



14 December 2021

Budget Policy Division
The Treasury
Langton Crescent
PARKES ACT 2600

Via email: Prebudgetsubs@treasury.gov.au

Dear Treasury,

EXCISE – Pre-Budget Submission FY22-23

The Australian Hotels Association (AHA) proposes a reduction in the excise rate for draught beer as a justifiable part of stimulus and structural reform. Our request is fair, moderate and targeted.

The AHA recommends a 50% reduction in the excise rate for draught beer.

The Centre for International Economics has modelled (**attached**) the impact on the Budget over the forward estimates:

Impact to Budget	2021-22	2022-23	2023-24	2024-25	Total
50% cut On-going	-\$153m	-\$153m	-\$152m	-\$149m	-\$607m

The reasons for a cut are simple:

- Every beer poured from a keg into a glass creates jobs
- Beer underpins the trade of all pubs and clubs, with beer accounting for around 70% of all alcohol sales
- At \$10-\$12 a pint, draught beer is becoming less affordable for the everyday Australian
- Unlike sectors such as aviation, home building and travel agents, there have been no “hospitality specific” COVID-19 schemes
- Hotels and clubs have been heavily impacted by lockdowns and trading restrictions with consequent accrual of debt which has to be re-paid

The effect of a reduction on the cost of living would be:

- A reduction in the excise of a keg of full-strength beer halving from about \$70 to \$35
- The \$35 saving per keg is a saving of about 40 cents per pint
- Competition between venues would very likely see some or all of the cut directly being passed on to patrons

We note:

- The cost of our proposal is about 2% of the \$7,000m collected in total alcohol excise revenue

- The current tax rate for full strength draught beer is the fourth highest rate in the OECD, and next year will become the 3rd highest
- We expect the next tax excise increase due on 1 February 2022 will be the largest in more than ten years due to inflation, with hotels forced to pass the cost onto consumers
- We do not support just a freeze in the excise, as this will have no meaningful benefit for hospitality or our patrons, and will still see Australia with the 3rd highest beer taxes in the world next year

An excise tax on draught beer is unfair because:

- A product which generates such a high degree of labour should not have a tax (excise) placed upon it
- It is a triple tax on the people who consume the product, the businesses which sell it and the workers who make or pour it
- Excise is a hidden tax which inhibits employment and is becoming too expensive for many Australians who have already had a tough couple of years.

Yours faithfully,



STEPHEN FERGUSON
NATIONAL CEO



DRAFT REPORT

Modelling the revenue impact of alcohol tax changes

*Prepared for
Brewers Association of Australia
30 July 2021*

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Summary

The report summarises the impact of 13 reform options proposed for alcohol taxation by the Brewers Association of Australia. The impact of each of the options was evaluated using an economic model of Australian alcohol consumption that focuses on the beer sector. The model identifies:

- sales channel that track consumption through
 - licenced premises selling draught and packaged beer
 - retail outlets selling packaged beer
- beer strengths — light, mid-strength and full strength
- domestically produced and imported beers

For wine, the model identifies domestically produced and imported wine consumed through licenced venues and through other retail outlets.

In total, 18 separate value chains for beer and 2 for wine were developed to reflect the impact of alcohol taxation in the final consumer price and on the factory price for the Australian brewing and wine-making industry. These value chains were used to develop an economic model which represents how consumers and producers are likely to respond to each of the options.

- As part of the developing the economic model and to evaluate some of the options, a baseline was established from 2019-20 to 2023-24 which represents business-as-usual outcomes without any change in current policy settings.
- Evaluation of some options required the further development of the baseline in terms of what would happen to the structure of production in the brewing sector.

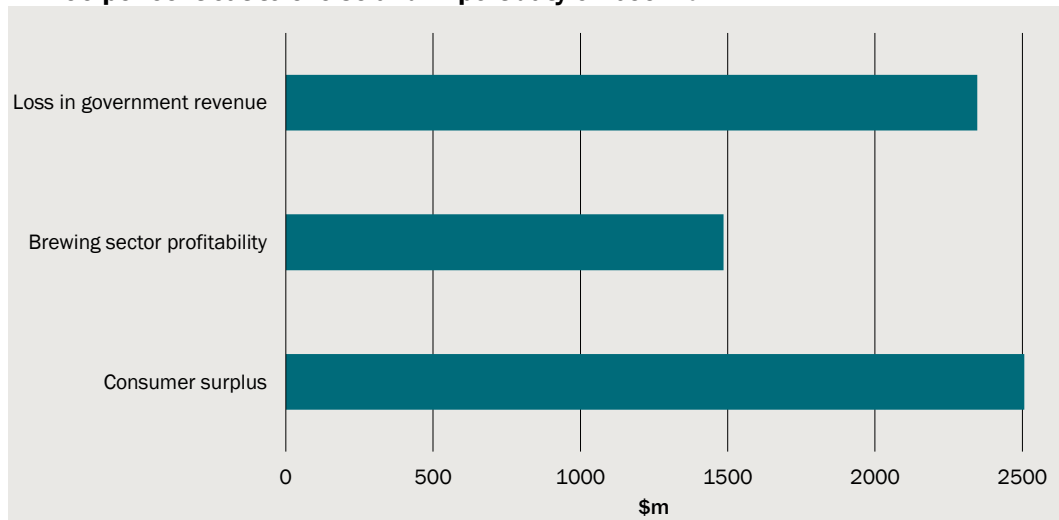
Chart 1 provides perspective on the impacts of current alcohol taxation arrangements for beer by simulating outcomes for a 100 per cent cut in excise and import duties. It provides a reference point for the remaining reform options. In 2021-22, taxation on beer:

- provides \$2.34 billion in excise and import duties to the Australian Government
- reduces brewing sector profitability by \$1.48 billion; and
- reduces consumer surplus at retail level by \$2.95 billion.¹

Chart 2 ranks each of the options in terms of loss of government revenue from beer excise and import duty in the first year of full implementation — 2021-22. The most expensive option for the government is the increase in the base rate to 2 per cent, then the increase in the base rate to 1.75 per cent, followed by the excise cut by 15 per cent.

¹ Consumers surplus is a measure of benefit from purchasing goods and services. It is the difference between the total amount that consumers are willing and able to pay for a good or service and the total amount that they actually do pay (that is, the prevailing retail price).

