	277.43	63.49	267.50	287.36
Night shifts					
Monday	116	244.28	47.79	235.58	252.98
Tuesday	152	260.99	52.61	252.63	269.36
Wednesday	149	284.52	51.60	276.24	292.81
Thursday	163	320.08	60.82	310.74	329.42
Friday	167	407.18	76.90	395.52	418.84
Saturday	174	405.13	79.09	393.37	416.88
Sunday	81	244.83	61.38	231.47	258.20

Note: Includes GST.

Source: CIE 2014 Survey of taxi drivers

B.2 Revenue per shift — WATs

	Responses	Mean	Standard deviation	95 per cent confidence interval Lower bound	95 per cent confidence interval Upper bound
	No.	$		$	$
Day shifts					
Monday	26	312.62	85.43	279.78	345.45
Tuesday	22	313.41	66.95	285.43	341.39
Wednesday	24	311.88	58.45	288.49	335.26
Thursday	23	331.00	72.61	301.32	360.68
Friday	20	382.25	98.13	339.24	425.26
Saturday	13	317.46	82.04	272.86	362.06
Sunday	15	242.53	70.72	206.74	278.32
Night shifts					
Monday	3	215.64	73.35	132.63	298.64
Tuesday	8	229.46	79.71	174.22	284.69
Wednesday	9	232.92	66.06	189.76	276.08
Thursday	8	281.98	103.55	210.22	353.73
Friday	9	469.50	112.62	395.92	543.08
Saturday	10	418.10	97.24	357.83	478.37
Sunday	6	288.75	110.72	200.16	377.34

Note: Includes GST.

Source: CIE 2014 Survey of taxi drivers

Driver earnings

Table B.3 and B.4 show summaries of the responses of bailee drivers only to question on driver earnings.

B.3 Driver earnings per shift — standard taxi

	Responses	Mean	Standard deviation	95 per cent confidence interval Lower bound	95 per cent confidence interval Upper bound
	No.	$		$	$
Day shifts					
Monday	224	111.63	40.50	106.33	116.94
Tuesday	219	112.37	40.06	107.06	117.67
Wednesday	232	115.22	35.34	110.67	119.76
Thursday	210	117.91	34.48	113.25	122.58
Friday	227	124.84	40.95	119.51	130.17
Saturday	155	125.42	45.83	118.21	132.64

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Sunday	146	140.91	54.77	132.03	149.80
Night shifts					
Monday	96	86.37	39.23	78.52	94.22
Tuesday	131	95.73	42.77	88.40	103.05
Wednesday	130	108.72	38.08	102.17	115.26
Thursday	141	133.79	44.10	126.51	141.07
Friday	143	189.96	58.81	180.32	199.60
Saturday	149	194.04	64.80	183.63	204.44
Sunday	71	112.48	49.33	101.00	123.95

Note: Includes GST.

Source: CIE 2014 Survey of taxi drivers

B.4 Driver earnings per shift — WATs

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	9	130.91	42.89	102.89	158.93
Tuesday	9	135.80	72.50	88.44	183.17
Wednesday	9	123.82	28.64	105.11	142.54
Thursday	9	141.94	32.57	120.67	163.22
Friday	8	162.26	34.43	138.41	186.12
Saturday	6	196.58	59.06	149.32	243.83
Sunday	6	121.17	48.94	82.01	160.33
Night shifts					
Monday	2	25.00	35.36	-24.00	74.00
Tuesday	6	80.83	64.30	29.38	132.28
Wednesday	7	74.57	45.58	40.81	108.34
Thursday	6	110.97	47.91	72.63	149.30
Friday	6	230.37	93.71	155.38	305.35
Saturday	9	221.16	85.10	165.56	276.75
Sunday	5	144.20	76.96	76.74	211.66

Note: Includes GST.

