

Unbooked Commercial Passenger Vehicle Fare Review 2018

Draft Decision

21 June 2018



An appropriate citation for this paper is:

Essential Services Commission 2018, Unbooked Commercial Passenger Vehicle Fare Review 2018: Draft Decision, 21 June

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1. Our draft decision is to keep maximum fares unchanged

The CPV industry is going through major changes

Over the last two years the commercial passenger vehicle (CPV) industry has experienced enormous change. This is likely to continue over the next few years.

The government has made wide reaching reforms to the industry. In particular, the reduction of the cost of taxi licences and changes to allow the entry of rideshare services have had a significant impact. There are still more reforms to come. Fares for all booked services will be deregulated, the licensing system will be replaced with a registration system, and the regulations that CPV service providers must comply with are being reviewed.

In addition to these reforms, we have seen the intensity of competition in the CPV industry increase. In Melbourne, there are three rideshare booking services (Ola, Taxify, and Uber) competing on price, new taxi booking services such as Oiii and Slyk continue to emerge and the number of licensed taxis has almost doubled since September 2017.

From a consumer perspective, this competition provides a greater variety of services to choose from and less time spent waiting for CPVs. But overall, what we are seeing is that passengers are using taxis less. This means that there are fewer taxi fares but many more taxis and other CPVs on the road.

For the traditional taxi industry, particularly long-time operators, this is a time of uncertainty. As mentioned above, over the coming year, further reforms will come into effect.

Our role is to set maximum fares for unbooked CPVs

Amongst all of these shifting conditions, we are now required to set (and periodically review) unbooked CPV fares whereas in the past we set maximum fares for booked and unbooked taxis. For the time being, we expect that most, if not all, unbooked CPV trips will be by taxi. This may change in the future if other types of services begin to provide unbooked services.

As part of our review, we met with people from the commercial passenger vehicle and taxi industry and we have also received written submissions in response to our consultation paper.

Views are mixed about what should happen to fares. Some submissions we received suggested fares should increase, some suggested that fares should decrease, while others stated that a change to fares would be unhelpful given all of the changes the industry is going through.

Our draft decision is to keep maximum fares unchanged

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Our decision

We are concerned that changing maximum fares for unbooked CPVs now might have unpredictable consequences. An increase could make passengers worse-off if the full amount is passed through in higher fares. Taxi service providers could also be worse-off if an increase in fares turns passengers away from using taxis. An increase in fares may also send misleading signals to the market and attract even more taxis and other CPVs on to the road. The result of this could be more vehicles competing over fewer trips and ultimately reduced earnings for taxi service providers.

On the other hand, we could consider lowering fares. There are some signs that taxi service providers are under pressure to reduce their fares. There is even some evidence they have some capacity to do so. Some of the costs of operating a taxi have come down, and in some instances, these reductions have been quite large. However, if this is the case, taxi service providers are already free to lower their fares. The fares we set are only maximums.

So, in the context of all of the changes underway in the industry, and noting taxis can already lower their fares as a way of trying to attract more passengers, **we are proposing to leave maximum fares unchanged for now**. After making our final decision, we will review maximum fares within two years, as required by legislation.

Time and distance tariffs

We are also proposing to give unbooked CPV service providers the choice of using ‘time **and** distance’ tariffs (see box below). We consider that ‘time **and** distance’ tariffs would make it easier for passengers to understand unbooked CPV price offerings. However, in recognition of the fact that the industry is in a transitional period, we have left the choice of whether to use ‘time **and** distance’ tariffs to unbooked CPV service providers.

‘Time and distance’ tariffs

A ‘time **and** distance’ tariff calculates fares using a time rate and distance rate that apply at the same time. Under the existing tariffs, which are ‘time **or** distance’ tariffs, only the time rate or distance rate applies (depending on the speed of the vehicle).

Cleaning fee

We are also seeking feedback on whether we should introduce a cleaning fee. Currently, if a passenger makes a mess in an unbooked CPV, for example if they spill food or vomit in the vehicle, they are not required to compensate the service provider for the time required to clean the

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vehicle. In other states taxis may recover a cleaning fee. Rideshare companies also charge customers a cleaning fee if passengers make a mess in a vehicle.

This is your opportunity to provide feedback on our draft decision

We are interested in hearing your views on this proposed draft decision.

We will be making our final decision on unbooked fares in September so **we would appreciate your feedback by 19 July 2018.**

Details on how to contact us are on pages 25 to 26.

Structure of this draft decision

The rest of this draft decision contains further detail on the analysis behind our proposal:

- chapter 2 is our analysis of market outcomes in Melbourne
- chapter 3 is our analysis of market outcomes in the urban and large regional zone
- chapter 4 is our analysis of the change in the cost of operating a taxi
- chapter 5 explains our proposed ‘time **and** distance’ tariffs
- chapter 6 contains details on how to make a submission to this review.

The appendices to this draft decision contain further information on our proposed fares, our role, our approach, recent changes in the industry, stakeholder submissions and market outcomes.

Our draft decision is to keep maximum fares unchanged

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2. Passengers in the metropolitan zone are using taxis less often

As foreshadowed in our consultation paper, we have looked at market outcomes, that is, data on the number of trips taken and taxi availability in the metropolitan zone (metro zone).¹ This information can be used to see if maximum fares need to change. This chapter provides an overview of our analysis of unbooked taxi trips and taxi availability (licence numbers and shift hours). Appendix E contains more detail.

In the metro zone, people are using taxis less: most likely because they are switching to ridesharing services. As a result, taxis are spending more time on the road without a passenger. This suggests that the taxi fleet is not being fully utilised: in other words there is some unused capacity.

Generally, in a market where we see unused capacity we would expect prices to go down. A decrease in price would increase the number of customers that want the services or products available. Suppliers would then use their unused capacity to service the new customers and increase their revenues without incurring additional costs.

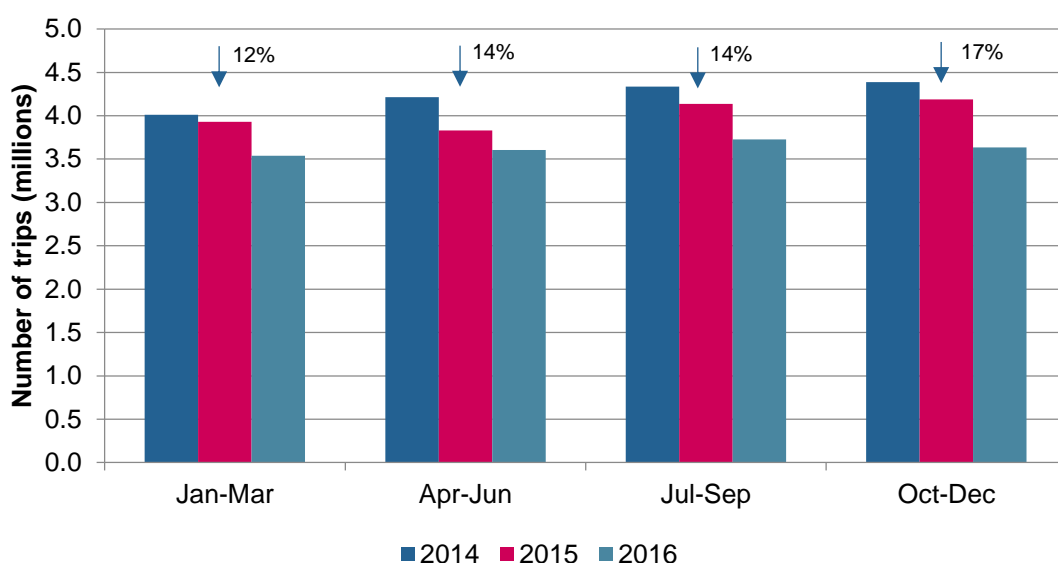
The number of trips in unbooked taxis has declined significantly

The number of trips taken in taxis in the metro zone has declined significantly since 2014 when fares were last changed. Our analysis of trip data shows that unbooked taxi trip numbers have declined every year between 2014 to 2016 (figure 2.1). We estimate that between the fourth quarters of 2014 and 2016², the number of trips in unbooked taxis decreased by 17 per cent.

¹ Specifically we measure market outcomes using the number of trips taken by passengers as a proxy for the demand for taxis and the number of licensed vehicles and shift hours worked by drivers as a proxy for the supply of taxis. We use occupancy rates (the percentage of the time taxis have paying passengers) and waiting times for drivers and passengers as measures of the balance between supply and demand.

² We only have complete trip data until the end of 2016 for the metro zone.

Figure 2.1: Unbooked taxi trips in the metro zone: 2014 to 2016



Historically, the number of taxi trips has increased as the population and economy have grown. Melbourne’s population increased by five per cent³ and the Victorian economy grew by seven per cent between 2014 and 2016.⁴ Based on past patterns we would also expect the number of taxi trips to increase. However, we have observed a decrease. As fares for taxis did not increase between 2014 and 2016, the drop in demand for taxis is most likely due to passengers switching to new ridesharing services. Meetings with stakeholders have confirmed this view.

There are more taxis, but possibly fewer on the road

Our data shows that there are now many more licensed taxis than in 2014. But on average, by June 2017, there were fewer taxis on the road providing services at any given time.

We looked at the number of taxi licences and the total hours that all taxis were in active service (shift hours). The number of licensed taxis is a measure of the potential supply of taxis, but shift hours is a better measure of actual taxi availability. For example there could be a large increase in the number of vehicles, but if no one drives those new vehicles then actual taxi availability would be unchanged.

The total shift hours worked by taxis in the metro zone decreased by around 13 per cent between the June quarters of 2014 and 2017. Shift hours measure the amount of time between the start and

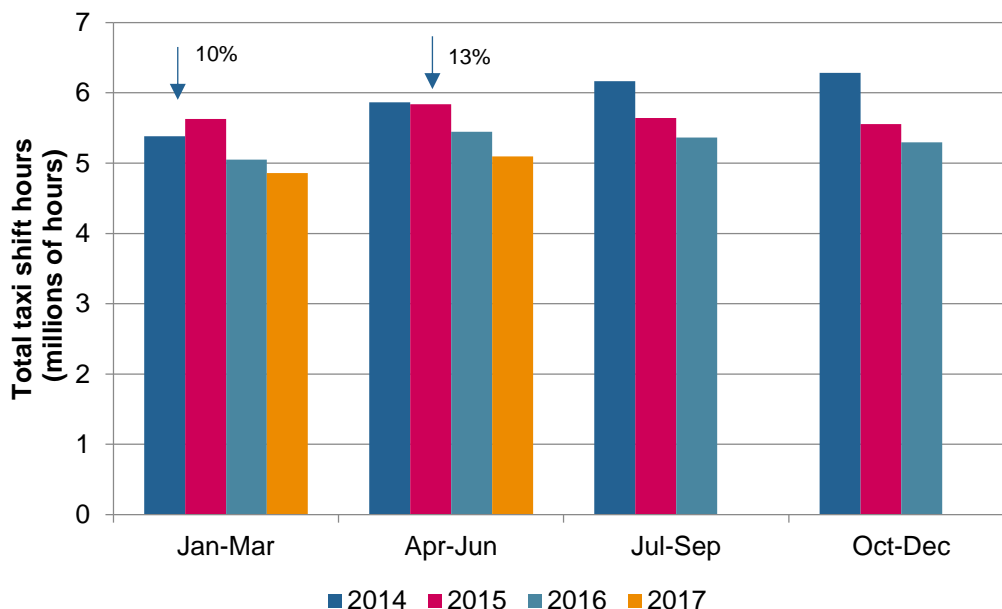
³ ABS, 3218.0 Regional Population Growth, Australia, July 2017, accessed 20 April 2018, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3218.02016?OpenDocument>.

⁴ ABS, 5220.0 Australian National Accounts: State Accounts, series ID A2336347R, November 2017, accessed 15 May 2018, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5220.02016-17?OpenDocument>.

Passengers in the metropolitan zone are using taxis less often

end of a taxi driver's shift. It includes all of the time drivers spend transporting passengers and all of the remaining time in between trips while drivers are accepting work but are unoccupied. The decrease in shift hours can be seen in figure 2.2.

Figure 2.2: Total hours of service for taxis in the metro zone: 2014 to 2017⁵



Some of the reasons for the decline in shift hours could be:

- the decline in taxi demand discussed above
- competition for drivers has increased: drivers that may have solely driven taxis can now drive part or full time for rideshare services meaning there are fewer drivers available for taxis.

Despite the observed decrease in taxi availability shown in shift hours, we note that starting in October 2017 the number of licensed taxis increased significantly. The number of licensed taxis almost doubled from 4,625 in September 2017 to 8,317 in April 2018.⁶ The significant increase in licence numbers began when the cost of a licence was reduced from around \$18,000⁷ to \$52.90 from October 2017.⁸ Figure 2.3 below shows the change in licence numbers in the metro zone.

⁵ This does not include the period of increased market entry. We do not have complete data for shift hours for the second half of 2017. However, the data that we do have suggests that this trend has continued.

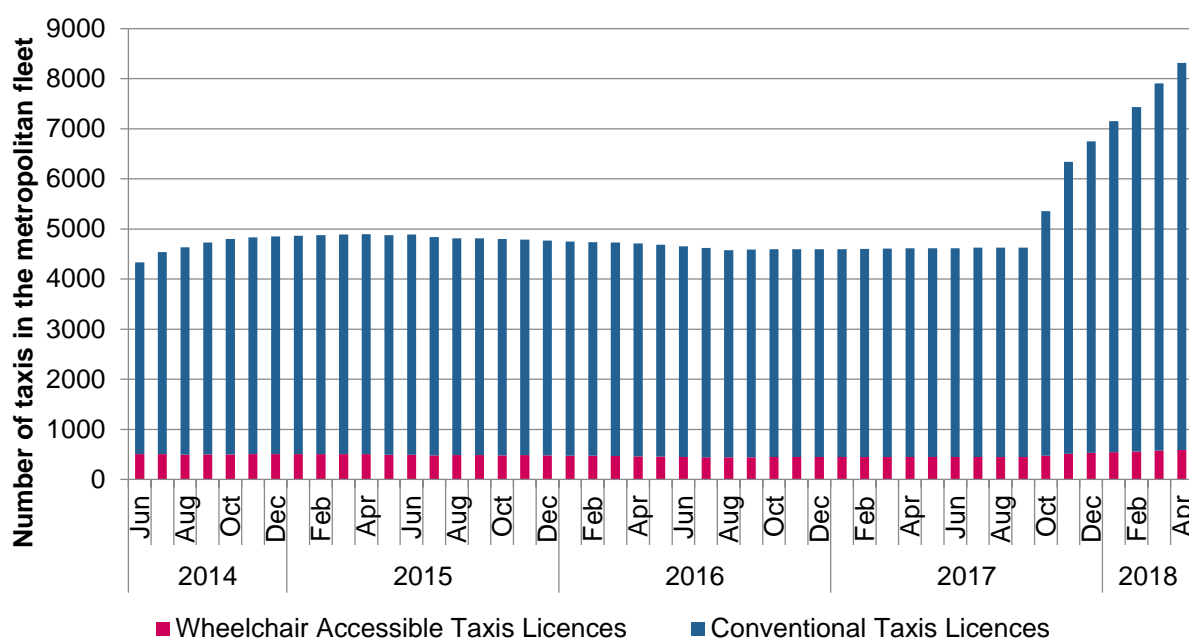
⁶ Taxi Services Commission, Taxi and hire car industry statistics, accessed 23 May 2018, <http://taxi.vic.gov.au/about-us/overview/industry-statistics>.

⁷ Taxi Services Commission, Annual Report 2016-17, October 2017, p. 25.

⁸ These fees are as of 5 October 2017, <http://www.gazette.vic.gov.au/gazette/Gazettes2017/GG2017S336.pdf#page=1>.

Passengers in the metropolitan zone are using taxis less often

Figure 2.3: Change in metro taxi licences: June 2014 to April 2018



It is difficult to say what this increase in taxi licences means for taxi availability. We do not have complete data on total shift hours for the period where the number of taxi licences increased significantly. However, the data that is available to us suggests that shift hours continued to decrease even after licence numbers increased significantly. One explanation for this could be that the new licences are for new owner/drivers who are not double shifting their vehicles. That is, many new owner/drivers do not rent their vehicle out to another driver when they are not driving it. This could increase licence numbers without a matching increase in shift hours.

Trip numbers and taxi availability suggest there is unused capacity

Occupancy rates have decreased

Average occupancy rates⁹ decreased from 29 per cent in 2014 to 27 per cent in 2016. This shows that taxi drivers were spending more time without a passenger in 2016 than in 2014. Figures 2.4 and 2.5 show the decrease in occupancy rates holds for most hours of the week but is most prominent on the Friday and Saturday night peak periods (that is, from 10.00pm to 4.00am).

⁹ The occupancy rate is the total number of minutes that all taxis were occupied divided by the total number of minutes each taxi was on the road. If demand for taxis is low relative to supply the occupancy rates will be lower. If demand for taxis is higher relative to supply the occupancy rates will be higher.

Passengers in the metropolitan zone are using taxis less often

The overall pattern of use across the week has not changed

While occupancy rates have decreased across all hours of the week, the way occupancy rates vary across the week has, in general, remained largely the same (see figure 2.5). Overall the pattern of taxi usage and availability has not changed (see figures 2.6 and 2.7). This indicates that the current fare structure is still encouraging taxi service providers to operate their vehicles at the times passengers need them. If we saw some periods with changes in occupancy rates that were very different to the change in occupancy rates for other times of the week it might be a sign that fares should change at those times. Figure 2.4 shows the only time that we observed such a change is at peak times on Friday and Saturday night. We have seen occupancy rates decrease by as much as 10 per cent at those times. This might suggest that fares could be reduced at those times so that taxis are better utilised. However, demand is still by far the highest during those peak times (see figure 2.6).

Figure 2.4: Change in average occupancy for each hour of the week in the metro zone - 2014 to 2016

Change in occupancy from 2014 to 2016							
Days of week							
Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
12am-1am	-2%	0%	-2%	-3%	-2%	-9%	-10%
1am-2am	-2%	-1%	-2%	-2%	-2%	-9%	-9%
2am-3am	-2%	0%	-3%	-1%	-2%	-6%	-8%
3am-4am	-1%	1%	-3%	-1%	-1%	-3%	-3%
4am-5am	0%	1%	-1%	0%	-1%	-2%	-3%
5am-6am	0%	1%	0%	1%	1%	-1%	-2%
6am-7am	-2%	-1%	-1%	-1%	0%	-1%	-4%
7am-8am	-2%	-2%	-1%	-2%	-1%	-2%	-3%
8am-9am	-1%	-3%	-2%	-1%	-2%	-1%	-1%
9am-10am	-1%	-1%	0%	-1%	-1%	0%	-1%
10am-11am	-1%	0%	0%	0%	-1%	0%	0%
11am-12pm	-1%	-1%	0%	-1%	-2%	-2%	-2%
12pm-1pm	-1%	-2%	-1%	-1%	-2%	-3%	-3%
1pm-2pm	-1%	-1%	-1%	-1%	-1%	-3%	-4%
2pm-3pm	-1%	-1%	-1%	-1%	-1%	-4%	-3%
3pm-4pm	-1%	-1%	-1%	0%	0%	-4%	-2%
4pm-5pm	-1%	-1%	1%	0%	-1%	-4%	-2%
5pm-6pm	0%	-1%	1%	1%	-2%	-4%	-1%
6pm-7pm	-1%	-2%	-1%	0%	-5%	-7%	-1%
7pm-8pm	-2%	-3%	-3%	-3%	-9%	-11%	-2%
8pm-9pm	-1%	0%	0%	0%	-7%	-10%	0%
9pm-10pm	1%	1%	1%	1%	-6%	-9%	0%
10pm-11pm	-1%	1%	0%	0%	-7%	-9%	-2%
11pm-12am	-2%	-1%	-3%	-3%	-9%	-10%	-3%

Passengers in the metropolitan zone are using taxis less often

Figure 2.5: Average occupancy for each hour across the week in the metro zone - 2014 and 2016

2014								2016							
Hour	Days of week							Hour	Days of week						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
12am-1am	28%	22%	22%	23%	28%	45%	52%	12am-1am	26%	22%	20%	21%	26%	35%	43%
1am-2am	24%	19%	19%	19%	25%	41%	51%	1am-2am	22%	18%	17%	17%	23%	31%	43%
2am-3am	21%	15%	18%	16%	23%	34%	47%	2am-3am	19%	16%	15%	15%	21%	28%	39%
3am-4am	20%	13%	16%	15%	22%	33%	43%	3am-4am	19%	14%	13%	14%	21%	29%	39%
4am-5am	18%	14%	14%	14%	18%	25%	33%	4am-5am	18%	15%	13%	14%	18%	23%	30%
5am-6am	25%	21%	20%	19%	18%	22%	28%	5am-6am	25%	22%	21%	20%	19%	21%	26%
6am-7am	29%	25%	24%	23%	21%	22%	28%	6am-7am	27%	24%	23%	22%	20%	21%	25%
7am-8am	29%	27%	27%	26%	26%	23%	27%	7am-8am	27%	25%	26%	25%	25%	21%	24%
8am-9am	36%	39%	39%	39%	36%	23%	24%	8am-9am	34%	36%	37%	37%	34%	22%	23%
9am-10am	35%	38%	38%	39%	35%	24%	25%	9am-10am	35%	37%	38%	38%	33%	24%	25%
10am-11am	30%	31%	31%	32%	31%	27%	26%	10am-11am	29%	31%	31%	32%	30%	27%	26%
11am-12pm	26%	27%	28%	29%	31%	31%	29%	11am-12pm	25%	26%	27%	28%	29%	29%	27%
12pm-1pm	25%	27%	28%	30%	33%	32%	31%	12pm-1pm	24%	26%	27%	29%	31%	29%	28%
1pm-2pm	24%	26%	27%	29%	30%	30%	30%	1pm-2pm	23%	25%	26%	28%	29%	27%	26%
2pm-3pm	27%	29%	31%	32%	34%	28%	29%	2pm-3pm	26%	28%	30%	31%	32%	24%	25%
3pm-4pm	30%	34%	36%	38%	39%	28%	28%	3pm-4pm	29%	32%	35%	38%	39%	24%	26%
4pm-5pm	28%	33%	35%	38%	40%	28%	29%	4pm-5pm	27%	32%	36%	39%	39%	24%	27%
5pm-6pm	26%	30%	31%	35%	38%	31%	28%	5pm-6pm	26%	30%	33%	36%	36%	26%	26%
6pm-7pm	27%	31%	33%	35%	40%	38%	28%	6pm-7pm	26%	29%	31%	35%	35%	31%	26%
7pm-8pm	26%	29%	31%	32%	40%	39%	25%	7pm-8pm	24%	26%	28%	29%	31%	28%	23%
8pm-9pm	26%	27%	28%	29%	33%	32%	23%	8pm-9pm	26%	27%	28%	29%	26%	22%	23%
9pm-10pm	26%	26%	27%	29%	33%	32%	26%	9pm-10pm	27%	28%	29%	30%	27%	23%	26%
10pm-11pm	26%	26%	28%	31%	40%	42%	29%	10pm-11pm	25%	27%	28%	31%	32%	33%	27%
11pm-12am	24%	23%	26%	30%	45%	50%	30%	11pm-12am	23%	23%	23%	27%	37%	40%	26%

Passengers in the metropolitan zone are using taxis less often

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Figure 2.6: Average unbooked taxi trips by hour of the week in the metro zone - 2014 and 2016¹⁰

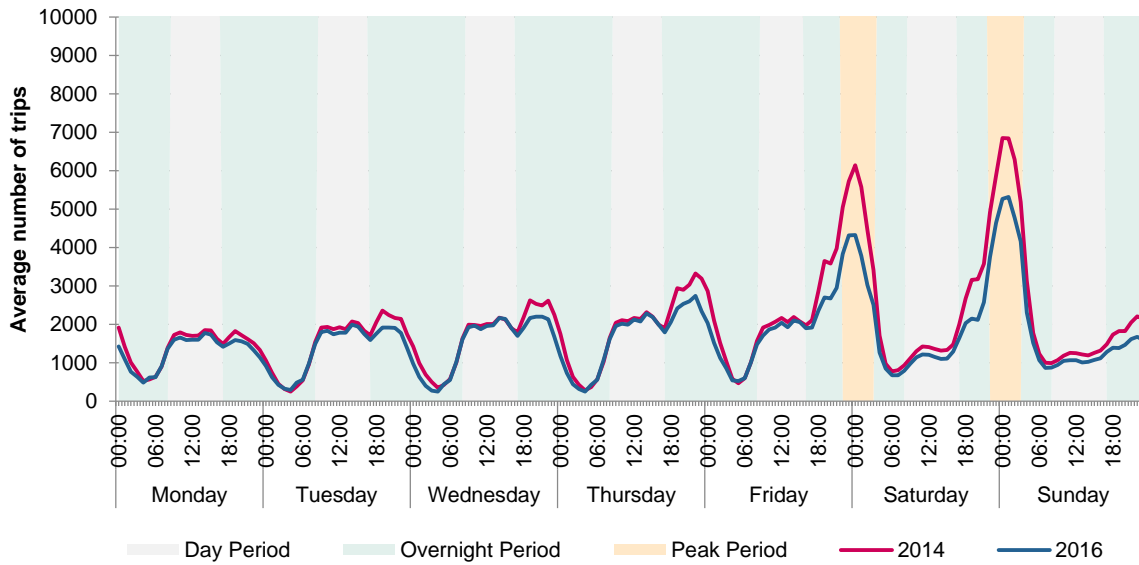
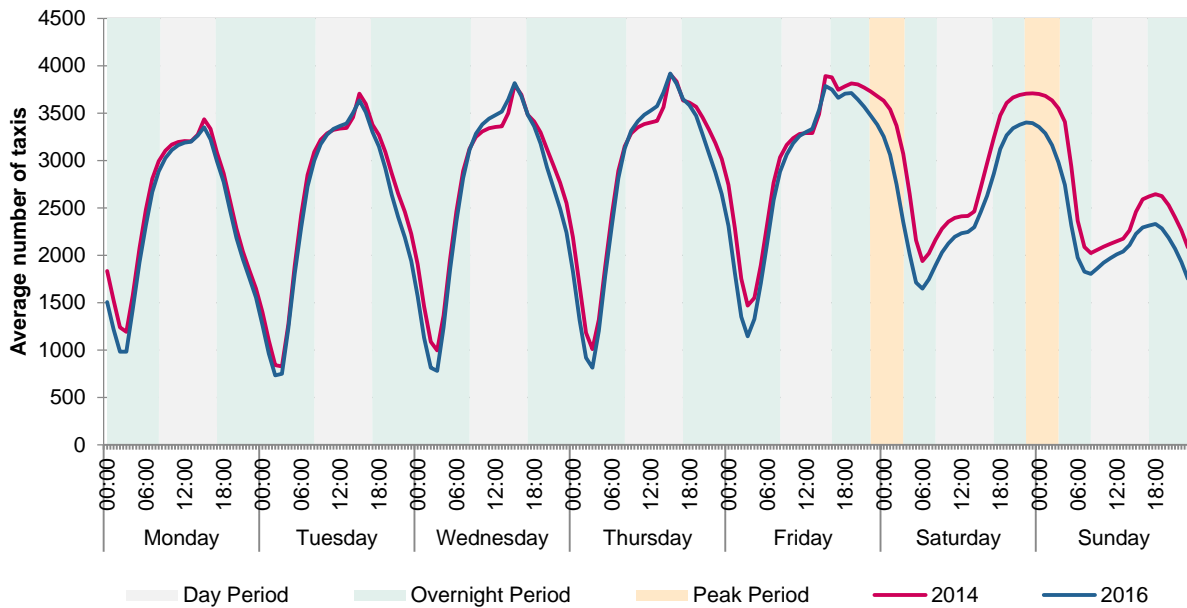


Figure 2.7: Average active taxis by hour of the week in the metro zone – 2014 and 2016



¹⁰ Data for July, August and December 2016 are not complete hence they are excluded from both years.

Passengers in the metropolitan zone are using taxis less often

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Taxi service quality has improved

Measuring taxi service quality can provide information about whether fares are too high or too low or whether fares should change at particular times.

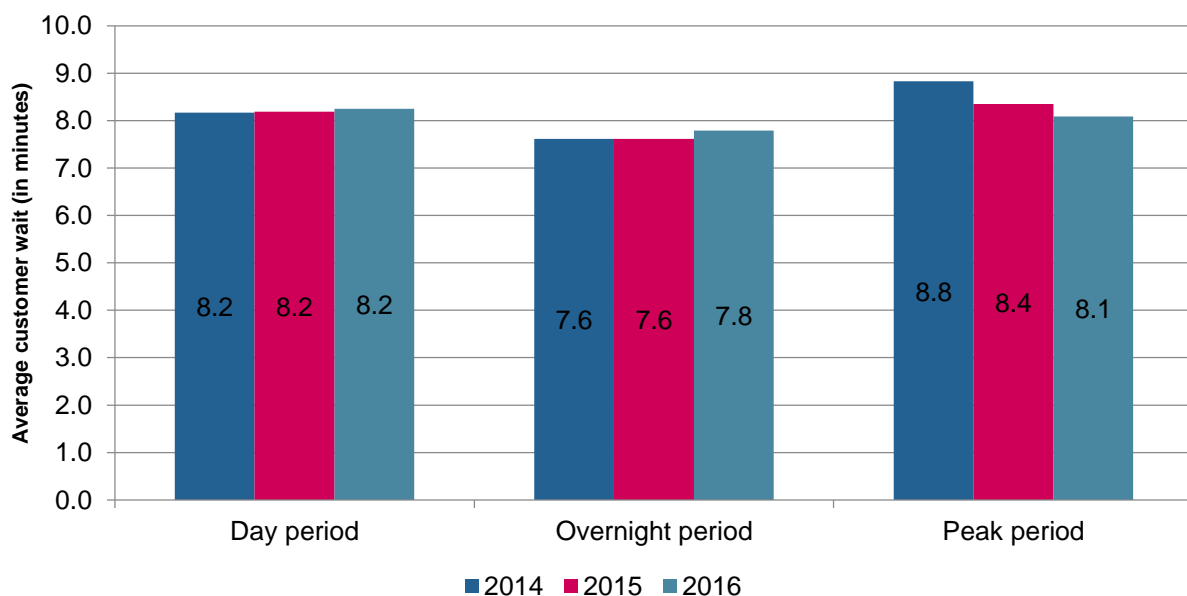
We examined taxi service quality by looking at the following measures:

- customer wait time (calculated from taxi networks' trip data)
- a customer satisfaction index (administered by the Taxi Services Commission)
- the total number of complaints about taxis lodged with the Taxi Services Commission.

These metrics either relate to both booked and unbooked trips (complaints and customer satisfaction) or only to booked trips (customer wait time). While these are not direct measures, they provide an indication of changes in service quality for unbooked services. For example, if customer wait times for booked trips are lower, it is likely that there is greater taxi availability and therefore that wait times for unbooked trips are also lower.

Our analysis shows that the quality of taxi services in the metro zone has generally stayed the same or improved. On average, in 2016 customer wait times were the same during the day and overnight periods as in 2014; and less during the peak period (figure 2.8).

Figure 2.8: Customer wait time by tariff period for the metro zone: 2014 to 2016



Note: Customer wait time in this graph is weighted average customer wait time. The wait times for immediate pick up bookings have been given greater weight than advance bookings. This reflects the fact that wait times for rank and hail trips, for which there are no recorded wait times, are more similar to immediate pick up bookings.