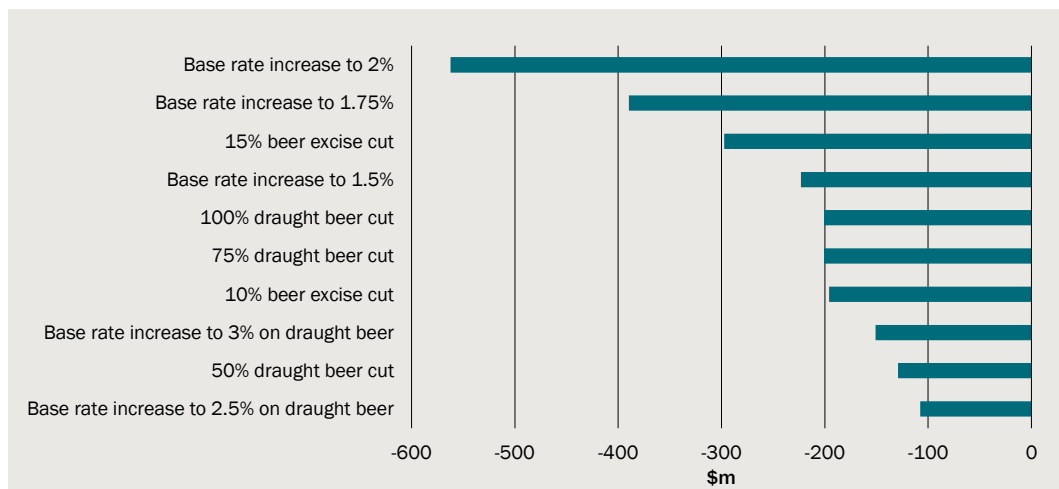
1 100 per cent cut to excise and import duty on beer 2021-22^a



^a Government revenue across domestic excise and import duty Consumer surplus estimates for beer options are calculated from beer expenditure only and are valued at retail level and therefore not directly comparable with government revenue or sector profitability.

Data source: CIE.

2 Ranking of options by change in revenue from beer excise and import duty 2021-22^a

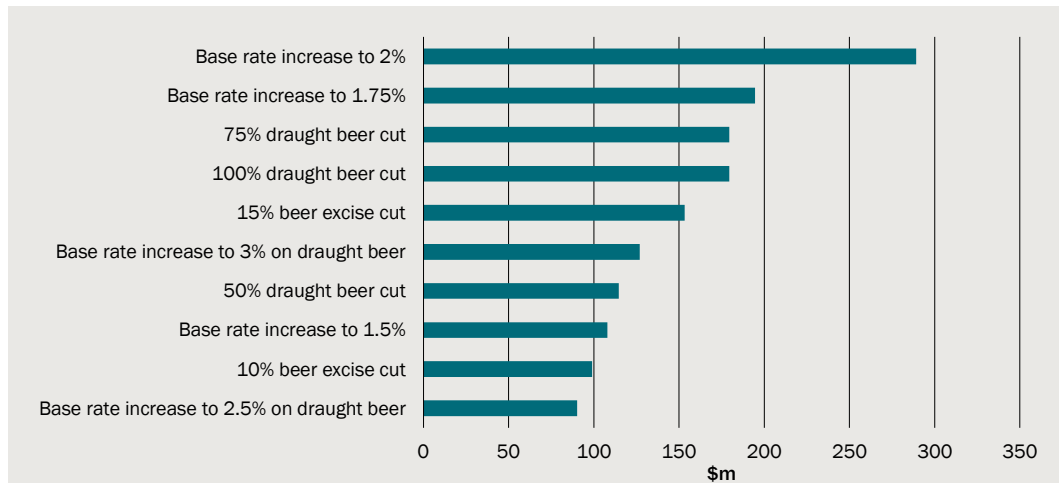


^a Government revenue across domestic excise and import duty.

Data source: CIE.

Chart 3 ranks the options from the perspective of profitability of the brewing sector. Compared to outcomes for government revenue, both the 100 per cent and the 75 per cent excise cuts on draught beer have relatively large impacts on the profitability of the sector. This is because this cut is not shared with imported product and focused on the brewing sector supplying draught rather than packaged beer.

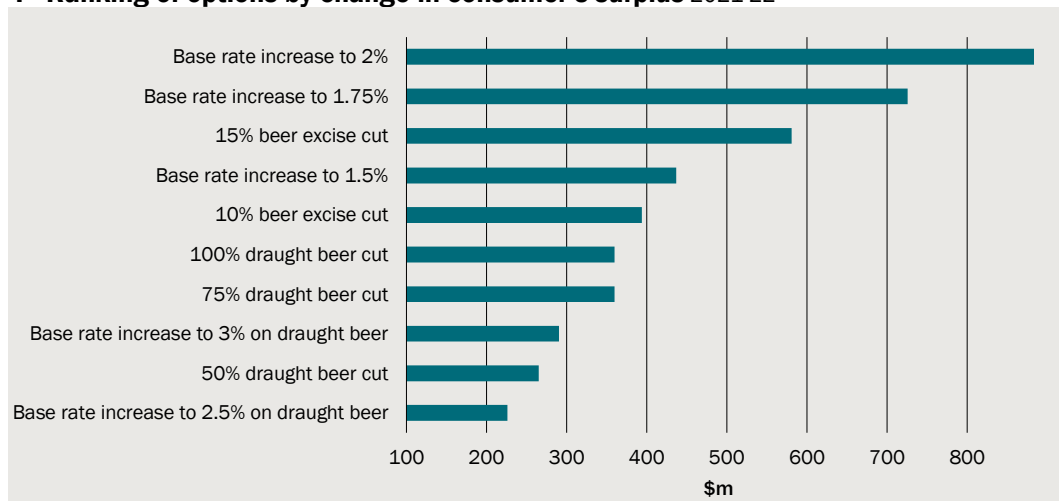
3 Ranking of options by change in profitability of the brewing sector 2021-22



Data source: CIE.

Chart 4 ranks the options from the perspective of consumers. In terms of benefit, the top-5 rankings is in similar order as for changes in government revenues.

4 Ranking of options by change in consumer's surplus 2021-22^a



^a The consumer surplus estimates for beer options are calculated from beer expenditure only and wine options relate to wine only.

Data source: CIE.

Sensitivity analysis demonstrated that these results were robust to the chosen model elasticities.

1 Introduction and purpose

In December 2018, the Centre for International Economics (CIE) provided a report to the Brewers Association of Australia (BAA) on the impact of 18 proposed excise reform options focusing on beer.²

The BAA wishes to update previous that analysis to provide a better understanding of the impacts on government revenue and industry profitability of a number of options for reform of alcohol taxation. — given changes that have occurred in the taxation regime and the wider market for alcohol in Australia.

These options are summarised in table 1.1 below.