Source: CIE 2014 Survey of taxi drivers

Hours worked by bailee drivers

B.5 Hours worked by bailee drivers per shift — standard taxi

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	246	10.09	1.38	9.92	10.27
Tuesday	247	10.10	1.32	9.94	10.27
Wednesday	265	9.99	1.33	9.83	10.15
Thursday	248	10.06	1.30	9.90	10.23
Friday	264	10.00	1.43	9.83	10.17
Saturday	178	10.48	1.48	10.27	10.70
Sunday	155	10.88	1.53	10.64	11.12
Night shifts					
Monday	107	9.79	1.43	9.52	10.06
Tuesday	151	9.90	1.41	9.68	10.13
Wednesday	150	10.11	1.30	9.90	10.32
Thursday	165	10.46	1.32	10.26	10.66
Friday	164	11.18	1.11	11.01	11.35
Saturday	164	11.31	1.06	11.15	11.47
Sunday	81	9.78	1.75	9.40	10.16

Source: CIE 2014 Survey of taxi drivers

B.6 Hours worked by bailee drivers per shift — WATs

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	11	11.32	1.62	10.36	12.27
Tuesday	9	11.11	0.78	10.60	11.62
Wednesday	12	10.75	0.97	10.20	11.30
Thursday	10	11.10	0.88	10.56	11.64
Friday	9	10.33	1.12	9.60	11.06
Saturday	6	12.83	2.86	10.55	15.12
Sunday	8	12.13	5.06	8.62	15.63
Night shifts					
Monday	4	9.00	2.58	6.47	11.53

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
Tuesday	8	10.63	1.77	9.40	11.85
Wednesday	9	10.89	1.83	9.69	12.09
Thursday	8	11.50	1.51	10.45	12.55
Friday	8	12.38	1.85	11.10	13.65
Saturday	8	12.38	1.51	11.33	13.42
Sunday	6	10.67	2.50	8.66	12.67

Source: CIE 2014 Survey of taxi drivers

Hours worked by all drivers

B.7 Hours worked by all drivers per shift — standard taxi

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	303	10.05	1.52	9.87	10.22
Tuesday	303	10.03	1.43	9.87	10.19
Wednesday	314	10.00	1.36	9.84	10.15
Thursday	287	10.08	1.31	9.93	10.23
Friday	310	10.00	1.46	9.84	10.17
Saturday	210	10.28	1.70	10.05	10.51
Sunday	176	10.63	1.82	10.36	10.90
Night shifts					
Monday	135	9.55	1.66	9.27	9.83
Tuesday	179	9.86	1.42	9.65	10.06
Wednesday	177	10.04	1.35	9.84	10.23
Thursday	191	10.43	1.31	10.25	10.62
Friday	195	11.24	1.11	11.08	11.40
Saturday	196	11.16	1.24	10.99	11.34
Sunday	92	9.56	1.79	9.19	9.93

Source: CIE 2014 Survey of taxi drivers

B.8 Hours worked by all drivers per shift — WATs

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	28	10.95	1.28	10.47	11.42
Tuesday	27	11.02	1.64	10.40	11.64
Wednesday	27	10.39	1.36	9.88	10.90
Thursday	27	10.91	1.56	10.32	11.49
Friday	26	10.90	2.31	10.02	11.79
Saturday	18	10.47	2.44	9.34	11.60
Sunday	19	9.18	2.64	8.00	10.37
Night shifts					
Monday	7	7.21	3.29	4.78	9.65
Tuesday	11	9.32	2.76	7.69	10.95
Wednesday	12	9.13	2.75	7.57	10.68
Thursday	11	9.41	2.76	7.78	11.04
Friday	14	10.43	3.11	8.80	12.06
Saturday	17	9.76	3.47	8.11	11.42
Sunday	8	10.00	2.67	8.15	11.85

Source: CIE 2014 Survey of taxi drivers

Pay-ins per shift

B.9 Pay-ins per shift — standard taxi

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	237	126.05	11.75	124.56	127.55
Tuesday	236	126.72	12.00	125.19	128.25
Wednesday	248	126.22	11.58	124.78	127.66
Thursday	233	126.78	12.14	125.22	128.34
Friday	243	126.52	12.57	124.94	128.10
Saturday	162	111.27	15.67	108.86	113.69
Sunday	153	110.79	17.36	108.04	113.54
Night shifts					
Monday	103	131.98	19.82	128.15	135.80

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Tuesday	134	142.60	14.85	140.09	145.12
Wednesday	137	154.72	13.00	152.55	156.90
Thursday	150	165.28	15.68	162.77	167.79
Friday	152	187.79	23.79	184.01	191.58
Saturday	156	178.92	19.04	175.94	181.91
Sunday	74	112.65	20.37	108.01	117.29

Note: Includes GST.