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Customer satisfaction levels have also improved (figure 2.9) and the total number of complaints received by the Taxi Services Commission has decreased since 2014 (figure 2.10).¹¹

Figure 2.9: Customer satisfaction index by quarter – metro zone: 2013 to 2017

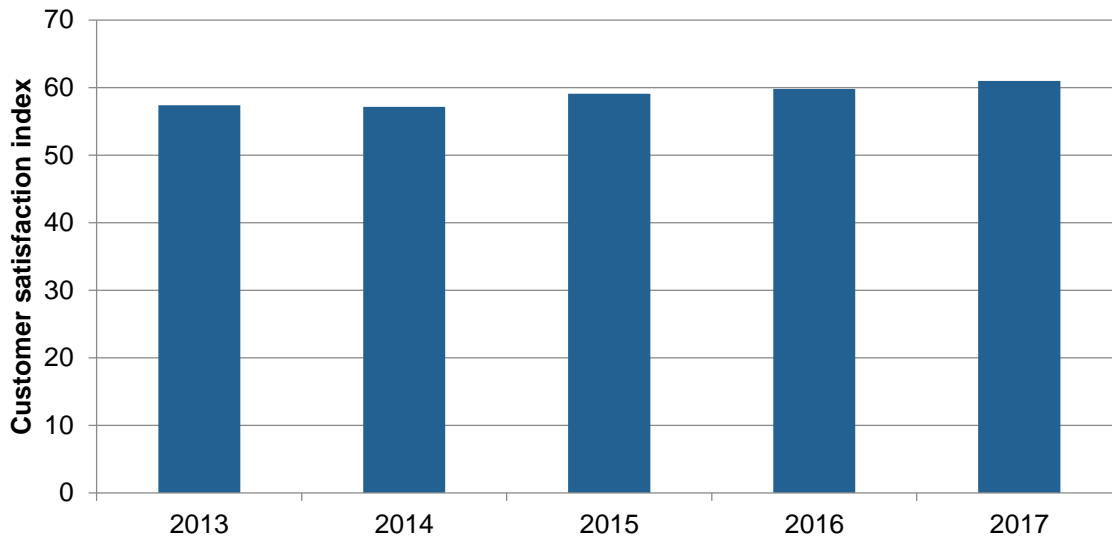
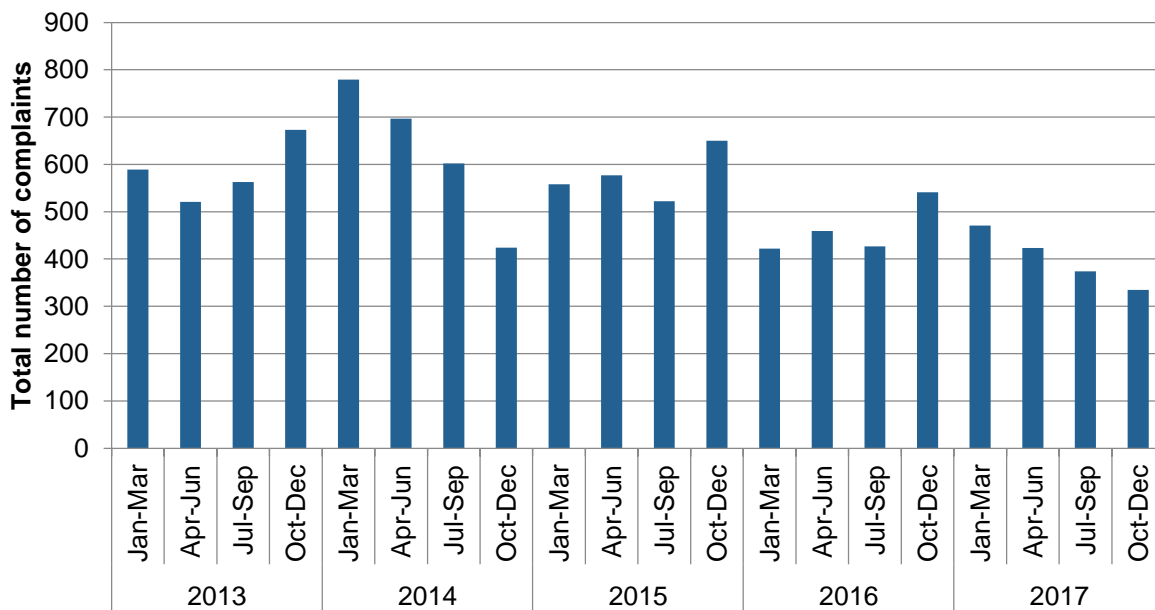


Figure 2.10: Total number of complaints in the metro zone – all taxis: 2013 to 2017



¹¹ Customers can lodge taxi related complaints with the Taxi Services Commission, typically on matters concerning driver behaviour, fare refusals and cleanliness of the vehicle.

Passengers in the metropolitan zone are using taxis less often

3. Passengers in the urban and large regional zone are also using taxis less often

The urban and large regional zone (urban zone) includes Geelong, Ballarat, Bendigo, Frankston, Dandenong and the Mornington Peninsula. Appendix D (Box D.2) contains a map of the urban zone.

The data that we have on the urban zone suggests that trip numbers have decreased. It also suggests that taxis spend a considerable amount of their time without passengers. As discussed in chapter 2 on the metropolitan zone (metro zone), this could indicate that fares should decrease.

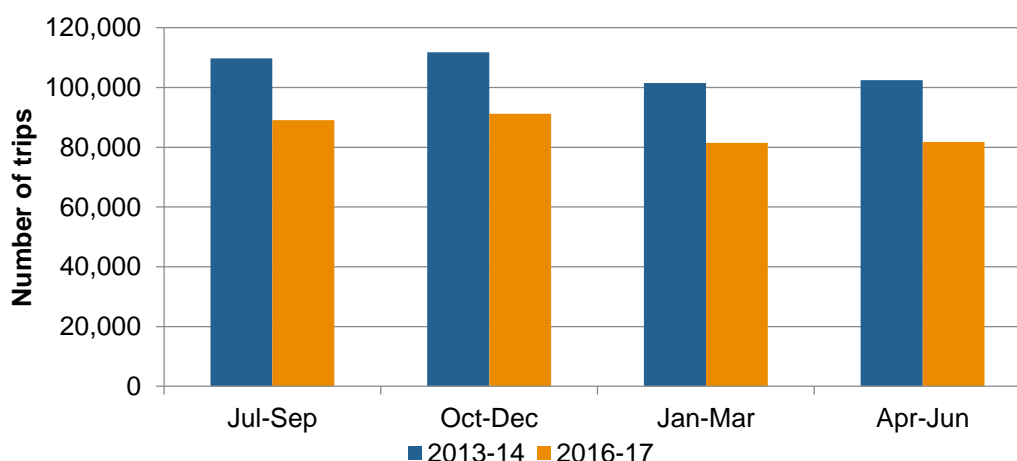
Appendix F contains more detail on our analysis of market outcomes in the urban zone.

The number of unbooked trips has significantly declined

The data that we have on the urban zone shows the number of unbooked taxi trips has declined significantly since 2014.

Figure 3.1 shows the number of trips in Geelong declined by roughly 20 per cent between 2013-14 and 2016-17.¹² We do not have trip data for Ballarat, Bendigo, or the east urban area (Dandenong, Frankston and the Mornington Peninsula) that can show trends in taxi trips. However, in meetings with network service providers from the urban zone we were told consumers are taking fewer trips on Friday and Saturday evenings due to the entry of rideshare operators into those markets.

Figure 3.1: Unbooked taxi trips in Geelong: 2013-14 and 2016-17



¹² We have data for different periods in the metro and urban zones. This is due to differences in the way that taxi networks have submitted their data.

Passengers in the urban and large regional zone are also using taxis less often

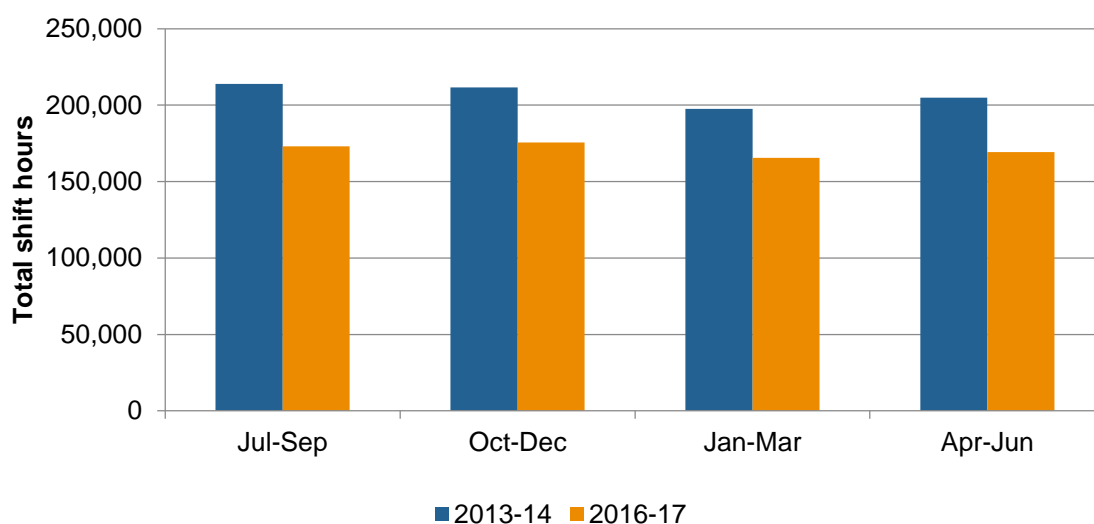
There are more taxis, but possibly fewer on the road

Data on taxi availability shows that there are many more licensed taxis than in 2014, but by June 2017, on average, there were fewer taxis on the road providing service at any given time.

As for the metro zone we assessed the level of taxi availability by looking at the number of taxi licences and the total hours that all taxis were in active service (shift hours).

The data we have for supply in the urban zone is not as complete as the data for the metro zone. We have good data for Geelong, but do not have good time series data on the level of supply for other parts of the urban zone. The data that we have for Geelong suggests trends in supply for the urban zone are similar to those in the metro zone. As in the metro zone it appears that the total shift hours worked by taxis in the urban zone has decreased (figure 3.2).

Figure 3.2: Total taxi shift hours for Geelong: 2013-14 to 2016-17



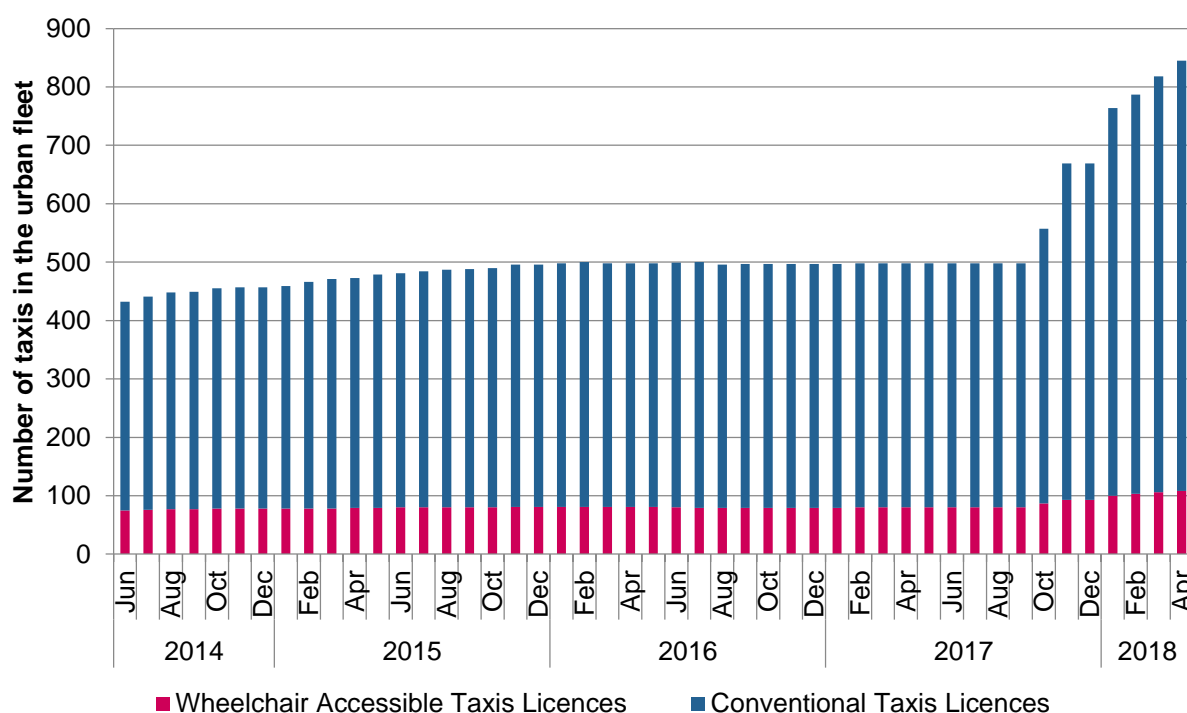
Lack of taxi drivers appears to be one of the key issues influencing the decline in shift hours in the urban zone. Some taxi service providers in the urban zone told us that they are finding it hard to attract drivers to cover all of their shifts. They believe this is due to the introduction of rideshare services.

As in the metro zone, although we have observed a decrease in shift hours up until midway through 2017, there was a large increase in the number of taxis licensed to operate in the urban zone late in 2017. The total number of taxi licences in the urban zone doubled from 498 in September 2017 to 845 in April 2018 (figure 3.3)¹³

¹³ Taxi Services Commission, Taxi and hire car industry statistics, accessed 23 May 2018, <http://taxi.vic.gov.au/about-us/overview/industry-statistics>.

Passengers in the urban and large regional zone are also using taxis less often

Figure 3.3: Urban zone taxi licences: June 2014 to April 2018



As in the metro zone, it is not clear if this increase in licence numbers has led to an increase in shift hours. The incomplete information that we have for the second half of 2017 suggests that it might not have.

Trip numbers and taxi availability suggest there is unused capacity

Occupancy rates increased in Geelong but there is no evidence there are too few taxis

On average, occupancy rates in Geelong have increased. Between 2013-14 and 2016-17 occupancy rates increased from 22 per cent to 24 per cent. While this suggests that taxis are spending less time unoccupied, and therefore that there is less unused capacity, occupancy rates in Geelong are still much lower than in the metro zone. Although overall occupancy rates have increased, occupancy rates have fallen on Saturday nights. This suggests that there is no shortage of taxis at what is generally the busiest time of the week in Geelong.

Occupancy rates in Ballarat are generally higher for all times of the week than in Geelong, but on average they are similar to those in the metro zone. This suggests that as in the metro zone, in Ballarat taxis are spending a lot of time on the road without passengers. Service providers in Bendigo have indicated that market outcomes there are similar to those in Ballarat.

The data that we have for the east urban area suggests that occupancy rates there have decreased. This indicates taxis are likely to spend a lot of time without a passenger there also.

Passengers in the urban and large regional zone are also using taxis less often

Occupancy rates indicate that there is no need to change the structure of fares in the urban zone

Although overall occupancy rates have increased in Geelong, the overall pattern of occupancy rates has not changed significantly since 2014. As discussed in chapter 2 this suggests that the overall patterns of taxi availability and usage have not changed and therefore the current fare structures are still appropriate. As the pattern of occupancy is similar in Ballarat and Bendigo, we draw the same conclusion for those parts of the urban zone.

The data available also suggests that, overall, the pattern of occupancy rates has also not changed in the east urban area.

Taxi service quality has remained stable

To look at trends in service quality for the urban zone we used the following measures:

- customer wait time (calculated from the Taxi Services Commission's trip data)
- the total number of complaints about taxis lodged with the Taxi Services Commission.

These measures indicate that the quality of taxi services in the urban zone has stayed roughly the same.

Passengers in the urban and large regional zone are also using taxis less often

Essential Services Commission

Unbooked Commercial Passenger Vehicle Fare Review 2018: Draft Decision

4. Costs have decreased

Since we last changed taxi fares for the metropolitan (metro) zone in 2014, we estimate the overall cost of operating a taxi has decreased for many taxi operators. This has been largely driven by decreases in licence costs. Overall, the other costs associated with operating a taxi have also slightly decreased and will decrease further by the time we make our price determination in September 2018.

Licence reform has significantly reduced costs for many operators

With the availability of low cost licences, drivers and operators are no longer required to rent a licence from a licence holder. For many taxi operators this is likely to significantly reduce costs. Prior to the introduction of low cost licences, which can be obtained for \$52.90, the average annual amount paid by taxi operators to licence holders was around \$18,000 per taxi.¹⁴

We measure changes in other costs using our taxi cost index

During our 2013-14 fare review, we conducted a survey of taxi operators in the metro zone to understand their costs. Using the information from this survey we were able to identify taxi operators' key cost components and their shares of total costs. To measure how these costs change over time, we use publicly available price indices for each cost component.¹⁵ Our taxi cost index is composed of an index and cost share for each cost component.

With this information we are able to estimate the total change in taxi costs (excluding licence costs) for conventional and wheelchair accessible taxis.

Overall the taxi cost index did not change much

Using our taxi cost index we are able to estimate how costs for taxis have changed since 2014.

Table 4.1 shows that, excluding licence costs, the cost of operating conventional taxis in the metro zone decreased slightly in nominal terms between March 2014 and December 2017. The decrease in costs was mostly driven by decreases in vehicle, network and fuel costs.

¹⁴ Taxi Services Commission, Annual Report 2016-17, October 2017, p. 25.

¹⁵ With the exception of fuel prices; we use proprietary data from FuelTRAC. See the appendix G on cost analysis for further information.

Table 4.1: Change in taxi cost index for conventional taxis in the metro zone:

March 2014 to December 2017

Cost Components	Change for cost component	Cost share	Contribution to overall change in index
Fuel	-6.2%	34.3%	-2.1%
Network (equipment)	-18.5%	6.5%	-1.2%
Network (labour)	9.1%	6.5%	0.6%
Comprehensive insurance	5.9%	6.1%	0.4%
Workers compensation	9.1%	1.5%	0.1%
Vehicle	-5.2%	11.6%	-0.6%
Registration	7.5%	3.9%	0.3%
Repairs and maintenance	7.3%	17.7%	1.3%
Administration	8.9%	12.0%	1.1%
Total*		100%	-0.2%

*Note: Due to rounding, the totals do not equal the sum of the rows

Overall the decrease in the taxi cost index for a conventional taxi in the metro zone was 0.2 per cent in nominal terms. The change in costs for wheelchair accessible vehicles was similarly small.¹⁶

Although the major networks have increased their fees in line with changes in the consumer price index, our index suggests that network costs should have gone down. The telecommunications component of the consumer price index shows that over the past 4 years telecommunications services, including bundles with equipment (such as fixed or mobile internet), have become cheaper. See appendix G for further details.

Lower vehicle registration costs will reduce costs further

From July 2018 the cost of operating a taxi is expected to further decrease. Registration costs are expected to decrease by 80 per cent. For an operator in the metro zone, the annual Transport Accident Commission premium will drop from \$2,586 to \$510. This will turn the observed total decrease in the taxi cost index of 0.2 per cent (in table 4.1) to a decrease of three per cent.

¹⁶ See Appendix G for our analysis on operating costs for wheelchair accessible vehicles.

Costs have decreased

Decreases in costs could be used to increase driver earnings

In its submission on our consultation paper 13CABS suggested that driver earnings need to increase to keep pace with the wages earned by other Australians and attract taxi drivers to provide their services.¹⁷ 13CABS suggested that, for this purpose, fares should increase by seven per cent.

We do not determine driver remuneration. We determine the total maximum fares which are then shared between drivers and operators. How much of the total fare drivers receive is up to taxi operators. Operators must give drivers at least 55 per cent of the total fare box revenue, but they can give more. Given that the cost of operating a taxi appears to be decreasing, it appears that operators may have capacity to increase driver earnings.

Anecdotal evidence suggests that some taxi operators are now offering drivers 60 per cent of the total fare box revenue. When the current fares came into effect in 2014 drivers were receiving 55 per cent of the total fare. An increase from 55 to 60 per cent of fare revenue is, all else equal, a nine per cent increase in drivers' earnings.

Current fares account for the commercial passenger vehicle levy

In their submissions on our consultation paper, both the Victorian Taxi Association and 13CABS stated that fares should increase to account for the costs associated with the introduction of the Commercial Passenger Vehicle Services Levy.¹⁸ ¹⁹ The Victorian Government introduced the levy to fund the assistance package for existing taxi service providers as a result of the significant reforms that have been made to the CPV industry.

All CPV service providers, including taxi service providers, will be required to pay the CPV levy from 1 July 2018 to comply with the Commercial Passenger Vehicle Industry Act 2017. In May 2018 we made a determination to give service providers the option to transparently recover that cost by adding a new fare component to the schedule of maximum hiring rates.²⁰ This is consistent with the government's intent that "booking service providers and trip providers will absorb or pass on the costs of the levy as they see fit in the new competitive environment."²¹

¹⁷ 13CABS, submission received on 24 April 2018.

¹⁸ 13CABS, submission received on 24 April 2018.

¹⁹ Victorian Taxi Association, submission received on 4 April 2018.

²⁰ Essential Services Commission, Determination of Maximum Taxi Fares (Recovery of Commercial Passenger Vehicle Services Levy from 1 July 2018), May 2018.

²¹ Jacinta Allan, the Minister for Public Transport, Parliamentary Debates (Hansard): Legislative Assembly Fifty-Eighth Parliament - First Session, 23 February 2017, p. 399.

Costs have decreased

5. Fare choice with 'time and distance' tariffs

In this draft decision we propose to give unbooked commercial passenger vehicle (CPV) service providers the ability to choose between two tariff structures: the existing tariff structure and a new more transparent structure.

The new tariff structure is a 'time **and** distance' tariff. A 'time **and** distance' tariff calculates fares using a distance rate and time rate that apply at the same time. Under the existing tariffs, which are 'time **or** distance' tariffs, only the distance rate or time rate applies (depending on the speed of the vehicle).

'Time **and** distance' tariffs have a number of advantages compared to 'time **or** distance' tariffs.

'Time **and** distance' tariffs make it easier:

- for passengers to understand tariff schedules
- to estimate the cost of a trip
- to compare the prices for different CPV services.

For these reasons, giving taxis the ability to use a 'time **and** distance' tariff should make it easier for them to compete with each other and other CPV services.

The new 'time **and** distance' tariffs can be found in appendix A.

'Time and distance' tariffs are easier to understand

A passenger can more easily estimate what the fare is likely to be using a 'time **and** distance' tariff by:

- multiplying the trip distance by the distance rate
- multiplying the trip duration by the time rate
- adding the two together with the flagfall.

Calculating a fare with the existing 'time **or** distance' tariff system is more complicated. To calculate a fare under a 'time **or** distance' tariff one must:

- calculate how many kilometres will be charged at the distance rate and how many minutes will be charged at the waiting rate (to do this one must know what speed the vehicle will travel at all times during the trip)
- multiply the distance rate by the number of kilometres charged at the distance rate
- multiply the waiting rate by the number of minutes charged at the waiting rate
- add the two together with the flagfall.

It is easier to estimate fares using 'time and distance' tariffs

Interested passengers would be better placed to estimate the distance of their trip and the time it will take, than to try to estimate the speed they will be travelling at all times during the trip. This means that more passengers will be better placed to estimate a fare with a 'time **and** distance' tariff than with a 'time **or** distance' tariff.

It is easier to compare prices using 'time and distance' tariffs

Because it might be easier to estimate fares using a 'time **and** distance' tariff, it would also be easier to compare fares between service offerings.

For example, a passenger might have a choice between two CPV services offering 'time **or** distance' tariffs. One service has a higher distance rate, while the other has a higher waiting rate. In this example, it would not be possible for the average passenger to immediately tell which service is cheaper.

Under a 'time **and** distance' tariff, a passenger can more easily compare fare offerings with some simple mental arithmetic.

In practice, passengers are most likely to compare booked and unbooked services. Most rideshare services calculate their fares using 'time **and** distance' tariffs. Having the maximum fares for taxis in the same format as those for rideshare services will make it easier for passengers to compare the prices for those services. Even if taxi service providers do not use the 'time **and** distance' tariffs, passengers will be able to access the maximum 'time **and** distance' tariffs on our, or the Taxi Services Commission's, website to make comparisons between taxi and rideshare price offerings.

The average fare will be the same under both fare schedules

We have calculated our 'time **and** distance' tariffs so that on average fares will be the same regardless of whether our maximum 'time **or** distance' tariffs or 'time **and** distance' tariffs are used.²² This has been checked by comparing the estimated total revenue and average fare at one kilometre intervals for each tariff system. More detail can be found in Appendix L.

²² Fares for individual journeys will be different, but on average fares will be the same under the two tariff structures.

We have considered the challenges of using 'time and distance' tariffs

We are aware of some issues that will complicate using 'time **and** distance' tariffs. The first is that not all current meters can calculate 'time **and** distance' tariffs. The second relates to potential disagreements between drivers and passengers.

Not all meters can be programmed to apply a 'time and distance' tariff

It is our understanding that many of the older meters still in use by taxis cannot be programmed to calculate 'time **and** distance' tariffs. This has been the key reason behind us giving operators the choice between using the current 'time **or** distance' tariffs and our new 'time **and** distance' tariffs.

By giving operators the choice between using the current tariffs and the new 'time **and** distance' tariffs we will not be forcing operators to invest in new meters. Instead, it will be up to them whether they upgrade their meter or wait until their next meter purchase to take advantage of the new tariffs.

In this way we have given the industry the option to make their fares more flexible without forcing potentially unnecessary capital expenditure on them.

Having two different tariff structures could create confusion for passengers

We are aware that having two different tariff structures could potentially cause confusion for passengers. It could also cause disagreements between passengers and drivers about whether the current tariffs or the 'time **and** distance' tariffs should apply.

In practice, drivers do not have a choice of which set of tariffs to apply at the beginning of trips. The decision on whether to use 'time **and** distance' or 'time **or** distance' tariffs is made by the operator (the owner of the vehicle) when they program their meters. As neither passengers nor drivers will have the choice of which set of tariffs will apply at the beginning of the trip, the risk of disagreement on whether 'time **and** distance' or 'time **or** distance' tariffs should apply will be low.

Also, while passengers might be confused about whether 'time **and** distance' or 'time **or** distance' tariffs apply, the current 'time **or** distance' tariffs are already a source of confusion for passengers. 'Time **or** distance tariffs' are difficult to understand. If 'time **and** distance' tariffs are used instead, it will be easier for passengers to understand how they are being charged.

Therefore, in our draft decision we propose that the decision on whether to use 'time **and** distance' or 'time **or** distance' tariffs be left to unbooked CPV operators.

6. We are seeking your feedback on our draft decision

This draft decision provides you with our preliminary views on maximum fares for unbooked commercial passenger vehicle services. We are seeking your feedback.

This is your opportunity to provide feedback on the data we have used, our analysis and our draft decision. We will consider all points of view when making our final decision on maximum fares.

We will also continue to consult with interested stakeholders for the rest of the review and encourage all interested parties to contribute their views.

Indicative timelines for the review

The release of this draft decision is the next step in our review process. We have already consulted with a range of stakeholders and undertaken extensive analysis of supply, demand, and costs in making our draft decision on maximum fares.

Table 6.1 below shows our target timeline for the rest of the review.

Table 6.1: Target timeline for our review

Activity	Target timeline
Commission releases draft decision for public consultation	21 June 2018
Commission conducts consultations	June - July 2018
Submissions on the draft decision close	19 July 2018
Commission releases final decision and price determination	September 2018
Price determination comes into effect	October 2018

How to make a submission on this draft decision

Submissions on this draft decision close 19 July 2018.

Please email submissions to cpvfares@esc.vic.gov.au. You may also send submissions via fax to 03 9032 1303 or by mail, marked:

Attention: Transport Division
Essential Services Commission
Level 37, 2 Lonsdale Street
Melbourne VIC 3000

We are seeking your feedback on our draft decision

Essential Services Commission

Unbooked Commercial Passenger Vehicle Fare Review 2018: Draft Decision

You can send any questions about this draft decision paper to:

Jonathan Roberts
Acting Project Manager, Transport
Essential Services Commission
Email: cpvfares@esc.vic.gov.au
Phone: 03 9032 1300

You may also make submissions through the Engage Victoria website by searching for the Commercial Passenger Vehicle Fare Review 2018.²³

We publish all submissions on our website

To promote an open and transparent review process, we will make all submissions publicly available on our website. If there is information that you do not wish to be disclosed publicly on the basis that it is confidential or commercially sensitive, this information should be clearly specified in the submission.²⁴

²³ <https://engage.vic.gov.au/commercial-passenger-vehicle-fare-review-2018>

²⁴ www.esc.vic.gov.au/our-submission-policy

We are seeking your feedback on our draft decision

Essential Services Commission

Unbooked Commercial Passenger Vehicle Fare Review 2018: Draft Decision

Appendix A: Proposed maximum fares

Table A.1: Maximum fares for the metro zone and east urban area - ‘time or distance’ tariffs: unchanged

	Tariff 1 ‘Day’ (9am-5pm)	Tariff 2 ‘Overnight’ (5pm-9am, excluding peak)	Tariff 3 ‘Peak’ (Fri & Sat nights 10pm-4am)
Standard fare components	Maximum charge up to		
Flagfall (\$)	4.20	5.20	6.20
Distance rate (\$/km) (when speed is above 21 km/hr)	1.622	1.804	1.986
Waiting time (\$/min) (when speed is below 21 km/hr)	0.568	0.631	0.695
Other fare components (applicable to tariffs 1, 2 and 3)	Maximum charge up to		
High occupancy fee ^(a)			\$14.00
Airport rank fee	For trips from the Melbourne Airport rank		\$3.58
Holiday rate ^(b)			Tariff 3 rates
CPV levy recovery fee			\$1.10
CityLink and EastLink tolls ^(c)			rates vary

(a) For taxis carrying 5 to 11 passengers.

(b) For trips commencing on Christmas Day, Boxing Day, New Year’s Day and from 6pm on New Year’s Eve.

(c) As published from time to time in the Victorian Government Gazette in accordance with the Melbourne City Link Act 1995 or the EastLink Project Act 2004 as applicable.

Table A.2: Maximum fares for Geelong, Ballarat and Bendigo - ‘time or distance’ tariffs: unchanged

Fare component		Maximum charge
Standard fare components		
Flagfall (\$)		3.60
Distance rate (\$/km) (applies when speed is above 21 km/hr)		1.838
Waiting time (\$/min) (applies when speed is below 21 km/hr)		0.643
High occupancy trips		
For trips with 5-11: not applicable for wheelchair passenger trips		
Flagfall (\$)		3.60
Distance rate (\$/km) (applies when speed is above 21 km/hr)		2.757
Waiting time (\$/min) (applies when speed is below 21 km/hr)		0.965
Other fare components		
Late night fee	For trips commencing between 7pm on Friday and Saturday nights through to 6am the following morning; and from midnight to 6am on all other days	\$3.40
Holiday rate ^{(a)(b)}		\$4.20
CPV levy recovery fee		\$1.10
CityLink and EastLink tolls ^(c)		rates vary

(a) For trips commencing between 7pm on evenings prior to all public holidays, through to 6am the following mornings and trips commencing on Christmas Day, Boxing Day, New Year’s Day and from 6pm on New Year’s Eve.

(b) The ‘late night fee’ does not apply during times that the holiday rate applies.

(c) As published from time to time in the Victorian Government Gazette in accordance with the Melbourne City Link Act 1995 or the EastLink Project Act 2004 as applicable.