1.1 Outline of alcohol taxation reform options to be examined

Scenario/option	Detailed description
Excise cut	5%, 10%, 15% or 100% reduction in beer excise rates
Increase ABV tax-free threshold	Increasing the ABV tax-free threshold from 1.15% to 1.5%, 1.75% and 2%.
Increase ABV tax-free threshold for draught beer	Increasing the ABV tax-free threshold for draught beer from 1.15% to 2.5% and 3.0%
Increase ABV tax-free threshold for draught beer	Increasing the ABV tax-free threshold for draught beer from 1.15% to 2.5% and 3.0%

Source: Brewers Association.

To analysis these reform options, the economic model was updated to 2019-20 as outlined in chapter 2. Chapter 3 provides details on how these options were applied to the updated model. The results of the reform options are reported in chapter 4.

² Centre for International Economics 2018, *Modelling the revenue impact of alcohol tax changes*, Prepared for Brewers Association of Australia, December.

2 Approach

The approach involved using the same structure of the economic model as described in CIE (2018) but updating:

- the base year from 2017-18 to 2019-20
- the baseline to now cover the period 2019-20 to 2023-24.

Base year and baseline

To maximise its accuracy and relevance to policy makers in government and in industry, the economic model uses the most up-to-date information available.

Base year and data sources

The base year for the economic analysis is 2019-20. Developing this data required synthesising information from a number of sources including:

- ATO official beer excise clearance volume data for 2019-20
- official ATO estimates for beer excise, customs duty for beer, WET and spirit revenues for 2019-20
 - 2019-20 estimates cross-checked against from the Budget papers 2019-20 Revenue Estimates for which aggregate across excise and customs duty.
- ABS trade data for 2019-20.

In absence of the updated estimates of alcohol consumption³, implied beer, wine and spirits consumption was extrapolated from 2018-19 to the 2019-20 base year using production and trade data.

Details of the value chains are provided in appendix A of this report.

Baseline

To quantify the impacts of a freeze in the indexation of excise over a period of 5 years, the model was extended to 2023-24.

To achieve this, a baseline was developed over this timeframe. The baseline is not intended as a forecast but to reflect present business-as-usual outcomes that could be reasonably expected based on current market trends. However, potential covid-19

³ ABS Apparent Consumption of Alcohol, Australia, 2017-18 Catalogue no 4307.0

impacts on demand and the shift in channel of purchase — from on-license to off-license — have been taken into account over the period of analysis.

Key baseline components

Table 2.3 summarises the inputs to the baseline from 2019-20 to 2023-24 comprised of:

- per person incomes
- retail prices of spirits (determined outside the model)
- a general demand shift away from all alcohol consumption (reflecting recent trends)
- costs of labour and inputs for the domestic brewing industry
- imported beer prices, and imported and domestic prices of wine.

2.1 Key macro baseline inputs^a

		2019-20	2020-21	2021-22	2022-23	2023-24
Population						
	million	25.8	26.1	26.3	26.6	26.9
- cumulative change	%	0.0	1.1	2.1	3.2	4.2
Real incomes						
Annual change	%	-6.0	6.0	4.5	3.0	2.9
	Index	100.0	106.0	110.8	114.1	117.4
- cumulative change	%	0.0	6.0	10.8	14.1	17.4
Average level of consumer prices						
Annual change	%	-0.3	2.3	2.2	2.3	2.3
	Index	100.0	102.3	104.6	106.9	109.3
— cumulative change	%	0.0	2.3	4.6	6.9	9.3
Demand shifter for all alcohol						
- cumulative change	%	0.0	-5.6	-6.7	-7.9	-9.0
Retail price of spirits						
- cumulative change	%	0.0	1.7	3.7	5.8	7.9
Factory equivalent price of domestic and imported wine						
- cumulative change	%	0.0	2.2	4.5	6.8	9.3
Increase in costs for domestic brewing						
- cumulative change	%	0.0	1.6	3.1	4.7	6.2
Landed price of imported beer						
- cumulative change	%	0.0	0.6	1.2	1.8	2.4

^a Percentage changes are relative to 2019-20 levels.

Source: CIE.

In addition, the baseline incorporates changes in beer taxation. Table 2.4 shows the baseline for beer excise rates for the next 5 years given twice-yearly indexation using the consumer prices index. In addition, there is no change to the WET in ad-valorem terms.

2.2 Baseline beer excise rate by container and strength

	2019-20	2020-21	2021-22	2022-23	2023-24
	\$/lal	\$/lal	\$/lal	\$/lal	\$/lal
Packaged Light	43.73	44.22	44.95	45.40	46.05
Packaged Medium	50.93	51.50	52.35	52.88	53.63
Packaged Full	50.93	51.50	52.35	52.88	53.63
Kegs Light	8.75	8.84	8.99	9.08	9.21
Kegs Medium	27.38	27.69	28.15	28.44	28.84
Kegs Full	35.87	36.28	36.88	37.25	37.78

Source: ATO and CIE calculations.

Key baseline outcomes

Table 2.5 shows possible business-as-usual outcomes focusing on the beer value chain. Overall, the baseline shows a small decline in overall consumption of alcohol in response to increases in prices and a small preference shift. Due to its large expenditure share in this group, the baseline reflects that beer's share in total alcohol consumption does not change dramatically.

Over this period, total consumption of beer falls moderately with domestic and imported shares remaining stable. Government revenue from excise and GST are also projected to be stable in 2019-20 dollar terms. However, a flat domestic market in concert with increased costs for hired labour and inputs is likely to put a downward pressure on the industry gross operating surplus measured in 2019-20 terms.

2.3 Baseline for the analysis of reform options

		2019-20	2020-21	2021-22	2022-23	2023-24
Alcohol consumption^a						
All alcohol	%	0.00	-5.60	-6.73	-7.85	-8.96
Beer	%	0.00	-3.09	-3.71	-4.23	-4.81
Wine	%	0.00	-8.49	-9.99	-11.58	-13.10
Spirits	%	0.00	-8.80	-10.84	-12.92	-14.85
Average retail prices^a						
Beer	%	0.00	-3.08	-2.43	-1.91	-1.27
Wine	%	0.00	1.45	2.96	4.53	6.15
Spirits	%	0.00	1.72	3.74	5.80	7.87
Detailed consumption of beer						

		2019-20	2020-21	2021-22	2022-23	2023-24
Total	m litres	1684.2	1632.5	1622.2	1613.4	1603.6
Locally produced	m litres	1437.3	1396.6	1387.6	1379.8	1371.2
– On-licence	m litres	522.0	507.7	504.7	502.0	499.0
– Off-licence	m litres	915.4	888.8	883.0	877.9	872.2
Imported	m litres	246.9	235.9	234.6	233.6	232.3
– On-licence	m litres	56.7	54.0	53.6	53.4	53.1
– Off-licence	m litres	190.1	181.9	180.9	180.2	179.3
Excise on beer (2019-20 dollars)						
Domestic excise	\$m	2066	1913	1849	1803	1767
Import duty	\$m	416	379	367	358	351
GST on beer (2019-20 dollars)						
On-licence	\$m	866	761	727	706	686
Off-licence	\$m	734	653	626	609	593
Brewing industry						
Gross operating surplus (2019-20 dollars)	\$m	850	577	523	485	448

^a Percentage change relative to 2019-20 levels.

