



**BRIEFING**

# The impacts of ACT on demand transport reforms

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## *Executive summary*

In 2015 the ACT Government embarked on reforms of the on-demand transportation sector. At the time, the CIE conducted an ex ante assessment of potential reform options. The reform package was anticipated to have benefits for consumers of \$5.9 million in 2016/17 and net benefits of \$3.4 million in 2016/17. These benefits reflected lower fares for on-demand transport in the ACT and reductions in costs for providing services.

The actual package of changes implemented differed in some ways to the package modelled. In particular, the number of taxi licences was not deregulated. Further, the modelling was based on expectations of fares and uptake of new services, for which some data is now available. The evidence from outcomes on the market to date suggests that:

- ridesharing uptake has been more rapid than anticipated in CIE's 2015 modelling, despite ridesharing fares being higher than anticipated
- average licence lease costs, across Government-issued and tradeable licences, have fallen only modestly. This partly reflects that restrictions on the number of taxi leases were not removed, as well as time for the taxi licence market to reach a new equilibrium, as lease contracts on tradeable licences steadily expire and are renewed. Taxi drivers and operators are currently shouldering the majority of the impacts of reductions in taxi revenue and these impacts have not been passed through in any substantial way to taxi licence holders
- average taxi network fees have not fallen substantially and remain much higher than in other jurisdictions, meaning that the reforms did not reduce costs for taxis by as much as expected. (While different Transport Booking Service fee structures are entering the ACT, the network fees structures affecting the majority of the entire taxi fleet are unchanged.)

Further, the expansion of the on-demand transport market from ridesharing appears larger than we anticipated, with about one third of ridesharing trips not being diverted from taxi and hire car services. This is about twice as large an expansion effect as was anticipated in the ex-ante modelling and indicates that many people have been induced into using on-demand transport because of the introduction of ride sharing.

Revised modelling scenarios of the benefits of the taxi reform package to reflect the market data available suggest benefits in 2016/17 for consumers of \$6.4 to \$8.8 million, and net benefits of \$2.8 million to \$3.8 million. That is, the more rapid uptake of ridesharing and expansion of the market suggest benefits for consumers have been higher than expected. However, the total benefits are about the same as expected. The main factor behind this is that costs for providing services have not fallen, particularly network fees related to taxi services, and remain much higher than other jurisdictions.

Further reforms that could be contemplated include:

- removing restrictions on supply of government taxi licences, which would push licence lease costs down and lead to entry into the taxi market. This would reduce the negative impacts on people leasing out taxi licences (taxi operators and drivers) and enable a more level playing field with ridesharing and hire cars. It would also enable a more rapid transition to lower licence lease costs, leading to the reduction in profitability being shifted rapidly to licence lease owners rather than operators and drivers
- reducing regulated taxi fares to reflect the removal of some of the fixed costs of providing a taxi service, such as reduced licence lease costs.

These additional changes would have the largest benefits if undertaken as a package. Allowing for access to an unlimited supply of taxis at the government lease rate of \$5000 would translate into the largest benefits for consumers if the reduction in licence lease costs was passed on, through lower regulated fares for taxis.

# 1 Introduction

In 2015, the CIE modelled the anticipated impacts of a number of possible reform options for the ACT Government. This briefing:

- compares the expected outcomes to the actual outcomes
- revises modelling inputs to estimate the benefits and costs of the on-demand transport reforms
- considers the impacts of further changes on ACT on-demand transport.

## Policy scenarios from 2015

The basic scenarios evaluated in 2015 are set out in table 1.1.

- No ridesharing assumes taxis and hire cars continue to operate as now and ridesharing does not enter illegally. Other policy parameters remain essentially the same as they are now. Note that we assume no cap on taxi licences from the ACT Government.
- Base policy changes. This involves the legal introduction of ridesharing and a number of other changes to ensure a level playing field for taxis. We assumed by 2019/20 ridesharing would reach 30 per cent market share (with no additional costs imposed). Because the policy scenario places some additional regulatory costs on ridesharing the market share reached is less than this.