Table A.3: Maximum fares for the metro zone and east urban area - proposed ‘time and distance’ tariffs: new

	Tariff 1 ‘Day’ (9am-5pm)	Tariff 2 ‘Overnight’ (5pm-9am, excluding peak)	Tariff 3 ‘Peak’ (Fri & Sat nights 10pm-4am)
Standard fare components	Maximum charge up to		
Flagfall (\$)	4.20	5.20	6.20
Distance rate (\$/km) (at all times)	1.342	1.490	1.648
Duration rate (\$/min) (at all times)	0.344	0.379	0.408
Other fare components (applicable to tariffs 1, 2 and 3)	Maximum charge up to		
High occupancy fee ^(a)			\$14.00
Airport rank fee	For trips from the Melbourne Airport rank		\$3.58
Holiday rate ^(b)			Tariff 3 rates
CPV levy recovery fee			\$1.10
CityLink and EastLink tolls ^(c)			rates vary

(a) For taxis carrying 5 to 11 passengers.

(b) For trips commencing on Christmas Day, Boxing Day, New Year’s Day and from 6pm on New Year’s Eve.

(c) As published from time to time in the Victorian Government Gazette in accordance with the Melbourne City Link Act 1995 or the EastLink Project Act 2004 as applicable.

Table A.4: Maximum fares for Geelong, Ballarat and Bendigo - proposed ‘time and distance’ tariffs: new

Fare component		Maximum charge
Standard fare components		
Flagfall (\$)		3.60
Distance rate (\$/km) (at all times)		1.494
Waiting time (\$/min) (at all times)		0.491
High occupancy trips		
For trips with 5-11 passengers: not applicable for wheelchair passenger trips		
Flagfall (\$)		3.60
Distance rate (\$/km) (at all times)		2.441
Waiting time (\$/min) (at all times)		0.529
Other fare components		
Late night fee	For trips commencing between 7pm on Friday and Saturday nights through to 6am the following morning; and from midnight to 6am on all other days	\$3.40
Holiday rate ^{(a)(b)}		\$4.20
CPV levy recovery fee		\$1.10
CityLink and EastLink tolls ^(c)		rates vary

(a) For trips commencing between 7pm on evenings prior to all public holidays, through to 6am the following mornings and trips commencing on Christmas Day, Boxing Day, New Year’s Day and from 6pm on New Year’s Eve.

(b) The ‘late night fee’ does not apply during times that the holiday rate applies.

(c) As published from time to time in the Victorian Government Gazette in accordance with the Melbourne City Link Act 1995 or the EastLink Project Act 2004 as applicable.

Appendix B: Our role is to set the maximum fares for unbooked CPV services

The Essential Services Commission must determine (set) maximum fares for unbooked commercial passenger vehicle (CPV) trips in Victoria’s metropolitan zone (metro zone) and urban and large regional zones (the urban zone).²⁵ The Commercial Passenger Vehicle Industry Act 2017 will govern this role.²⁶

Our objectives

The purpose of the Commercial Passenger Vehicle Industry Act is to establish a new and modern regulatory regime for the CPV industry that focuses on safety and the provision of consumer protections.²⁷ Our role determining maximum fares for unbooked services is one of these protections.

Our specific objective under the Commercial Passenger Vehicle Industry Act for determining maximum fares is to promote the efficient provision and use of unbooked CPV services.²⁸ This objective complements our objective under the Essential Services Commission Act, which is to promote the long term interests of Victorian consumers.²⁹ We consider the interests of consumers are served by having: a ceiling on fares (a maximum) that can be charged for unbooked services, good service quality and diverse CPV service offerings.³⁰

We will set maximum fares for unbooked CPV services

The CPV market is the hire of point-to-point vehicle transport. This is different to other forms of transport that, for example, run on pre-specified routes.

²⁵ Before determining fares we typically undertake a fare review. A price determination is the legislative instrument we use to set maximum fares.

²⁶ Under section 110F of the Commercial Passenger Vehicle Industry Act 2017 we will be required to make our first determination before 7 July 2019.

²⁷ Commercial Passenger Vehicle Industry Amendment (Further Reforms) Bill 2017: Explanatory Memorandum, p.1.

²⁸ Commercial Passenger Vehicle Industry Act 2017, section 110C (see section 18 of the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

²⁹ Essential Services Commission Act 2001, section 8.

³⁰ Essential Services Commission, Fare review for unbooked commercial passenger vehicle services – consultation paper, February 2018, p.7.

It is useful to divide the market for CPVs into two submarkets, depending on the way passengers obtain services:

- booked: passengers reserve prior to travel through an app, online or over the phone
- unbooked: passengers hail from the street or take a vehicle from a rank.

Under our new role we will determine fares for unbooked services, but not for booked services.

Unbooked CPVs are not just taxis. They could also include hire cars, and rideshare vehicles that have the required safety equipment (for example, security cameras) to provide unbooked services.³¹ Our review will consider fares for these unbooked services only.

The locations where we set maximum fares

Our determination of maximum fares for unbooked services will apply to only the metro and urban zone.³² The metro zone covers most of metropolitan Melbourne. The urban zone includes Geelong, Ballarat, Bendigo, Frankston, Dandenong and the Mornington Peninsula.

Our role in legislation

Under section 162C of the Transport (Compliance and Miscellaneous) Act 1983 our current role is to set maximum fares for booked and unbooked **taxis**. This role will be repealed on 7 July 2018³³ and our new role under the Commercial Passenger Vehicle Industry Act will come into effect.

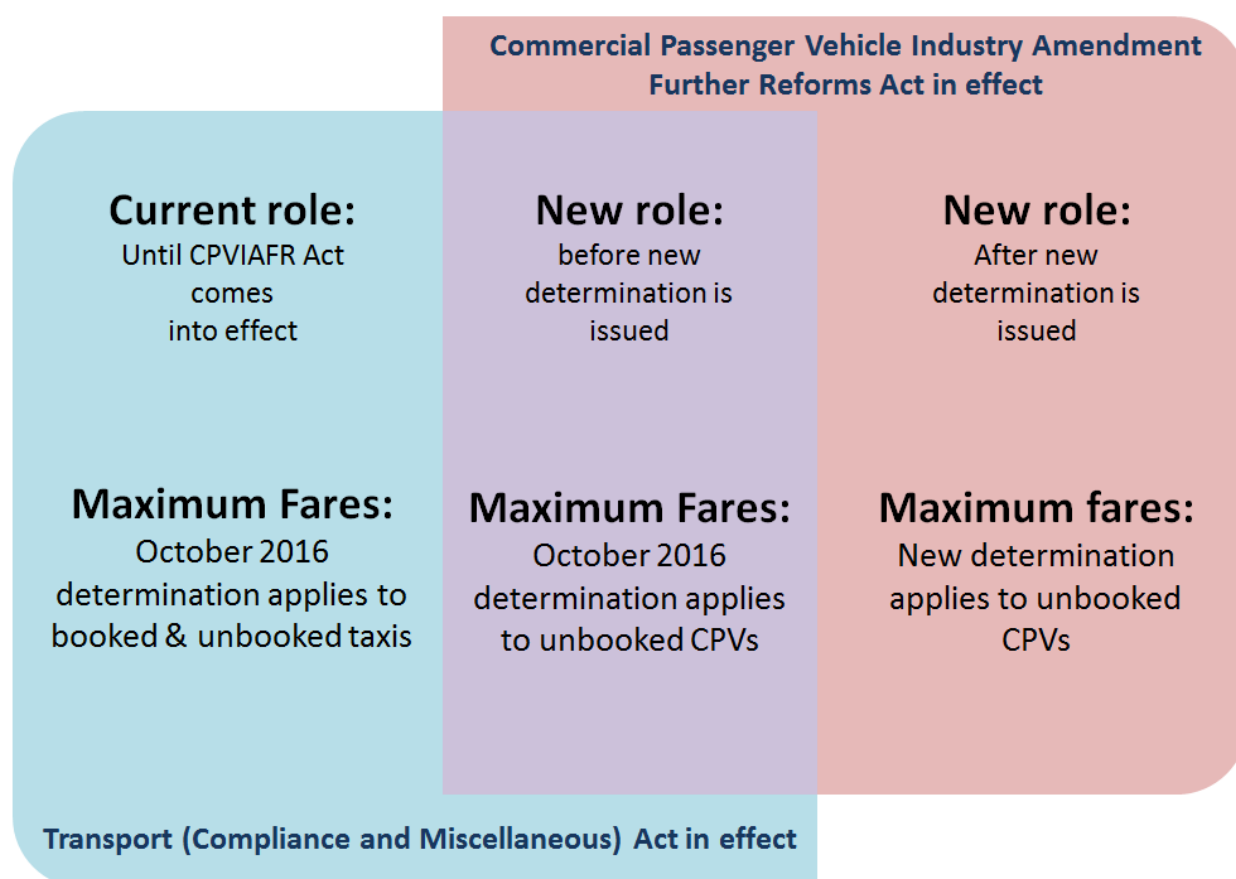
As discussed above, our new role will be to determine maximum fares for all **unbooked CPV services** in the metro and urban zones. Figure B.1 below shows what is regulated under our current role, and what will be regulated under our new role.

³¹ Currently it is not clear what these requirements will be. This will depend on the regulations that will be made by the Governor in Council under section 289 of the Commercial Passenger Vehicle Industry Act 2017 (Vic) (see section 19 of the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

³² Commercial Passenger Vehicle Industry Act 2017, section 110D (see section 18 of the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

³³ Or earlier if the Act is proclaimed before this date in which case the provision becomes operational and takes effect from the date of proclamation. Commercial Passenger Vehicle Industry Act 2017, section 110D (see section 18 of the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017). Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017, schedule 1 item 10.8.

Figure B.1: Coverage of our maximum fare determinations



Current fares will apply until we make our determination

The maximum fares³⁴ we set in October 2016 will continue to apply for **unbooked CPV services** until we issue a new price determination. They will also continue to apply to booked taxis, but only until our new role comes into effect in July 2018.

³⁴ Essential Services Commission, Updating the Schedule of Maximum Taxi Fares Document Determination, October 2016, pp. 5 - 9.

Appendix C: How we have assessed fares

Our approach to this review

In coming to our draft decision on maximum fares, we have assessed market outcomes since our last review and changes in operators' costs. This is consistent with the approach we set out in our consultation paper.³⁵ In general stakeholders supported our proposed approach to this fare review (see appendix K).

We have analysed market outcomes

Market outcomes are the levels of supply and demand that prevail in the commercial passenger vehicle (CPV) industry. Analysing the balance between supply and demand for CPVs helps show us what should happen to the level and structure of the maximum fares at particular times and places — that is, whether there is a case for fares to go up, go down or stay the same (including at different times of the day, week or year).

All of the market outcomes in the CPV industry that we have observed have occurred in response to the current maximum taxi fares. This makes the current fares a good starting point for assessing the value of any proposed maximum fares.

We have reviewed CPVs' costs

We also reviewed taxi operators' costs to inform us about whether maximum fares are still sufficient to cover unbooked CPV service providers' efficient costs to maintain service levels.

To assess efficient costs, among other things, we considered:

- **Current market conditions** – Changes in economic conditions affect the inputs used to provide CPV services.
- **Licence fees** - The new regime has removed licence fees that were once paid to operate CPVs.
- **Cost sharing between booked and unbooked services** - Many service providers supply both booked and unbooked services. Any vehicle fitted to accept unbooked services would also be allowed to provide booked services.
- **Costs associated with changing meters** - Making changes to maximum fares imposes costs on service providers. If a service provider changes their fares they must make changes to their signage and meter. Often vehicles cannot be used to provide services while these changes are

³⁵ Essential Services Commission, Fare review for unbooked commercial passenger vehicle services: consultation paper, February 2018, p.9.

being made: service providers cannot earn money if their vehicle is not on the road. If we decide to change fares we would also need to be satisfied that the expected benefits exceed these costs.

Assessment approach for maximum fares

We considered the following matters when deciding whether any proposed changes to the maximum fares were warranted. Changes to the current maximum fares should:

- have benefits that outweigh the associated costs³⁶
- not make it more difficult, and preferably make it easier, for unbooked service providers to compete with each other or booked service providers³⁷
- give incentives to unbooked service providers to provide the service outcomes consumers want³⁸
- give a reasonable opportunity for unbooked service providers to recover the costs that a well-run business would need to run its service³⁹
- result in a fare structure that passengers can easily understand.⁴⁰

Our assessment approach helps us meet our legislated requirements

Considering market outcomes,⁴¹ changes in the cost of providing CPV services,⁴² and following our assessment approach, helps us meet our legislated obligations.⁴³

By assessing market outcomes and costs we can make observations about the efficient use and provision of CPV services. These observations can also help us understand if price, quality and reliability outcomes are in the long term interests of consumers.

³⁶ For example, the market outcomes we present in chapters three and four suggest that the costs associated with increasing maximum fares (primarily from reduced efficiency in the unbooked CPV market) would outweigh any associated benefits.

³⁷ For example, see the discussion under 'our decision' in chapter one.

³⁸ For example, see our analysis of service quality in appendices E and F.

³⁹ For example, see our analysis of the costs service providers must recover to be financially viable in chapter four.

⁴⁰ For example, we have proposed to give taxi service providers the choice of offering 'time **and** distance' tariffs: see chapter five.

⁴¹ See chapters two and three and appendices E and F.

⁴² See chapter four and appendix G.

⁴³ Essential Services Commission Act 2001, sections 8, 8A and 33; Commercial Passenger Vehicle Industry Act 2017, section 110C (see section 18 of the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

Appendix C: How we have assessed fares

We also considered the various reforms underway in the CPV industry,⁴⁴ increased competition among CPVs,⁴⁵ the financial viability of the industry,⁴⁶ the legislative obligations of the industry,⁴⁷ and maximum fares in other Australian jurisdictions.⁴⁸

Dynamics of the CPV market

In setting the maximum fares for unbooked services, we have reviewed how recent regulatory changes will affect the CPV market.

Under the new regulatory regime, the cost of entering the market has decreased significantly. Previously, operators were required to rent a licence from a licence holder or the government at significant cost. Low cost licences⁴⁹ are now available for an annual fee of \$52.90.

Booked CPV service providers will also be able to set their own fares. In many situations, booked services (especially 'ready to ride' bookings where passengers request an immediate pick up) will be a close substitute for unbooked services. It is therefore important that the maximum fares that we set for unbooked services do not constrain competition between booked and unbooked CPVs.

We also do not want to encourage service providers to actively avoid certain submarkets. For example, if fares for unbooked services are too low, the supply of unbooked CPVs may decline significantly because providing booked services would be more profitable for vehicle operators. Furthermore, as zones will no longer exist for licensing purposes, if there is an excessive imbalance in fares between the metropolitan and urban and large regional zones there is the potential for oversupply in one zone and undersupply in the other.

⁴⁴See appendix D.

⁴⁵See chapter one.

⁴⁶ See chapter one, four and appendix G.

⁴⁷See appendix D.

⁴⁸ See appendix J.

⁴⁹ Taxi Services Commission, New low cost licences, accessed 23 May 2018, <http://taxi.vic.gov.au/about-us/news/taxis/new-low-cost-licences>.

Appendix D: Background on the CPV industry

This appendix provides context for the review, including a brief overview of the commercial passenger vehicle (CPV) market. We also recap the key changes that have been made to the regulatory framework governing the industry since our last fare review and outline some of the ongoing industry reforms and latest developments in the market.

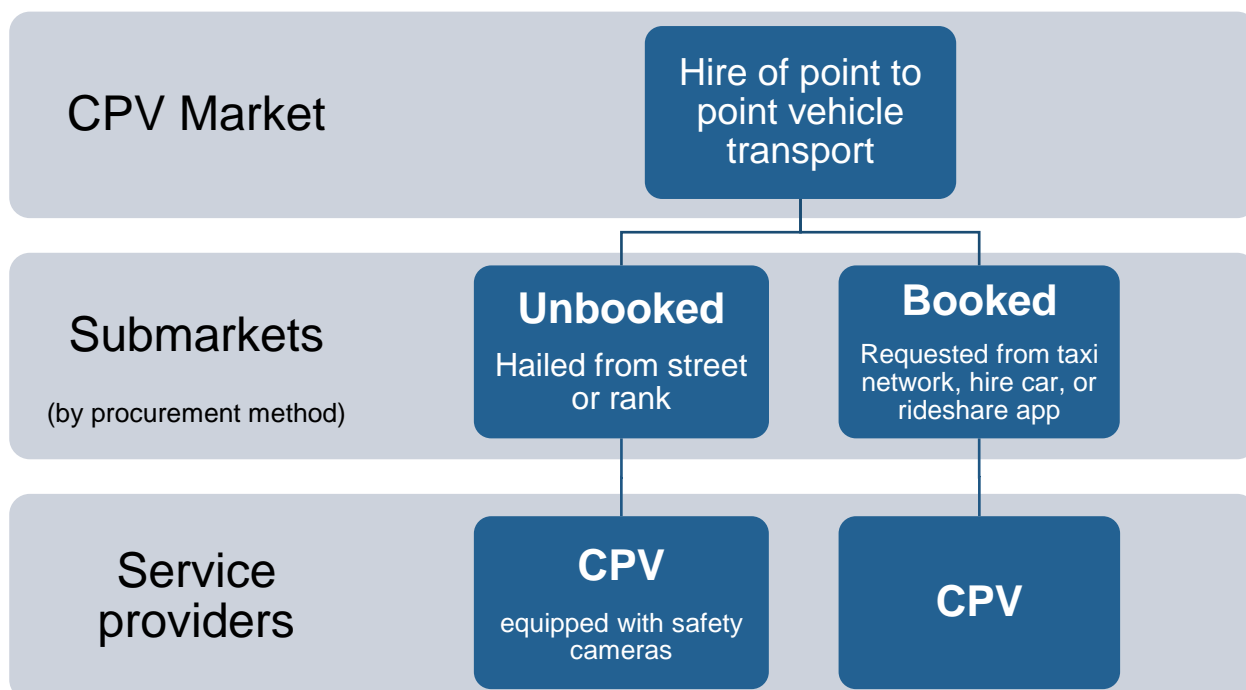
The CPV market

CPVs provide flexible motor vehicle transport services where passengers choose their points of departure and destinations. This is sometimes referred to as point-to-point vehicle transport. It differs from other commercial modes of transport which generally run on pre-specified routes with fixed timetables.

It is useful to divide the market for CPVs into two submarkets (figure D.1) depending on the way passengers obtain services:

- Booked: passengers reserve a vehicle prior to travel through an app, online or by phone
- Unbooked: passengers hail from a taxi rank or the street.

Figure D.1: Supply chain for CPV services

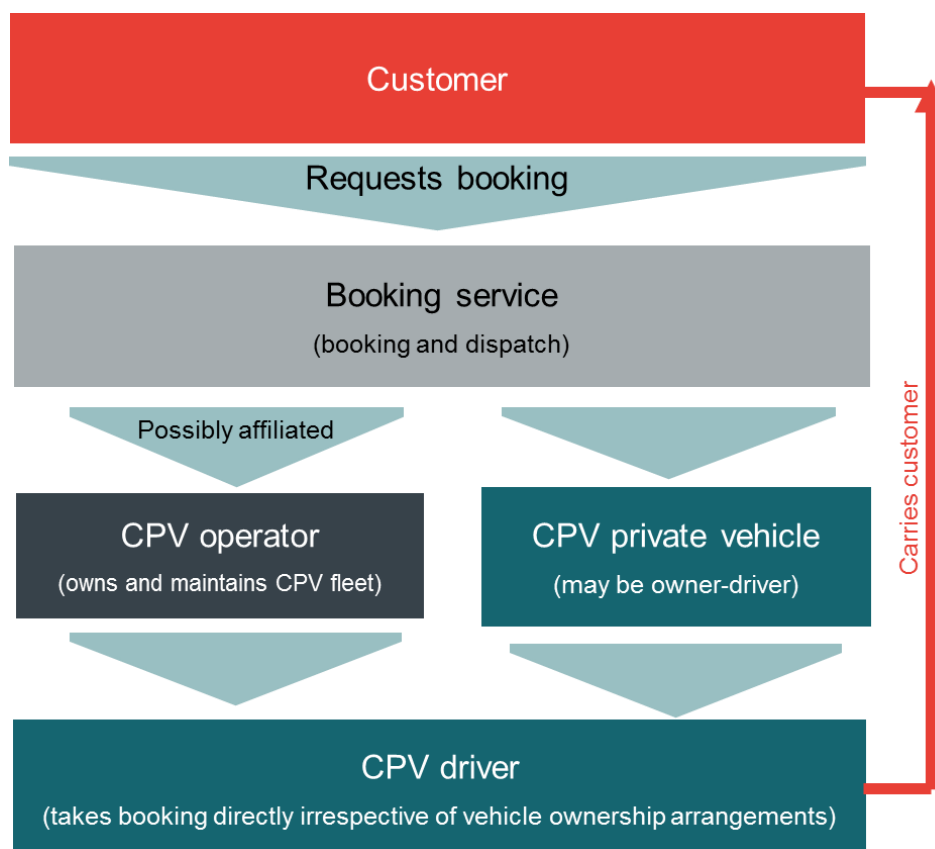


Booked

CPVs that are used for booked services have historically included hire cars, taxis, and rideshare vehicles.⁵⁰ Reservations are made using a booking service, and the transport service also relies on vehicle operators and drivers.

The main functions of these participants in the CPV supply chain are shown in figure D.2.

Figure D.2: Supply chain for booked CPV services



Note individual entities may assume multiple roles within the supply chain. For example, some operators drive their vehicles and some booking services operate vehicles.

Booking services have traditionally been provided by taxi booking networks using telephones (to take calls from passengers) and separate dispatch equipment installed in taxis (to dispatch the jobs to drivers). Suppliers of booking services have included:

- third-party taxi networks (not owned by taxi operators)
- co-operative taxi networks, which are owned jointly by taxi operators (these are more frequent in country areas).

⁵⁰ These are regulatory designations. The underlying vehicle types used to deliver the services may be very similar, or identical.

More recently, booking services have also been provided using smartphone applications (apps), and the reach of booking services has extended to hire car and ridesharing services as well as traditional taxi services. App providers in Victoria include:

- traditional taxi network apps, such as SilverTop and 13CABS
- new third-party taxi network apps, such as GoCatch, Ingogo and Oiii
- apps for booking rideshare services such as Ola, Taxify, and Uber.

Unbooked

Unbooked CPV services have historically been provided by taxis. These taxi services have had a wide range of regulatory requirements designed to maintain standards and quality, and to protect consumers and drivers from poor behaviours.

As we will discuss, due to recent regulatory changes, unbooked services will now be able to be provided by any vehicle that can meet the necessary safety and consumer protection requirements (for example security cameras).

Overview of recent changes to the regulatory framework

The CPV industry has undergone significant reform since our last review.

Between August and December 2017 the Victorian Government passed two acts of parliament reforming the CPV industry:

- the Commercial Passenger Vehicle Industry Act 2017 (CPV Industry Act)
- the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017 and proposed supporting regulations.

Not all provisions of these Acts have had immediate effect. The reforms will be progressively implemented throughout 2018, with all provisions in the CPV Industry Act commencing no later than 1 July 2018,⁵¹ and all provisions in the Further Reforms Act by 7 July 2018.⁵²

An overview of the reforms is provided in box D.1.

⁵¹ Commercial Passenger Vehicle Industry Act 2017, section 2 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁵² Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017, section 2.

Box D.1: Reform overview

The Commercial Passenger Vehicle Industry Act 2017 passed by the Victorian Parliament on 10 August 2017:

- abolished licence fees for taxis and hire cars
- allowed for the regulation of rideshare providers in Victoria
- established the framework for a \$1 per trip industry levy (the CPV service levy) which will start in 2018.

The Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017 passed by the Victorian Parliament on 12 December 2017:

- removed the distinction between taxis and hire cars (including rideshare) vehicles, making them all CPVs
- introduced flexible fares for all booked CPV services along with stronger consumer protections
- regulated maximum fares for unbooked (rank and hail) CPV services in the metropolitan zone and the urban and large regional zone
- replaced complex licensing requirements with a simple registration system
- made all industry participants responsible for passenger and driver safety
- gave the industry regulator extra enforcement powers to reflect its new broader focus.

Source: <https://transport.vic.gov.au/ways-to-travel/taxis-hire-car-and-ridesharing/industry-reforms/>

Reforms with particular relevance to our current review include:

- licensing changes that remove barriers to entry into the CPV industry and enable alternative servicing options
- application of a consistent accreditation framework for all CPV services
- deregulation of booked fares.

Each of these major reforms and their possible effect on the CPV market are discussed below.

Licensing changes have removed barriers to entry

After the CPV Industry Act and Further Reforms Act are implemented, a taxi or hire car licence will no longer be required to legally operate a CPV in Victoria.

The licence has been the legal mechanism used to regulate fares, safety and service quality. Government also controlled supply in the CPV industry by only issuing new licences from time to time.

Licences were either perpetual (of no fixed term) or fixed term. Licences were also issued for a particular zone and type of service (conventional or wheelchair accessible). Most of the licences issued were perpetual and owners of licences were permitted to trade them for profit. Taxi licence owners were also able to lease their licences to taxi operators for a negotiated fee. In financial year 2017, lease fees paid for licences by metropolitan taxi operators averaged around \$18,000 per year.⁵³

Following reforms in the CPV Industry Act, all perpetual and fixed term taxi and hire car licences have been revoked. CPV operators now have the option of obtaining low cost, annual single-class licences from the Taxi Services Commission.⁵⁴ These will be replaced by a vehicle registration system when the Further Reforms Act commences.

While the licensing regime is in effect, to apply for a licence the applicant must be the owner of the vehicle and only one vehicle is permitted to operate per taxi licence. There is no restriction on the number of low cost licences that can be issued. The annual fee for the licences is \$52.90.⁵⁵

As a result of these reforms, there are no longer quantity or price based limits on vehicle supply. The number of taxi licences increased significantly once low cost licences became available.

- In the metropolitan zone (metro zone), taxi licence numbers increased by 80 per cent – from 4,625 in September 2017 immediately prior to the release of low cost licences reforms, to 8,317 in April 2018.
- In the urban zone, taxi licence numbers increased by 70 per cent over the same period – from 498 to 845.
- More than 27,000 new hire car licences have been issued.⁵⁶

This increase in supply has the potential to improve the ability of passengers to take point-to-point journeys that would otherwise not be made. It has also enabled new kinds of service models, such as rideshare services, to legally compete which increases the competitive pressure faced by existing taxi and hire car services.

⁵³ Taxi Services Commission, Annual Report 2016-17, October 2017, p. 25.

⁵⁴ The Taxi Services Commission will be known as the Commercial Passenger Vehicles Victoria in future.

⁵⁵ Taxi Services Commission, Industry reforms, accessed 23 May 2018, <http://taxi.vic.gov.au/taxi-reform/about-taxi-and-hire-car-reforms>.

⁵⁶ Taxi Services Commission, Taxi and hire car industry statistics, accessed 24 April 2018, <http://taxi.vic.gov.au/about-us/overview/industry-statistics>.

A registration-based regulatory framework will be introduced for all CPV services

As noted, the historic **vehicle** licensing scheme applying to CPV services will be replaced by a vehicle registration scheme.⁵⁷ Licences will automatically transition to registered vehicles.⁵⁸

All **drivers** of CPVs will continue to be required to be accredited to drive a vehicle to provide CPV services. The driver accreditation scheme aims to ensure that new and existing drivers are "competent", have passed relevant character checks, have a good driving history, are medically fit to conduct services and are "fit and proper" persons to carry out services.⁵⁹

Booking services are also undergoing a regulatory transition. As part of the first stage of the legislative reforms, all providers of booking services are required to be accredited. This requirement is to be continued under the new regulatory framework with amendments. Accreditation is re-labelled as registration, to better reflect the nature of the permission.⁶⁰

Booked fares will no longer be subject to fare regulation

After the Further Reforms Act comes into effect, the regulatory framework will differentiate between booked and unbooked CPV services rather than differentiating between services based on the type of vehicle used (i.e. rideshare vehicle, taxi or hire car). Any registered CPV and accredited driver can provide booked point-to-point transport services.

The fares for booked CPV services (including those provided by taxis) will no longer be subject to maximum fare regulation. This will provide service providers with flexibility around how they set the level and structure of fares.

The exact date of the removal of fare regulation for booked services is not yet clear. Under section 162C of the Transport (Compliance and Miscellaneous) Act 1983 our current role is to set maximum fares for booked and unbooked taxis. This role will be repealed on 7 July 2018, or earlier if proclaimed by the Governor in Council, before this date.

The maximum fares we set under the Transport (Compliance and Miscellaneous) Act 1983 will continue to apply for unbooked CPV services until we issue a new price determination. They will also continue to apply to booked taxis, but only until the Further Reforms Act comes into effect.

⁵⁷ Commercial Passenger Vehicle Industry Act 2017, Part 3 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁵⁸ Commercial Passenger Vehicle Industry Act 2017, Schedule 3 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁵⁹ Commercial Passenger Vehicle Industry Act 2017, Part 5 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁶⁰ Commercial Passenger Vehicle Industry Act 2017, Part 4 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

We will continue to regulate maximum fares for unbooked CPV services in metro and urban zones (see box D.2). CPV service providers will be able to set fares at or below this regulated fare.

Box D.2: Function of taxi zones under new legislation

Historically, taxi-cab and hire car licences have been attached to zones in which the taxi or hire-car could operate. There are four taxi zones in Victoria: metropolitan (metro); urban and large regional (urban); regional; and country.

These zones are shown in the map below.



In the past, taxi-cab licences specified the zone the vehicle was to operate in.⁶¹ This meant taxis could only undertake unbooked trips within their licensed zones. So, for example, taxis operating in the metropolitan zone could take booked work to or from anywhere in Victoria, except journeys that start and end within the urban zone. Similar restrictions apply to taxis licensed in other zones.⁶²

⁶¹ Transport (Compliance and Miscellaneous) Act 1983, Part VI, Division 5—Commercial passenger vehicles, s140(1A).

⁶² Victorian Government Gazette, No. S 184 Thursday 12 June 2014, accessed 23 April 2018, <http://www.gazette.vic.gov.au/gazette/Gazettes2014/GG2014S184.pdf>.

Hire cars were historically licensed as metropolitan or non-metropolitan. However, as a result of reforms, hire cars can now operate anywhere in Victoria as zones were abolished in 2017. Under the new legislative framework, a CPV will be able to operate in any zone.

The metro and urban zones will continue to exist for the purpose of determining the journeys which will be subject to the maximum fare determination that applies for unbooked work.⁶³ Unbooked trips that begin in the metro or urban zone will be subject to the maximum fares for that zone.

Other fare-related changes

There will also be changes to fare monitoring and notification arrangements.

In regional and country areas, taxi service providers currently have to notify the regulator, the Taxi Services Commission, of the fares they will charge for booked and unbooked work.⁶⁴ The Essential Services Commission currently has a monitoring function for fares in these areas, and annually reports on whether fares or fare changes might be reflecting an exercise of market power.⁶⁵

Under the new legislative framework, service providers in the regional and country zone will not be required to notify their fares to the Taxi Services Commission. The Taxi Services Commission will monitor fares for all CPV services in Victoria to keep Victorian consumers and the Government informed about the economic performance of the CPV industry.⁶⁶

Finally, we will also determine maximum surcharges for electronic payments for CPV services. Currently, these are capped at five per cent of the metered fare for taxis. We are required under the new legislation to ensure that service providers can recover their reasonable costs of accepting and processing such transactions, where "reasonable cost" includes any fees payable for the acquisition of transactions involving the use of debit, credit or charge cards.⁶⁷

Other ongoing reforms to CPV markets

There are a number of other important regulatory changes that are yet to be implemented as part of the reform process. This includes:

⁶³ Commercial Passenger Vehicle Industry Act 2017, section 110A (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁶⁴ Transport (Compliance and Miscellaneous) Act 1983, section 162EA.