Source: CIE.

3 Impacts of beer excise reforms

This chapter provides a summary of results for the revised reform options for beer that have been quantified.

Excise cut

The first group of options involves a 5, 10, 15 or 100 per cent reduction in beer excise rates. These reductions are from the base identified in table 2.2. In addition, the following assumptions have been made:

- the cut in excise starts in the February 2021 quarter
- the cuts are applied to both domestic and imported beer.

Table 3.1 illustrates the excise rate outcomes for a 10 per cent cut from baseline levels (refer to table 2.2) The excise outcome for 2020-21 reflects the cut commencing in the third quarter of the financial year.

3.1 Excise cut by 10 per cent from baseline levels

Excise category		2019-20	2020-21	2021-22	2022-23	2023-24
		\$/lal	\$/lal	\$/lal	\$/lal	\$/lal
Packaged Light	\$/lal	43.73	42.36	40.45	40.86	41.44
Packaged Medium	\$/lal	50.93	49.34	47.12	47.59	48.27
Packaged Full	\$/lal	50.93	49.34	47.12	47.59	48.27
Kegs Light	\$/lal	8.75	8.47	8.09	8.17	8.29
Kegs Medium	\$/lal	27.38	26.53	25.34	25.59	25.96
Kegs Full	\$/lal	35.87	34.76	33.19	33.53	34.00

Source: ATO and CIE calculations.

Table 3.2 provides a summary of the impacts of the 4 excise cut options. In 2019-20, we estimate that the beer value chain contributes \$4.353 billion in revenue comprised of \$2.066 billion in excise, \$416 million in import duty and \$1.872 billion in GST on consumption.

The cuts are simulated by reducing the \$ per litre of alcohol excise by the listed percentage reductions across all beer strengths and container sizes.

For cuts in excise, the rule for reductions of 5 to 15 per cent is that government revenue falls by 85 per cent of the initial cut for domestic excise and 73 per cent of the initial cut for import duty revenue. That is, for a 10 per cent cut in domestic excise, government revenue falls by 7.3 per cent. The remainder of the value is clawed back through increased consumption. For the 100 per cent cut, excise revenue becomes zero.

3.2 Impact on key industry outcomes – excise cuts

^a

Outcome by reform option		2019-20	2020-21	2021-22	2022-23	2023-24
Beer excise - domestic						
Baseline	\$m	2 066	1 984	1 959	1 924	1 897
– 5 per cent	\$m	0	- 35	- 83	- 81	- 79
– 10 per cent	\$m	0	- 71	- 167	- 163	- 160
– 15 per cent	\$m	0	- 106	- 254	- 248	- 243
– 100 per cent	\$m	0	- 764	-1 959	-1 924	-1 896
Import duty on beer						
Baseline	\$m	416	393	389	382	377
– 5 per cent	\$m	0	- 6	- 14	- 14	- 14
– 10 per cent	\$m	0	- 12	- 29	- 28	- 28
– 15 per cent	\$m	0	- 18	- 44	- 43	- 42
– 100 per cent	\$m	0	- 134	- 388	- 382	- 377
GST on beer consumption						
Baseline	\$m	1 872	1 719	1 682	1 645	1 609
– 5 per cent	\$m	0	- 2	- 4	- 4	- 4
– 10 per cent	\$m	0	- 3	- 8	- 8	- 9
– 15 per cent	\$m	0	- 5	- 12	- 13	- 13
– 100 per cent	\$m	0	- 31	- 64	- 65	- 66
Beer consumption						
Baseline	m litres	1 684	1 632	1 622	1 613	1 604
– 5 per cent	m litres	0	6	14	15	15
– 10 per cent	m litres	0	11	28	29	30
– 15 per cent	m litres	0	17	41	43	44
– 100 per cent	m litres	0	104	232	239	247
Brewing industry gross operating surplus						
Baseline	\$m	850	599	554	518	481
– 5 per cent	\$m	0	21	48	45	43
– 10 per cent	\$m	0	42	99	94	89
– 15 per cent	\$m	0	64	153	146	138
– 100 per cent	\$m	0	520	1 486	1 438	1 395

^a All values are reported in 2019-20 dollar terms.

Source: CIE.

There are also flow-on effects to government GST revenue. For every 1 per cent reduction in excise, GST revenue from the beer value chain falls by 0.05 per cent. Similarly, the reduction in revenue from cascading GST off the excise is offset by the increase in consumption volumes.

A 10 per cent reduction in beer excise reduces the retail beer prices across each of the channels by -2.2 per cent and aggregate beer consumption increases by around 1.8 per cent or 28 million litres.

In terms of brewing industry profitability, for every 1 per cent cut in excise, industry profitability as reflected by gross operating surplus improves by between 1.8 per cent. That is in the case of a 10 per cent excise cut, brewing profitability in 2021-22 increases by 18 per cent or \$99 million in 2019-20 terms. If excise is eliminated, profitability could increase by \$1.49 billion in 2019-20 terms.

Increase ABV tax-free threshold

Table **Error! Reference source not found.** summarises the impacts of the following scenarios:

- an increase in the threshold excise-free rate from 1.15 to 1.5 and 1.75 per cent, and from 1.15 to 2 per cent for all beer
- an increase in the threshold excise-free rate from 1.15 to 2.5 and 3 per cent for draught beer

The first-round impact of the increase to 1.5 per cent is to reduce the quantity of excisable alcohol by an average of 10 per cent (ranging from 8 per cent for full-strength through to 26 per cent for light-beer). The increase to 2 per cent reduces excisable alcohol by 25 per cent given an average alcohol rate of 4.2 per cent. After the value chain responds to changes in prices, total excise revenue falls by 10 and 25 per cent respectively. The impact of a base rate of 3 per cent for draught beer is comparable to that of 50 per cent excise cut on draught beer.