### 1.1 Basic scenarios

Name	Unit	No ridesharing	2015 base policy scenario
Actual taxi number		341	Unlimited
Licence lease costs	\$/year	20 000	10 000
Regulated fare change (real)	%	0.0%	-5.0%
Legal introduction of ridesharing	Yes/No	No	Yes
driver training required	Yes/No	No	Yes
licence required	Yes/No	No	Yes
licence fee for ridesharing	\$/vehicle	0	900
Illegal introduction of ridesharing	Yes/No	No	No
Change in hire car fees	\$/taxi	0	-3 700
Taxi network cost impacts			
Remove requirement for network affiliation	Yes/No	No	Yes
Ridesharing impact on network costs	Yes/No	No	Yes
Change in network costs	\$/taxi	0	-9 000
Insurance impacts			

Name	Unit	No ridesharing	2015 base policy scenario
Allowing umbrella insurance for ridesharing		No	Yes
Additional CTP cost for ridesharing		0	1000
Allowing umbrella insurance policies for taxis		No	Yes
Share of revenue assumed for drivers	%	50%	50%

Source: CIE.

## *Anticipated outcomes from on-demand transport reforms*

The anticipated outcomes from reforms after five years are shown in table 1.2.

### 1.2 Model results for basic scenarios after five years

Name		No ridesharing	2015 base policy scenario
Scenario no.	Unit	Scenario1	Scenario3
Consumer surplus – total	\$m/year	43.8	50.4
Change from baseline	\$m/year		6.6
Taxi licence surplus	\$m/year	6.8	3.9
Hire care/ridesharing surplus	\$m/year	0.2	0.0
Total surplus	\$m/year	50.9	54.4
Change from baseline	\$m/year		3.5
Industry demand	MPK	24.4	26.7
Taxi demand	MPK	23.1	19.9
Hire car demand	MPK	1.2	1.3
Ridesharing demand	MPK	0.0	5.5
Number of licensed taxis	No.	341	393
Industry revenue	\$m/year	70.1	71.9
Taxi industry revenue (incl GST)	\$m/year	63.3	51.7
Hire car revenue	\$m/year	6.8	6.9
Ridesharing revenue	\$m/year	0.0	13.3
Driver employment	Annual hours	2 209 318	2 546 450
<b>Taxi specific information</b>			
Lease costs	\$/taxi	20,000	10,000
Taxi numbers	No.	341	393
Trips per year per taxi	No./taxi	8375	6251
Revenue per licensed taxi (incl GST)	\$/year	185,643	131,591
Operator revenue (incl GST)	\$/year	92,822	65,795
Average share of time taxi is on the road	%	70.1%	55.1%
Average taxi fare	\$/km	2.74	2.60
Utilisation (share of time with passenger)	%	29.5%	28.3%

Note: MPK is million passenger kilometres.

Source: CIE.



## *The package of reforms*

The package of reforms implemented differed in some respects from that modelled in 2015. In particular:

- limits were not removed on the number of taxi vehicles, although Government licence lease costs have fallen by more than modelled as part of the central case policy package
- changes to hire car licence fees were slightly different to those modelled
- there has not been any nominal adjustment in regulated fares, so fares have declined in real terms but less than expected. Note that it is not obvious that declining real fares are a part of the reform package. We have assumed that this is a part of reforms. Note also that fares structures for rideshare and hire-car services differ from each other (the former, typically structured; the latter, typically negotiated), and differ from taxi fares
- network fees have not fallen, although we understand growth in non-Aerial networks with lower network fees has occurred, and
- CTP insurance costs for ride sharing have been lower than expected and the cost of taxi CTP insurance has fallen more than expected.

A summary of the reform package implemented relative to the 2015 base policy scenario is shown in table 1.3.