⁶⁵ Transport (Compliance and Miscellaneous) Act 1983, section 162ED.

⁶⁶ Commercial Passenger Vehicle Industry Act 2017, section 111 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁶⁷ Commercial Passenger Vehicle Industry Act 2017, section 122 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

Appendix D: Background on the CPV industry

Essential Services Commission

Unbooked Commercial Passenger Vehicle Fare Review 2018: Draft Decision

- the CPV service levy
- the Commercial Passenger Vehicle Industry Regulations 2018, which are currently in draft form for consultation.

CPV service levy

The CPV Industry Act introduced the CPV service levy and initially set the levy at \$1 per trip to fund an industry transition package.⁶⁸ The levy will increase in accordance with the consumer price index from 2019.^{69 70}

The levy is payable by the booking service provider (for booked services), and for unbooked services by the trip provider and/or the booking service provider they are affiliated with.⁷¹

There are no specific requirements in legislation about whether or how the levy is to be collected from passengers, for the purpose of determining maximum unbooked fares.

Commercial Passenger Vehicle Industry Regulations 2018 (Draft)

The new legislative framework includes provisions for new subordinate regulations to be made. The proposed draft regulations, the Commercial Passenger Vehicle Industry Regulations 2018 (the proposed Regulations), will prescribe safety and other operational requirements for CPV services and the vehicles used to provide those services, and establish consumer protections for the users of those services.⁷² The proposed Regulations could be considered to extend some requirements, historically imposed on taxi-cabs, to providers of all CPV services. For example the proposed Regulations prescribe requirements relating to the following:

⁶⁸ Commercial Passenger Vehicle Industry Act 2017, section 238 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁶⁹ Commercial Passenger Vehicle Industry Act 2017, section 238(3) (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁷⁰ The commission also has a role to make recommendations about the amount of the levy to the Minister. The commission must not recommend the specification of an amount unless the commission is satisfied that it is the lowest amount that is reasonably likely to result in the total amount of the levy collected within 8 years of the commencement of the levy being equal to the money spent on transitional assistance.

⁷¹ Commercial Passenger Vehicle Industry Act 2017, section 236 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁷² Schedule 2 of the Commercial Passenger Vehicle Industry Act 2017 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017) outlines the subject matter for the regulations, which may be made under the Act. This includes safety duties, the registration of CPVs, booking service providers, driver accreditation, consumer protections in respect of fares, non-cash payment surcharges, operational requirements, infringement offences, the commercial passenger vehicle service levy and forms. The current requirements relating to the matters listed are contained in the Transport (Buses, Taxi-Cabs and Other Commercial Passenger Vehicles) (Taxi-Cab Industry Accreditation and Other Matters) Regulations 2017.

- acceptable ways of indicating a vehicle is being used to provide CPV services (identification of this is a requirement under the CPV Industry Act)⁷³
- accredited drivers needing to ensure identification is clearly visible at all times
- the provision of fare information and fare estimates or fixed fares to hirers by booking service providers upon request
- complaints management and other operational requirements relating to smoking, assistance animal carriage, passenger assistance, record keeping (including in relation to trip records, fares, non-cash payment surcharges, and complaints).

For CPVs providing unbooked services the proposed Regulations also prescribe equipment requirements relating to security cameras, fare calculation devices (see further discussion below) and fare information displays. Requirements relating to specific safety and metering equipment are covered in the current regulations for the CPV industry.⁷⁴ The Taxi Services Commission will investigate whether it is appropriate to specify additional equipment (beyond a security camera) in a safety code of practice made under the CPV Industry Act.⁷⁵

The proposed Regulations are less prescriptive than existing regulations.⁷⁶ The proposed Regulations focus on consumer protection and regulating for the safety of CPV services rather than matters relating to service quality. For example, regulatory requirements relating to branding have been removed.

The proposed Regulations may improve unbooked service providers' ability to compete with booked service providers by:

- imposing a consistent set of consumer protection provisions (relating to fare transparency, fare information and protections for vulnerable users) and some minimum safety-related requirements on all CPV providers
- removing highly prescriptive regulatory requirements relating to service quality and equipment requirements (see further discussion below) that were previously imposed on taxis that may have limited taxis' ability to compete with other CPV services.

⁷³ Commercial Passenger Vehicle Industry Act 2017, section 51 (as amended by the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁷⁴ Transport (Buses, Taxi-Cabs and Other Commercial Passenger Vehicles) (Taxi-Cab Industry Accreditation and Other Matters) Regulations 2017.

⁷⁵ More generally the proposed Regulations empower the regulator to determine specifications for classes of CPVs that provide wheelchair accessible services or unbooked CPV services (relating to fare calculation devices and security cameras).

⁷⁶ DEDJTR, Proposed new regulations for commercial passenger vehicles, accessed 28 April 2018, available at: <https://getinvolved.transport.vic.gov.au/regulations>.

New forms of competition are beginning to emerge

There has been an increase in new booking services entering CPV markets. This has been driven primarily by the prevalence of smartphones. Smartphones have enabled new software applications (apps) to emerge that match drivers and passengers in real time. As bookings with apps are not recorded and dispatched to vehicles manually (or through a mixture of manual and automated processes), these platforms have also reduced costs for booking service providers.

The regulatory reforms described above are intended to support competition in the market for commercial passenger vehicle services, including between these new booking services and existing ones, such as by making the regulations as similar as possible for all service models and pricing approaches. The regulations focus on passenger and driver safety and consumer protection.

The innovations that have enabled competition in booked services have also made these services better substitutes for unbooked services. This introduces some challenges and complexities when continuing to regulate maximum fares in only a segment of the market (unbooked services).

Overview of competition

Competing booking services

Booking services were traditionally provided by taxi networks (such as SilverTop and 13CABS). Hire cars also operated smaller networks. The advent of smartphones has rapidly changed the booking service provider landscape. Most people would now be familiar with ridesharing services such as the smartphone apps Ola, Taxify, and Uber. Competing smartphone booking service apps continue to enter the market with Taxify and Ola entering the Melbourne market earlier this year.

These booking apps need not be associated with the underlying providers of the transport services. They may merely act as intermediaries between transportation service providers (vehicles and drivers) and consumers.

These booking platforms are all subtly different, but tend to have standard features such as:

- enabling passengers to select their exact pick-up location
- providing passengers with estimated arrival times
- up front fare estimates and
- booked vehicles' real-time location (via GPS tracking).

New booking platforms also typically include some form of rating system for passengers and drivers. These reputational reporting mechanisms are intended to provide incentives for drivers to provide quality service and for passengers to behave courteously.

Booking service providers, including traditional taxi networks, third-party taxi apps and ridesharing apps compete for passengers and drivers on the basis of vehicle types, fares and how drivers are compensated. These arrangements are summarised in table D.1 below.

Table D.1: Typical offerings of different booking service providers

Characteristic of offering	Traditional taxi networks	Third-party taxi apps	Rideshare apps
Fares	Regulated maximum fares	Usually regulated maximum fares Some use of fixed fares	Fare schedule, with some different elements Some use of dynamic pricing Some use of fixed fares and minimum fares
Network compensation	Annual fixed fee charged to affiliated vehicles	Between 15 to 25 per cent of the fare going to app networks	Between 15 to 25 per cent of the fare going to app networks
Driver compensation	Typically, as per the model mandated in the taxi driver agreement At least 55 per cent of the fare going to drivers and 45 per cent to vehicle operators.	Between 75 to 85 per cent of the fare going to drivers/operators	Between 75 to 85 per cent of the fare going to drivers
Driver / operator relationship	Commonly, drivers engaged by taxi operators	Commonly, drivers engaged by taxi operators	Drivers are the operator
Vehicle types	Taxis from affiliated network	Typically enable access to only taxis, but may be from multiple networks	Provide access to a greater variety of CPV vehicles
Payment options	Cash, in-vehicle card	Generally cash, in-vehicle card or in-app payment	In-app payments only

Traditional taxi networks

As noted, taxi booking services were traditionally provided by taxi networks. These networks originally evolved from co-operative structures, where all operators jointly belonged to and jointly-owned the network. While co-operative structures remain the norm in non-metropolitan areas of Victoria, in metropolitan areas the larger networks are now corporate entities.

Prior to 2014, affiliation to a taxi network was mandatory for a taxi operator. Taxi operators did have some choice as to which network to affiliate. The agreement between the operator and network provided for the network to allocate booked work to the operator, and the operator paid a

fixed monthly fee (not contingent on the number of bookings received). The mandatory affiliation requirement was removed in 2014.

Within the traditional taxi network structure, the relationships between drivers and taxi operators have been governed by a driver agreement. This agreement provided for a split of the fare between the operator and driver, where the operator provided the vehicle and its running costs to the provision of the service. Mandatory conditions were implied into all driver agreements in 2014 which require a minimum split of 55 per cent of the fare accruing to the driver.⁷⁷

Traditional taxi networks have faced considerable challenges in recent years due to increasing competition from new entrants. These networks have responded to competition and technological improvement by developing their own app-based booking platforms.

Taxi apps

Apps have been developed by third-party app developers, which operate across traditional taxi networks (this includes providers such as GoCatch,⁷⁸ Ingogo⁷⁹ and Oiii).⁸⁰ These apps enable passengers to book traditional taxis. New competitors continue to emerge. For example, Slyyk, a taxi app used by Crown Cabs, has recently launched in Melbourne.⁸¹ The majority of taxi apps offer a fare structure in line with regulated, unbooked tariffs, although some apps have offered fixed upfront fares.⁸²

Taxi apps connect directly with drivers rather than taxi operators. The share of the fare accruing to the booking service provider is taken as a percentage of the fare. Driver compensation arrangements may, however, continue to rely on the taxi sharing model mandated in the taxi driver agreement, with at least 55 per cent of the fare going to drivers.⁸³

⁷⁷ Taxi Services Commission, Driver Agreement, accessed 23 May 2018, http://taxi.vic.gov.au/_data/assets/pdf_file/0008/21869/Implied-Conditions.pdf.

⁷⁸ GoCatch, accessed 23 April 2018, <https://www.gocatch.com/>.

⁷⁹ Ingogo, Time to shake up the long-standing taxi monopoly in Australia, accessed 23 April 2018, <https://www.ingogo.com.au/our-story/>.

⁸⁰ Oiii, Oiii – Welcome, accessed 23 April 2018, <https://oiii.com/>.

⁸¹ Slyyk, Slyyk – Premium Transport Service, accessed 23 April 2018, <https://slyyk.com/>.

⁸² Taxi Link, Taxi Fare Estimator – Taxi Fare Calculator Melbourne – Taxilink, accessed 23 April 2018, <https://taxilink.com.au/fare-estimator/>.

⁸³ TSC, Implied Conditions, accessed 23 May 2018, http://taxi.vic.gov.au/_data/assets/pdf_file/0008/21869/Implied-Conditions.pdf.

Non-taxi apps

Booking apps that enable access to hire car and rideshare services (in private vehicles) such as Uber, and the more recently launched Taxify and Ola, tend to have a more diverse approach to fare setting and driver compensation:

- Base fares for these trips are calculated through the app, varying with trip ‘time **and** distance’ travelled (using a ‘time **and** distance’ tariff as discussed in chapter 5). Some service providers vary their rates using surge pricing — this equates to an algorithm that increases the base rate during times of high demand and limited supply. This provides for dynamic pricing in response to supply and demand.
- These booking service apps take a commission from drivers in the form of a percentage of the fare. These commissions can vary depending on the driver and when they joined the network. At the present time, for new drivers, Ola takes a lower commission from drivers of 7.5 per cent, Taxify takes 15 per cent, and Uber takes 25 per cent.

Other competitors include GoCatch, which enables passengers to book either taxis or rideshare vehicles, Scooti⁸⁴ a scooter ride sharing booking app, and Shebah a female only driver and passenger rideshare booking service.⁸⁵

In addition to introducing some degree of flexibility to fares for booked services, the increasingly wide variety of booking apps has had another notable impact. It has made bookings of taxis and hire cars where the passenger requests an immediate pick up much easier, with passengers able to identify the wait time on any booking in advance of making it. As a result, booked services provide more certainty on waiting times, which make them an increasingly closer substitute for certain kinds of unbooked services.

Future market developments

Although there have been significant changes to CPV offerings in Victoria, examination of other jurisdictions indicates that further service evolution is likely.

For example, there is the potential for the cost of ridesharing to fall even further with the introduction of pooling services, such as uberPOOL (now operating in Sydney).⁸⁶ Ridepooling allows users to share a ride with another passenger and split the cost of the trip. In the case of uberPOOL, passengers book their trip on Uber as normal, but if they select uberPOOL the platform will look to match closely located passengers travelling along a similar route (dynamic routing).

⁸⁴ Scooti, Scooti – Let’s Ride!, accessed 23 April 2018, <https://scooti.com.au/>.

⁸⁵ Shebah, About - Shebah, accessed 23 April 2018, <http://shebah.com.au/about/>.

⁸⁶ Uber, What is Uber Pool, accessed 23 April 2018, <https://www.uber.com/en-AU/ride/uberpool/>.

Passengers are usually asked to walk a short distance to a pickup point along the route of the car they will board. This arrangement adds some time to the trip but reduces the cost for passengers. Uber has stated that uberPOOL now accounts for over 20 per cent of all its rides globally.⁸⁷

Dynamic routing may hold particular promise for passengers wishing to depart from, or arrive at, a common location, such as after disembarking a train. More people wanting to depart from the same place at the same time, improves the efficiency of the routes drivers may take.

In some jurisdictions, such as Singapore, ridesharing competitors such as Uber and Grab have undertaken joint ventures with local taxi companies. These have allowed hirers to choose the nearest vehicle (taxi or rideshare) and so reduce wait times.⁸⁸ These platforms operate in conjunction with taxi and ridesharing apps, which can be used if passengers always prefer a taxi or ridesharing vehicle.

Challenges for new entrants and existing providers

Competition between booking service providers appears strong, with significant new entry. Booking services are competing for passengers on price, quality and the nature of their service offering. However, there are challenges that will need to be overcome by new and traditional booking service providers.

The value of a booking service increases to taxi drivers and operators if there are more passengers connected to and using the service. Similarly, the value of a booking service to passengers increases when there are more drivers connected to and using the service. Larger networks of drivers or passengers are therefore more valuable and provide a significant competitive advantage. This is sometimes called “network effects”.⁸⁹

In light of the network effects, the major challenge for any booking service provider is to secure a critical mass of both drivers and passengers using its platform.

For new entrants to the booking services market, success relies on establishing a critical mass of drivers and passengers, particularly as there are already market competitors with such mass. To attract more passengers to use their service, booking service providers must offer benefits to

⁸⁷ Uber, Upfront fares: no math and no surprises, accessed 23 May 2018, <https://newsroom.uber.com/canada/upfront-fares/>.

⁸⁸ Uber’s version is called UberFLASH and Grab’s version is called JustGrab. Uber and Grab announced plans to merge in March 2018.

⁸⁹ Booking service providers also operate in what are known in the economics literature as two-sided platform markets (or just two-sided markets). The key characteristic of these markets is that the value of the network to users on “one side” of the platform depends on the number of users on the “other side” of the platform. Credit cards and newspapers are two commonly-cited other examples of two-sided markets.

passengers such as: discounted rides, better service, or puppy cuddles.⁹⁰ To attract more drivers to use its service, the booking service provider must offer benefits to drivers such as a higher share of fares, financial bonuses for driving at certain times, or a more frequent or stable supply of fares.

Given these features of the market, it may be necessary for new entrants to offer fares and driver incentives that may not be sustainable in the long run, to rapidly increase their market share and secure critical mass.⁹¹ Potentially, the market features might also suggest a limit on the number of competing booking services that can be sustained, although experience with traditional taxi networks suggests that at least two or three networks could be sustainable.

While we have described these market features in the context of new entry, traditional taxi networks are not immune to the same challenges. New entrants have increased the demand for drivers, and made it more difficult to attract drivers to their networks. This may particularly be evident at times of high passenger demand, as non-taxi apps can use dynamic pricing to increase driver returns. Traditional taxi networks have not had such flexibility in the past, but will be once fares for booked taxis are deregulated.

Challenges of a more open market for regulating fares

More potential for regulatory error

As booked services become a more viable substitute for unbooked services, we are conscious that regulation of maximum unbooked fares should not bias the decisions of passengers or drivers towards any particular operating model.

As we noted in our 2016 fare review, the environment in which we are setting maximum unbooked fares is very different from the past, and different to setting prices in monopoly industries:

Up until the reforms that were implemented in 2014, in setting taxi fares, the Commission (and the Transport Minister prior to that) simply had regard to the level of costs in the industry and whether fare revenues were sufficient to cover those costs. It was possible to take this approach in the past because the taxi industry ran a largely exclusive service which faced little competition from alternative service providers. (At the time, hire cars offered a niche service that only competed with taxis at the margin). The supply of vehicles was controlled tightly through regulatory restrictions on the number of licences; and the demand for taxi trips grew consistently with underlying economic parameters (such as population growth). In such circumstances, it was possible to estimate farebox revenue with a

⁹⁰ Uber, It's a pawsome day, #UberPUPPIES are in town, February 24, accessed 23 May 2018 <https://www.uber.com/en-AU/blog/uberpuppies-au/>.

⁹¹ This can include, for example, offering drivers that sign up to the platform "early" the opportunity to retain a higher percentage of the fare. Drivers that sign up once the platform is better established receive a lower share.

reasonable degree of confidence and adjust fares from time to time to ensure industry revenue kept pace with costs.⁹²

The impact of recent reforms means that it is futile for us to seek to tightly control revenue and profits. This is accentuated by the similarity in service provision between booked and unbooked services, with the underlying transport service using identical inputs. Attempting to raise prices to recover higher costs runs a material risk of simply pushing demand away from unbooked services towards substitutable booked services (taxi or rideshare). This could create a spiral of higher costs, higher prices and lower demand.

This means the way we determine fares for unbooked services must take into account a broader view of the market, and the ability of booked and unbooked CPVs to compete in that larger market. For example, we must recognise that differences in relative prices between (regulated) unbooked and (unregulated) booked fares will affect both consumer behaviour and driver behaviour. Estimating the costs of a typical operator of unbooked services is secondary to understanding how changes in fares might affect supply and demand at particular times.

Two areas where we have considered how distortions might arise include whether:

- unbooked maximum fares create a price “anchor” for booked fares or
- unbooked maximum fares constrain an unbooked service providers’ ability to compete with booked services.

Regulated unbooked fares as an anchor price for booked fares

Taxi fare structures are more complex than those for many goods and services. Fares vary by time of day and week, and contain fixed and variable components. This complexity may make regulated fares for unbooked services act as an anchor, marker or binding constraint on prices for booked services, as the underlying transport service is very similar.

There are forces on both the supply side and demand side which favour such anchoring. On the supply side, service providers may anchor fares because these can be readily communicated to passengers (for example, “we charge regulated fares”, or “x per cent less than regulated fares”). Passengers may also anchor their view of the acceptability of booked prices to the regulated fares.

Through these two mechanisms, there is the possibility that the regulated maximum fares for unbooked services may frame the upper bound of prices in the booked market, and thereby push prices above the competitive price.⁹³

⁹² Essential Services Commission, Taxi Fare Review 2016 Draft Report Volume 2: Our Review, May 2016, p. 24.

However, there are other forces which should act to prevent this:

- the regulated price can be used as a basis for discounting, and so will be an informative anchor that is helpful to a passenger's choice
- other price anchors already exist in the booked market, which reduce reliance on regulated unbooked fares. For example, Uber's approach to implementing dynamic pricing – which involves setting lower base prices and then moving prices upwards from this base – may also act as an anchor for consumers and other apps.

Limitations on the ability of regulation to facilitate competition between booked and unbooked services

A second possible concern is that fares for unbooked services could constrain the ability of unbooked service providers to compete with booked services.

Providers of booked services will be able to use more complex pricing schemes that better enable these suppliers to match demand for their service with supply. This can occur both over time and by location. In contrast, a regulator cannot acquire (at least without great cost to the regulator, industry and therefore consumers) the information necessary to regulate fares in the same way. As a consequence, suppliers of CPV services may favour servicing booked fares because, for example, they allow higher fares at peak demand times or locations.

Potentially, these impacts may be somewhat lessened with new regulations potentially allowing for different kinds of fare metering devices. This could allow unbooked service providers to offer more complex tariffs, so long as these fit within the regulated maximum fares. However, there are obvious constraints on fare transparency and complexity for unbooked fares. These should not be so complex that passengers cannot readily understand how they are calculated.

Ultimately, we can at best mitigate this concern by seeking a balance between fare complexity and transparency, and the most efficient fare structures.

⁹³ Certainly anchoring effects are well accepted in behavioural economics. This can occur through the anchor priming a passenger's view of the value of a booked service. See, for example, Daniel Kahneman, Thinking, Fast and Slow, Farrar, Straus and Giroux, 2011, chapter 11.

Appendix E: Metropolitan zone market outcomes

This appendix describes our analysis of market outcomes for taxis in the metropolitan zone (metro zone). By market outcomes we mean the levels of supply and demand prevailing in the market.⁹⁴ This information can be used to see if maximum fares need to change.

The data that we have on market outcomes for unbooked commercial passenger vehicles (CPVs) are for taxis. However, as we are not aware of any other widespread services in the unbooked market segment, it is reasonable to use taxi data to make conclusions about the unbooked market. We examined market outcomes using: occupancy rates, trip numbers, licensed vehicles, shift hours, active taxis, and waiting time for drivers and passengers. We also considered the trends in customer satisfaction and complaints in relation to provision of taxi services.

The trends presented in this appendix draw on taxi trip and shift data we received from the Taxi Services Commission covering the period from January 2013 to October 2017. For the metro zone we only have complete trip data until the end of 2016. While the data is of reasonable quality, we note that by now it is more than a year old. We are conscious that the balance of supply and demand may have changed since that time; especially given the recently observed large increases in supply.

The metrics presented relate to either all taxis or unbooked taxis only. We present information on unbooked taxis where the relevant data could be isolated.

Recent trends in total taxi supply and demand

This section presents data on the recent trends in the supply and demand⁹⁵ for taxis.

Demand for unbooked taxis in the metro zone has declined significantly since 2014

Since fares were last changed in 2014, the demand for unbooked taxis has decreased significantly. Our analysis of trip data indicates that trip numbers have declined by as much as 17 per cent from 2014 to 2016 as shown in figure E.1. The share of unbooked trips has remained roughly 70 per cent of total trips since 2014.

⁹⁴ Specifically we measure market outcomes using the number of trips taken by passengers as a proxy for the demand for taxis and the number of licensed vehicles and shift hours worked by drivers as a proxy for the supply of taxis. We use occupancy rates (times at which a taxi has paying passenger) and waiting times for drivers and passengers as a measure of the balance between supply and demand.

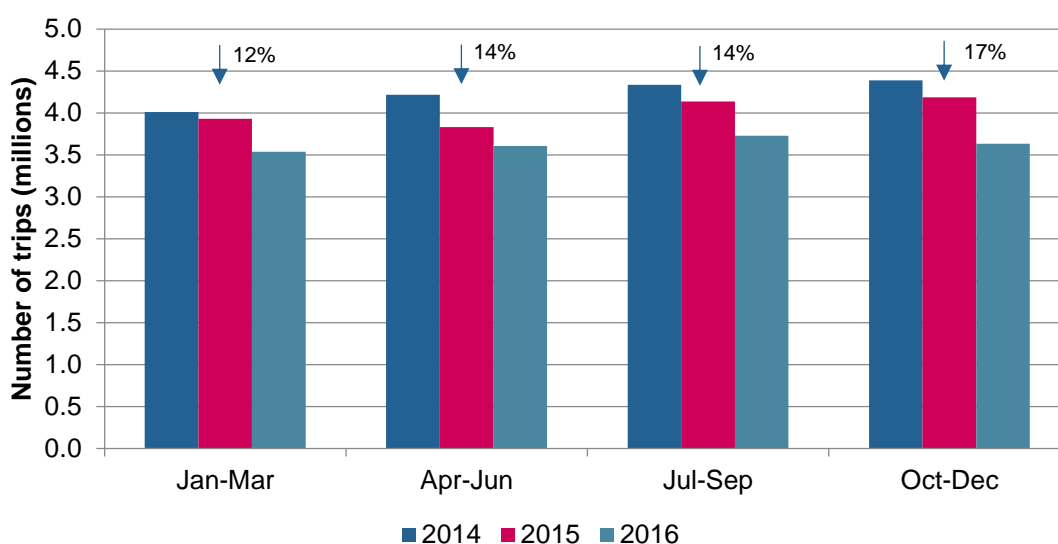
⁹⁵ As demand for taxi services is difficult to observe directly, we use the number of taxi trips as an indirect measure of taxi demand, while noting that trends in this data may also reflect changes in taxi supply.

We only have complete trip data up to 2016. Not all networks submitted their data for 2017 and we have no trip data from November 2017 onwards. This means that our analysis is based on data which is more than a year old and does not reflect the current demand for taxis. However, in meetings, stakeholders informed us that demand for taxis has continued to decrease; especially during peak periods.

In addition to this, trip data for July, August and December 2016 are not complete. As a result when we compare demand in the metro zone for 2014 and 2016 we have either:

- excluded those months from both the 2014 and 2016 data (when a metric compares averages like figure E.2) or
- estimated data (when a metric is at the level of total demand like figure E.1).

Figure E.1: Unbooked taxi trips in the metro zone: 2014 to 2016



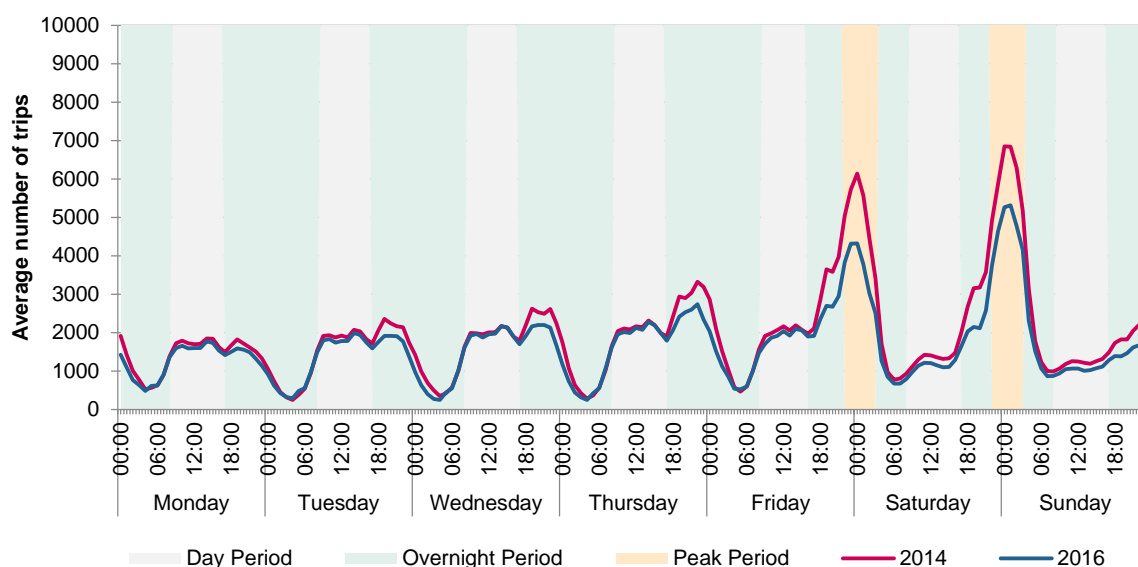
Demand for taxis declined across the week but the pattern of demand remained the same

Figure E.2 shows the typical variation for taxi demand across the week. It shows the average number of trips taken for each hour of the week in 2014 and 2016. The background shading indicates the three tariff periods – day, overnight and peak – reflecting the times when different maximum fares apply (peak period fares are highest, followed by overnight, then day).

While the demand for taxis has declined significantly, the general trend of how demand varies across a typical week remained the same. Early in the week, demand is highest during business hours before increasing slightly in the early evening, followed by a period of low demand overnight from around 10pm. On Wednesday and Thursday evenings, the level of demand for taxis is generally similar to during business hours. From around 7pm to the early hours of the morning on Friday and Saturday nights, demand for taxis increases to its highest levels.

Figure E.2 also shows that the decline in demand for taxis from 2014 to 2016 has been most prominent on Friday and Saturday night peak periods.

Figure E.2: Average unbooked taxi trips by hour of the week in the metro zone: 2014 and 2016



Inner suburbs experienced the highest decline in demand for unbooked taxis

Except for trips to and from Melbourne Airport, all areas of the metro zone experienced declining demand for unbooked taxis. The inner suburbs experienced the largest decline in demand. Table E.1 shows the change.

Table E.1: Change in demand for unbooked taxis by location: 2014 and 2016

Area	CBD & surrounds	Inner suburbs	Melbourne Airport	Other Metropolitan
Trip trips from	-12.3%	-33.4%	16.1%	-19.0%
Taxi trips to	-13.1%	-24.5%	10.0%	-15.8%

We note that trips **to** Melbourne Airport did not increase as much as trips **from** Melbourne Airport. This could be because it is harder to organise a rideshare trip **from** Melbourne Airport than **to** Melbourne Airport. To get a rideshare vehicle from Melbourne Airport passengers must walk past the Melbourne Airport taxi rank.

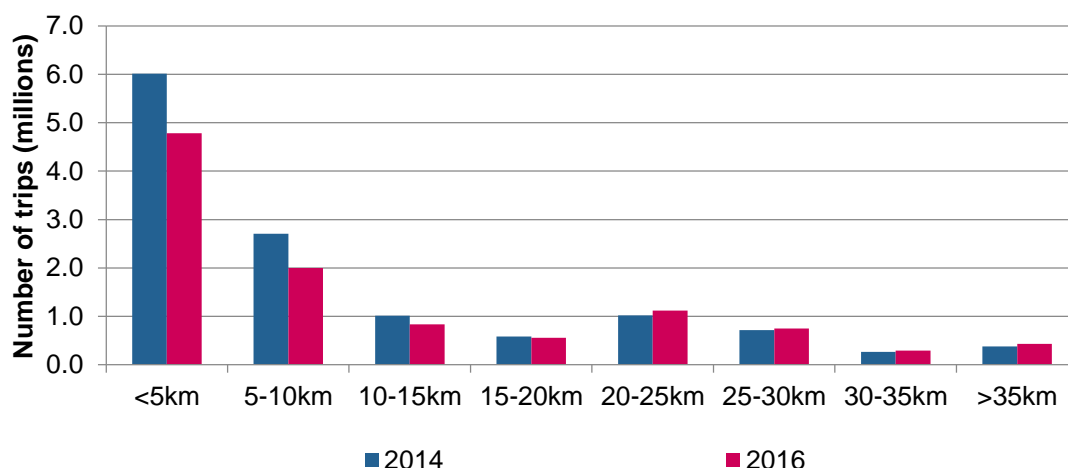
Demand for unbooked taxis declined for short trips but increased for long trips

Figure E.3 displays the number of trips by five kilometre distance bands, comparing demand in 2014 and 2016. The demand for unbooked taxis has decreased for distances less than

20 kilometres. Distances of less than 20 kilometres made up about 76 per cent of all total unbooked trips in 2016.

The influence of Melbourne Airport taxi demand can be seen, with a large number of trips between the airport and the CBD reflected around the 25 kilometre distance band.