3.3 Impact on key industry outcomes — increase ABV tax free threshold^a

		2019-20	2020-21	2021-22	2022-23	2023-24
Beer excise - domestic						
Baseline	\$m	2 066	1 984	1 959	1 924	1 897
– Base rate of 1.5%	\$m	0	- 197	- 193	- 189	- 185
– Base rate of 1.75%	\$m	0	- 344	- 337	- 330	- 323
– Base rate of 2%	\$m	0	- 495	- 486	- 475	- 466
– Base rate of 2.5% on draught beer	\$m	0	- 109	- 107	- 105	- 102
– Base rate of 3% on draught beer	\$m	0	- 153	- 150	- 146	- 143
Import duty on beer						
Baseline	\$m	416	393	389	382	377
– Base rate of 1.5%	\$m	0	- 30	- 30	- 29	- 29
– Base rate of 1.75%	\$m	0	- 53	- 52	- 51	- 50
– Base rate of 2%	\$m	0	- 77	- 76	- 74	- 73
– Base rate of 2.5% on draught beer	\$m	0	- 1	0	0	0
– Base rate of 3% on draught beer	\$m	0	- 1	- 1	- 1	0

		2019-20	2020-21	2021-22	2022-23	2023-24
GST on beer consumption						
Baseline	\$m	1 872	1 719	1 682	1 645	1 609
– Base rate of 1.5%	\$m	0	- 9	- 9	- 9	- 10
– Base rate of 1.75%	\$m	0	- 15	- 15	- 16	- 16
– Base rate of 2%	\$m	0	- 21	- 21	- 22	- 22
– Base rate of 2.5% on draught beer	\$m	0	- 5	- 5	- 5	- 5
– Base rate of 3% on draught beer	\$m	0	- 6	- 6	- 6	- 7
Beer consumption						
Baseline	m litres	1 684	1 663	1 654	1 646	1 637
– Base rate of 1.5%	m litres	0	30	32	32	33
– Base rate of 1.75%	m litres	0	51	53	54	56
– Base rate of 2%	m litres	0	70	73	75	78
– Base rate of 2.5% on draught beer	m litres	0	15	16	17	18
– Base rate of 3% on draught beer	m litres	0	20	21	22	23
Brewing industry gross operating surplus						
Baseline	\$m	850	577	523	485	448
– Base rate of 1.5%	\$m	0	116	108	102	96
– Base rate of 1.75%	\$m	0	209	195	184	173
– Base rate of 2%	\$m	0	310	289	274	259
– Base rate of 2.5% on draught beer	\$m	0	95	90	86	82
– Base rate of 3% on draught beer	\$m	0	134	127	122	117

^a All values are reported in 2019-20 dollar terms.

Source: CIE.

Draught beer excise cut

Table 3.4 summarises the impacts of an excise cut for draught beer of 25, 50, 75 and 100 per cent. The impact of the 25 and 100 per cent cut on the average retail price through on-licence premises are 2 and 5 per cent respectively. A 100 per cent cut in draught beer is equivalent to a 10 per cent cut in all beer excise and improves profitability of the brewing sector by 32 per cent.

3.4 Impact on key industry outcomes – draught beer excise cut^a

		2019-20	2020-21	2021-22	2022-23	2023-24
Beer excise - domestic						
Baseline		2 066	1 984	1 959	1 924	1 897
– 25 per cent		0	- 26	- 62	- 60	- 59
– 50 per cent		0	- 53	- 128	- 125	- 122
– 75 per cent		0	- 80	- 198	- 194	- 190
– 100 per cent		0	- 80	- 198	- 194	- 190

	2019-20	2020-21	2021-22	2022-23	2023-24	
Import duty on beer						
Baseline	416	402	406	409	412	416
– 25 per cent	0	0	0	0	0	0
– 50 per cent	0	0	- 1	- 1	- 1	0
– 75 per cent	0	- 1	- 3	- 2	- 2	0
– 100 per cent	0	- 1	- 3	- 2	- 2	0
GST on beer consumption						
Baseline	1 872	1 758	1 758	1 758	1 759	1 872
– 25 per cent	0	- 1	- 3	- 3	- 3	0
– 50 per cent	0	- 2	- 6	- 6	- 6	0
– 75 per cent	0	- 4	- 8	- 8	- 8	0
– 100 per cent	0	- 4	- 8	- 8	- 8	0
Beer consumption						
Baseline	1 684	1 597	1 552	1 509	1 467	1 684
– 25 per cent	0	4	10	10	10	0
– 50 per cent	0	8	18	19	19	0
– 75 per cent	0	12	25	25	26	0
– 100 per cent	0	12	25	25	26	0
Brewing industry gross operating surplus						
Baseline	\$m	850	599	554	518	481
– 25 per cent	\$m	0	23	55	52	50
– 50 per cent	\$m	0	47	115	110	106
– 75 per cent	\$m	0	72	179	173	168
– 100 per cent	\$m	0	72	179	173	168

^a All values are reported in 2019-20 dollar terms.

Source: CIE.

Summary of reform options

Table 3.5 summarises each of the options including:

- government revenue including beer excise and duty on beer
- brewing sector profitability at factory level
- an assessment of change in consumer surplus evaluated at retail prices.

As there are costs and margins between each of these points in the value chain, it is not possible to directly compare each of these estimates as they are not valued on the same price basis.

3.5 Summary of impacts of each beer reform option in 2021-22

	Beer excise revenue ^a	Brewing sector profitability	Consumer surplus ^b	
			Beer	Wine
	\$m	\$m	\$m	\$m
Excise cuts				
5% beer excise cut	- 106	62	174	- 42
10% beer excise cut	- 214	128	341	- 82
15% beer excise cut	- 324	196	502	- 120
100% beer excise cut	-2 468	1 692	2 987	- 615
Increase ABV tax-free threshold				
Base rate increase to 1.5%	- 243	145	375	- 90
Base rate increase to 1.75%	- 423	257	624	- 149
Base rate increase to 2%	- 608	377	857	- 204
Base rate increase to 2.5% on draught beer	- 118	110	167	- 40
Base rate increase to 3% on draught beer	- 164	153	216	- 52
Draught beer excise cut				
25% draught beer cut	- 69	65	109	- 26
50% draught beer cut	- 141	133	198	- 47
75% draught beer cut	- 217	205	270	- 65
100% draught beer cut	- 295	278	330	- 79

^a Revenue across domestic excise and import duty. ^b Evaluated at retail prices.

Source: CIE.

Appendix B of this report provides a sensitivity analysis of the key model elasticities.

A Summary of database and elasticities

Database and sources

The data for the value chain of the beer and wine industry were gathered from various sources.