Source: CIE 2014 Survey of taxi drivers

B.10 Pay-ins per shift — WATs

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	10	150.62	34.21	129.42	171.82
Tuesday	9	153.41	31.21	133.02	173.80
Wednesday	9	135.00	25.74	118.18	151.82
Thursday	10	145.07	27.60	127.96	162.18
Friday	9	120.00	28.28	101.52	138.48
Saturday	6	156.28	35.22	128.10	184.46
Sunday	7	138.57	56.99	96.35	180.79
Night shifts					
Monday	2	158.50	82.73	43.84	273.16
Tuesday	6	127.17	45.56	90.71	163.62
Wednesday	7	127.29	45.74	93.40	161.17
Thursday	6	135.50	43.69	100.54	170.46
Friday	6	170.33	34.74	142.54	198.13
Saturday	9	145.78	40.86	119.09	172.47
Sunday	5	120.00	18.71	103.60	136.40

Note: Includes GST.

Source: CIE 2014 Survey of taxi drivers

Fuel costs per shift

B.11 Fuel costs per shift — standard taxi

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	274	29.34	6.24	28.61	30.08
Tuesday	285	28.04	6.92	27.23	28.84
Wednesday	289	28.77	6.76	27.99	29.55
Thursday	277	28.80	7.19	27.95	29.64
Friday	284	30.11	7.57	29.23	30.99
Saturday	190	31.06	8.77	29.81	32.31
Sunday	169	35.21	10.61	33.61	36.81
Night shifts					
Monday	122	29.66	7.20	28.39	30.94
Tuesday	157	30.70	7.28	29.57	31.84
Wednesday	153	32.17	6.73	31.11	33.24
Thursday	172	34.97	7.79	33.80	36.13
Friday	176	39.48	8.26	38.26	40.70
Saturday	185	40.51	9.03	39.21	41.81
Sunday	85	30.91	8.93	29.01	32.80

Note: Includes GST.

Source: CIE 2014 Survey of taxi drivers

B.12 Fuel costs per shift — WATs

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	27	44.09	12.35	39.43	48.74
Tuesday	27	37.53	17.61	30.89	44.17
Wednesday	27	39.79	12.26	35.17	44.42
Thursday	26	46.02	13.90	40.67	51.36
Friday	23	44.11	16.57	37.34	50.88
Saturday	18	37.77	19.76	28.65	46.90
Sunday	16	34.89	11.41	29.30	40.48
Night shifts					
Monday	5	31.34	20.22	13.61	49.07

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Tuesday	9	31.39	10.11	24.78	37.99
Wednesday	10	31.23	7.87	26.36	36.10
Thursday	8	37.50	8.52	31.60	43.40
Friday	11	50.45	19.58	38.89	62.02
Saturday	13	50.73	17.50	41.22	60.24
Sunday	8	36.94	17.96	24.49	49.38

Note: Includes GST.

Source: CIE 2014 Survey of taxi drivers

Number of paid trips per shift

B.13 Paid trips per shift — standard taxi

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	186	11.80	4.02	11.22	12.37
Tuesday	191	11.94	3.96	11.38	12.50
Wednesday	199	12.36	4.20	11.78	12.95
Thursday	179	12.88	3.88	12.31	13.45
Friday	192	13.45	4.27	12.85	14.06
Saturday	137	13.82	5.24	12.94	14.70
Sunday	124	14.71	5.17	13.80	15.62
Night shifts					
Monday	75	12.53	3.53	11.73	13.33
Tuesday	99	13.68	3.38	13.02	14.35
Wednesday	102	15.12	3.78	14.38	15.85
Thursday	115	16.30	3.75	15.61	16.99
Friday	116	21.67	6.04	20.57	22.77
Saturday	122	21.84	6.43	20.70	22.99
Sunday	65	14.18	5.22	12.91	15.45