Figure E.3: Unbooked taxi trip volumes by distance class in the metro zone: 2014 and 2016



The number of taxi licences was stable until a large increase in October 2017

From 30 June 2014, new annually renewable taxi licences were made available for purchase from the Taxi Services Commission without quantity restrictions. For the metro zone, the fees for a conventional taxi licence were \$22 703 per year and \$18 988 for a Wheelchair Accessible Taxi (WAT) licence. These charges increased annually and were indexed at CPI minus 0.5 per cent. By July 2017 the cost of an annual licence was \$23 017.⁹⁶

In August 2017, the government introduced further licensing reforms. It enacted the Commercial Passenger Vehicle Industry Act 2017 to remove the high licensing costs associated with providing a CPV service.⁹⁷ To obtain a CPV licence an individual need only apply to the Taxi Services Commission and pay the annual fee of \$52.90.⁹⁸ Figure E.4 shows the change in metropolitan taxi licences from June 2014 to April 2018.

The number of taxi licences increased from 4,330 in June 2014 to 8,317 in April 2018 (a 92 per cent increase). However the number of taxi licences was fairly stable between April 2015 and

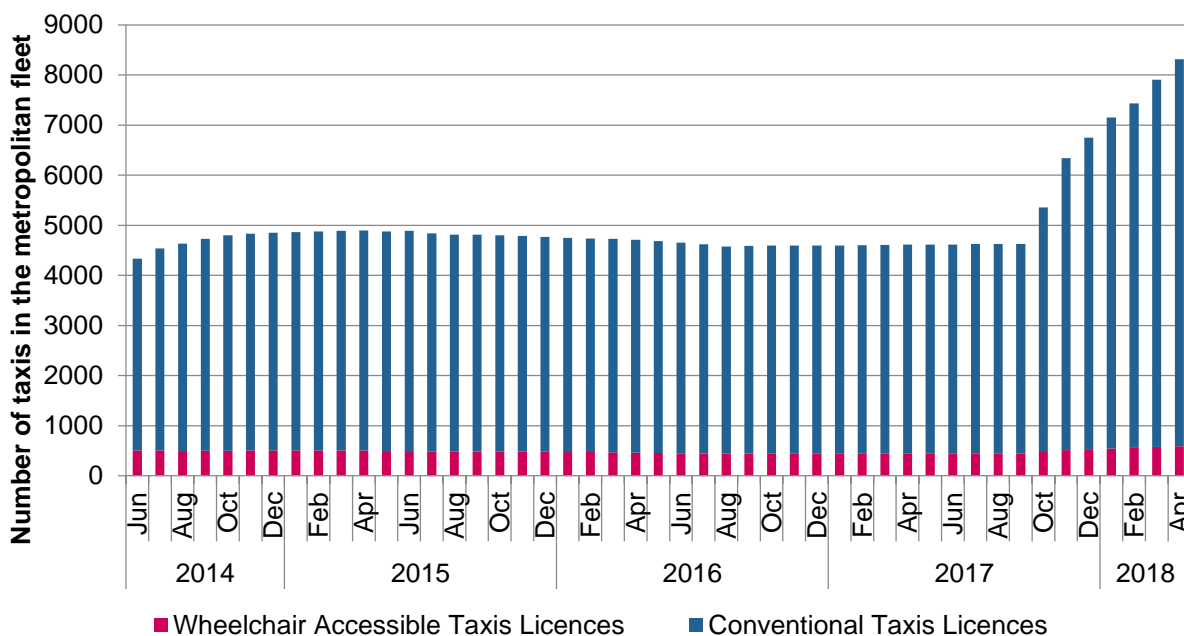
⁹⁶ Taxi Services Commission, Fees and Charges, accessed 20 April 2018, <https://web.archive.org/web/20170709032453/http://taxi.vic.gov.au/owners-and-operators/fees-and-charges>.

⁹⁷ Commercial Passenger Vehicle Industry Act 2017 s.1(b)(i) (prior to the amendments under the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017).

⁹⁸ These fees are as of 5 October 2017, <http://www.gazette.vic.gov.au/gazette/Gazettes2017/GG2017S336.pdf#page=1>

September 2017. The significant increase in licence numbers started only later in 2017 when the cost of a licence was reduced. Since our trip data is only complete up until the end of 2016, we do not know what effect this increase in licence numbers has had on the supply of active taxis and on the demand for taxis.

Figure E.4: Change in metropolitan taxi licences: June 2014 to April 2018



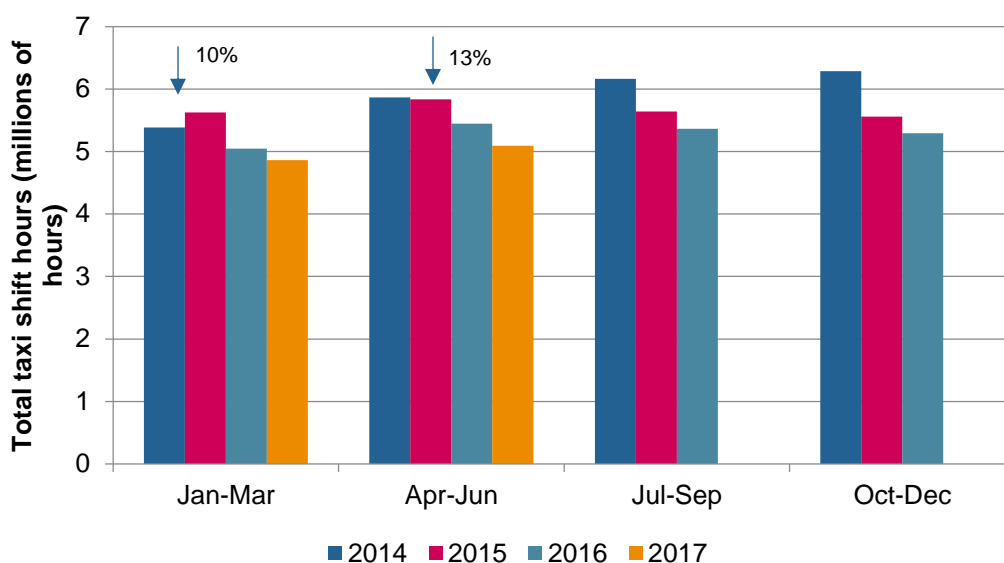
The total shift hours spent on the road by taxis began to decrease in 2015

Shift hours represent the time between the start and the end of each shift for taxi drivers. It includes both the time when a taxi is occupied with passengers and the time it is unoccupied but looking for passengers.

Starting in the second quarter of 2015, the total shift hours provided by all taxis began to decline. This trend continued into 2017. Figure E.5 shows that between 2014 and 2017 total taxi shift hours decreased by 10 and 13 per cent for the March and June quarters respectively.⁹⁹ However, this does not cover the period starting in late 2017 where the number of taxi licences almost doubled. We have some data which suggests the decline in shift hours continued into October 2017, but no data after that. Therefore it is difficult to say if this downward trend in total shift hours has continued.

⁹⁹ Although we only have complete trip data until the end of 2016, we have shift data for the first half of 2017. This shift comes from a different source: the TSC’s Multi Purpose Taxi Program data. It covers all taxis because it is not possible to isolate separately the shift hours for unbooked taxis. All taxis can do both booked and unbooked work.

Figure E.5: Total shift hours in the metro zone – all taxis: 2014 to 2017



The average number of taxis active at any one time has also declined

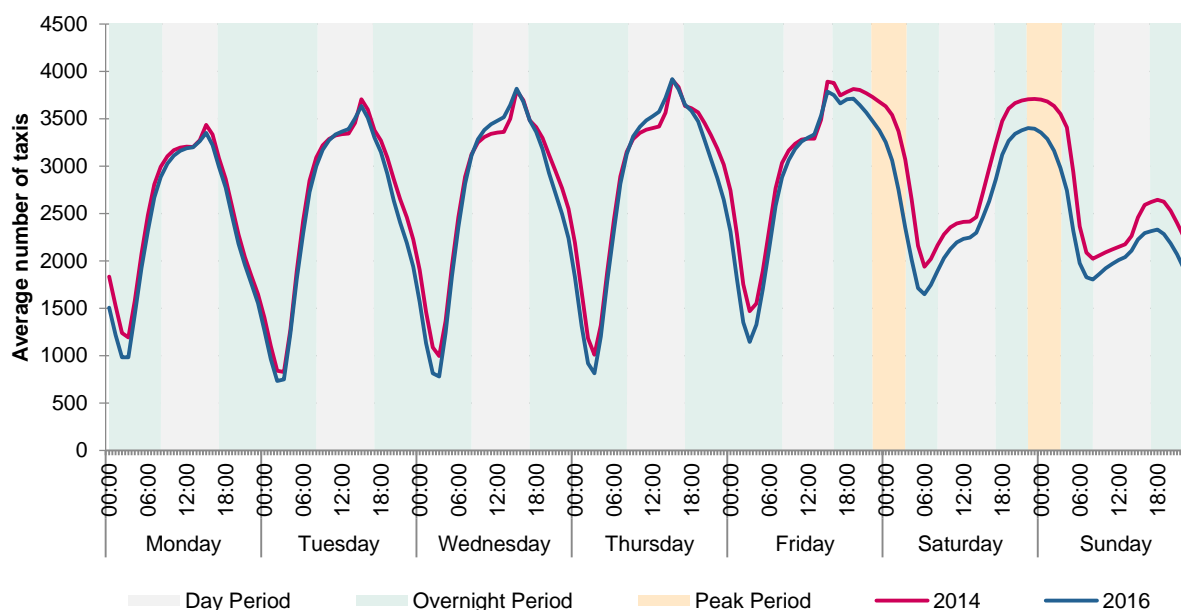
Figure E.6 shows the average number of taxis that were active during each hour of the week, for 2014 and 2016. Active taxis are all taxis that are on the road either occupied with a passenger or unoccupied but looking for passengers.

On weekdays, taxi supply was highest during business hours, and increased noticeably from 3pm when peak service taxis start their shifts.¹⁰⁰ In contrast to taxi demand across the week, the supply of taxis is not at its maximum on Friday and Saturday nights. It can be seen that on Friday nights the number of active taxis begins to decline prior to the commencement of the peak tariff period where taxi demand increases significantly.

While the overall pattern of active taxis has remained largely the same since 2014, the number of taxis on the road has decreased during the early evenings and weekends.

¹⁰⁰ Peak service taxis are licensed to operate only between 3pm and 7am. There are approximately 500 peak service taxis.

Figure E.6: Average active taxis by hour of the week in the metro zone – all taxis: 2014 and 2016



The balance of supply and demand

The balance of supply and demand can be shown using taxi occupancy rates. It can also be examined by looking at waiting times. These indicators for the balance of taxi supply and demand indicate that demand has decreased by more than supply in the metro zone.

Taxi occupancy

The occupancy rate is calculated as the total number of minutes that each taxi was occupied (passenger minutes) divided by the total number of minutes each taxi was on the road (shift minutes). It is a common measure of taxi utilisation.

Figure E.7 presents the average occupancy rate for each hour of the week in 2014 and 2016. It shows high levels of taxi utilisation on Friday and Saturday nights from early evening until around 4am. Relatively high utilisation is also observed on weekdays from 8am to 10am and 3pm to 5pm.

However, average taxi utilisation has decreased from 29 per cent in 2014 to 27 per cent in 2016. That is, in 2016 taxis were occupied for a smaller percentage of the time than they were in 2014. This decreasing trend in occupancy holds for the majority of hours of the week, which is consistent with the larger decreases in demand relative to supply that we have observed.

Figure E.7: Average occupancy for each hour across the week in the metro zone – all taxis: 2014 and 2016

Hour	2014						
	Days of week						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
12am-1am	28%	22%	22%	23%	28%	45%	52%
1am-2am	24%	19%	19%	19%	25%	41%	51%
2am-3am	21%	15%	18%	16%	23%	34%	47%
3am-4am	20%	13%	16%	15%	22%	33%	43%
4am-5am	18%	14%	14%	14%	18%	25%	33%
5am-6am	25%	21%	20%	19%	18%	22%	28%
6am-7am	29%	25%	24%	23%	21%	22%	28%
7am-8am	29%	27%	27%	26%	26%	23%	27%
8am-9am	36%	39%	39%	39%	36%	23%	24%
9am-10am	35%	38%	38%	39%	35%	24%	25%
10am-11am	30%	31%	31%	32%	31%	27%	26%
11am-12pm	26%	27%	28%	29%	31%	31%	29%
12pm-1pm	25%	27%	28%	30%	33%	32%	31%
1pm-2pm	24%	26%	27%	29%	30%	30%	30%
2pm-3pm	27%	29%	31%	32%	34%	28%	29%
3pm-4pm	30%	34%	36%	38%	39%	28%	28%
4pm-5pm	28%	33%	35%	38%	40%	28%	29%
5pm-6pm	26%	30%	31%	35%	38%	31%	28%
6pm-7pm	27%	31%	33%	35%	40%	38%	28%
7pm-8pm	26%	29%	31%	32%	40%	39%	25%
8pm-9pm	26%	27%	28%	29%	33%	32%	23%
9pm-10pm	26%	26%	27%	29%	33%	32%	26%
10pm-11pm	26%	26%	28%	31%	40%	42%	29%
11pm-12am	24%	23%	26%	30%	45%	50%	30%

Hour	2016						
	Days of week						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
12am-1am	26%	22%	20%	21%	26%	35%	43%
1am-2am	22%	18%	17%	17%	23%	31%	43%
2am-3am	19%	16%	15%	15%	21%	28%	39%
3am-4am	19%	14%	13%	14%	21%	29%	39%
4am-5am	18%	15%	13%	14%	18%	23%	30%
5am-6am	25%	22%	21%	20%	19%	21%	26%
6am-7am	27%	24%	23%	22%	20%	21%	25%
7am-8am	27%	25%	26%	25%	25%	21%	24%
8am-9am	34%	36%	37%	37%	34%	22%	23%
9am-10am	35%	37%	38%	38%	33%	24%	25%
10am-11am	29%	31%	31%	32%	30%	27%	26%
11am-12pm	25%	26%	27%	28%	29%	29%	27%
12pm-1pm	24%	26%	27%	29%	31%	29%	28%
1pm-2pm	23%	25%	26%	28%	29%	27%	26%
2pm-3pm	26%	28%	30%	31%	32%	24%	25%
3pm-4pm	29%	32%	35%	38%	39%	24%	26%
4pm-5pm	27%	32%	36%	39%	39%	24%	27%
5pm-6pm	26%	30%	33%	36%	36%	26%	26%
6pm-7pm	26%	29%	31%	35%	35%	31%	26%
7pm-8pm	24%	26%	28%	29%	31%	28%	23%
8pm-9pm	26%	27%	28%	29%	26%	22%	23%
9pm-10pm	27%	28%	29%	30%	27%	23%	26%
10pm-11pm	25%	27%	28%	31%	32%	33%	27%
11pm-12am	23%	23%	23%	27%	37%	40%	26%

Appendix E: Metropolitan zone market outcomes

Essential Services Commission

Unbooked Commercial Passenger Vehicle Fare Review 2018: Draft Decision

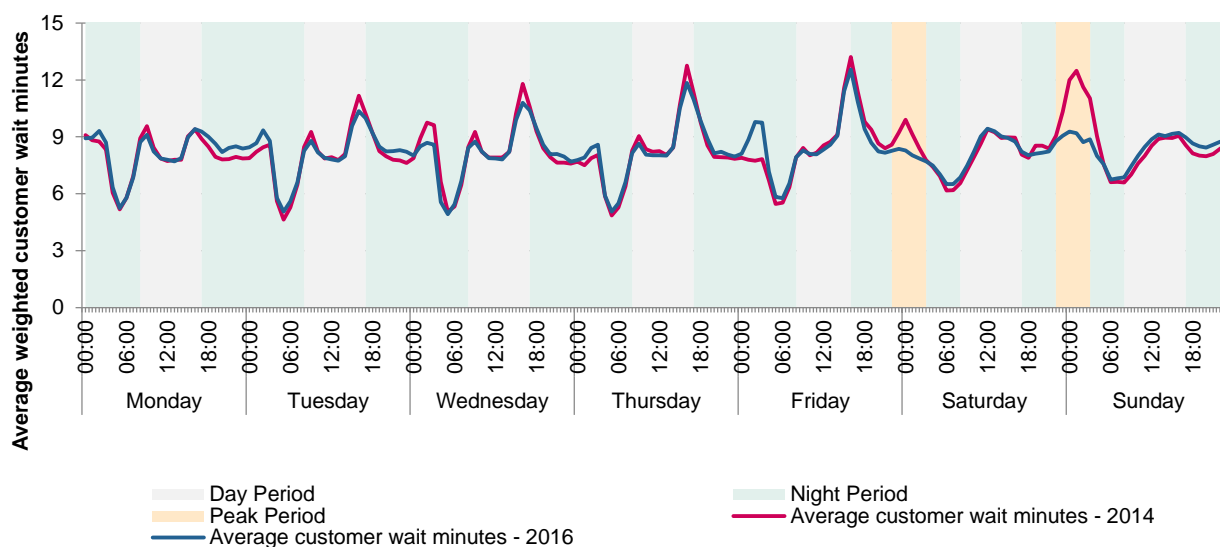
Our occupancy measures include both booked and unbooked taxi trips. It is not possible to calculate a separate occupancy rate for booked and unbooked taxis. Taxis do both booked and unbooked work. But unbooked taxi trips account for around 70 per cent of all taxi trips. As a result, these occupancy rates are a good estimate of occupancy rates for unbooked CPVs.

Passengers are waiting less

For another indication of the trends in the balance of supply and demand for CPVs, we analysed customer wait times for booked trips. Customer wait time is calculated as the difference between the time that a trip was booked for, and the time that the meter was turned on to begin the trip.¹⁰¹ While this is not a direct measure, it provides an indication of changes in the balance of supply and demand for unbooked services. If customer wait times for booked trips are lower, it is likely that there is greater taxi availability and therefore that wait times for unbooked trips are also lower.

Average weighted customer wait times vary across the week, as shown in figure E.8, but tend to peak at around 5pm. Overall, customer wait times are shorter in 2016. Customer wait times during the Friday and Saturday night peak tariff periods are not at their highest. This is surprising given large peaks in taxi demand at those times are not matched by large peaks in supply. We suspect this is because if a booking is not accepted by a driver then there is no trip record for it.

Figure E.8: Customer wait time by hour of the week for the metro zone: 2014 and 2016¹⁰²



¹⁰¹ There are two types of trips that fit into this category: advanced bookings and ready to ride bookings. Advanced bookings are bookings where the requested time of departure is in the future. Ready to ride bookings are bookings that request the next available cab: the time the booking is made and requested for are the same.

¹⁰² Customer wait time in this graph is the weighted average customer wait time. This means that the wait times for immediate pick up bookings have been given greater weight than advance bookings. This is to reflect the fact that wait times for rank and hail trips, for which there are no recorded wait times, are more similar to immediate pick up bookings.

Drivers are waiting longer between jobs

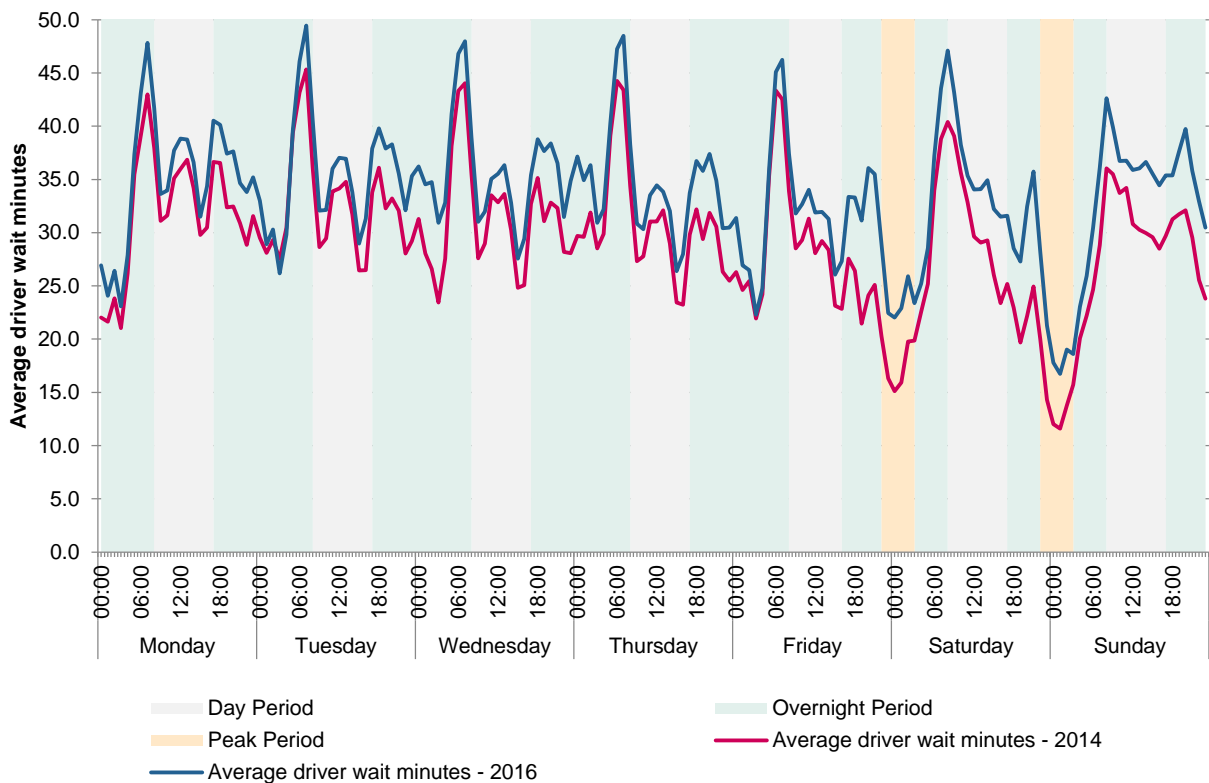
For an indication of how long drivers have to wait for a job, we have calculated the average time drivers spend between dropping off one passenger and picking up their next passenger (driver wait time). This measure counts the time in between trips regardless of whether the first trip was booked and the second trip was unbooked or vice versa.

Figure E.9 shows drivers' wait times between trips is highest in the morning between 6am and 8am. We suspect this result is influenced by drivers queuing at Melbourne Airport while waiting for the morning rush of air passenger arrivals into Melbourne.

Figure E.9 also shows the influence of high demand relative to supply on Friday and Saturday nights with drivers spending less than 15 minutes between trips on average on Saturday nights – roughly half the typical waiting time on weekdays during business hours.

We also observe that drivers waited longer between trips on average in 2016 than in 2014. This is consistent with the expected outcomes of lower demand for taxis discussed previously.

Figure E.9: Average driver wait time by hour of the week for the metro zone: 2014 and 2016



Taxi service quality

Measuring taxi service quality can provide information about problems with the level of fares or the structure of fares.

Appendix E: Metropolitan zone market outcomes

Essential Services Commission

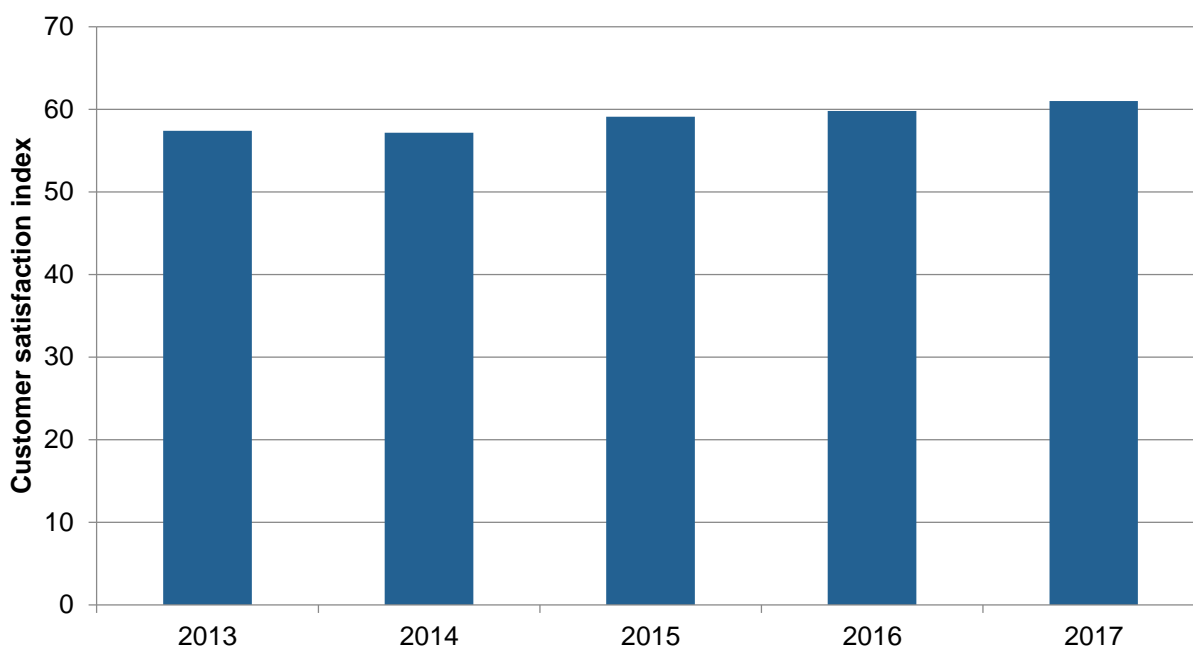
Unbooked Commercial Passenger Vehicle Fare Review 2018: Draft Decision

We used three measures to examine taxi service quality:

- a customer satisfaction index (calculated from the Taxi Services Commission’s Customer Satisfaction Monitor results)
- the total number of complaints about taxis lodged with the Taxi Services Commission¹⁰³
- customer wait times (calculated based on the Taxi Services Commission’s trip data).

Our analysis suggests that the quality of taxi services in the metro zone has improved. This can be seen in improved customer satisfaction (figure E.10)¹⁰⁴, fewer complaints received by the Taxi Services Commission (figure E.11) and generally improved customer wait times (figure E.8).

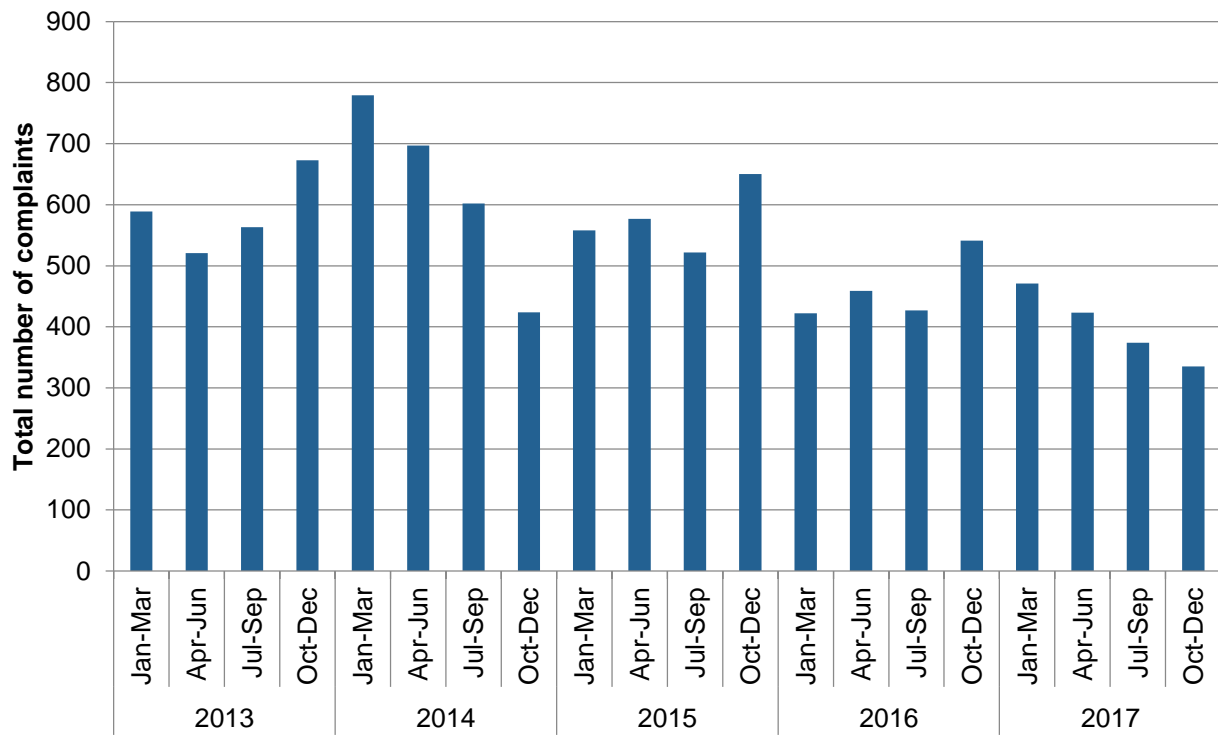
Figure E.10: Customer satisfaction index by quarter – all taxis: 2013 to 2017



¹⁰³ Customers can lodge taxi related complaints with the Taxi Services Commission, typically on matters concerning driver behaviour, fare refusals and cleanliness of the vehicle.

¹⁰⁴ According to the Taxi Services Commission driver performance, safety and comfort, and fare mostly determine overall customer satisfaction with taxi services. Source: Taxi Services Commission, 2016-17 Annual Report, October 2017, p.30.

Figure E.11: Total number of complaints in the metro zone – all taxis: 2013 to 2017



Improved quality of taxi services from 2014 to 2017 suggests that the current maximum fares are not leading to a decrease in the quality of taxi services.

Appendix F: Urban and large regional zone market outcomes

This appendix describes our analysis of market outcomes for unbooked taxis in the urban and large regional zone. The urban and large regional zone (the urban zone) includes Geelong, Ballarat, Bendigo, Frankston, Dandenong and the Mornington Peninsula. We refer to the Frankston, Dandenong and the Mornington Peninsula areas as the east urban area in this report.

In general we have examined market outcomes using the same metrics that we used for the metropolitan zone (metro zone).

The amount of data available to us for the urban zone is mixed and less complete than the data we have for the metro zone. We have enough data to observe trends in Geelong but not for Ballarat and Bendigo. The data that we have for the east urban area allows us to compare trends in average outcomes, such as customer wait times or occupancy rates, but there are some issues with the inclusion or exclusion of some parts of the area that make comparisons of the total level of demand or supply difficult.

Overall, following careful cleansing of the data to remove invalid records, the data we have for Geelong is of reasonable quality. However, it is difficult to draw strong conclusions for other areas. While the data for Geelong are of reasonable quality, we note that by now it is almost a year old. We are conscious that the balance of supply and demand may have changed since that time.

As for the metro zone the metrics presented relate to either all taxis or unbooked taxis only. We present information on unbooked taxis where the relevant data could be isolated.

Recent trends in total taxi supply and demand

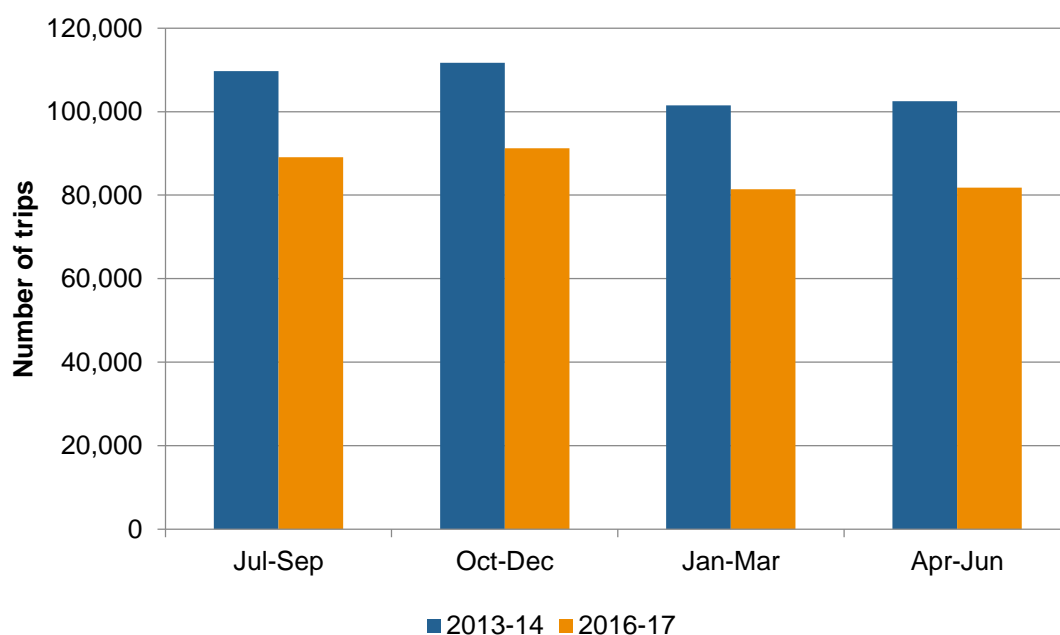
This section presents data on the recent trends in total taxi supply and demand.