### **1.3 Policy package 2015 and actual**

Name	Unit	2015 base policy scenario	Actual policy package
Actual taxi number		Unlimited	328
Licence lease costs	\$/year	10 000	5 000 (Govt only)
Regulated fare change (real)	%	-5.0%	-3.5%
Legal introduction of ridesharing	Yes/No	Yes	Yes
driver training required	Yes/No	Yes	Yes
licence required	Yes/No	Yes	Yes
licence fee for ridesharing	\$/vehicle	900	100
Illegal introduction of ridesharing	Yes/No	No	No
Change in hire car fees	\$/taxi	-3 700	-4 500
Taxi network cost impacts			
Change in network costs	\$/taxi	-9 000	-975
Insurance impacts			
Allowing umbrella insurance for ridesharing		Yes	Yes
Additional CTP cost for ridesharing		1 000	276
Allowing umbrella insurance policies for taxis		Yes	Yes
Change in insurance costs		0	-1 130
Share of revenue assumed for drivers	%	50%	50%

Source: CIE.

## *Methodology*

In order to undertake the assessment, we have:

- documented changes observed in the ACT on-demand transport market
- remodelled the expected outcomes for the original reforms for 2016/17, using the model used for the initial assessment (see attachment A). Note that the 2015 modelling showed time periods of 3 years, 5 years and 10 years
- modelled the impacts of the reforms undertaken by incorporating the outcomes observed in the on-demand transport market. This includes:
  - updating the expected ride share uptake to reflect data available
  - updating the extent to which changes have occurred in taxi network fees and costs
  - updating the relationships between demand for ride share and taxis. That is, the extent to which ride sharing expands the market versus being a substitute for taxi services
  - updating the prices of services (taxi and ridesharing fares)

## *Limitations of the modelling framework*

The particular limitations noted in interpreting the results below are as follows.

- The 2015 model assumes that consumer welfare is a function of the weighted average industry fare and quantity. This is likely to underestimate the consumer gains from the introduction of ridesharing, because:
  - it does not allow for consumers to gain from increased choice, from the entry of a differentiated product, which matches the preferences of some consumers better
  - it does not allow for any changes in quality from increased competition in on-demand transportation, as a result of the introduction of ridesharing

We have made adjustments to the model to reconsider gains, as the data to date provides strong evidence of consumer gains beyond those only related to price, reflected in higher uptake of ridesharing despite higher fares than expected, and a greater share of ridesharing trips that were not diverted from taxis.

- The model is an equilibrium model, where taxis and other vehicles will enter to the point at which they are profitable. In the short term, supply may vary from this. Further, demand may take time to adjust to changes in availability and fares. This means that some factors will take time to adjust, such as taxi licence leases, and observed data may not be at equilibrium
- The model generally assumes a 50 per cent share of gross revenues for taxi drivers. In practice, as operator costs fall the driver share may increase as operators compete to try to get their taxis onto the road. We note that respondents to Evaluation surveys provided differing opinions on the per cent share taken by drivers and operators.

## 2 *Changes observed in the on-demand transport market*

Evidence has started to become available of changes to the outcomes of the on-demand transport market in the ACT. This includes:

- observed evidence about basic ride share fares (not including surge pricing periods)
- evidence about the uptake of ride sharing services
- evidence about the extent to which uptake of ridesharing services has added to the overall demand for on-demand transport services, versus reducing taxi demand
- evidence about impacts on the taxi industry.

The evidence available is set out in this chapter.

### *Ride share fares*

At the time of modelling the 2015 reforms, ridesharing had not entered the ACT and fares were not available. The modelling used an average of the Melbourne and Sydney ridesharing fares.

The actual fares charged in the ACT for uberX are higher than those expected. This is because:

- fares include an additional booking fee of \$0.55 per trip (as of 9 June 2017)
- fares are above the average of Sydney and Melbourne prices, and
- the minimum fare also increased from \$6 to \$8 on 9 June 2017. Because we do not have information on the distribution of trips this is not reflected in the modelling.

#### 2.1 Ride sharing fares (uberX)

Price component	Sydney 2015	Melbourne 2015	2015 modelling	Current ACT prices
Service fee (\$/trip)	0.00	0.00	0.00	0.55
Flagfall (\$/trip)	2.50	2.00		2.35
Time based charge (\$/minute)	0.40	0.35		0.45
Distance based charge (\$/km)	1.45	1.10		1.35
Overall cost (\$/km)	2.44	1.95	2.20	2.48

Note: The overall cost is based on calibration of times and distances.

Source: Uberestimator.com; The CIE.