Source: CIE 2014 Survey of taxi drivers

B.14 Paid trips per shift — WATs

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Day shifts					
Monday	20.0	12.0	3.1	10.7	13.4
Tuesday	18.0	11.6	3.5	10.0	13.2
Wednesday	20.0	11.1	2.7	9.9	12.2
Thursday	19.0	12.9	3.5	11.4	14.5
Friday	16.0	14.3	4.7	11.9	16.6
Saturday	11.0	13.5	5.1	10.4	16.5
Sunday	14.0	9.1	3.5	7.2	10.9
Night shifts					
Monday	2.0	10.5	3.5	5.6	15.4
Tuesday	6.0	9.7	4.7	5.9	13.4
Wednesday	8.0	9.6	3.6	7.1	12.1
Thursday	7.0	12.6	5.9	8.2	17.0
Friday	8.0	17.8	9.7	11.1	24.4
Saturday	9.0	14.2	4.2	11.5	17.0
Sunday	6.0	11.2	4.5	7.5	14.8

Source: CIE 2014 Survey of taxi drivers

Driver administration

Driver responses to the question on driver administration are summarised in table B.15.

B.15 Time spent on driver administration

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	Minutes		Minutes	Minutes
Standard drivers	787	17.4	9.1	16.7	18.0
WAT drivers	47	20.9	12.7	17.3	24.6

Source: CIE 2014 Survey of taxi drivers

Operator survey

Vehicle costs

The survey responses to variables used to estimate vehicle costs are summarised in table B.16.

B.16 Vehicle costs

	Responses	Mean	Standard deviation	95 per cent confidence interval Lower bound	Upper bound
Standard taxis					
Purchase cost ($)	78	24 324.0	6 623.0	22 854.2	25 793.8
Cost of fitout ($)	75	6 221.3	2 703.7	5 609.4	6 833.2
Expected life (years)	81	4.3	1.1	4.1	4.6
WATs					
Purchase cost ($)	18	58 572.2	23 591.4	47 673.7	69 470.7
Cost of fitout ($)	14	23 857.1	13 369.0	16 854.2	30 860.1
Expected life (years)	18	8.8	2.0	7.9	9.7

Source: CIE 2014 Survey of taxi operators.

Repairs and maintenance

B.17 Repairs and maintenance costs — all vehicles

	Responses	Mean	Standard deviation	95 per cent confidence interval Lower bound	Upper bound
	No.	Unit		Unit	Unit
Hours (No.)	111	23.8	37.3	16.9	30.8
Staff time ($)	112	183.7	183.7	149.7	217.7
Other ($ ex GST)	111	4 949.5	3 746.4	4 252.5	5 646.4
Total ($ ex GST)	105	6 721.1	4 087.2	5 939.4	7 502.9

Note: Summarises responses from all operators.

Source: CIE 2014 Survey of taxi operators.

B.18 Repairs and maintenance costs — standard vehicles only

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	Unit		Unit	Unit
Hours (No.)	50	24.6	38.9	13.8	35.4
Staff time ($)	51	180.5	609.5	13.3	347.8
Other ($ ex GST)	50	4 478.8	4 064.0	3 352.3	5 605.3
Total ($ ex GST)	47	6 719.5	4 919.6	5 313.1	8 126.0

Note: Summarises responses from operators that have standard taxis only.

Source: CIE 2014 Survey of taxi operators.

B.19 Repairs and maintenance costs — WAT vehicles only

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	Unit		Unit	Unit
Hours (No.)	16	42.2	56.0	14.8	69.6
Staff time ($)	17	162.4	477.1	- 64.4	389.1
Other ($ ex GST)	16	5 702.2	5 265.6	3 122.1	8 282.3
Total ($ ex GST)	15	8 140.2	5 248.8	5 484.0	10 796.4

Note: Table summarises responses from operators that have WATs only.