Production, consumption, and import quantities

The primary data points required for this analysis are as follows:

- production quantities were estimated using the excisable alcohol levels reported by the ATO for beer (extrapolated from ATO Taxation Statistics data for 2019-20)
- domestic production for wine was deduced from ABS total consumption of wine and imports quantity collected from Australian Commodity Statistics published by the Department of Agriculture and Water Resources.
- consumption figures for beer and wine were taken from the Apparent Consumption of Alcohol reported by the ABS.⁴
- import quantities were sourced from ABS trade data for the financial year 2019-20 for beer and Australian commodity statistics for Wine.

Table A.1 provides the quantity estimates for beer production and consumption derived from the sources above.

A.1 Estimates of beer consumption for 2019-20

	Containers <48L	Containers >48L	Total
	ML	ML	ML
ABS total consumption			
Low Strength	77.5	8.9	86.4
Mid Strength	300.1	67.2	367.2
Full Strength	997.6	264.0	1261.5
Total	1375.1	340.0	1715.2
– %	80.4	19.6	100.0
ATO excisable production in litres of alcohol			
Low Strength	0.9	0.2	1.0
Mid Strength	6.7	1.6	8.3

⁴ ABS, various years, *Apparent Consumption of Alcohol, Australia, 2017-18*, Catalogue no 4307.0.

	Containers <48L	Containers >48L	Total
	ML	ML	ML
Full Strength	26.0	8.5	34.5
Non-commercial purposes	0.1	0.0	0.1
Total ATO	33.6	10.3	43.9
– %	80.2	19.8	100.0
ATO Excisable beer production			
Low Strength	61.4	13.6	75.0
Mid Strength	304.3	67.2	371.5
Full Strength	783.5	207.3	990.8
Non-commercial purposes	2.8	0.0	2.8
Total ATO	1152.0	288.2	1440.1
– %	80.0	20.0	100.0
Imports			
Low Strength	5.5	0.0	5.6
Mid Strength	11.0	0.1	11.0
Full Strength	222.2	8.1	230.3
Total	238.7	8.2	246.9
Estimate of domestic disappearance			
Low Strength	66.9	13.6	80.6
Mid Strength	315.3	67.3	382.5
Full Strength	1005.7	215.4	1221.1
Total	1387.9	296.3	1684.2

Source: ABS, ATO and CIE Calculations.

Excise and WET revenue

Excise revenue was calculated using official excise rates and excisable alcohol published by the ATO Taxation Statistics and verified with Treasury estimates.

- WET revenue estimates were also collected from Treasury reports.

Prices at factory, wholesale, and retail level

Retail price calculations for beer were guided by the average prices in the Acil-Allen report and prices across each sales channel provided by the Brewers Association.

- Wholesale and factory prices were backtracked from the retail prices using price relationships derived from the ACIL-Allen report and were further verified with the ABS input-output estimates from 2018-19 (which were extrapolated to the 2019-20 financial year).
- CIF returns for beer were acquired from ABS trade data.

An important assumption here is that a great majority of beer is distributed directly from factory to retail eliminating the incidence of wholesale mark-ups:

- Average wholesale price for domestic and imported wine across all segments were derived from WET revenue and average retail prices were calculated using a 30 per cent mark-up on wholesale price for off-licence and 75 per cent mark-up for on-licence.

Tables A.2 to A.7 summarise the value chain information for beer.

A.2 Value chain for domestic on-licence beer in containers >48 litres 2019-20

		Light	Mid	Full-Strength	All
Consumption	ML	14	67	207	288
Government revenue					
Excisable alcohol	Litres	178275	1559857	7152257	8890389
Actual alcohol content	Litres	334776	2333062	9536343	12204180
Strength	%	2.46	3.47	4.60	4.24
Excise rate	\$/litre of alcohol	8.75	27.38	35.87	33.84
Excise	\$/litre	0.11	0.64	1.24	1.04
Base rate	%	1.15	1.15	1.15	1.15
Tax Revenue	\$m	1.6	42.7	256.6	300.8
Value chain					
Factory/CIF return	\$/litre	2.28	1.89	2.02	2.00
	\$m	31	127	418	577
Ex-factory/distributors costs	\$/litre	0.61	0.61	0.61	0.61
Wholesale price less excise	\$/litre	2.89	2.50	2.63	2.61
	\$m	39.4	168.4	545.1	752.9
Wholesale value	\$/litre	3.01	3.14	3.87	3.66
	\$m	40.9	211.1	801.7	1053.7
Retail price mark-up	\$/litre	8.68	9.06	11.15	10.55
	%	67.5	67.5	67.5	67.5
Retail price excluding GST	\$/litre	11.68	12.20	15.02	14.20
GST	\$/litre	1.17	1.22	1.50	1.42
Retail price (including GST)	\$/litre	12.85	13.42	16.52	15.62
Retail value	\$m	175	902	3 425	4 502

Source: ABS, ATO and CIE Calculations.

A.3 Value chain for domestic on-licence beer in containers <48 litres 2019-20

		Light	Mid	Full-Strength	All
Consumption	ML	12	62	159	234
Government revenue					
Excisable alcohol	Litres	157 352	1 417 732	5 499 273	7 074 357

		Light	Mid	Full-Strength	All
Actual alcohol content	Litres	300 967	2 129 693	7 332 364	97 63 024
Strength	%	2.61	3.50	4.64	4.23
Excise rate	\$/litre of alcohol	2.41	3.44	4.60	4.18
Excise	\$/litre	43.73	50.93	50.93	50.77
Base rate	%	0.55	1.17	1.76	1.54
Tax Revenue	\$m	1.15	1.15	1.15	1.15
Value chain					
Factory/CIF return	\$/litre	2.64	2.18	2.51	2.43
	\$m	33	135	400	569
Ex-factory/distributors costs	\$/litre	0.64	0.64	0.64	0.64
Wholesale price less excise	\$/litre	2.97	2.60	2.91	2.83
	\$m	18	74	217	309
Wholesale value	\$/litre	3.83	3.99	4.91	4.61
	\$m	47.9	247.0	782.5	1077.4
Retail price mark-up	\$/litre	9.62	10.01	12.31	11.56
	%	65.0	65.0	65.0	65.0
Retail price excluding GST	\$/litre	13.45	14.00	17.22	16.17
GST	\$/litre	1.35	1.40	1.72	1.62
Retail price (including GST)	\$/litre	14.80	15.40	18.95	17.78
Retail value	\$m	185	953	3 020	4 158

Source: ABS, ATO and CIE Calculations.