Demand for unbooked taxis in Geelong has declined since 2014

Demand for unbooked trips in Geelong declined by roughly 20 per cent between 2013-14 and 2016-17. Figure F.1 shows this trend. Over this period, the share of unbooked trips in Geelong has remained stable at roughly 35 per cent of total trips.

We do not have complete data for the east urban area, Ballarat and Bendigo to compare the trends in demand for taxis. However in meetings with the network service providers from Bendigo and Ballarat they reported that demand for taxis has declined on Friday and Saturday evenings due to the entry of Uber into the market.

Figure F.1: Taxi trips for unbooked taxis in Geelong: 2013-14 and 2016-17



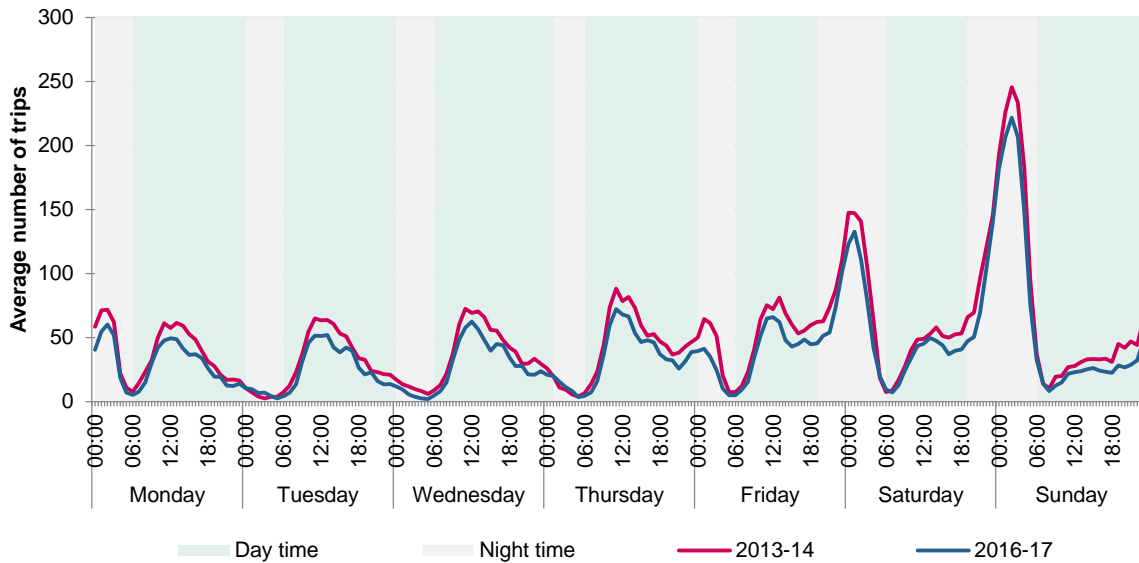
Demand for taxis declined for most hours of the week and the pattern of demand remained the same

Figure F.2 shows the typical variations in demand for taxis in Geelong across the week. The background shading indicates the two tariff periods – the day period and the night period.¹⁰⁵ The decline in demand for unbooked taxis in Geelong from 2013-14 to 2016-17 was quite evenly spread across the week.

While demand for taxis has declined, the general trend of how demand varies across a typical week remained largely the same. On weekdays, taxi demand is highest during business hours before declining in the evening, followed by a period of low demand overnight. Demand for taxis increases to its highest level on Saturday night from midnight to 1am. As the pattern of demand is largely unchanged it seems that the current fare structure, which determines how fares vary across the week, is still appropriate.

¹⁰⁵ A late night fee applies for trips commencing between 7pm on Friday and Saturday nights through to 6am the following morning; and from midnight to 6am on all other days.

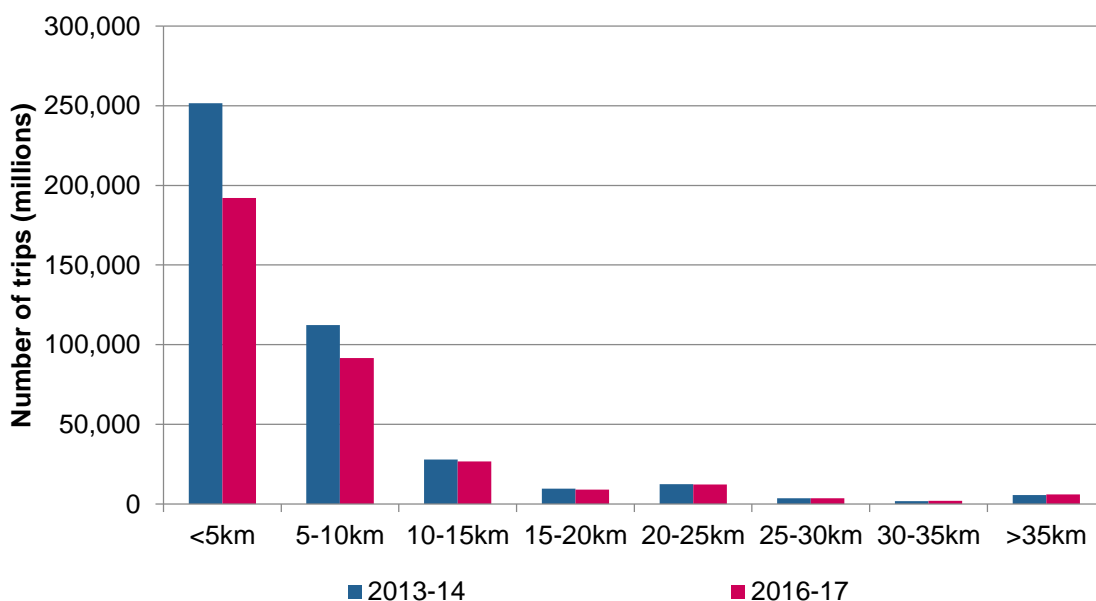
Figure F.2: Average unbooked taxi trips by hour of the week for Geelong: 2013-14 and 2016-17



Demand for unbooked taxis declined for short trips

The demand for unbooked taxis has decreased for distances less than 30 kilometres but increased for longer trips. Distances of less than 30 kilometres comprise about 98 per cent of all unbooked trips in Geelong in 2016-17. Figure F.3 displays the number of trips by five kilometre distance bands, comparing demand in 2013-14 and 2016-17.

Figure F.3: Unbooked taxi trips in Geelong by distance: 2013-14 and 2016-17

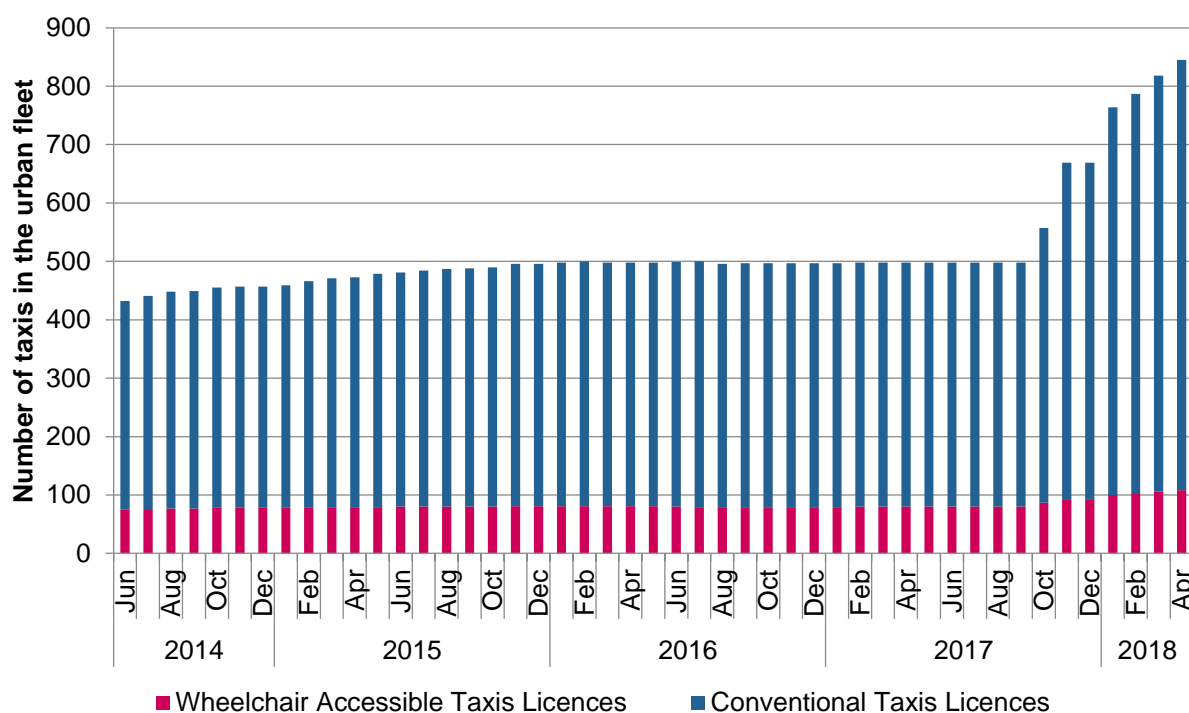


The number of taxi licences was stable until a large increase in October 2017

As discussed in appendix E, in June 2014 and August 2017, the government introduced licensing reforms that effectively removed all quantity and price restrictions on CPV licences. Figure F.4 shows the resulting change in urban and large regional zone taxi licences from June 2014 to April 2018.

The number of taxi licences increased from 498 in September 2017 to 845 in April 2018 (a 70 per cent increase). However the number of taxi licences was fairly stable between December 2015 and September 2017. The significant increase in licence numbers started only later in 2017 when the cost of a licence was reduced significantly.

Figure F.4: Change in urban and large regional zone taxi licences 2014 to 2018

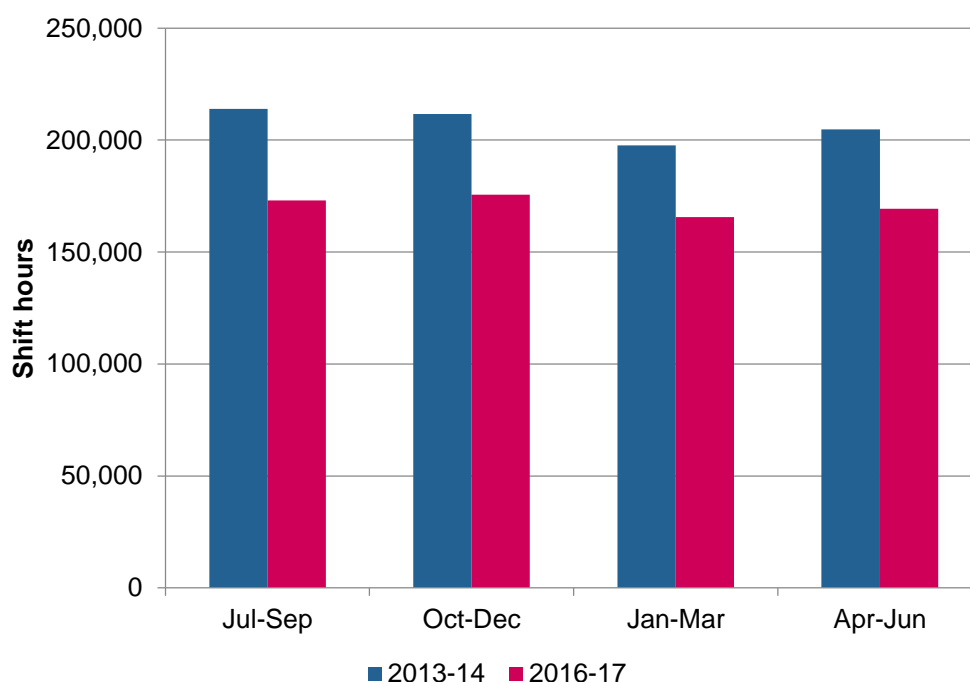


The total shift hours spent by taxis on the road has declined since 2014

Figure F.5 shows the total shift hours spent by taxis on the road providing trips or looking for passengers for 2013-14 and 2016-17 in Geelong. This does not cover the period starting in late 2017 where taxi licences almost doubled, hence we cannot be sure what effect this increase in licence numbers has had on the shift hours worked by taxis and demand for taxis from July 2017.

The total taxi shift hours decreased by 17 per cent from 2013-14 to 2016-17. We do not have the data to make a similar comparison for the east urban area, Ballarat or Bendigo.

Figure F.5: Total shift hours for Geelong – all taxis: 2013-14 and 2016-17



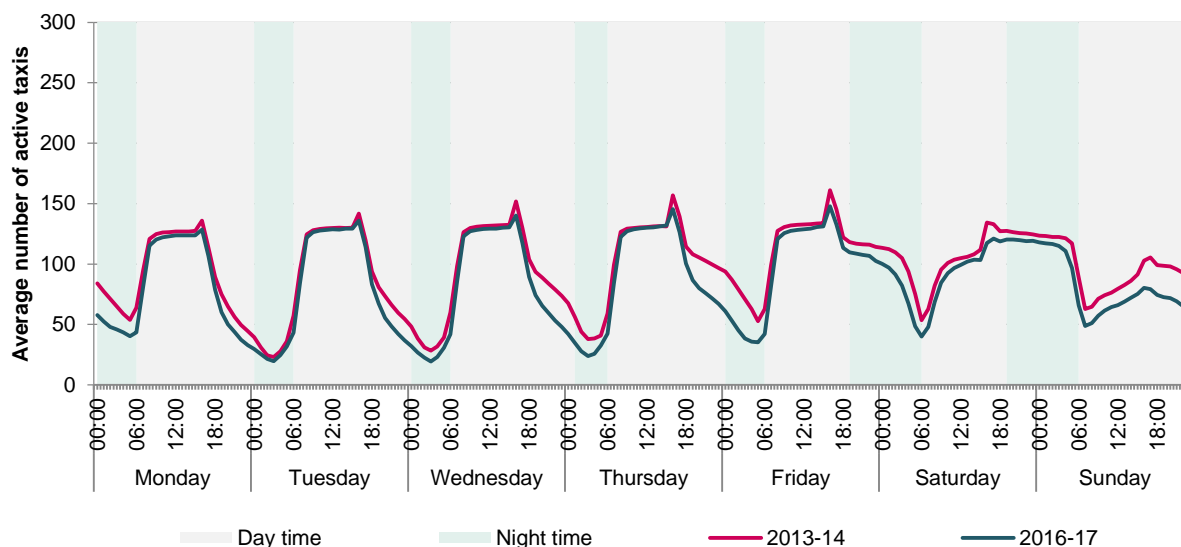
Lack of taxi drivers in the large regional zone appears to be one of the issues influencing the decline in shift hours. In meetings, network service providers in the urban zone said they are finding it hard to attract drivers for their vehicles at some times of the week. As discussed in chapter 3, this could be because drivers can now operate their own vehicles (either as an independent taxi driver or using their private vehicle for a rideshare company).

The average number of taxis active at night has also declined

Figure F.6 shows the average number of taxis that were active during each hour of the week, for 2013-14 and 2016-17. Taxi supply is highest during business hours, and increases noticeably at 4pm. In contrast to taxi demand across the week, the supply of taxis is not at its maximum on Friday and Saturday nights.

While the pattern of supply of active taxis remained largely the same between 2013-14 and 2016-17, on average, the level of supply of active taxis on the road decreased. The decrease in supply is most prominent during the early evenings and weekends.

Figure F.6: Average active taxis (supply) by hour of the week in Geelong – all taxis: 2013-14 and 2016-17



The balance of supply and demand

Overall the balance of supply and demand has not changed

On average, taxi utilisation in Geelong increased from 22 per cent in 2014 to 24 per cent in 2017. However, the occupancy rates on Friday and Saturday nights have decreased (see figure F.7). This suggests that demand decreased relative to supply during this period. It also suggests that there is no shortage of taxis at what is generally the busiest time of the week in Geelong.

In the east urban area, occupancy rates decreased from 27 per cent in 2014 to 23 per cent in 2017 (see figure F.8). The decrease in occupancy rates is most significant during business hours and during Friday and Saturday nights, but occupancy rates dropped for almost all hours of the week.

We do not have complete data for Ballarat and Bendigo to make similar comparisons. However, the data available to us shows that in 2017, the pattern of the occupancy rates in Ballarat was generally similar to those of Geelong.

Overall the way occupancy rates vary across the week in Geelong and the east urban area has not changed since 2014. High levels of taxi utilisation were observed on weekdays during business hours and Friday and Saturday nights. Data available for Ballarat shows it has generally the same pattern of occupancy rates and network service providers in Bendigo indicated that the pattern of their occupancy rates is similar to those in Ballarat. As the overall balance of supply and demand has not greatly changed since 2014, the tariff schedule (which determines how fares vary across the week) still seems to be appropriate.

Figure F.7: Average occupancy rate for each hour across the week in Geelong – all taxis: 2013-14 and 2016-17

2013-14								2016-17							
Hour	Days of week							Hour	Days of week						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
12am-1am	16%	11%	11%	12%	13%	32%	49%	12am-1am	18%	16%	15%	18%	18%	33%	47%
1am-2am	18%	10%	11%	11%	15%	30%	48%	1am-2am	21%	13%	15%	17%	18%	33%	47%
2am-3am	21%	7%	8%	8%	16%	27%	47%	2am-3am	25%	10%	11%	15%	17%	28%	46%
3am-4am	24%	6%	8%	8%	16%	24%	45%	3am-4am	28%	9%	9%	14%	17%	26%	44%
4am-5am	15%	11%	12%	9%	13%	20%	37%	4am-5am	21%	17%	17%	19%	17%	23%	36%
5am-6am	16%	14%	14%	11%	12%	16%	26%	5am-6am	20%	16%	16%	15%	16%	22%	28%
6am-7am	13%	13%	13%	12%	11%	14%	22%	6am-7am	18%	15%	18%	18%	18%	20%	24%
7am-8am	12%	13%	13%	13%	12%	13%	16%	7am-8am	18%	16%	18%	18%	18%	16%	20%
8am-9am	33%	34%	34%	35%	33%	15%	15%	8am-9am	38%	39%	41%	39%	38%	16%	18%
9am-10am	29%	30%	31%	34%	31%	17%	21%	9am-10am	32%	32%	32%	35%	33%	21%	25%
10am-11am	22%	23%	25%	28%	25%	21%	20%	10am-11am	23%	26%	27%	28%	28%	24%	25%
11am-12pm	23%	23%	24%	27%	27%	24%	22%	11am-12pm	23%	25%	27%	28%	29%	27%	27%
12pm-1pm	20%	23%	23%	25%	25%	24%	21%	12pm-1pm	23%	25%	26%	28%	28%	27%	27%
1pm-2pm	21%	23%	23%	27%	26%	24%	19%	1pm-2pm	23%	26%	27%	28%	29%	26%	23%
2pm-3pm	27%	28%	31%	32%	32%	23%	20%	2pm-3pm	28%	30%	32%	32%	34%	24%	21%
3pm-4pm	40%	44%	45%	47%	47%	21%	18%	3pm-4pm	46%	45%	46%	46%	45%	23%	22%
4pm-5pm	24%	28%	29%	32%	34%	23%	19%	4pm-5pm	27%	31%	30%	34%	33%	23%	23%
5pm-6pm	19%	19%	21%	23%	25%	22%	16%	5pm-6pm	24%	24%	27%	28%	29%	22%	21%
6pm-7pm	16%	18%	18%	17%	26%	28%	15%	6pm-7pm	21%	22%	22%	22%	26%	26%	19%
7pm-8pm	15%	17%	17%	16%	25%	30%	15%	7pm-8pm	19%	18%	20%	19%	22%	25%	18%
8pm-9pm	14%	13%	13%	13%	21%	25%	15%	8pm-9pm	19%	20%	20%	19%	19%	21%	17%
9pm-10pm	14%	15%	15%	14%	24%	29%	17%	9pm-10pm	18%	18%	19%	16%	19%	23%	17%
10pm-11pm	14%	14%	15%	15%	25%	35%	16%	10pm-11pm	15%	16%	17%	18%	23%	30%	17%
11pm-12am	12%	12%	12%	14%	29%	44%	19%	11pm-12am	16%	15%	17%	18%	28%	40%	22%

Appendix F: Urban and large regional zone market outcomes

Essential Services Commission

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Figure F.8: Average occupancy rate for each hour across the week in the east urban area – all taxis: January-October, 2014 and 2017

2014							
Days of week							
Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
12am-1am	22%	21%	20%	18%	20%	30%	43%
1am-2am	20%	19%	21%	20%	22%	29%	46%
2am-3am	19%	18%	20%	21%	25%	27%	46%
3am-4am	14%	12%	14%	17%	20%	25%	40%
4am-5am	14%	14%	15%	15%	16%	22%	24%
5am-6am	21%	20%	20%	20%	19%	19%	22%
6am-7am	24%	23%	22%	23%	23%	19%	23%
7am-8am	24%	26%	26%	27%	25%	15%	16%
8am-9am	39%	43%	41%	43%	39%	17%	16%
9am-10am	38%	40%	38%	41%	37%	21%	20%
10am-11am	33%	36%	36%	39%	35%	26%	23%
11am-12pm	32%	34%	34%	38%	37%	30%	23%
12pm-1pm	32%	34%	36%	38%	39%	30%	24%
1pm-2pm	32%	34%	35%	37%	37%	27%	23%
2pm-3pm	35%	38%	39%	41%	42%	26%	21%
3pm-4pm	41%	43%	45%	46%	47%	27%	21%
4pm-5pm	30%	33%	36%	40%	41%	27%	22%
5pm-6pm	24%	27%	30%	32%	35%	29%	23%
6pm-7pm	20%	25%	24%	27%	33%	32%	23%
7pm-8pm	18%	19%	19%	22%	26%	32%	21%
8pm-9pm	18%	17%	17%	19%	24%	28%	22%
9pm-10pm	19%	17%	17%	21%	28%	32%	24%
10pm-11pm	21%	20%	19%	20%	29%	35%	24%
11pm-12am	20%	18%	17%	19%	29%	38%	22%

2017							
Days of week							
Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
12am-1am	20%	19%	18%	17%	20%	22%	30%
1am-2am	19%	19%	17%	18%	21%	25%	33%
2am-3am	16%	18%	17%	18%	20%	23%	34%
3am-4am	16%	16%	15%	16%	19%	25%	34%
4am-5am	20%	17%	19%	16%	17%	18%	20%
5am-6am	24%	22%	20%	19%	20%	19%	19%
6am-7am	20%	18%	20%	17%	19%	17%	20%
7am-8am	20%	21%	22%	21%	20%	13%	16%
8am-9am	30%	33%	34%	33%	30%	16%	16%
9am-10am	32%	33%	34%	33%	32%	20%	21%
10am-11am	28%	31%	31%	33%	30%	23%	23%
11am-12pm	26%	29%	29%	31%	30%	25%	23%
12pm-1pm	27%	31%	31%	32%	31%	26%	23%
1pm-2pm	27%	30%	29%	32%	32%	24%	22%
2pm-3pm	30%	32%	34%	34%	34%	22%	21%
3pm-4pm	34%	36%	37%	37%	38%	22%	21%
4pm-5pm	28%	31%	31%	33%	34%	21%	21%
5pm-6pm	21%	25%	27%	27%	28%	22%	20%
6pm-7pm	17%	21%	22%	22%	23%	23%	19%
7pm-8pm	16%	18%	18%	19%	20%	21%	20%
8pm-9pm	15%	16%	15%	17%	16%	18%	19%
9pm-10pm	18%	17%	16%	19%	18%	21%	21%
10pm-11pm	17%	18%	17%	19%	21%	24%	20%
11pm-12am	16%	17%	17%	19%	22%	27%	19%

Appendix F: Urban and large regional zone market outcomes

Essential Services Commission

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Passenger and driver wait times have not changed significantly

Another measure of the balance and supply of demand, as explained in appendix E, is customer wait times. Overall, customer wait times in Geelong (figure F.9) and the east urban area (figure F.10) have not changed much since 2014; they increased slightly in Geelong and decreased slightly in the east urban area.

Figure F.9: Average customer wait time by hour of the week for Geelong – booked trips only: 2013-14 and 2016-17

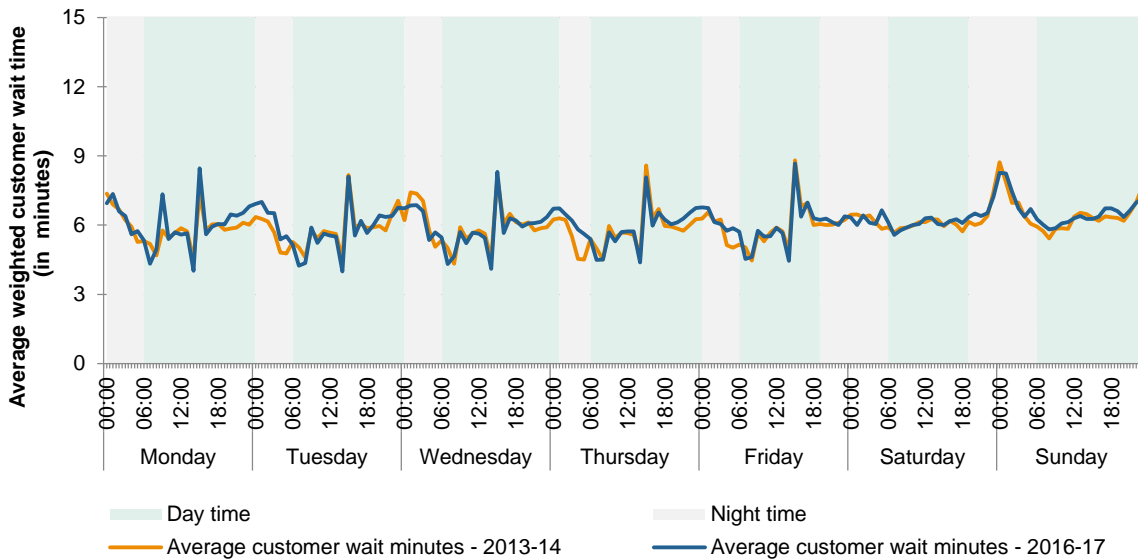
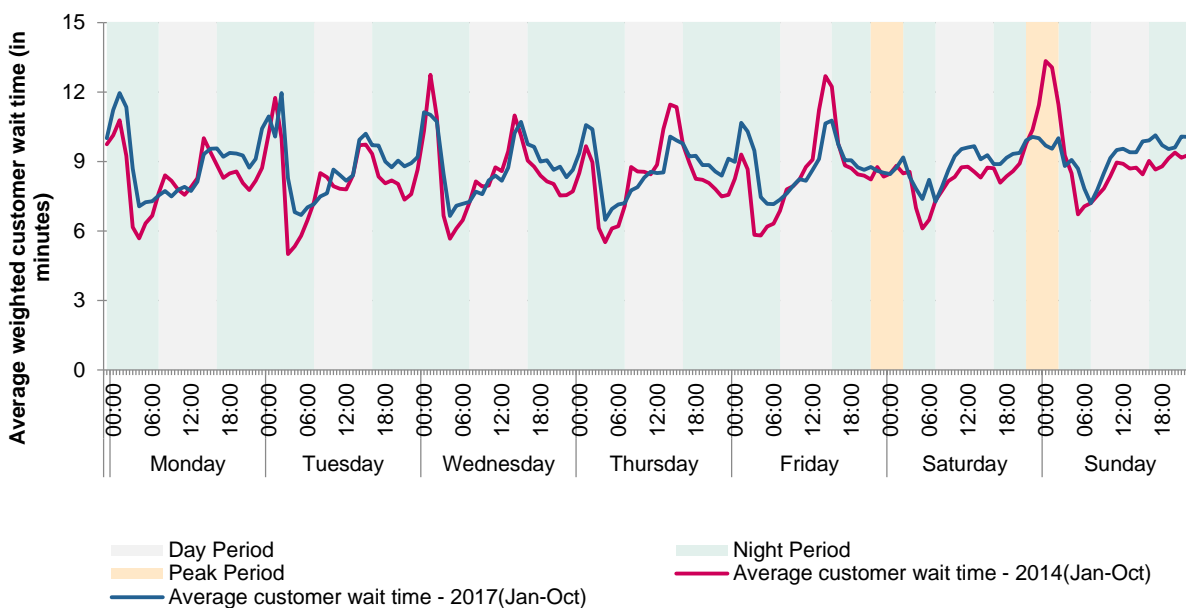
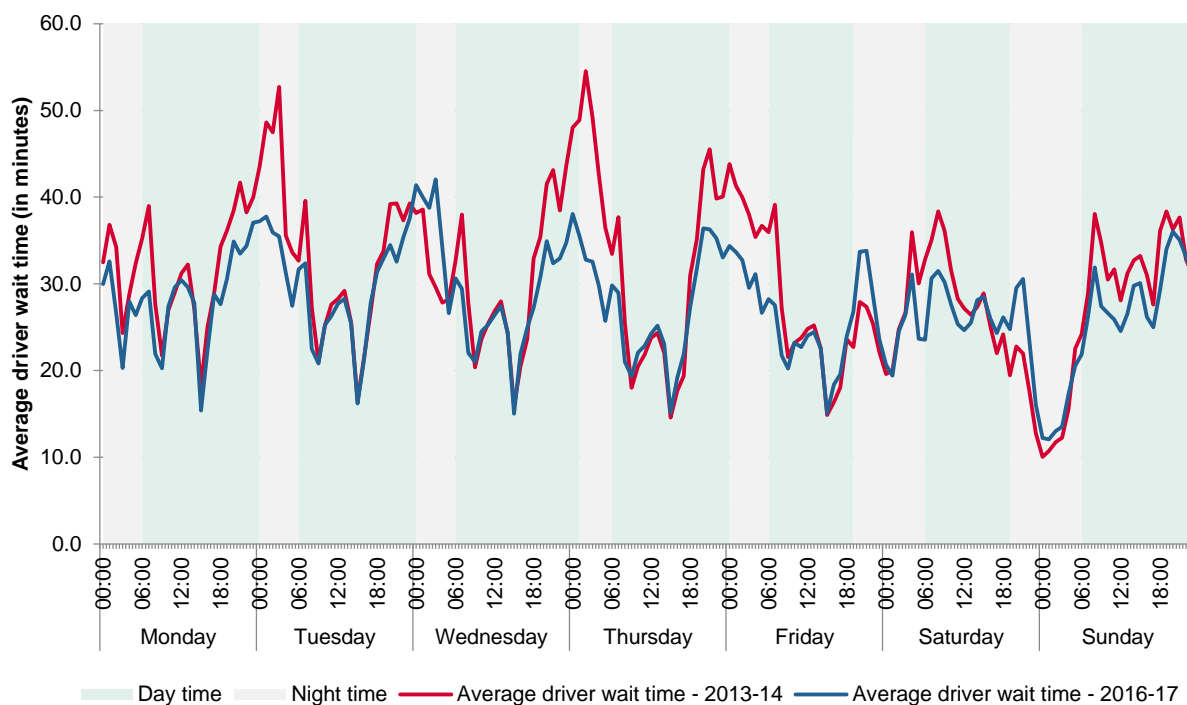


Figure F.10: Average customer wait time by hour of the week for east urban area – booked trips only: January-October, 2014 and 2017



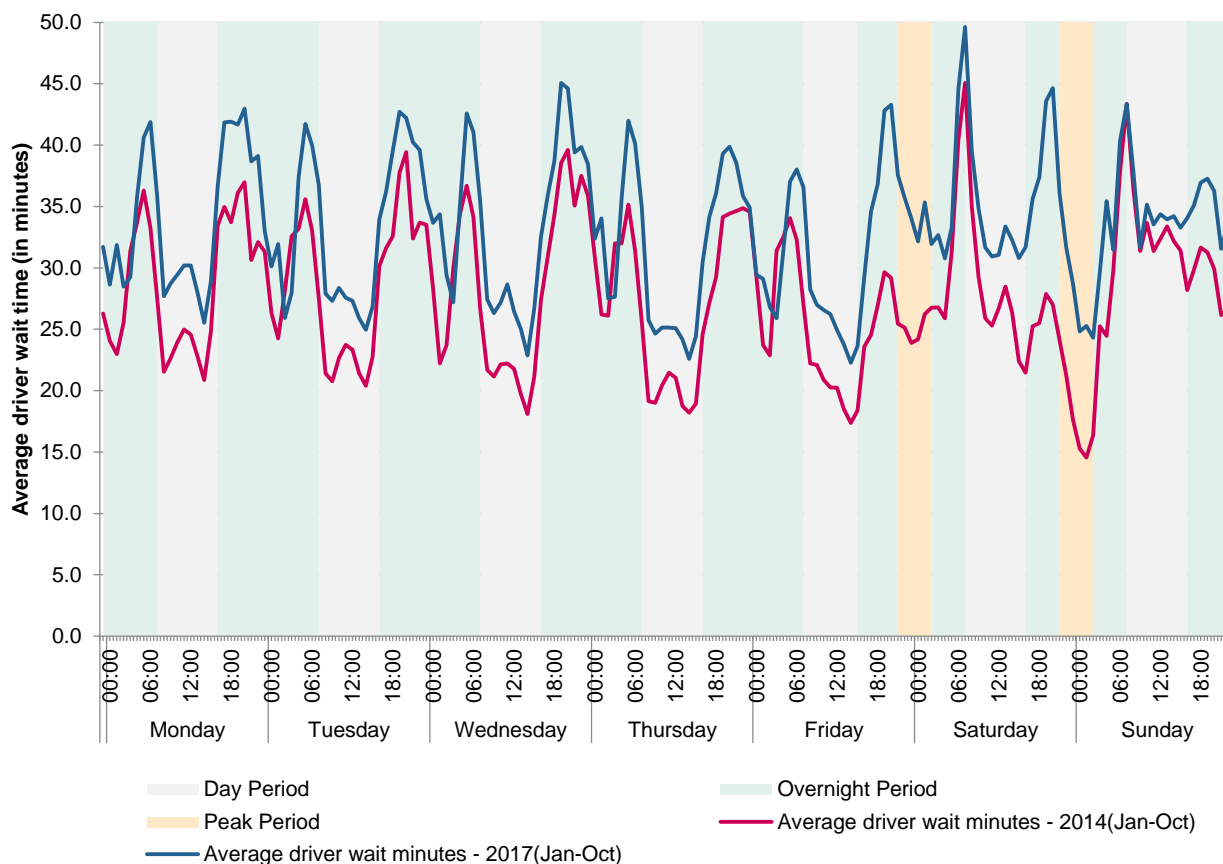
Similarly, the pattern of driver wait times has remained roughly the same (figure F.11). In Geelong, the average driver wait time decreased from 30 minutes in 2014 to 28 minutes in 2017. However, driver wait times on Friday and Saturday nights increased, which is consistent with our observations of lower occupancy rates at those times.