Source: CIE 2014 Survey of taxi operators.

Insurance

B.20 Insurance costs — all operators

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Compulsory Third Party	119	5 427.0	1 652.4	5 130.2	5 723.9
Comprehensive	107	4 586.2	1 916.3	4 223.1	4 949.3
Third Party Property	18	2 350.1	903.7	1 932.6	2 767.6
Workers' Compensation	88	1 530.7	504.5	1 425.3	1 636.1
General Liability	11	685.8	648.7	302.4	1 069.1

Note: Survey responses include GST.

Source: CIE 2014 Survey of taxi operators.

B.21 Insurance costs — single taxi operators only

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Compulsory Third Party	83	6 235.4	481.6	6 131.8	6 339.0
Comprehensive	80	5 258.4	1 569.5	4 914.5	5 602.3
Third Party Property	12	2 397.8	656.2	2 026.5	2 769.0
Workers' Compensation	54	1 734.8	258.6	1 665.8	1 803.8
General Liability	5	981.7	779.5	298.5	1 664.9

Note: Survey responses include GST.

Source: CIE 2014 Survey of taxi operators.

B.22 Insurance costs — single standard taxi operators only

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Compulsory Third Party	38	6 299.9	402.7	6 171.9	6 427.9
Comprehensive	35	5 408.8	1 690.2	4 848.8	5 968.7
Third Party Property	9	2 638.8	560.5	2 272.6	3 005.0
Workers' Compensation	26	1 813.5	131.6	1 762.9	1 864.1
General Liability	1	1 858.5	0.0	n.a.	n.a.

Note: Survey responses include GST.

Source: CIE 2014 Survey of taxi operators.

B.23 Insurance costs — single WAT operators only

	Responses	Mean	Standard deviation	95 per cent confidence interval	
				Lower bound	Upper bound
	No.	$		$	$
Compulsory Third Party	11	6 016.5	930.8	5 466.5	6 566.6
Comprehensive	12	4 747.9	939.4	4 216.4	5 279.4
Third Party Property	0	n.a.	n.a.	n.a.	n.a.
Workers' Compensation	7	1 703.6	393.3	1 412.2	1 995.0
General Liability	0	n.a.	n.a.	n.a.	n.a.

Note: Survey responses include GST.

Source: CIE 2014 Survey of taxi operators.

Network fees

B.24 Network fees

	Responses	Mean	Standard deviation	95 per cent confidence interval Lower bound	95 per cent confidence interval Upper bound
	No.	$		$	$
Sydney network fees	96	8 293.7	957.9	8 102.1	8 485.3

Source: CIE 2014 Survey of taxi operators.

Administration costs

B.25 Operator administration costs

	Responses	Mean	Standard deviation	95 per cent confidence interval Lower bound	95 per cent confidence interval Upper bound
	No.	Units		Units	Units
Hours (No. per week)	112	3.5	2.3	3.0	3.9
Staff time ($ per year)	122	0.0	0.0	n.a.	n.a.
Other ($ ex GST per year)	119	420.7	452.3	339.4	501.9
Total ($ ex GST per year)	119	421.5	453.6	340.1	503.0

Source: CIE 2014 Survey of taxi operators.

Licence lease

B.26 Licence lease costs

	Responses	Mean	Standard deviation	95 per cent confidence interval Lower bound	95 per cent confidence interval Upper bound
	No.	$ per taxi		$ per taxi	$ per taxi
Standard	46	30 046	5 905	28 340	31 753
WAT	14	1 025	61	993	1 057
Peak	7	17 831	678	17 329	18 334

Source: CIE 2014 Survey of taxi operators.

C Regression modelling to compare 2011 and 2014 survey

We have constructed regression models of:

- operator earnings,
- driver earnings,
- hours per shift,
- fuel cost per shift, and
- trips per shift

in order to determine the change in these variable between the two surveys. Regression modelling allows us to control for shift timing in testing for a statistically significant difference in these variables between the surveys.