A.4 Value chain for domestic off-licence beer in containers <48 litres 2019-20

		Light	Mid	Full-Strength	All
Consumption	ML	49	242	624	915
Government revenue					
Excisable alcohol	Litres	616 074	5 550 781	21 531 061	27 697 916
Actual alcohol content	Litres	1 178 364	8 338 292	28 708 081	38 224 737
Strength	%	2.41	3.44	4.60	4.18
Excise rate	\$/litre of alcohol	43.73	50.93	50.93	50.77
Excise	\$/litre	0.55	1.17	1.76	1.54
Base rate	%	1.15	1.15	1.15	1.15
Tax Revenue	\$m	26.9	282.7	1096.6	1406.2
Value chain					
Factory/CIF return	\$/litre	2.80	2.09	2.52	2.42
	\$m	137	506	1575	2218
Ex-factory/distributors costs	\$/litre	0.64	0.64	0.64	0.64
Wholesale price less excise	\$/litre	3.44	2.73	3.16	3.06
	\$m	168.1	661.4	1974.1	2803.6

		Light	Mid	Full-Strength	All
Wholesale value	\$/litre	3.99	3.89	4.92	4.60
	\$m	195.0	944.1	3070.7	4209.8
Retail price mark-up	\$/litre	2.30	2.25	2.84	2.66
	%	33.3	33.3	33.3	33.3
Retail price excluding GST	\$/litre	6.29	6.14	7.76	7.25
GST	\$/litre	0.63	0.61	0.78	0.73
Retail price (including GST)	\$/litre	6.92	6.76	8.54	7.98
Retail value	\$m	338	1638	5328	7 305

Source: ABS, ATO and CIE Calculations.

A.5 Value chain for imported on-licence beer in containers >48 litres 2019-20

		Light	Mid	Full-Strength	All
Consumption	ML	0	0	8	8
Government revenue					
Excisable alcohol	Litres	483	1 270	302 444	304 197
Actual alcohol content	Litres	888	1 964	395 138	397 990
Strength	%	2.52	3.25	4.90	4.88
Excise rate	\$/litre of alcohol	8.75	27.38	35.87	24.00
Excise	\$/litre	0.12	0.58	1.35	1.34
Base rate	%	1.15	1.15	1.15	1.15
Tax Revenue	\$m	0.0	0.0	10.8	10.9
Value chain					
Factory/CIF return	\$/litre	2.59	1.93	1.99	2.00
	\$m	0	0	16	16
Ex-factory/distributors costs	\$/litre	0.42	0.66	0.64	0.64
Wholesale price less excise	\$/litre	3.01	2.59	2.64	2.64
	\$m	0.1	0.2	21.2	21.5
Wholesale value	\$/litre	3.13	3.17	3.98	3.97
	\$m	0.1	0.2	32.1	32.4
Retail price mark-up	\$/litre	9.03	9.14	11.48	11.46
	%	67.5	67.5	67.5	67.5
Retail price excluding GST	\$/litre	12.16	12.31	15.47	15.43
GST	\$/litre	1.22	1.23	1.55	1.54
Retail price (including GST)	\$/litre	13.37	13.54	17.01	16.97
Retail value	\$m	0	1	137	138

Source: ABS, ATO and CIE Calculations.

A.6 Value chain for imported on-licence beer in containers <48 litres2019-20

		Light	Mid	Full-Strength	All
Consumption	ML	1	2	45	49
Government revenue					
Excisable alcohol	Litres	17591	48592	1555243	1621426
Actual alcohol content	Litres	30572	74216	2075130	2179918
Strength	%	2.71	3.33	4.59	4.49
Excise rate	\$/litre of alcohol	43.73	50.93	50.93	48.53
Excise	\$/litre	0.68	1.11	1.75	1.70
Base rate	%	1.15	1.15	1.15	1.15
Tax Revenue	\$m	0.8	2.5	79.2	82.5
Value chain					
Factory/CIF return	\$/litre	1.03	2.00	1.86	1.85
	\$m	1	4	84	90
Ex-factory/distributors costs	\$/litre	2.26	0.80	1.48	1.47
Wholesale price less excise	\$/litre	3.29	2.81	3.34	3.32
	\$m	3.7	6.3	151.1	161.1
Wholesale value	\$/litre	3.98	3.92	5.09	5.01
	\$m	4.5	8.7	230.3	243.5
Retail price mark-up	\$/litre	9.97	9.83	12.78	12.58
	%	65.0	65.0	65.0	65.0
Retail price excluding GST	\$/litre	13.95	13.75	17.87	17.59
GST	\$/litre	1.40	1.37	1.79	1.76
Retail price (including GST)	\$/litre	15.35	15.12	19.66	19.35
Retail value	\$m	17	34	889	940

Source: ABS, ATO and CIE Calculations.

A.7 Value chain for imported off-licence beer in containers <48 litres2019-20

		Light	Mid	Full-Strength	All
Consumption	ML	4	9	177	190
Government revenue					
Excisable alcohol	Litres	68875	190249	6089176	6348300
Actual alcohol content	Litres	119697	290576	8124663	8534936
Strength	%	2.71	3.33	4.59	4.49
Excise rate	\$/litre of alcohol	43.73	50.93	50.93	48.53
Excise	\$/litre	0.68	1.11	1.75	1.70
Base rate	%	1.15	1.15	1.15	1.15
Tax Revenue	\$m	3.0	9.7	310.1	322.8
Value chain					
Factory/CIF return	\$/litre	1.14	1.59	1.81	1.79

		Light	Mid	Full-Strength	All
	\$m	5	14	321	340
Ex-factory/distributors costs	\$/litre	2.26	0.80	1.48	1.47
Wholesale price less excise	\$/litre	3.40	2.39	3.29	3.25
	\$m	15.0	20.8	582.5	618.4
Wholesale value	\$/litre	4.08	3.50	5.04	4.95
	\$m	18.1	30.5	892.6	941.2
Retail price mark-up	\$/litre	2.36	2.02	2.91	2.86
	%	33.3	33.3	33.3	33.3
Retail price excluding GST	\$/litre	6.44	5.52	7.95	7.81
GST	\$/litre	0.64	0.55	0.80	0.78
Retail price (including GST)	\$/litre	7.09	6.07	8.75	8.59
Retail value	\$m	31	53	1549	1 633

Source: ABS, ATO and CIE Calculations.

B Sensitivity analysis

The model uses some key parameters to estimate the demand and supply response of the given scenarios. The parameters have been determined using previous literature with some adjustments from our side, the details of which are given in Appendix A.

To test the impact of changes in these parameters in the outputs, we conduct sensitivity tests on the values of the parameters.

