Popularity of heavy, mid-strength and light beer in Australia from 2001-2013

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LA TROBE UNIVERSITY
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Executive summary

- Market research indicates that mid-strength beer is gaining in popularity, possibly indicating that beer drinkers may be trying to moderate their consumption.
- ABS statistics indicate that the increase in popularity of mid-strength beer might be at the expense of both low-alcohol beer and heavy beer.
- The aim of the current study is to use survey data from the National Drug Strategy Household Survey to examine shifts in popularity of low, mid and regular strength beer from 2001 to 2013.
- Heavy beer and mid-strength beer appeared to have fairly stable popularity over time while the popularity of light beer decreased. Between 2001 and 2013 mid-strength beer became more popular than light beer.
- This pattern seemed to hold for men and women except for a slight increase in popularity in mid-strength beer in women.
- In older drinkers, light beer was the most popular beer choice in 2001, but by 2013 it was heavy beer, while mid-strength beer rose to be as popular as light beer.
- The demographic make-up of drinkers of mid-strength and light beer changed little over time. Older drinkers were consistently more likely than younger drinkers to drink both mid-strength and light beer, but the strength of this relationship decreased over time for light beer.
- The decrease in light beer consumption may be due to older Australians not switching to light beer at the same rate as the generations before them.
- Those who switched to mid-strength or low alcohol beers were most likely to have switched from heavy beer.
- Those who drink mid-strength and light beer are less likely than other drinkers to participate in high-risk episodic drinking.
- The most common reasons for switching to lower-alcohol drinks among mid-strength and low alcohol beer drinkers were health, lifestyle and social reasons.
- Drink driving laws were also a popular reason for switching.
- The health benefits of reducing the strength of beer should be promoted to older Australians. There is evidence to suggest that older drinkers are not decreasing their consumption at the same rate as cohorts before them, so this could be a worthy avenue of health promotion.

Introduction

Apparent consumption of alcohol statistics released by the Australian Bureau of Statistics (ABS) indicate that, by volume of alcohol, mid-strength beer sales have been rising since 2001, while light beer and heavy beer sales have been decreasing (ABS, 2018). Brand revenue and market share data indicate that beer accounts for the largest portion of the Australian alcohol industry revenue (Ledovskikh, 2016). Of this revenue, heavy beer remains the leading strength of beer sold in Australia, while mid-strength beer is on the increase, and is expected to account for 13.7 per cent of industry revenue while light or low-strength beer only accounts for 3 per cent of industry revenue (Ledovskikh, 2016).

There are no consistent definitions of or terminology for light (or low-alcohol), mid-strength or heavy (or full strength or regular) beers. In this report, we will refer to these beers as light, mid-strength and heavy and will use the term "reduced alcohol beer" to refer to any beer that meets the criterion of light or mid-strength beer. The strengths of each beer type according to the ABS, Australian Taxation Office (ATO) and the Australian Institute of Health and Welfare (AIHW), along with the cut points for different excise rates on alcohol content, are shown in Appendix 1.

Associations in the literature have been made between heavy beer consumption and high incidences of risky drinking and harm. In an ecological study in Western Australia, researchers demonstrated that the proportion of alcohol consumed as heavy beer was associated with higher rates of alcohol-related harm at the regional level, while light beer consumption was associated with lower rates of harm (Stockwell et al., 1998). Also, harm related to beer consumption are positively correlated with strength (Srivastava & Zhao, 2010). The preferred beer strength for risky drinkers is heavy beer (Srivastava & Zhao 2010), although this may in part relate to demographic variation in beverage choice.

Men are more likely than women to consume all beer types, across all age demographics (Australian Insititute of Health and Welfare, 2014; Branch, White, & Hayman, 2006; King, Taylor, & Carroll, 2005). In 2008, it was reported that heavy beer's popularity is increasing over time for middle-aged and older respondents but not for younger respondents (Australian Institute of Health and Welfare, 2008).

The increase in popularity of mid-strength beer was reflected in the inclusion of three mid-strength beers in the 'Top 10 Australian Beers' by volume in 2012 (Tin, 2012). The same year also saw one light beer making the list (Tin, 2012). In 2000, Stockwell and Crosbie (2001) reported that low-alcohol beer had dramatic increases in sales over the previous two decades in Australia. They reported that ABS figures had shown a gradual substitution of reduced-alcohol beers in place of heavy beer over time. They also reported that, in 2000, reduced-alcohol beer made up 41 per cent of the beer market in some states. These statistics are based on dollars, rather than alcohol content. According to the ABS the proportion of alcohol sold in beer form that was mid-strength beer increased from 12 per cent to 15 per cent while light beer decreased from five per cent to three per cent of all alcohol in beer form sold from 2008/2009 to 2013/2014 (ABS, 2018).