The actual base ridesharing fare is therefore relatively close to the taxi fare used in the modelling (about 10 per cent lower).

- Surge pricing would increase the ridesharing fare.

- The average taxi fare doesn't include any component for fares on the waiting time charge or surcharges for credit card payment and is therefore understated.
- We note that uberX fares form the basis of modelling, and data on goCatch fares is insufficient for modelling inclusion.

Other comparisons of taxis versus uberX in the ACT have noted uberX is about one third cheaper when not on surge pricing.<sup>1</sup>

In undertaking revised modelling we adjust fares to uberX's latest fare schedule as at September 2017.

## *Uptake of ride sharing services*

The uptake of ridesharing services appears to have been more rapid than expected in the 2015 modelling. By 2016/17, the modelling anticipated ridesharing would have reached a market share of 12-18 per cent. The evidence available, as summarised in table 2.2, indicates uptake has most likely been stronger than this.

### **2.2 Evidence on the share of market from ridesharing**

Source	View of ridesharing market share
Hotels	Hotels submitted their view of ridesharing being between 10 and 25 per cent of on-demand transport servicing hotels.
Changes to taxi demand	Changes to taxi demand are in the order of a 15-25 per cent reduction. The information from customers indicates about two thirds of demand for ridesharing is taken from taxis. This would suggest ride sharing has around 20 to 30 per cent of the market.
Number of uberX drivers and driver survey results on hours driven	<p>Suggests ridesharing is ~50 per cent of the market, with around 1000 active drivers and survey evidence indicating average hours per week of ~40.</p> <p>The hours may well be overstated as the survey sample is small. If drivers that are drive more had a higher response rate this would make a big difference. We therefore place minimal weight on this information.</p>
CIE view	Based on the evidence above, the share of the market taken by ridesharing is likely at least 20 per cent and at most 40 per cent. We expect it is more likely towards the lower end of this range.

Source: As noted in table.

## *Expansion of on-demand transport*

The survey evidence suggested that about two thirds of ridesharing trips are would otherwise have been taken in taxis and hire cars and one third are additional. This is a

<sup>1</sup> For example see: <http://www.canberratimes.com.au/act-news/canberra-life/canberras-transport-experiment-uber-and-taxis-compared-20151106-gkse8.html>

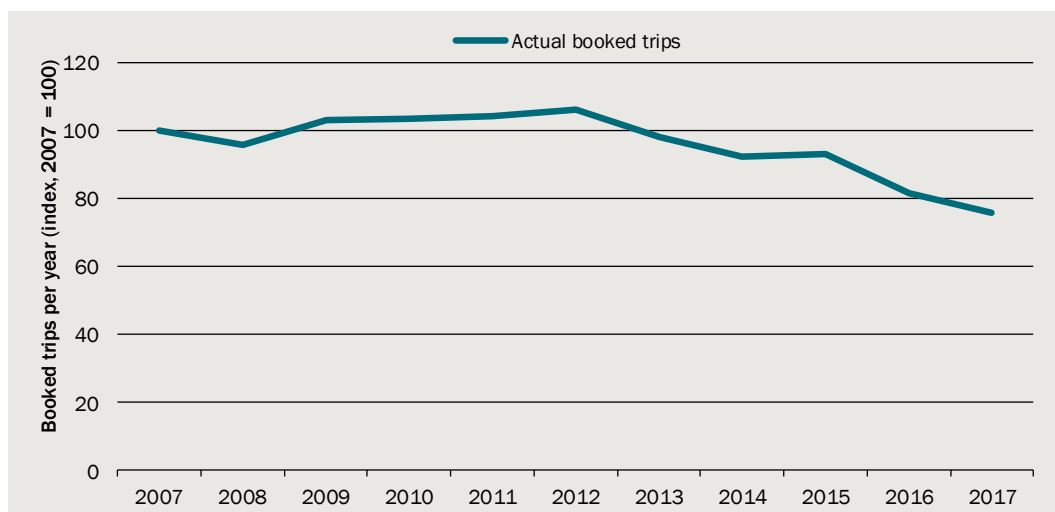
substantially higher expansion of the market than allowed for in CIE 2015, where about 85 per cent of ridesharing trips were substituted from taxis and hire cars.