Beer value chain

To systematically demonstrate the sensitivity of the key model elasticities, the impacts of a 15 per cent cut in beer excise option in 2023-24, relative to baseline, has been used as the reference case. The model outcomes have been represented in percentage change terms for ease of comparison.

Table B.1 shows the outcomes of varying the general price elasticity of demand for all alcohol:

- -0.4 represents the lower end of the spectrum of estimates from the literature — especially those studies based on historical data over the past 30 years
- -0.8 is at the high-end — and represents an optimistic outcome for the impact of reform of alcohol taxation.

B.1 Sensitivity analysis of general price elasticity of alcohol^a

		15% excise cut		50% draught excise cut	
		Headline	Sensitivity	Headline	Sensitivity
Price elasticity of all alcohol		-0.40	-0.80	-0.40	-0.80
Consumer demand					
Domestic beer	%	2.4	2.8	1.3	1.5
Imported beer	%	4.6	5.1	1.3	1.6
Excise Revenue					
Domestic beer	%	-12.8	-12.5	-6.4	-6.3
Imported beer	%	-11.1	-10.6	-0.2	0.1
GST Revenue					
Domestic beer	%	-0.5	0.4	-0.5	-0.1
Imported beer	%	-2.7	-2.1	0.2	0.5

		15% excise cut		50% draught excise cut	
		Headline	Sensitivity	Headline	Sensitivity
Brewing sector profitability					
Draught beer	%	28.6	33.3	71.6	74.2
Packaged beer	%	28.8	33.4	6.8	8.7

^a Change from baseline for a 10% beer excise cut for 2023-24.

Source: CIE.

The outcome of this analysis is that all variables except GST revenue and the brewing sector profitability appear to be reasonably insensitive to changes in general alcohol elasticity. This is because the increase in elasticity results in higher consumption response which offsets the loss in the revenue.

At the next level of consumption decision-making, and of direct interest to this report, is the own-price elasticity of all beer — across consumption by channel, draught and packaged, strength, and domestic and imported beer.

- The alternative values of the headline value of -0.78 tested were -0.58 and -0.99.
- Similar to the previous analysis, table B.2 also shows that the outcome for profitability appears to be more sensitive to this assumption than beer consumption or excise revenue.

B.2 Sensitivity analysis of own-price elasticity for beer^a

		Change from headline		
		Headline	Sensitivity 1	Sensitivity 2
Own-price elasticity of beer		-0.78	-0.58	-0.99
Consumer demand				
Domestic beer	%	1.65	1.38	1.86
Imported beer	%	3.0	2.6	3.3
Excise Revenue				
Domestic beer	%	-8.4	-8.7	-8.2
Imported beer	%	-7.3	-7.7	-7.0
GST Revenue				
Domestic beer	%	-0.3	-1.0	0.2
Imported beer	%	-1.8	-2.2	-1.4
Brewing sector profitability				
Draught beer	%	18.5	15.1	21.3
Packaged beer	%	18.5	15.2	21.1

^a Change from baseline for a 10% beer excise cut for 2023-24.

Source: CIE.

In the headline analysis, the substitution possibilities between beer consumption at on-licence and off-licence premises are assumed to be low. That is, consumers are choosing

venues on the basis of a range of other factors other than beer prices. Two alternative and higher values for these elasticities were tested — but still with modest impact on the results (see table B.3)

B.3 Sensitivity analysis of beer price elasticity by channel^a

		Change from headline		
		Headline	Sensitivity 1	Sensitivity 2
Average own-price elasticity of beer consumed on-licence and off-licence		-0.05	-0.25	-0.38
Consumer demand				
Domestic beer	%	1.65	1.21	1.71
Imported beer	%	3.0	3.0	3.1
Excise Revenue				
Domestic beer	%	-8.4	-8.8	-8.4
Imported beer	%	-7.3	-7.3	-7.1
GST Revenue				
Domestic beer	%	-0.3	-0.2	-0.3
Imported beer	%	-1.8	-1.9	-1.7
Brewing sector profitability				
Draught beer	%	18.5	13.8	16.7
Packaged beer	%	18.5	17.3	19.7

^a Change from baseline for a 10% beer excise cut for 2023-24.

Source: CIE.

In the headline analysis, the scope for substitution between draught and packed beer in on-licensed venues is assumed to be low to moderate. The alternatives tested in table B.4 tests the outcomes if this substitution is either zero or twice that of the headline analysis.

While aggregate consumption and excise revenue position remains insensitive, there is little impact on relative profitability of draught and packaged beer production, similar to the analysis above.

B.4 Sensitivity analysis of beer price elasticity between draught/packaged^a

		Change from headline		
		Headline	Sensitivity 1	Sensitivity 2
Average own-price elasticity between draught and packaged beer ^b		-0.25	0.00	-0.50
Consumer demand				
Domestic beer	%	1.65	1.6	1.67
Imported beer	%	3.0	2.8	3.1

		Change from headline		
		Headline	Sensitivity 1	Sensitivity 2
Excise Revenue				
Domestic beer	%	-8.4	-8.5	-8.4
Imported beer	%	-7.3	-7.5	-7.2
GST Revenue				
Domestic beer	%	-0.3	-0.3	-0.4
Imported beer	%	-1.8	-2.0	-1.6
Brewing sector profitability				
Draught beer	%	18.5	24.6	15.8
Packaged beer	%	18.5	16.7	19.3

^a Change from baseline for a 10% beer excise cut for 2023-24. ^b For consumption through on-licence and off-licence channels for all beer.

Source: CIE.

In the headline analysis, the average elasticity of supply for the brewing sectors is 1.0 with different cost structures for draught and packaged beer. In the sensitivity analysis, this response is halved and doubled (see table B.5). The results also appears to be quite insensitive to the supply response.

B.5 Sensitivity analysis of brewing supply elasticity ^a

		Change from headline		
		Headline	Sensitivity 1	Sensitivity 2
Supply elasticity of brewing industry		1	0.5	1.5
Consumer demand				
Domestic beer	%	1.65	1.66	1.65
Imported beer	%	3.0	3.0	3.0
Excise Revenue				
Domestic beer	%	-8.4	-8.4	-8.4
Imported beer	%	-7.3	-7.3	-7.3
GST Revenue				
Domestic beer	%	-0.3	-0.3	-0.3
Imported beer	%	-1.8	-1.8	-1.8
Brewing sector profitability				
Draught beer	%	18.5	18.6	18.5
Packaged beer	%	18.5	18.5	18.5

^a Change from baseline for a 10% beer excise cut for 2023-24.

Source: CIE.