Regression models estimate the values of coefficients of included variables to maximise the ability of the model to predict the dependent variable (the variable sought to be explained by other variables). There are broadly three types of variables we have included in the models.

- Dummy/indicator variables (taking value 0 or 1) that indicate the time of the shift that the data point belongs to – e.g. a variable such as 'Monday night' takes value 1 if the observation of operator earnings is from a Monday night shift, and value 0 otherwise
- Dummy variables that indicate whether the data point is from the 2011 survey or 2014 survey
- Dummy variables that indicate whether the data point is from a 2014 day shift, a 2014 night shift or not – e.g. the *yearnight* variable takes value 1 if the data point is from 2014 and is a night shift, and value 0 otherwise[12]

We construct two models for each dependent variable:

1 A model including all shift indicator variables and the *year* variable, taking value 1 for 2014 and 0 otherwise
2 A model including all shift indicator variables, the *yearday* variable (value 1 on 2014 for day shifts only) and the *yearnight* variable (value 1 on 2014 for night shifts only)

The following example shows the functional form of our 2nd model for operator earnings[13]:

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12 Because we have included variables that indicate the shift that the data point is from, the combination of the *yearday*, *yearnight* and all other shift variables together indicates whether the shift is from 2011 day, 2011 night, 2014 day or 2014 night, despite there only being 2 indicator variables used.

$$Operator\ earnings = \sum_{i=1}^{13} \beta_i Shift_i + \beta_{14} yearday + \beta_{15} yearnight$$

The following points explain how regression output can be interpreted.

- The coefficient indicates the relationship between the explanatory variable and the dependent variable (such as operator earnings). For example, a coefficient of -2.29 on the *year* variable indicates that operator earnings from 2014 are 2.29 lower than operator earnings from the 2011 survey.
- P-values are a statistic that can be used to test whether the coefficient is significantly different from 0. Lower p-values imply that we can have more confidence that the variable is statistically significant. For example, a p-value of 0.01 can be interpreted as indicating that we can conclude the coefficient is statistically significant with a high degree of confidence.
- Similarly, the confidence interval can assist interpretation of the significance of the coefficient. It gives a range of values that are a good estimate of the true value of the coefficient. If the range between the lower and upper bound includes 0, this implies that the variable is not statistically significant at the 5 per cent level of significance.
- The constant term has been included in the regression output as well.

The output from the regression models we have constructed is presented below. For each dependent variable the 2 models (firstly with just the *year* variable, and secondly with the *yearday* and *yearnight* variables) are shown.

Operator earnings per shift models

C.1 Operators model (*year*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	0.69	0.45	-1.09	2.46
Wednesday day	0.77	0.39	-1.00	2.54
Thursday day	0.93	0.31	-0.85	2.70
Friday day	1.65	0.07	-0.12	3.43
Saturday day	-12.77	0.00	-14.69	-10.84
Sunday day	-14.61	0.00	-16.63	-12.60
Monday night	6.78	0.00	4.71	8.85
Tuesday night	17.90	0.00	15.92	19.87
Wednesday night	27.39	0.00	25.45	29.33
Thursday night	38.03	0.00	36.11	39.96
Friday night	59.36	0.00	57.44	61.28
Saturday night	52.42	0.00	50.44	54.39

13 Note that there are 13 shift variables ($Shift_1$, $Shift_2$, etc.) because only 13 dummy variables are required to indicate which of 14 shifts the data point is from

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Sunday night	-13.92	0.00	-16.39	-11.45
Year	-2.29	0.00	-3.08	-1.50
Constant	128.20	0.00	126.89	129.50

Source: CIE.

C.2 Operators model (*yearday* and *yearnight*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	0.68	0.45	-1.10	2.46
Wednesday day	0.78	0.39	-0.99	2.55
Thursday day	0.92	0.31	-0.86	2.69
Friday day	1.65	0.07	-0.12	3.43
Saturday day	-12.79	0.00	-14.72	-10.87
Sunday day	-14.62	0.00	-16.63	-12.60
Monday night	6.17	0.00	4.03	8.30
Tuesday night	17.25	0.00	15.19	19.30
Wednesday night	26.76	0.00	24.74	28.77
Thursday night	37.38	0.00	35.37	39.38
Friday night	58.70	0.00	56.71	60.70
Saturday night	51.71	0.00	49.64	53.78
Sunday night	-14.60	0.00	-17.13	-12.06
Yearday	-3.03	0.00	-4.05	-2.01
Yearnight	1.87	0.02	0.25	3.49
Constant	128.48	0.00	127.16	129.81

Source: CIE.