Given the concurrent decrease in low alcohol and heavy beer, deciphering whether the increase in mid-strength beer consumption is due to drinkers switching from light or heavy beer is difficult. There are indications that many of those drinking reduced-alcohol beer are doing so while also still drinking heavy beer, for instance choosing reduced alcohol beer when they are driving, and drinking heavy beer when they are not. A survey of 278 respondents from Gippsland sporting clubs revealed 50 per cent consumed beer, with 43 per cent of beer drinkers only consuming full strength beer. Only one in five

reported that they only drank light beer, yet one in three consumed both full strength and light beer (Snow & Munro, 2000).

The current study aims to provide an update on trends in the popularity of beer types in Australia from 2001 to 2013, looking below the level of the aggregate data available from the ABS. Using data from the National Drug Strategy Household Survey (NDSHS), trends in the popularity of beer types by age and gender will be calculated, along with predictors of light and mid-strength beer drinking and reasons for switching to a lower strength beer.

Methods

SAMPLE

Results were based on data obtained from the NDSHS in 2001, 2004, 2007, 2010 and 2013 (AIHW 2002, 2005, 2008, 2011, 2014). At least 22,000 people participated in each wave of the cross-sectional survey. The majority of analyses are based on those who stated that they had consumed alcohol in the last 12 months and selected at least one drink type as usually consumed (see the bolded column in Table 1).

Table 1.
Sample sizes in National Drug Strategy Household Survey, 2001-2013

Year	N	Drinker rate (%)	Missing (%)	**N**	Mean number of drinks selected
2001	26451	83.8	2.9	**21675**	2.37
2004	28050	84.5	3.0	**23112**	2.42
2007	22680	83.1	3.7	**18206**	2.35
2010	25883	80.8	4.6	**20370**	2.64[a]
2013	23071	79.2	4.0	**17972**	2.50 [a]

[a] *The format of the question changed, slightly increasing the mean number of drinks selected.*

As can be seen in Table 1, the proportion of drinkers who did not respond to the question on preferred drink type did not exceed five per cent in any wave of the survey – these respondents were excluded from this analysis. As will be detailed below, the wording and formatting of the question on preferred drink type changed in 2010, and this appeared to alter the mean number of drinks that people selected. The change in wording will be reflected in full in all results, and marked with a broken line between 2010 and 2013 results in all figures.

SURVEY

The NDSHS is a detailed questionnaire on alcohol, tobacco and illicit drug use. In the 2001, 2004 and 2007 questionnaires, all respondents who had consumed alcohol were asked: *"What type of alcohol do you usually drink? (Mark all that apply)"*. The possible responses were Cask wine, Bottled wine, Heavy beer (greater than 4% Alcohol), Mid-strength beer (3% to 3.9% Alcohol), Low alcohol beer (1% to 2.9% Alcohol), Home-brewed beer, Pre-mixed spirits in a can, Bottled spirits and liqueurs, Pre-mixed spirits in a bottle, Cider, Fortified wine, port, vermouth, sherry, and Other.

In 2010 and 2013, respondents were asked: *"What type of alcohol is your main drink, the one you drink most often?"* They are then directed to mark one response only. They were then asked: *"What other types of alcohol do you usually drink?"* and directed to mark all that apply. From these two questions,

we are able to derive a list of drinks that people "usually" consume, and for 2010 and 2013, their main drink preference as well.

Respondents are designated into age groups of 15-29, 30-49 and 50+. Average drinks per day were calculated from total volume consumed over the past twelve months, which is derived from questions in a standard graduated frequency format where respondents are asked about how often they drink at a range of levels. These questions were also used to calculate the number of times respondents drank five or more drinks in an occasion and eleven or more drinks in an occasion. A `drink' is an Australian standard drink (10g ethanol).

In the two most recent surveys (2010 and 2013), respondents were asked about any harm reduction methods they had employed while drinking in the last twelve months, one of which was switching to low-alcohol drinks. They were then asked what their reasons are for doing this. In 2010 and 2013 respondents were also asked if they had switched their favourite drink in the past twelve months, and if they had then they were asked what their favourite drink was prior to this switch.

As can be seen in Table 1, the mean number of drinks increased between 2007 and 2010. Further analyses, not shown, indicated that this change in the survey question resulted in 10 per cent of respondents increasing the number of drink types they listed as usually consumed from one to two. Besides this, there were very few differences due to the change in the wording of questions. However, to help ensure that results are interpreted with this shift being taken into account, both favourite and usual drink types are shown in each figure, with dotted lines indicating the change in survey items. Furthermore, all interpretation of trends is done without any shifts between 2007 and 2010 taken into account.

ANALYSIS

All results presented are weighted to account for disproportionate representation in the sample on the grounds of age, sex, and geographic location compared to ABS statistics. Weighted proportions are shown for all figures. Logistic regression models predicting selection of mid-strength beer as a usual drink type in each wave of the survey were calculated. No bivariate models are presented, as all results are thought to be skewed by the higher number of drink types that younger and heavier drinkers select. In place of bivariate models, Adjusted Odds Ratios (AOR) models are presented which include the variable in question, adjusted for the number of drink types that each individual selected as usually consumed. This was to ensure that those people who selected more drink types, traditionally younger, heavier drinkers (Callinan & Ferris, 2012), did not skew the analysis. Multivariate models were adjusted for respondents' sociodemographic characteristics, alcohol consumption and drinking patterns, as well as the number of drinks that each respondent selected.