The higher expansion of the market indicates that ridesharing is pushing out the demand curve for on-demand transport, rather than just lowering the fare. This is also borne out by customer responses for ridesharing indicating higher satisfaction with all aspects of the service relative to taxis (availability, waiting times, fares, driver service and safety).

### *Changes to the taxi industry*

Data on the number of bookings in the taxi market in the ACT suggests that demand increased from 2007 to 2012 before steadily falling. The number of bookings in 2016/17 is 29 per cent below its peak.

#### **2.3 Overall booked trips in ACT (index)**



Note: Years are financial years.

Data source: ACT Government.

Data from Aerial Taxi Group, which serves a large part of the taxi market, also confirms this. This data suggests:

- taxi demand has fallen substantially from 2014, with a larger reduction in booked trips than in rank and hail trips
- taxi licence lease costs have remained broadly the same to date. Notes that this is at odds with information from taxi operators where 30 per cent of responses indicated that licence lease costs had fallen.

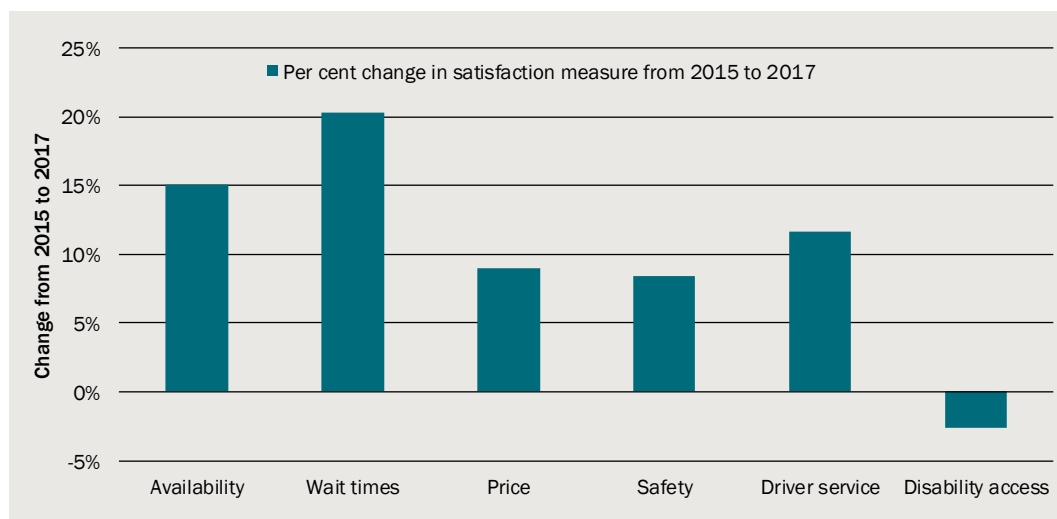
This data cannot be presented in detail as it is commercial in-confidence.

### *Changes to taxi service quality*

An obvious anticipated result from the entry of ridesharing is an improvement in the quality and innovation in delivering taxi services.

- Survey data about taxi services indicates improved levels of satisfaction, although the sample is very small for 2017 (chart 2.4).

## 2.4 Changes in quality of taxi services



Data source: ACT Government survey of customers 2015 and 2017.

Official waiting time data collected for booked taxis indicate that waiting times have been getting progressively lower since 2007. There has been no noticeable impact from ridesharing up to the most recently available data (December 2016).

### 3 *Modelling of the impacts of reforms*

Incorporating the observed data and corroborating evidence we have made a number of changes to the modelling.

- revised the policy package to reflect the actual policies impacted and the direct effects of this, such as changes in taxi network costs
- revised uptake rates for ridesharing to consider a low scenario of 20 per cent and a high scenario of 40 per cent — note that final market shares are difference once the interactions and flow-on effects are modelled
- revised fares for ridesharing
- increases to overall demand for on-demand transport to account for the higher share of ridesharing demand that appears to be additional than was expected in the modelling.

Note that there also appear to have been increases to the quality of taxi services. However, the sample size for the 2017 survey is very small and it is not clear how that relates to increased demand, so we have not included any impacts from improved taxi service quality.