Driver earnings per shift models

C.3 Drivers model (*year*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	-1.32	0.60	-6.25	3.62
Wednesday day	2.36	0.35	-2.57	7.29
Thursday day	7.18	0.00	2.23	12.13
Friday day	16.48	0.00	11.54	21.43
Saturday day	19.12	0.00	13.78	24.46
Sunday day	26.94	0.00	21.39	32.49
Monday night	-22.29	0.00	-28.09	-16.49
Tuesday night	-10.68	0.00	-16.18	-5.17

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Wednesday night	3.87	0.16	-1.56	9.31
Thursday night	23.70	0.00	18.31	29.09
Friday night	78.79	0.00	73.44	84.14
Saturday night	82.00	0.00	76.50	87.49
Sunday night	8.91	0.01	1.98	15.85
Year	4.19	0.00	1.98	6.40
Constant	105.98	0.00	102.36	109.59

Source: CIE.

C.4 Drivers model (*yearday* and *yearnight*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	-1.29	0.61	-6.22	3.65
Wednesday day	2.36	0.35	-2.57	7.29
Thursday day	7.22	0.00	2.28	12.17
Friday day	16.49	0.00	11.55	21.43
Saturday day	19.18	0.00	13.84	24.51
Sunday day	26.96	0.00	21.41	32.51
Monday night	-20.97	0.00	-26.96	-14.98
Tuesday night	-9.25	0.00	-14.98	-3.52
Wednesday night	5.26	0.07	-0.39	10.91
Thursday night	25.13	0.00	19.51	30.76
Friday night	80.21	0.00	74.62	85.79
Saturday night	83.53	0.00	77.77	89.29
Sunday night	10.40	0.00	3.27	17.54
Yearday	5.77	0.00	2.94	8.61
Yearnight	-4.00	0.08	-8.51	0.51
Constant	105.36	0.00	101.68	109.04

Source: CIE.

Hours per shift models

C.5 Hours model (*year*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	-0.03	0.64	-0.18	0.11
Wednesday day	0.01	0.90	-0.13	0.15
Thursday day	0.05	0.53	-0.10	0.19
Friday day	0.05	0.46	-0.09	0.20

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Saturday day	0.31	0.00	0.16	0.47
Sunday day	0.60	0.00	0.43	0.77
Monday night	-0.22	0.01	-0.39	-0.05
Tuesday night	-0.05	0.51	-0.21	0.11
Wednesday night	0.15	0.07	-0.01	0.31
Thursday night	0.51	0.00	0.35	0.67
Friday night	1.39	0.00	1.23	1.55
Saturday night	1.28	0.00	1.12	1.44
Sunday night	-0.33	0.00	-0.53	-0.12
Year	-0.01	0.76	-0.07	0.05
Constant	9.97	0.00	9.86	10.07

Source: CIE.

C.6 Hours model (*yearday* and *yearnight*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	-0.03	0.64	-0.18	0.11
Wednesday day	0.01	0.91	-0.13	0.15
Thursday day	0.05	0.51	-0.09	0.19
Friday day	0.05	0.47	-0.09	0.20
Saturday day	0.32	0.00	0.16	0.47
Sunday day	0.60	0.00	0.43	0.77
Monday night	-0.15	0.10	-0.32	0.03
Tuesday night	0.02	0.78	-0.14	0.19
Wednesday night	0.22	0.01	0.06	0.39
Thursday night	0.59	0.00	0.42	0.75
Friday night	1.47	0.00	1.30	1.63
Saturday night	1.37	0.00	1.20	1.53
Sunday night	-0.25	0.02	-0.46	-0.04
Yearday	0.07	0.08	-0.01	0.16
Yearnight	-0.21	0.00	-0.35	-0.08
Constant	9.94	0.00	9.83	10.04

Source: CIE.