Figure F.11: Average driver wait time by hour of the week for Geelong – all taxis: 2013-14 and 2016-17



In the east urban area, the pattern of driver wait times has also remained largely the same since 2014 (figure F.12). However, on average driver wait time increased from 28 minutes in 2014 to 33 minutes in 2017. The increase applied across most hours of the week but is most prominent on Friday and Saturday nights starting from 5pm-6pm up to midnight. This is consistent with our observations of decreased occupancy rates in the east urban area.

Figure F.12: Average driver wait time by hour of the week for east urban areas– all taxis: January-October, 2014 and 2017



Taxi service levels

We examined taxi service levels in the urban zone using the following measures:¹⁰⁶

- customer wait times (calculated from the Taxi Services Commission’s taxi data)
- the total number of complaints about taxis lodged with the Taxi Services Commission.

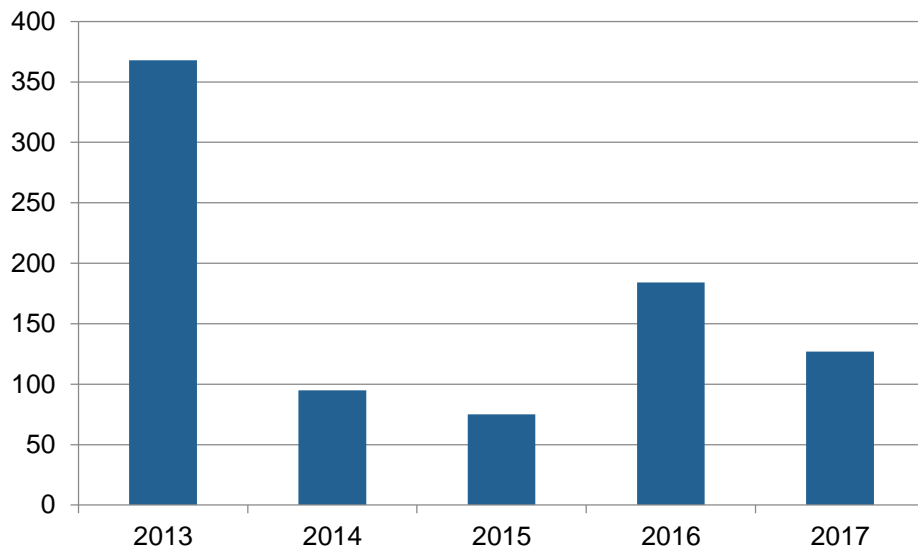
The quality of taxi services in the urban zone appears to have remained stable. On average customer wait times have remained unchanged (see figures F.9 and F.10 above) and the total number of complaints for the urban zone has also remained largely the same.

Figure F.13 shows an increase in complaints of 33 per cent between 2014 and 2017. We note however that this is a decrease of 65 per cent from 2013. Stable service quality during this period

¹⁰⁶ The Taxi Services Commission’s customer satisfaction monitor is another measure, but, there is no specific customer satisfaction survey by the Taxi Services Commission for the urban zone.

suggests that there is no need to increase the current maximum fares. The current fares are providing enough reward for taxi service providers to keep service standards stable.

Figure F.13: Total number of complaints in the urban zone – all taxis: 2013 to 2017



Appendix G: Detailed cost analysis

Keeping our analysis transparent

This appendix provides all of the figures necessary to understand our analysis of changes in costs since our last fare review. These include the cost survey results from our 2014 review, the cost shares derived from those results, and the indices we used to estimate how costs have changed since then. We provide this information to help stakeholders understand and have confidence in our analysis.

Calculating changes in the taxi cost index

Key taxi costs

In 2014 we commissioned a survey of metropolitan, outer metropolitan and urban taxi operators to understand the typical costs of operating taxis.¹⁰⁷ From the survey we identified key operational costs. Relevant components are summarised in table G.1 below.

From the survey results, we estimated the total costs associated with operating a typical taxi in the metro and urban zones.

Table G.1: Key costs for taxi operators

Cost component	Description
Fuel	Total fuel costs incurred by a taxi.
Network fees	Costs associated with network affiliation. Operators receive access to services such as centralised booking and dispatch and networked security alarms.
Insurance	Comprehensive insurance and workers' compensation insurance.
Vehicle cost	Includes costs associated with purchasing or leasing a vehicle, including fit-out. We have used purchase costs amortised over the life of the vehicle.
Registration / TAC	Includes compulsory third party insurance (Transport Accident Charge).
Repairs	Includes the cost of operators' own time, staff costs and costs paid to other businesses for maintenance and repairs.
Administration	Includes the cost of operators' own time, staff costs and costs paid to other businesses for administration (e.g. accountant).

¹⁰⁷ Essential Services Commission, Taxi fare review 2013-14 — Final report, March 2014.

Putting together the taxi cost index

To measure changes in taxi costs over time we used the survey results to make a taxi cost index. There are two basic parts to our taxi cost index: the component indices and the weighting of those indices. Each component index measures the change in one of the key costs we identified in our survey of taxi operators. For example, we measure changes in 'maintenance and repairs' costs using changes in the 'Melbourne consumer price index (CPI) maintenance and repairs of motor vehicles' index, available from the Australian Bureau of Statistics (ABS). The component indices are each assigned a cost share based on the percentage share of total costs for the relevant key cost. By multiplying the change in each component index over time by its share of total costs, we can estimate the change in the total costs over time.

Component indices

With the exception of the fuel index (which we obtain from FuelTRAC) all indices come from publicly available sources including: the ABS, the Reserve Bank of Australia, the Transport Accident Commission and the Insurance Council of Australia. The indices we use for each key cost can be found below in Table G.2.

Table G.2: Taxi cost index - Component and inflator

Cost component	Inflator
Fuel	FuelTRAC LPG
Network	50% equipment – CPI (telecommunications equipment and services, Melbourne) 50% labour – Wage Price Index (WPI)
Insurance	80% comprehensive – ICA comprehensive car insurance index 20% workers compensation – WPI
Vehicle	Imputed based on CPI (motor vehicle, Melbourne) and RBA lending rates for small business
Registration/TAC	Imputed based on actual Transport Accident Commission charge
Repairs and maintenance	CPI (maintenance and repairs of motor vehicles, Melbourne)
Administration	94% WPI 6% CPI

Cost shares

The cost shares assigned to each component index are based on the cost profile from our survey of taxi operators' costs in 2014. We used these weights to assign the relative importance to the component indices.

Using the cost components we are able to estimate the representative cost profiles, and cost weights, as shown in table G.3.

Table G.3: Cost profile for metropolitan zone taxis (\$2014 excl. GST)^{108 109}

Cost component	Standard taxi		Wheelchair accessible taxis	
	Estimated cost	Cost share	Estimated cost	Cost share
Fuel	19,155	34.3%	19,813	32.5%
Network	7,256	13.0%	7,256	11.9%
Insurance	4,233	7.6%	4,652	7.6%
Vehicle	6,473	11.6%	10,551	17.3%
Registration/TAC	2,178	3.9%	2,178	3.6%
Repairs and maintenance	9,887	17.7%	9,887	16.2%
Administration	6,698	12.0%	6,698	11.0%%
Total operational costs	55,880	100%	61,035	100%

*Note: Due to rounding, the totals may not equal the sum of the rows

How licence costs are factored into fares

Licence costs are not included in our taxi cost index, but we have considered the impact of changes in licence costs on the current fares.

The current fares include an allowance for industry returns. Industry returns are calculated as a percentage margin on operating costs (the items in our taxi cost index) and driver earnings. They are similar to what an accountant would call earnings before interest and tax (EBIT) margin. The equations below shows how industry returns were used calculate the current maximum fares.

$$\text{revenues} = \text{operating costs} + \text{driver earnings} + \text{industry returns}$$

$$\text{revenues} = \text{operating costs} + 0.55 \times \text{revenues} + 0.145 \times \text{revenues}$$

In the past, taxi operators used industry returns to pay licence holders. With the availability of low cost licences, taxi operators are no longer required to rent licences from licence holders. However,

¹⁰⁸ Essential Services Commission, Taxi Fare Review 2013-14 – Final Report, March 2014, p. 44.

¹⁰⁹ We have not presented updated weightings for each year between 2014 and now to make the index easier to understand. When we updated the cost weights each year for changes in the indices we observed similar results on costs.

an industry return is still required to encourage investment in unbooked commercial passenger vehicles.

To remain profitable, taxi service providers must receive a commercial return to compensate them for their investments and the risk on those investments. These risks include: demand variability, changes in input costs, operating risks and regulatory risk. Without such returns there are no profits and therefore no incentive to invest. The current fares include industry returns on revenues of 14.5 per cent. The same rate as allowed in our 2014 decision

These returns were intended to create incentives for investment, not as an allowance for licence costs. In calculating the contribution of industry returns to fares, we made no explicit assumptions about how the allowed returns should be shared between different industry participants (particularly: operators, drivers and licence owners). It was up to the industry whether those funds be reinvested or extracted by licence holders through licence assignments.

Because the current maximum fares do not explicitly include an allowance for licence costs, there is no need to decrease fares to account for the recent decrease in licence costs. However, the decrease in licence costs will significantly reduce costs for many operators. Prior to the introduction of low cost licences, which can be obtained for \$52.90, the average annual amount paid by taxi operators to licence holders was around \$18,000.¹¹⁰ These funds that were once paid to licence holders can now be shared between taxi operators and drivers.

Operational costs for wheelchair accessible taxis (WATs)

Overall operating costs for WATs remain largely unchanged

We observed similar cost results for WATs as for conventional taxis.

Table G.4 below shows that the cost of operating WATs decreased slightly between March 2014 and December 2017. The decrease in costs was driven by decreases in fuel, vehicle and network equipment costs of between six and 18 per cent.

Network costs are based on publicly available data that shows telecommunications costs have decreased across the economy. Although some networks have increased their charges at the same rate as the CPI, we have not used the CPI to measure the change in network costs. We consider that the change in the telecommunications equipment and services component of the Melbourne CPI is the appropriate cost inflation measure as it reflects broad trends in telecommunications pricing. The decreases observed in this index are likely to reflect changes in

¹¹⁰ Taxi Services Commission, Annual Report 2016-17, October 2017, p. 25.

technology that have allowed telecommunications service providers to offer their services to consumers at lower costs.

Cost decreases were offset by increases in repairs and maintenance, administration of between 7.3 and 8.9 per cent.

Overall the decrease in operating a WAT in Melbourne was 0.8 per cent.

Table G.4: Change in taxi cost index for Melbourne WATs: March 2014 to December 2017

Cost Components	Change for cost component	Cost share	Contribution to overall change in index
Fuel	-6.2%	32.5%	-2.0%
Network (equipment)	-18.5%	5.9%	-1.1%
Network (labour)	9.1%	5.9%	0.5%
Comprehensive insurance	5.9%	6.1%	0.4%
Workers compensation	9.1%	1.5%	0.1%
Vehicle	-6.5%	17.3%	-1.1%
Registration	7.5%	3.6%	0.3%
Repairs and maintenance	7.3%	16.2%	1.2%
Administration	8.9%	11.0%	1.0%
Total*		100%	-0.8%

*Note: Due to rounding, the totals do not equal the sum of the rows

Costs will decrease further due to decreases in Transport Accident Commission (TAC) charges

From July this year registration costs are expected to decrease by 80 per cent. This is due to a decrease in the TAC charge from \$2586 to \$510. This will turn the observed decrease in costs of 0.8 per cent to a decrease of 3.3 per cent.

The high occupancy charge provides enough revenue for WATs

We have reviewed the current structure of fares to see if they give WAT operators a reasonable opportunity to recover their costs. WAT operators currently recover their additional costs through the high occupancy charge and the Multi Purpose Taxi Program (MPTP) lifting fee.

The high occupancy charge of \$14 may be charged whenever a WAT carries 5 or more people, or when a passenger specifically requests a vehicle larger than a standard taxi. The MPTP lifting fee can be charged when a driver carries an MPTP member with a wheelchair or scooter taxi card.¹¹¹

In 2016, the last year that we have complete data for, we estimate that there were roughly 180,000 high occupancy trips in Melbourne. Over the same period the lifting fee was paid 620,000 times. As a result, there was a pool of \$5.2 million¹¹² to cover the difference in operating costs between WATs and conventional taxis in the metropolitan zone. In 2016, on average there were 454 WATs operating in Melbourne. As a result, the high occupancy fee and lifting fee provided roughly \$11,000 per WAT. This is more than double our estimate of the difference between the annual costs of running a WAT and running a conventional taxi: \$5,155 (table G.3 above). This suggests that on average the current financial incentives to invest in WATs are more than adequate.

However, the number of high occupancy and wheelchair trips is not distributed evenly between WAT operators. In particular, we understand that it can be difficult for new WAT operators to develop a customer base for these types of trips. But the financial rewards appear to be present for new WAT operators if they can develop a good client base.

We have not undertaken the same analysis for the urban zone due to the unavailability of data on high occupancy fees for large parts of the urban zone. However, we note that since low cost licences became available the number of licensed WATs in the urban zone increased from 80 in September 2017 to 108 in April 2018.

¹¹¹ Taxi Services Commission, Travelling with a disability, accessed 27 April, <http://taxi.vic.gov.au/passengers/travelling-with-a-disability>.

¹¹² $5,200,000 \approx 180,000 \times 14 \times 0.45 + 620,000 \times 20 \times 0.3$.

Appendix H: Analysis of introducing a higher flagfall

Some stakeholders submitted that the flagfall should be increased.¹¹³

We do not consider that this change is warranted because:

1. The benefits of the change are unlikely to outweigh the costs
2. It is likely to make it harder for unbooked commercial passenger vehicle (CPV) services to compete with booked services
3. It is unlikely to significantly affect the incentives for service providers to provide good service
4. It will not make taxi fare structures any easier to understand.

A higher flagfall is unlikely to produce benefits

Increasing the flagfall might be beneficial if there was excess demand or a shortage of supply for short trips. In this situation providing stronger incentives for service providers to provide short trips would help them meet passenger demand.

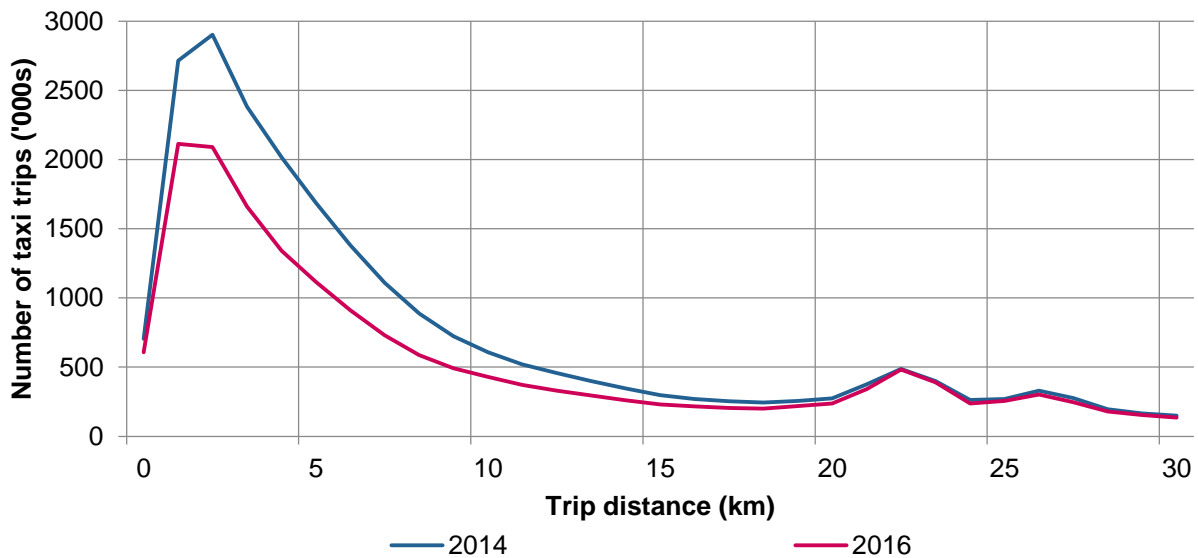
The evidence that we have does not show this. Demand is decreasing for short trips, and there appears to be no shortage of supply.

Demand for short trips is falling

Demand for short unbooked trips has decreased since 2014. As the state's population and economy have grown over this time, it is likely that this decrease in demand for short taxi trips was due to passengers choosing new rideshare services. The decrease in demand can be seen in figure H.1 below.

¹¹³ Aaron Pisani, submission received on 10 March 2018; Hatim Ali, submission received on 16 March 2018; Derek Screen, submission received on 1 March 2018.

Figure H.1 Demand for unbooked trips in the metro zone by distance: 2014 and 2016

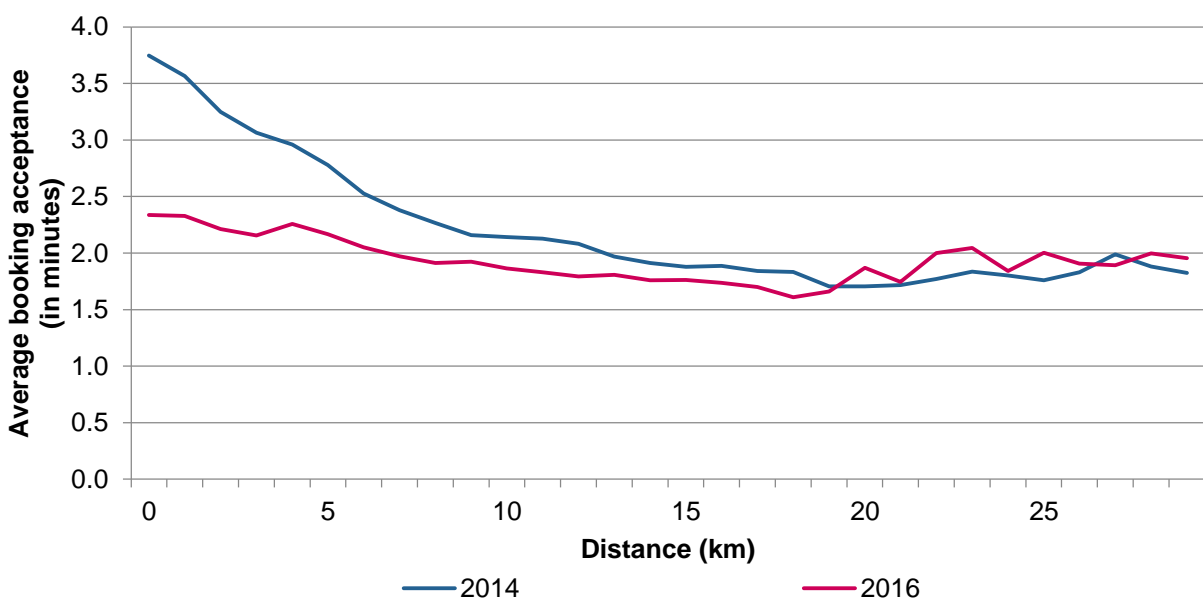


Supply of service for short trips is improving

There are indications that unbooked service providers are more willing to provide short trips now than they were in 2014. In 2016 drivers were quicker to accept short trips (figure H.2).

The acceptance times in figure H.2 are for ready to ride trips. Ready to ride trips are booked trips where the passenger requests immediate pick-up. Although ready to ride trips are booked, they have very similar characteristics to rank and hail trips in that the passenger is seeking immediate transportation. Due to this similarity, ready to ride bookings provide useful information about drivers’ attitudes to rank and hail fares.

Figure H.2 Driver accept time in the metro zone by distance: 2014 and 2016



Increasing the flagfall will make short trips less attractive

As shown in figure H.1 above, the decrease in demand for unbooked trips has been greatest for short trips. As the flagfall makes up a greater share of the total fare for short trips, an increase in the flagfall is likely to make short trips even less attractive. Increasing the flagfall further is likely to make potential passengers more likely to choose another CPV service. This is unlikely to make it easier for unbooked CPV service providers to compete.

A higher flagfall is unlikely to significantly improve driver incentives

Historically, taxi drivers have been less likely to accept short trips than long trips. This appears to be changing. Figure H.2 above shows that since 2014 drivers have become much quicker to accept short trips. In 2016 drivers were almost as quick to accept short trips as they were to accept longer trips. Increasing the flagfall is unlikely to make short trips much more attractive to drivers. In fact, it could make short trips more attractive than long trips which would also be undesirable.

A higher flagfall will not make fares easier to understand

Increasing the flagfall will not change the structure of taxi fares. Passengers will still have to undertake exactly the same calculations regardless of whether the flagfall remains at the current level or is increased.

Appendix I: The legislation governing our role in setting maximum fares

Table I.1: Relevant sections of the Essential Services Commission Act 2001

Section detail	
s. 8 (1)	<p>Objective of the Commission</p> <p>In performing its functions and exercising its powers, the objective of the Commission is to promote the long term interests of Victorian consumers.</p>
s. 8 (2)	<p>Without derogating from subsection (1), in performing its functions and exercising its powers in relation to essential services, the Commission must in seeking to achieve the objective specified in subsection (1) have regard to the price, quality and reliability of essential services.</p>
s. 8A (1)	<p>Matters the Commission must have regard to</p> <p>In seeking to achieve the objective specified in section 8, the Commission must have regard to the following matters to the extent that they are relevant in any particular case—</p> <ul style="list-style-type: none">(a) efficiency in the industry and incentives for long term investment;(b) the financial viability of the industry;(c) the degree of, and scope for, competition within the industry, including countervailing market power and information asymmetries;(d) the relevant health, safety, environmental and social legislation applying to the industry;(e) the benefits and costs of regulation (including externalities and the gains from competition and efficiency) for—<ul style="list-style-type: none">(i) consumers and users of products or services (including low income and vulnerable consumers);(ii) regulated entities;(f) consistency in regulation between States and on a national basis;(g) any matters specified in the empowering instrument.
s. 8A (2)	<p>Without derogating from section 8 or subsection (1), the Commission must also when performing its functions and exercising its powers in relation to a regulated industry do so in a manner that the Commission considers best achieves any objectives specified in the empowering instrument.</p>

Continued next page

S.33(2) Price determinations

In making a price determination, the Commission must adopt an approach and methodology which the Commission considers will best meet the objectives specified in this Act and any relevant legislation.

- s. 33(3) In making a determination under this section, the Commission must have regard to—
- (a) the particular circumstances of the regulated industry and the prescribed goods and services for which the determination is being made;
 - (b) the efficient costs of producing or supplying regulated goods or services and of complying with relevant legislation and relevant health, safety, environmental and social legislation applying to the regulated industry;
 - (c) the return on assets in the regulated industry;
 - (d) any relevant interstate and international benchmarks for prices, costs and return on assets in comparable industries;
 - (e) any other factors that the Commission considers relevant.
- s. 33(4) In making a determination under this section, the Commission must ensure that—
- (a) the expected costs of the proposed regulation do not exceed the expected benefits; and
 - (b) the determination takes into account and clearly articulates any trade-offs between costs and service standards
- s. 33(5) A price determination by the Commission may regulate a prescribed price for prescribed goods and services in any manner the Commission considers appropriate.
- s. 33(6) Without limiting the generality of subsection (5), the manner may include—
- (a) fixing the price or the rate of increase or decrease in the price;
 - (b) fixing a maximum price or maximum rate of increase or minimum rate of decrease in the maximum price;
 - (c) fixing an average price for specified goods or services or an average rate of increase or decrease in the average price;
 - (d) specifying pricing policies or principles;
 - (e) specifying an amount determined by reference to a general price index, the cost of production, a rate of return on assets employed or any other specified factor;
 - (f) specifying an amount determined by reference to quantity, location, period or other specified factor relevant to the rate or supply of the goods or services;
 - (g) fixing a maximum average revenue or maximum rate of increase or minimum rate of decrease in the maximum average revenue in relation to specified goods or services;
 - (h) monitoring the price levels of specified goods and services.

Table I.2: Relevant sections of the Commercial Passenger Vehicle Industry Act 2017

Section detail	
s. 110A	<p>Definitions</p> <p><i>In this Division—</i></p> <p><i>"applicable unbooked service " means an unbooked commercial passenger vehicle service in respect of carriage on a journey that begins in—</i></p> <ul style="list-style-type: none"><i>(a) the Melbourne Metropolitan Zone; or</i><i>(b) the Urban and Large Regional Zone;</i> <p><i>"Melbourne Metropolitan Zone" means the Melbourne Metropolitan Zone established under section 143B(1)(a) of the Transport (Compliance and Miscellaneous) Act 1983 (as in force immediately before the commencement of item 10.7 of Schedule 1 to the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017 ;</i></p> <p><i>"Urban and Large Regional Zone" means the Urban and Large Regional Zone established under section 143B(1)(b) of the Transport (Compliance and Miscellaneous) Act 1983 (as in force immediately before the commencement of item 10.7 of Schedule 1 to the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017.</i></p>
s. 110B	<p>Application to the Essential Services Commission Act 2001</p> <p><i>(1) For the purposes of the Essential Services Commission Act 2001 —</i></p> <ul style="list-style-type: none"><i>(a) this Division is relevant legislation; and</i><i>(b) the commercial passenger vehicle industry is a regulated industry in relation to applicable unbooked services.</i> <p><i>(2) If there is any inconsistency between this Division and a provision of the Essential Services Commission Act 2001 , the provision of this Division prevails.</i></p>
s. 110C	<p>Objective of the ESC</p> <p><i>The objective of the ESC in relation to the commercial passenger vehicle industry is to promote the efficient provision and use of applicable unbooked services.</i></p>
s. 110D	<p>Powers in relation to fares regulation</p> <p><i>for the purposes of Part 3 of the Essential Services Commission Act 2001 —</i></p> <ul style="list-style-type: none"><i>(a) applicable unbooked services are prescribed services; and</i>

Continued next page

(b) the maximum charges for the services covered by paragraph (a) are prescribed prices.

s. 110E **Price determinations**

Without limiting s. 33(5) of the Essential Services Commission Act 2001, the manner in which the ESC may regulate prescribed prices includes determining different prices according to—

- (a) the time of day at which, or day of the week or kind of day on which, an applicable unbooked service is provided;*
- (b) the speed at which the commercial passenger vehicle used in the provision of the applicable unbooked service is travelling;*
- (c) the distance travelled by the commercial passenger vehicle used in the provision of the applicable unbooked service;*
- (d) the type of commercial passenger vehicle used in the provision of the applicable unbooked service;*
- (e) the occupancy of the commercial passenger vehicle used in the provision of the applicable unbooked service, including where there is more than one passenger;*
- (f) where a journey in respect of which the applicable unbooked service is provided begins or ends;*
- (g) the prevailing economic conditions, including the price of fuel and the consumer price index;*
- (h) any other matter the ESC considers to be relevant.*

s. 110F **Exercise of regulatory functions**

(1) The ESC must make a determination under this Division of the maximum charges for applicable unbooked services before the first anniversary of the day on which this section comes into operation.

(2) The ESC must complete a review of a price determination no later than 2 years after it is made.

s. 110G **Offence to charge or ask for a fare for an unbooked service in excess of the maximum fare**

A person who drives a commercial passenger vehicle for the purpose of providing an applicable unbooked service must not charge or ask for a fare for the service that is in excess of the fare or hiring rates permitted by a determination of the ESC under this Division.

Penalty: 60 penalty units.

These sections are to be inserted into the Commercial Passenger Vehicle Industry Act 2017 in July 2018. Currently they can be found in section 18 of the Commercial Passenger Vehicle Industry Amendment (Further Reforms) Act 2017.