The estimated outcomes for 2016/17 are shown in table 3.1, relative to a counterfactual of no ridesharing or other reforms.

- The policy package is estimated to have led to benefits for consumers of \$6.4 to \$8.8 million in 2016/17. This is higher than expected at the time of the policy changes, because ride sharing uptake has been more rapid, indicating a more marked consumer preference for ride sharing.
- The total benefits of the policy package, measured by total surplus, are \$2.8 to \$3.8 million in 2016/17. This is comparable to that expected at the time of modelling the reforms in 2015 (\$3.4 million), reflecting a range of impacts working in opposite directions. For example, reductions in network fees have not occurred to any meaningful extent, and remain well above fees in other jurisdictions. However, the expansion of demand for on-demand transport has likely been larger than expected.

#### 3.1 Revised estimates of impacts for 2016/17

Name	Unit	Base case (No ridesharing)	Actual policy package - low	Actual policy package - high
Consumer surplus – total	\$m/year	41.7	48.1	50.5
Change from baseline	\$m/year		6.4	8.8
Taxi licence surplus	\$m/year	6.5	3.1	1.6
Hire care/ridesharing surplus	\$m/year	0.2	0.0	0.0
Total surplus	\$m/year	48.4	51.2	52.2

Name	Unit	Base case (No ridesharing)	Actual policy package - low	Actual policy package - high
Change from baseline	\$m/year		2.8	3.8
Industry demand	MPK	23.2	25.9	27.0
Taxi demand	MPK	22.0	20.5	17.4
Hire car demand	MPK	1.2	1.3	1.3
Ridesharing demand	MPK	0.0	4.2	8.3
Number of licensed taxis	No.	325	328	328
Industry revenue	\$m/year	66.7	71.2	73.8
Taxi industry revenue (incl GST)	\$m/year	60.3	54.0	46.0
Hire car revenue	\$m/year	6.5	6.6	6.6
Ridesharing revenue	\$m/year	0.0	10.6	21.2
Driver employment	Annual hours	2 111 438	2 403 980	2 654 662
<b>Taxi specific information</b>				
Lease costs	\$/taxi	20 000	9 507	5 013
Trips per year per taxi	No./taxi	8 376	7 699	6 557
Revenue per licensed taxi (incl GST)	\$/year	185 647	164 645	140 203
Operator revenue (incl GST)	\$/year	92 824	82 323	70 101
Average share of time taxi is on the road	%	70.4%	66.1%	59.5%
Average taxi fare (2014\$)	\$/km	2.74	2.64	2.64
Utilisation (share of time with passenger)	%	29.4%	28.9%	27.5%

Note: MPK is million passenger kilometres.

Source: CIE.

In comparison to the data on taxi industry impacts, the modelling suggests a reduction in demand per taxi of 8 to 22 per cent, relative to no ride sharing. It suggests licence lease costs declining to \$5000 to \$10 000 per year. Actual taxi licence lease costs have not fallen to this level, although the data suggests that operators and drivers are being squeezed, which will eventually be passed back to taxi licence owners.

At the higher end of ride share impact, in the longer term the current taxi numbers would be about where the industry would settle. Providing more Government licences would hasten the movement to this position, by forcing perpetual licence holders to reduce their lease rates. The declining share of time taxis are expected to be on the road would also lead to the taxi industry having to find more flexible ways of using their capital and their drivers.



## 4 *Modelling of further reforms*

We have also modelled impacts of further reforms to increase taxi numbers, reduce taxi licence lease costs for taxi operators and drivers and reduce fares for consumers.

- Scenario A is to increase the number of licences to 358 and maintain fares at existing levels
- Scenario B is to increase the number of licences to 358 and reduce fares by 1.6 per cent to reflect lower lease costs
- Scenario C is to make unlimited licences at the Government lease rate of \$5000 and reduce fares by 2.6 per cent
- Scenario D is to make unlimited licences at the Government lease rate of \$5000 and maintain fares at existing levels

The fare reductions are based on the expected reduction in taxi licence lease rates, which are then passed on to consumers.