Fuel costs per shift models

C.7 Fuel model (*year*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	-0.81	0.03	-1.54	-0.09
Wednesday day	0.01	0.98	-0.72	0.74
Thursday day	0.06	0.87	-0.67	0.79
Friday day	1.05	0.01	0.33	1.78
Saturday day	2.08	0.00	1.30	2.87
Sunday day	4.69	0.00	3.85	5.53
Monday night	0.58	0.18	-0.28	1.44
Tuesday night	1.68	0.00	0.86	2.49
Wednesday night	3.11	0.00	2.30	3.93
Thursday night	5.39	0.00	4.59	6.20
Friday night	10.46	0.00	9.66	11.25
Saturday night	11.20	0.00	10.39	12.01
Sunday night	1.43	0.01	0.40	2.47
Year	3.21	0.00	2.88	3.54
Constant	25.93	0.00	25.40	26.46

Source: CIE.

C.8 Fuel model (*yearday* and *yearnight*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	-0.81	0.03	-1.54	-0.08
Wednesday day	0.01	0.98	-0.72	0.74
Thursday day	0.06	0.87	-0.67	0.79
Friday day	1.05	0.01	0.33	1.78
Saturday day	2.08	0.00	1.29	2.87
Sunday day	4.69	0.00	3.85	5.53
Monday night	0.53	0.25	-0.36	1.42
Tuesday night	1.62	0.00	0.77	2.47
Wednesday night	3.06	0.00	2.22	3.90
Thursday night	5.33	0.00	4.49	6.17
Friday night	10.40	0.00	9.57	11.23
Saturday night	11.13	0.00	10.29	11.98
Sunday night	1.37	0.01	0.31	2.43
Yearday	3.14	0.00	2.72	3.56
Yearnight	0.17	0.62	-0.50	0.84
Constant	25.96	0.00	25.42	26.50

Source: CIE.

Trips per shift models

C.9 Trips model (*year*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	-0.06	0.83	-0.65	0.52
Wednesday day	0.58	0.05	-0.01	1.17
Thursday day	0.65	0.03	0.06	1.24
Friday day	1.59	0.00	1.00	2.18
Saturday day	1.50	0.00	0.87	2.13
Sunday day	2.47	0.00	1.79	3.14
Monday night	0.15	0.68	-0.57	0.87
Tuesday night	1.95	0.00	1.27	2.64
Wednesday night	3.46	0.00	2.79	4.14
Thursday night	4.89	0.00	4.22	5.56
Friday night	10.31	0.00	9.64	10.98
Saturday night	10.14	0.00	9.47	10.80
Sunday night	2.78	0.00	1.97	3.59
Year	-0.43	0.00	-0.70	-0.16
Constant	12.30	0.00	11.87	12.73

Source: CIE.

C.10 Trips model (*yearday* and *yearnight*)

Variable	Coefficient	P-value	95% Confidence interval	
			Lower bound	Upper bound
Tuesday day	-0.06	0.83	-0.65	0.52
Wednesday day	0.58	0.05	-0.01	1.17
Thursday day	0.65	0.03	0.06	1.24
Friday day	1.59	0.00	1.00	2.18
Saturday day	1.50	0.00	0.87	2.14
Sunday day	2.46	0.00	1.79	3.13
Monday night	0.34	0.37	-0.40	1.08
Tuesday night	2.15	0.00	1.44	2.86
Wednesday night	3.66	0.00	2.96	4.37
Thursday night	5.10	0.00	4.40	5.79
Friday night	10.52	0.00	9.82	11.22
Saturday night	10.35	0.00	9.66	11.05
Sunday night	2.99	0.00	2.15	3.82
Yearday	-0.21	0.22	-0.55	0.13
Yearnight	-0.57	0.04	-1.13	-0.02
Constant	12.22	0.00	11.78	12.66

Source: CIE.

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