Appendix J: Comparison of Australian taxi fares

Table J.1: Day period fares (as at June 2018)

Jurisdiction	Flagfall	Distance rate	Waiting rate
Australian Capital Territory ¹¹⁴	\$5.00	\$2.06/km	86.7c/per minute
New South Wales ¹¹⁵	\$3.60	\$2.19/km	94.4c/per minute
Northern Territory ¹¹⁶	\$4.40	\$1.54/km	92.3c/per minute
Queensland ¹¹⁷	\$2.90	\$2.17/km	82.0c/per minute
South Australia ¹¹⁸	\$3.70	\$1.87/km	65.5c/per minute
Tasmania ¹¹⁹	\$3.60	\$1.94/km	64.0c/per minute
Victoria ¹²⁰	\$4.20	\$1.62/km	56.8c/per minute
Western Australia ¹²¹	\$4.20	\$1.72/km	81.7c/per minute

¹¹⁴ ACT Government, Road Transport (Public Passenger Services) Maximum Fares for Taxi Services Determination 2017 (No 1), accessed 18 June 2018, <http://www.legislation.act.gov.au/di/2017-247/current/pdf/2017-247.pdf>.

¹¹⁵ Transport for NSW (TfNSW), Point to Point Transport (Fares) Order 2018, accessed 18 June 2018, <https://www.transport.nsw.gov.au/system/files/media/documents/2018/taxi-fares-order-2018.pdf>.

¹¹⁶ Northern Territory Department of Infrastructure, Planning and Logistics, Taximeter Fare Indicator, accessed 18 June 2018, https://nt.gov.au/data/assets/pdf_file/0005/279050/darwin-tariff.pdf.

¹¹⁷ Queensland Department of Transport, Maximum Taxi Fares Notice (no. 2) 2016, accessed 18 June 2018, <https://www.tmr.qld.gov.au/-/media/busind/Taxiandlimousine/maximumtaxifaresnotice.pdf?la=en>.

¹¹⁸ South Australian Department of Premier and Cabinet, Taxi fares and charges, accessed 18 June 2018, <https://www.sa.gov.au/topics/driving-and-transport/other-forms-of-transport/taxis>.

¹¹⁹ Tasmanian Department of State Growth, Taxi Fares, accessed 18 June 2018, <http://www.transport.tas.gov.au/passenger/taxi/fares>.

¹²⁰ Essential Services Commission, Determination of Maximum Taxi Fares (Recovery of Commercial Passenger Vehicle Services Levy from 1 July 2018), May 2018.

¹²¹ Swan Taxis, Standard Taxi Fares and Charges, accessed 18 June 2018, <http://www.swantaxis.com.au/fares.php>.

Table J.2: Peak period fares (as at June 2018)

Jurisdiction	Flagfall	Distance rate	Waiting rate
Australian Capital Territory ¹²²	\$5.00	\$2.37/km	86.7c/per minute
New South Wales ¹²³	\$6.10	\$2.63/km	94.4c/per minute
Northern Territory ¹²⁴	\$5.50	\$1.89/km	92.3c/per minute
Queensland ¹²⁵	\$4.30	\$2.17/km	82.0c/per minute
South Australia ¹²⁶	\$4.90	\$2.16/km	65.5c/per minute
Tasmania ¹²⁷	\$3.60	\$2.32/km	64.0c/per minute
Victoria ¹²⁸	\$6.20	\$1.98/km	69.5c/per minute
Western Australia ¹²⁹	\$6.10	\$1.72/km	81.7c/per minute

¹²² ACT Government, Road Transport (Public Passenger Services) Maximum Fares for Taxi Services Determination 2017 (No 1), accessed 18 June 2018, <http://www.legislation.act.gov.au/di/2017-247/current/pdf/2017-247.pdf>.

¹²³ Transport for NSW (TfNSW), Point to Point Transport (Fares) Order 2018, accessed 18 June 2018, <https://www.transport.nsw.gov.au/system/files/media/documents/2018/taxi-fares-order-2018.pdf>.

¹²⁴ Northern Territory Department of Infrastructure, Planning and Logistics, Taximeter Fare Indicator, accessed 18 June 2018, https://nt.gov.au/data/assets/pdf_file/0005/279050/darwin-tariff.pdf.

¹²⁵ Queensland Department of Transport, Maximum Taxi Fares Notice (no. 2) 2016, accessed 18 June 2018, <https://www.tmr.qld.gov.au/-/media/busind/Taxiandlimousine/maximumtaxifaresnotice.pdf?la=en>.

¹²⁶ South Australian Department of Premier and Cabinet, Taxi fares and charges, accessed 18 June 2018, <https://www.sa.gov.au/topics/driving-and-transport/other-forms-of-transport/taxis>.

¹²⁷ Tasmanian Department of State Growth, Taxi Fares, accessed 18 June 2018, <http://www.transport.tas.gov.au/passenger/taxi/fares>.

¹²⁸ Essential Services Commission, Determination of Maximum Taxi Fares (Recovery of Commercial Passenger Vehicle Services Levy from 1 July 2018), May 2018.

¹²⁹ Swan Taxis, Standard Taxi Fares and Charges, accessed 18 June 2018, <http://www.swantaxis.com.au/fares.php>.

Appendix J: Comparison of Australian taxi fares

Essential Services Commission

Unbooked Commercial Passenger Vehicle Fare Review 2018: Draft Decision

Appendix K: Stakeholder submissions

The following table provides a summary of all the matters raised by stakeholders in response to the consultation paper we released in February 2018 on unbooked CPV fares,¹³⁰ and our responses. We received submissions from taxi operators, taxi drivers, network service providers, passengers and the Taxi Services Commission.

Table K.1: Summary of stakeholder submissions

Theme	Submission summary	ESC response
Changes in maximum fares	Submissions received were mixed with stakeholders saying fares should increase, decrease or remain the same.	
	<ul style="list-style-type: none"> Fares should be higher¹³¹ 	We have recommended that fares stay the same (see chapter 1).
	<ul style="list-style-type: none"> flagfall should be higher to compensate drivers for the time they spend driving empty between fares¹³² and increased market entry means that taxis are empty more of the time: fares should increase to account for this¹³³ 	As discussed in chapter 1, increasing fares could put taxi service providers in a worse position than they are now.

¹³⁰ Essential Services Commission, Fare review for unbooked commercial passenger vehicle services – consultation paper, February, 2018, p.7.

¹³¹ Anonymous, submission received on 1 March 2018; Greg Gilliver, submission received on 8 March 2018; Aaron Pisani, submission received on 10 March 2018; Hatim Ali, submission received on 16 March 2018.

¹³² Aaron Pisani, submission received on 10 March 2018.

¹³³ David Griffiths, submissions received on 3 March 2018.

– to give a fair return on investment¹³⁴

The current level of maximum fares provides an allowance for a fair return on investment. This is covered in our discussion of industry return in appendix G.

– fares have not increased in a long time¹³⁵

Fares were last increased in 2014. Our analysis shows that operator costs have not changed significantly since then. In addition, as discussed in chapter 4, the share of revenues that operators and drivers receive has in most cases increased.

– fares are higher in other jurisdictions¹³⁶

In appendix J we have a comparison of fares across jurisdictions. Although Victorian fares are lower than in most other jurisdictions, they are not unambiguously lower than in all jurisdictions. Fares are different in other jurisdictions for a variety of reasons. These could include: differences in cost, demand, licence numbers, expected service quality and traffic conditions.

– drivers are less likely to reject trips if fares are higher.¹³⁷

Higher fares may reduce incidents of fare refusal but they could also turn more passengers away from using taxis. Higher fares might also attract more new taxis on the road, meaning more taxis competing over fewer trips (see chapter 1).

Also, from the complaint data available to us, it seems that fare refusals are becoming

¹³⁴ Greg Gilliver, submission received on 8 March 2018.

¹³⁵ Greg Gilliver, submission received on 8 March 2018.

¹³⁶ Greg Gilliver, submission received on 8 March 2018; Hatim Ali, submission received on 16 March 2018.

¹³⁷ Hatim Ali, submission received on 16 March 2018.

less prevalent. This may be because:

- after the minister increased the flagfall following the recommendations of our 2014 review, short trips have become more attractive to drivers
- in the face of stronger competition, drivers are more willing to take any fare as seen by lower driver acceptance times in 2016 compared to 2014 or
- passengers who suffered fare refusals are now using alternative services.

With increased competition in the market we may see further decreases in fare refusals.

- Marginal increases in the price of taxi fares do not result in a reduction in demand for taxi services.¹³⁸

Given the large decreases in taxi demand we have observed since rideshare operators entered the market, it is difficult to believe CPV passengers are not price sensitive.

- Fares should increase by 7 per cent to account for wage increases since 2014.¹³⁹

The total taxi fare is shared between operators and drivers. The WPI affects these two parties differently.

The share of revenue allocated to operators covers the cost of items required to operate a taxi: not wages. As a result, the Wages Price Index (WPI) is not a good measure of how that revenue should increase.

Nonetheless in our analysis of operators' costs, we accounted for changes in the WPI. Our analysis shows that overall operators' costs have not changed much since 2014.

¹³⁸ 13CABS, submission received on 24 April 2018.

¹³⁹ 13CABS, submission received on 24 April 2018.

As for driver remuneration, that is up to taxi operators. Operators must give drivers at least 55 per cent of the total fare box revenue, but they can give more. Anecdotal evidence is that unbooked CPV service providers are now often offering drivers 60 per cent of the total fare. When the current fares came into effect in 2014 drivers were receiving 55 per cent of the total fare. An increase from 55 to 60 per cent of fare revenue is, all else equal, a 9 per cent increase in drivers' share of revenues. This is greater than 7 per cent.

We also note that operators are no longer required to pay assignment fees to licence holders. Operators could use these revenues to better remunerate drivers.

Further, driver earnings only make up roughly 55 to 60 per cent of the fare. As a result, if we were to adopt 13CABS suggested increase we would only increase fares by four per cent (0.55×7).

- Unbooked CPV services provide positive externalities¹⁴⁰

The decision to subsidise services with positive externalities is a matter for policy makers not the regulator.

The Victorian government runs a subsidy scheme (the Multi Purpose Taxi Program) for mobility impaired citizens. If any changes are required to this program this would be a matter for policy makers.

¹⁴⁰ 13CABS, submission received on 24 April 2018.

<ul style="list-style-type: none"> • Fares should stay the same 	<p>We have recommended that fares stay the same (see chapter 1).</p>
<ul style="list-style-type: none"> – Rideshare fares are not a good benchmark for CPV prices. Rideshare operators have substandard working conditions and rideshare booking operators are running at a loss to put their competitors out of business.¹⁴¹ 	<p>Our analysis is based on information we have on the supply/demand of unbooked taxis and cost information based on a survey of taxi operators. That analysis suggests that fares should be lower than what they are now (see chapter 1).</p>
<ul style="list-style-type: none"> • Fares should be lower^{142 143 144} 	<p>We have proposed that fares stay the same (see chapter 1).</p>
<ul style="list-style-type: none"> – For mobility impaired passengers, the additional cost of having to pay the tariff 2 or tariff 3 rate can be quite significant. This can force these passengers to choose between transport and other essentials such as food or electricity usage.¹⁴⁵ 	<p>Although we have proposed to keep fares stable in nominal terms, as wages and prices increase with general inflation, unbooked services will become relatively cheaper for consumers.</p>

¹⁴¹ David Griffiths, submission received on 3 March 2018.

¹⁴² Anonymous, submission received on 28 February 2018.

¹⁴³ Anonymous, submission received on 1 March 2018.

¹⁴⁴ Anonymous, submission received on 21 March 2018.

¹⁴⁵ Anonymous, submission received on 26 March 2018.

- Tariff 2 rate should only apply until 5am on Sundays¹⁴⁶
- Tariff 2 should not apply on Easter¹⁴⁷
- Tariff 3 rate should not apply on Christmas¹⁴⁸

Fares are higher at these times to compensate drivers for driving at unsociable times.

Should maximum fares for unbooked services in Melbourne be different to fares in Ballarat, Bendigo, and Geelong? Why?

- No¹⁴⁹
 - because each taxi service is unique to its local environment and it is a market decision to provide services¹⁵⁰
 - the cost of running a taxi service does not vary due to locality¹⁵¹

The patterns of demand are different in the urban zone than in the metropolitan zone. In the metro zone demand for unbooked taxis on weeknights is higher than demand during business hours (see figure E.2).

By comparison, there is relatively less demand on weeknights the urban zone (see figure F.2).

Additionally when demand for all taxi trips are considered (both booked and unbooked) there is far less variation in demand in the urban zone than in the metro zone.

We also note that there has been a high level of entry of taxis in both the urban and metro zones. This suggests that differences in fares between the two zones are not creating supply shortages in either zone.

¹⁴⁶ Anonymous, submission received on 26 March 2018.

¹⁴⁷ Anonymous, submission received on 26 March 2018.

¹⁴⁸ Anonymous, submission received on 26 March 2018.

¹⁴⁹ Anonymous, submission received on 28 February 2018; Anonymous, submission received on 28 February 2018.

¹⁵⁰ Derek Screen, submission received on 24 April 2018.

¹⁵¹ Greg Gilliver, submission received on 8 March 2018.

	<ul style="list-style-type: none"> • Yes.¹⁵² 	The existing fare structure acknowledges differences in demand between the metro and urban zones.
Flagfall	<ul style="list-style-type: none"> • Increase¹⁵³ <ul style="list-style-type: none"> – A \$15 standard flagfall and \$20 for rank and hail at night would compensate drivers going to the suburbs for the empty return trip to the city.¹⁵⁴ – Flagfall should be higher to reduce the number of short fare refusals.¹⁵⁵ • Decrease¹⁵⁶ <p>Flagfall ... seems ... an antiquated concept¹⁵⁷</p>	<p>Increasing the flagfall would not be in the long term interests of consumers (see Appendix H).</p> <p>We do not consider that removing the flagfall would be in the long term interests of consumers. Short fare refusals appear to be less of a problem now: the number of complaints relating to fare refusals has reduced in recent years. Removing the flagfall could potentially undo this progress.</p>
CPV levy	<ul style="list-style-type: none"> • Maximum fares should increase to reflect the impact of the CPV levy¹⁵⁸ 	To reflect the policy intent behind the levy, we released an interim determination in May, as part of a separate process, to give

¹⁵² Hatim Ali, submission received on 16 March 2018; Anonymous, submission received on 16 March 2018; Anonymous, submission received 21 March 2018.

¹⁵³ Hatim Ali, submission received on 16 March 2018.

¹⁵⁴ Aaron Pisani, submission received on 10 March 2018.

¹⁵⁵ Derek Screen, submission received on 1 March 2018.

¹⁵⁶ Anonymous, submission received on 28 February 2018.

¹⁵⁷ Anonymous, submission received on 21 March 2018.

¹⁵⁸ Victorian Taxi Association, submission received on 4 April 2018; 13CABS, submission received on 24 April 2018.

– In its initial form, the legislation which deregulated the CPV industry was to deregulate fares for unbooked CPV services. This would give unbooked CPV operators the ability to pass on the CPV levy if they choose to. But due to changes made to the legislation during parliamentary debates, fares for unbooked CPVs are still regulated. The maximum fare should increase to reflect the intention of the original legislation.¹⁵⁹

unbooked CPV service providers the choice of whether they recover the cost of the CPV levy from consumers.¹⁶⁰

Cleaning fee

- If a passenger soils an unbooked CPV, service providers should be able to recover the costs associated with cleaning the vehicle from passengers.¹⁶¹

We consider that this proposal has merit. We are seeking stakeholder feedback on whether a cleaning fee should be introduced into the schedule of maximum charges for unbooked CPVs.

Fare structure

- The best structure is a ‘time **or** distance’ tariff with 15 minute increments.¹⁶²

We discuss ‘time **or** distance’ tariffs and ‘time **and** distance’ tariffs in chapter 5. ‘Time **and** distance’ tariffs have a number of

¹⁵⁹ 13CABS, submission received on 24 April 2018.

¹⁶⁰ Jacinta Allan, Parliamentary Debates (Hansard) Legislative Assembly - fifty-eighth parliament first session: Thursday, 23 February 2017 (extract from book 2), pp. 398 to 399, accessed 28 April, https://www.parliament.vic.gov.au/images/stories/daily-hansard/Assembly_2017/Assembly_Daily_Extract_Thursday_23_February_2017_from_Book_2.pdf.

¹⁶¹ Anonymous, submission received on 5 June 2018.

¹⁶² Anonymous, submission received on 21 March 2018.

	<ul style="list-style-type: none"> • A ‘time and distance’ tariff would be an improvement on the current ‘time or distance’ tariff.¹⁶³ 	<p>advantages compared to ‘time or distance tariffs’. ‘Time and distance’ tariffs make it easier:</p> <ul style="list-style-type: none"> • for passengers to understand tariff schedules • to estimate the cost of a trip • to compare the prices for different CPV services. <p>For these reasons giving service providers the ability to use ‘time and distance’ tariffs will make it easier for them to compete with each other and other CPV services.</p>
<p>Transparency in fares</p>	<p>Fares should be more transparent, quick and easy to understand.¹⁶⁴</p> <p>Setting a maximum charge at the beginning of the trip gives the hirer a definitive figure that he can use to determine if he wants to use that service or not.¹⁶⁵</p>	<p>Our proposal to provide unbooked service providers the option to choose a ‘time and distance’ tariff will make it easier for passengers to understand fare offerings (see chapter 5).</p>
<p>Metering technology</p>	<ul style="list-style-type: none"> • Having different tariffs for booked and unbooked work is not possible and completely unnecessary¹⁶⁶ • Constraints of metering technology could be avoided 	<p>The decision of whether to charge different fares for booked and unbooked work will be up to service providers.</p> <p>We have given unbooked service providers the option of using either distance and time</p>

¹⁶³ Taxi Services Commission, submission received on 18 April 2018.

¹⁶⁴ Anonymous, submission received on 21 March 2018; Anonymous, submission received on 8 March 2018.

¹⁶⁵ Derek Screen, submission received on 1 March 2018.

¹⁶⁶ Greg Gilliver, submission received on 8 March 2018.

	by giving operators a choice of different tariff structures. ¹⁶⁷	tariffs or distance or time tariffs.
Services standards	<p>The culture around service quality for incumbent commercial passenger vehicles needs to change to put the passenger at the centre.¹⁶⁸</p> <p>Rideshare networks have shown that incumbent CPV services have poor customer service.¹⁶⁹</p>	It is up to unbooked CPV service providers to decide on the level of service quality they wish to provide. If they are unable to meet customer expectations they may continue to lose market share to new booked alternatives.
Fare refusals	Refusals should not occur for trips that are deemed too far or too short. ¹⁷⁰	<p>Under the current fares there has been a decrease in the number of complaints about fare refusals. This may be because:</p> <ul style="list-style-type: none"> • the current fares have made the rewards for short and long fares closer in value • with increased competition drivers are more willing to take any fare or • passengers that suffered fare refusals are now using alternative services.
Booked vs unbooked competition	<ul style="list-style-type: none"> • Rideshare services have a competitive advantage over taxis. It can charge less at times of low demand, and then use dynamic pricing to 	There does not appear to be a need for higher unbooked fares at peak times. Our analysis (in chapter 2) indicates that occupancy rates for unbooked CPV vehicles have decreased at peak times.

¹⁶⁷ Taxi Services Commission, received on 18 April 2018.

¹⁶⁸ Anonymous, submission received on 21 March 2018.

¹⁶⁹ Anonymous, submission received on 21 March 2018.

¹⁷⁰ Anonymous, submission received on 1 March 2018.

	<p>increase fares at peak times.^{171 172}</p>	<p>Also, unbooked service providers are able to offer discounted fares at off peak times.</p>
	<ul style="list-style-type: none"> To compete with rideshare services, unbooked services need to be more price competitive and improve service standards.¹⁷³ 	<p>We are proposing to introduce a new optional 'time and distance' tariff (see chapter 5). This will make it easier to compare fares for unbooked and booked CPV services.</p>
<p>ESC approach to setting fares</p>	<p>I disagree with your approach to give reasonable opportunities for unbooked service providers to recover costs. They are private businesses and they should understand the risks they are taking before committing to the business model.¹⁷⁴</p>	<p>Our approach is to give unbooked service providers a reasonable opportunity to recover costs. This means that we aim for the industry as a whole to be financially viable. However we cannot guarantee that all service providers will be profitable. CPV services are private businesses and it is up to them to manage their costs and weigh the commercial risks before they enter the market.</p>
<p>Agree with the ESC's approach¹⁷⁵</p>		

¹⁷¹ David Griffiths, submission received on 3 March 2018.

¹⁷² Derek Screen, submission received on 1 March 2018.

¹⁷³ Anonymous, submission received on 21 March 2018.

¹⁷⁴ Derek Screen, submission received on 1 March 2018.

¹⁷⁵ Anonymous, submission received on 1 March 2018; Aaron Pisani, submission received on 10 March 2018; Hatim Ali, submission received on 16 March 2018; Anonymous, submission received on 21 March 2018.

Appendix L: Calculating the 'time and distance' tariffs

When we calculated the new 'time **and** distance' tariffs we took steps to ensure that the 'time **or** distance' tariffs and the 'time **and** distance' tariffs are revenue neutral. This ensures that on average there is no difference in the total revenue generated by the 'time **or** distance' tariffs and the 'time **and** distance' tariffs.

To accurately calculate the duration rate (A) and the distance rate (B) we estimated regression¹⁷⁶ models. The regression equation is shown below. In the equation A is the time rate and B is the distance rate.

$$\text{Fare estimate} = \text{Duration (in minutes)} * A + \text{Distance (in kilometres)} * B$$

A separate regression was done for each tariff period in order to produce the 'time **and** distance' tariffs for each tariff period.

We used 33 data points for each tariff period. We used the average trip characteristics¹⁷⁷ for each one kilometre interval for trips between zero and 30 kilometres. We also added data points for the total revenue, distance, and time for all trips and another for all trips less than 30kms. We used data from 2016 as that was the most recent year that we have relatively complete data for.

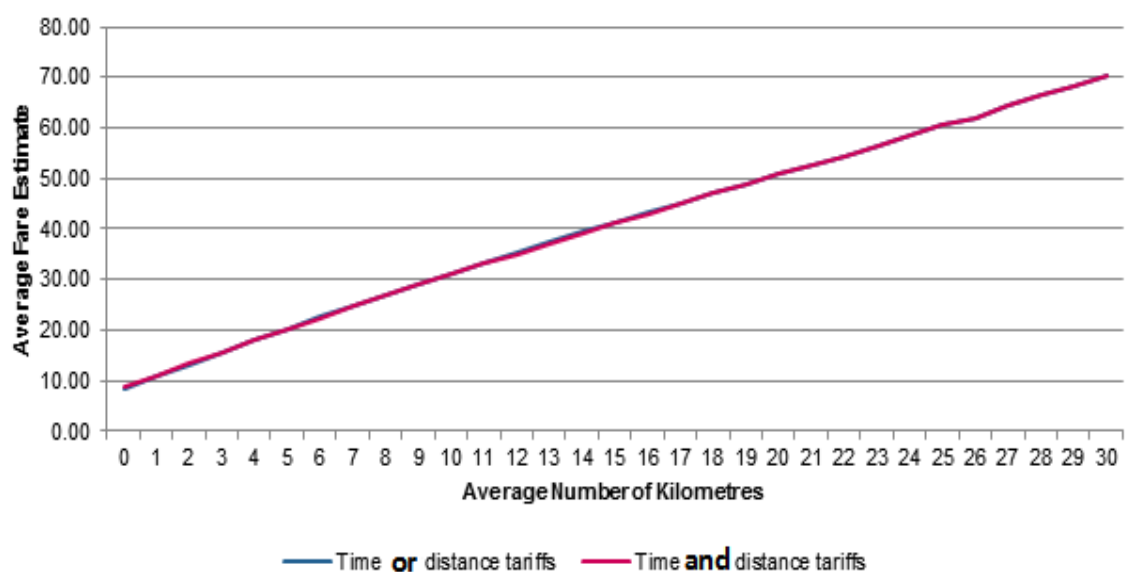
To make sure that the results for 2016 were robust, we also did regressions using data for 2015 and 2017. We also estimated revenue neutral 'time **and** distance' tariffs using other non-linear models.

We chose to use the results from the regression using 2016 data to calculate revenue neutral 'time **and** distance' tariffs. This regression produced the most accurate results. This can be seen in figure L.1 below which shows the fares produced using the current 'time **or** distance' tariffs and those from our produced 'time **and** distance' tariffs.

¹⁷⁶ Regression is a method to quantify the relationship between a first variable (dependent variable) and other variables (independent variables) that are thought to be related and explain the variation in the first variable (dependent variable). The regression estimates the line of best fit given the observed data, with the objective of the regression to minimise the difference between what the regression model predicts the fare to be given the distance travelled in a trip and time elapsed in a trip with what is actually seen in the trip database.

¹⁷⁷ The average duration, the average distance and the average fare (excluding the flagfall and other fixed charges).

Figure L.1: Average fares for the current and new tariffs (metropolitan zone tariff 3)



Using these regressions we were able to calculate ‘time **and** distance’ tariffs for both the urban and metro zones that on average return the same amount as the current ‘time **or** distance’ tariffs. The time rate and distance rate for these tariffs can be seen in tables L.1, L.2 and L.3 below.

Table L.1: ‘Time and distance’ tariffs for the metropolitan zone and east urban area

	‘Day’ (9am-5pm)	‘Overnight’ (5pm-9am)	‘Peak’ (Fri & Sat nights 10pm-4am)
Standard fare components		Maximum charge up to	
Flagfall (\$)	4.20	5.20	6.20
Distance rate (\$/km) (at all times)	1.342	1.490	1.648
Duration rate (\$/min) (at all times)	0.344	0.379	0.408

Table L.2: ‘Time and distance’ tariffs for Geelong, Ballarat and Bendigo

	Conventional taxis	High occupancy trips
Standard fare components		Maximum charge up to
Flagfall (\$)	3.60	3.60
Distance rate (\$/km) (at all times)	1.494	2.441
Waiting time (\$/min) (at all times)	0.491	0.521

Glossary

Term	Definition
Applicable unbooked services	An unbooked commercial passenger vehicle service in respect of carriage on a journey that begins in the Melbourne Metropolitan Zone; or the Urban and Large Regional Zone.
Booked market	The market for commercial passenger vehicle services whereby customers book the service prior to travel.
Booking service provider	A person, company or association who provides a service that reserves CPVs to transport passengers at a certain time, departure point, and destination.
Commercial Passenger Vehicle (CPV)	Any motor vehicle used or intended to be used for carrying passengers for hire or reward, excluding a bus used to provide a bus service.
CPV levy	Under the Commercial Passenger Vehicle Industry Act 2017, commercial passenger vehicle service providers will become liable for the CPV levy; initially set at \$1 per commercial passenger vehicle transaction. The purpose of the CPV levy is to partly fund regulation of the industry and to fund transitional assistance to a new regulatory framework for certain industry participants.
CPV operator	A person who owns, maintains and operates a CPV. A CPV operator may engage a driver for their vehicle or they may drive the vehicle themselves.
Day tariff	The maximum tariff rates applicable from 9am to 5pm in the metropolitan zone.
Distance rate	A fare component that is a fee per kilometre travelled. In current taxi fares the distance rate applies when travelling over 21 kilometres per hour.
Fare calculating/metering device	A device required in all taxis to calculate and display taxi fares. The Taxi Services Commission is responsible for specifying the functional requirements of fare devices.
Fare structure	Refers to the system by which fare components apply to calculate the fare of a trip. For

	example, individual fare components include: the flagfall, distance rate, waiting time rate and booking fee.
Flagfall	A fare component that is a fixed fee charged regardless of the distance travelled or journey time.
High occupancy	The carriage of five or more passengers at a time in a commercial passenger vehicle.
High occupancy vehicle (HOV)	A class of taxi which can carry up to 11 passengers. Higher taxi fares apply to HOVs if carrying at least five passengers or if the hirer requests a HOV. The higher rate does not apply when the hirer is a wheelchair passenger.
Metropolitan zone	Referred to in legislation as the 'Melbourne Metropolitan Zone', the taxi zone comprising key areas of metropolitan Melbourne (see Taxi Services Commission website for zone maps).
Multi Purpose Taxi Program (MPTP)	A government program that subsidises taxi fares for people with severe and permanent disabilities. MPTP members receive a 50 per cent subsidy on taxi fares up to a maximum of \$60 per trip and \$2180 per year. Some MPTP members, for example those using wheelchairs, are exempt from the annual cap.
Network service provider	A provider of booking and dispatch services, who acts as an intermediary between taxi drivers and customers. They are now called Booking Service Providers.
Overnight tariff	The maximum tariff rates in the metro zone applicable from 5pm to 9am (excluding the peak tariff period).
Peak tariff	In the metro zone, the maximum tariff rates applicable from 10pm to 4am on Friday and Saturday nights, all day Christmas Day, Boxing Day, from 6pm on New Year's Eve and all day New Year's Day.
Price determination	A price determination is the legislative instrument we use to set maximum fares.
Rideshare services	Booked commercial passenger vehicle services that use the driver's personal vehicle to provide a transport service. These services are offered to passengers through an accredited booking service: generally a smartphone application.

Smartphone booking apps	Smartphone booking applications that connect CPV drivers with passengers through a booking interface. Some smartphone apps include both booking and payment processing functionality. App providers include 13CABS, GoCatch, Ingogo, Ola, Scooti, Sheba, Silver Top Taxis, Taxify and Uber.
Taxi network	A provider of taxi booking and dispatch services, connecting passengers with taxi drivers through a booking service.
Taxi Services Commission (TSC)	The TSC is responsible for regulation of the commercial passenger vehicle industry. The TSC was established on 1 July 2013 as the independent industry regulator as part of the Taxi Industry Inquiry’s recommended reforms.
The Commission	The Essential Services Commission (ESC) — Victoria’s independent economic regulator of certain prescribed services as determined by the Victorian Government. The Commission is responsible for setting maximum fares in the metropolitan and urban zones.
‘Time and distance’ tariff	A ‘time and distance’ tariff calculates fares for CPV trips using a time rate and distance rate that apply at the same time.
‘Time or distance’ tariff	A ‘time or distance’ tariff, calculates fares for CPV trips using only the ‘time or distance’ rate that applies (depending on the speed of the vehicle). The current maximum fares are ‘time or distance’ tariffs.
Unbooked CPV demand	Unbooked CPV demand is the volume of unbooked CPV services that passengers want at a given price level. As a proxy of demand for unbooked CPVs we have used unbooked taxi trips.
Unbooked CPV supply	Unbooked CPV supply is the availability of unbooked CPV services at a given price level. As proxies for unbooked CPV supply we have used taxi licence numbers, taxi shift hours, and active taxis. Licence numbers shows the potential supply of CPVs. Active taxis and taxi shift hours give a better measure of the actual level of unbooked CPV supply.
Unbooked market	A sub market of the market for commercial passenger vehicle services, whereby services are procured either from taxi ranks or hailed from the street. The rank and hail market is

	serviced exclusively by taxis.
Urban zone	Referred to in legislation as ‘the Urban and Large Regional Zone’, the taxi zone comprising of Geelong, Ballarat, Bendigo, Frankston, Dandenong and the Mornington Peninsula (see Taxi Services Commission website for zone maps).
Waiting time rate	A fare component that is a per minute charge. In current taxi fares the waiting time rate applies when travelling at 21 kilometres per hour or slower (also referred to as the ‘time rate’).
Wheelchair Accessible Taxi (WAT)	Taxis with WAT licences are designed to transport people in wheelchairs. WATs may also operate as high occupancy vehicles that can carry up to 11 passengers when not carrying people in wheelchairs.