The results using the low and high ride share take-up are shown in table 4.1 and table 4.2.

- In the longer term, there will only be material benefits measured by total surplus from a higher supply of taxis if this is passed on to consumers through lower prices
  - consumers always benefit from an increase in the number of taxi licences
- In the high ride share uptake scenario, the additional taxi licences would not be taken up, as there would be insufficient demand for taxi services to make these commercially viable, even at a lease rate of \$5000 per taxi. In practice, we expect that they would be taken up and then as longer term adjustments take place some licences may be returned. This will depend on the future path for ride share uptake
- Note that in the short term, releasing more licences would enable an improved transition for drivers and operators, as they are currently bearing transition costs while taxi licence lease rates adjust to levels that can be supported by the returns being made in the industry

### 4.1 The impact of additional reforms on total surplus – low

Name	Unit	Current reforms	Scen. A	Scen. B	Scen. C	Scen. D
Licence releases		328	358	358	Unlimited	Unlimited
Price relative to current	%	0.0%	0.0%	-1.6%	-2.6%	0.0%
Consumer surplus – total	\$m/year	48.1	48.2	49.7	51.3	48.2
Change from current	\$m/year	6.4	6.5	8.0	9.6	6.5
Total surplus	\$m/year	51.2	51.0	52.6	53.3	50.2
Change from current	\$m/year	2.8	2.6	4.2	4.9	1.8

Name	Unit	Current reforms	Scen. A	Scen. B	Scen. C	Scen. D
Industry demand	MPK	25.9	25.9	26.5	27.1	25.9
Taxi demand	MPK	20.5	20.5	21.1	21.7	20.5
Hire car demand	MPK	1.3	1.3	1.3	1.3	1.3
Ridesharing demand	MPK	4.2	4.2	4.2	4.2	4.2
Number of licensed taxis	No.	328	358	358	400	395
Industry revenue	\$m/year	71.2	71.3	72.0	72.7	71.4
Taxi industry revenue (incl GST)	\$m/year	54.0	54.1	54.8	55.4	54.1
Hire car revenue	\$m/year	6.6	6.6	6.6	6.6	6.6
Ridesharing revenue	\$m/year	10.6	10.6	10.6	10.6	10.6
Driver employment	Annual hours	2 403 980	2 466 415	2 472 369	2 512 184	2491769
<b>Taxi specific information</b>						
Lease costs	\$/taxi	9 507	7 824	7 919	5 000	5,000
Trips per year per taxi	No./taxi	7 699	7 068	7 266	6 680	6401
Revenue per licensed taxi (incl GST)	\$/year	164 645	151 162	152 984	138 406	136,886
Operator revenue (incl GST)	\$/year	82 323	75 581	76 492	69 203	68,443
Average share of time taxi is on the road	%	66.1%	62.2%	62.7%	57.3%	56.9%
Average taxi fare (2014\$)	\$/km	2.64	2.64	2.60	2.56	2.64
Utilisation (share of time with passenger)	%	28.9%	28.3%	28.8%	29.1%	28.1%

Note: MPK is million passenger kilometres.

Source: CIE.

## 4.2 The impact of additional reforms on total surplus – high

Name	Unit	Current reforms	Scen. A	Scen. B	Scen. C	Scen. D
Consumer surplus – total	\$m/year	50.5	50.5	51.8	52.8	50.5
Change from current	\$m/year	8.8	8.8	10.1	11.0	8.8
Total surplus	\$m/year	52.2	52.2	53.5	54.5	52.2
Change from current	\$m/year	3.8	3.8	5.1	6.1	3.8
Industry demand	MPK	27.0	27.0	27.5	27.9	27.0
Taxi demand	MPK	17.4	17.4	17.9	18.3	17.4
Hire car demand	MPK	1.3	1.3	1.3	1.3	1.3
Ridesharing demand	MPK	8.3	8.3	8.3	8.3	8.3
Number of licensed taxis	No.	328	336	338	340	336
Industry revenue	\$m/year	73.8	73.8	74.4	74.8	73.8
Taxi industry revenue (incl GST)	\$m/year	46.0	46.0	46.6	46.9	46.0
Hire car revenue	\$m/year	6.6	6.6	6.6	6.6	6.6
Ridesharing revenue	\$m/year	21.2	21.2	21.2	21.2	21.2
Driver employment	Annual hours	2 654 662	2 660 386	2 661 734	2 661 717	2 660 386

Name	Unit	Current reforms	Scen. A	Scen. B	Scen. C	Scen. D
<b>Taxi specific information</b>						
Lease costs	\$/taxi	5 013	5 000	5 000	5 000	5 000
Trips per year per taxi	No./taxi	6 557	6 404	6 540	6 640	6 404
Revenue per licensed taxi (incl GST)	\$/year	140 203	136 930	137 671	138 211	136 930
Operator revenue (incl GST)	\$/year	70 101	68 465	68 836	69 106	68 465
Average share of time taxi is on the road	%	59.5%	58.3%	58.5%	58.6%	58.3%
Average taxi fare (2014\$)	\$/km	2.64	2.64	2.60	2.57	2.64
Utilisation (share of time with passenger)	%	27.5%	27.4%	27.9%	28.2%	27.4%

Note: MPK is million passenger kilometres.

Source: CIE.

## A Modelling of reforms using the 2015 model

In order to compare modelling, we have undertaken a scenario from the 2015 model for 2016/17 with the policy package modelled in 2015. This maintains the same assumptions as the 2015 modelling in terms of ride sharing uptake and prices, and the extent to which taxi and ridesharing services are substitutes.

- The base policy package modelled in 2015 had an estimated total surplus of \$3.4 million in 2016/17 and gains to consumers of \$5.9 million.

The anticipated impacts using the 2015 assumptions for 2016/17 are shown in table A.1. Note that the actual policy package differed from this because:

- the number of licences remained restricted. The 2015 modelling anticipated 414 taxis in service in 2016/17 (at a \$10 000 per year licence cost), while this remained capped at 328 available, as at September 2017
- taxi network fees have not fallen as much as expected
- CTP costs for taxis have fallen and the CTP for ride share has not been as large as expected, and
- taxi fares have not fallen as much as allowed for.

In addition, the uptake of ridesharing has been more rapid than anticipated.

The 2015 modelling predicts taxi demand would have fallen by ~5 per cent in total by now and 10 per cent relative to the scenario without ridesharing. The per taxi impacts being larger because of an expansion of the taxi fleet. This reflects ride share taking slightly less than 15 per cent of market share and market expansion from population growth and lower real taxi fares. The reduction in revenue is larger (in real terms) because fares decline in real terms.

### A.1 2015 model results for 2016/17

Name	Unit	No ridesharing	2015 base policy scenario
Consumer surplus – total	\$m/year	41.7	47.6
Change from baseline	\$m/year		5.9
Taxi licence surplus	\$m/year	6.5	4.1
Hire care/ridesharing surplus	\$m/year	0.2	0.0
Total surplus	\$m/year	48.4	51.8
Change from baseline	\$m/year		3.4
Industry demand	MPK	23.2	25.3
Taxi demand	MPK	22.0	20.9
Hire car demand	MPK	1.2	1.2
Ridesharing demand	MPK	0.0	3.2

Name	Unit	No ridesharing	2015 base policy scenario
Number of licensed taxis	No.	325	414
Industry revenue	\$m/year	66.7	68.7
Taxi industry revenue (incl GST)	\$m/year	60.3	54.4
Hire car revenue	\$m/year	6.5	6.6
Ridesharing revenue	\$m/year	0.0	7.6
Driver employment	Annual hours	2 111 438	2 398 117
<b>Taxi specific information</b>			
Lease costs	\$/taxi	20 000	10 000
Trips per year per taxi	No./taxi	8 376	6 249
Revenue per licensed taxi (incl GST)	\$/year	185 647	131 576
Operator revenue (incl GST)	\$/year	92 824	65 788
Average share of time taxi is on the road	%	70.4%	54.7%
Average taxi fare	\$/km	2.74	2.60
Utilisation (share of time with passenger)	%	29.4%	28.5%

Note: MPK is million passenger kilometres.

Source: CIE.



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