Results

The proportion of people who selected heavy, mid-strength or light beer in their list of drinks that they "usually" consume, from 2001 to 2013, is shown in Figure 1. In 2010 and 2013, respondents were asked to differentiate between their favourite drink (where they could only select one option), and any other drink that they usually consumed (where they could make as many selections as they wished) – the dotted lines represent the disconnection between trends before 2010 and trends after 2010. When counting the changes between 2007 and 2010, heavy beer and mid-strength beer appear to be slightly increasing in popularity over time, while light beer popularity is decreasing. However, when discounting the changes between 2007 and 2010 (which may be attributable to a change in the wording of the survey items), the popularity of regular-strength beer and mid-strength beer appears

to fluctuate but remain fairly stable over time, whereas light beer popularity consistently decreases over time. Between 2007 and 2010 mid-strength beer became more popular than light beer.

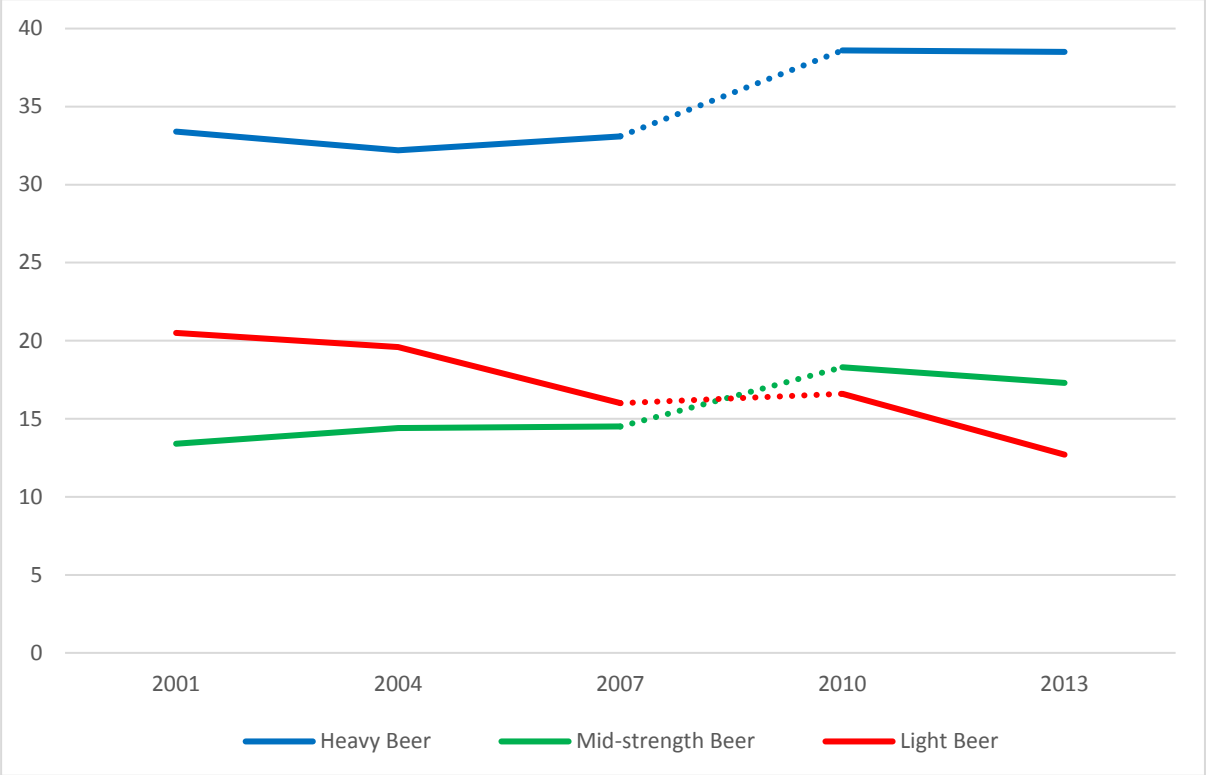

Figure 1. Trends in the prevalence (%) of low, mid and heavy beer drinkers among Australian respondents between 2001 and 2013.

N = 101,335. Dashed lines represent the break between two surveys where the wording of the question changed.

In Figure 2 and 3, the same analysis is presented for men and women respectively. Discounting the changes between 2007 and 2010 when the question wording changed, the popularity of regular-strength beer for men slightly increased over time, while mid-strength beer remained fairly steady in years that the question remained consistent, and light beer popularity decreased rapidly. When discounting the changes between 2007 and 2010, for women, the popularity of regular-strength beer and light beer decreased over time, while the popularity of mid-strength beer increased. Therefore, much of the increase in popularity of mid-strength beer is coming from women.

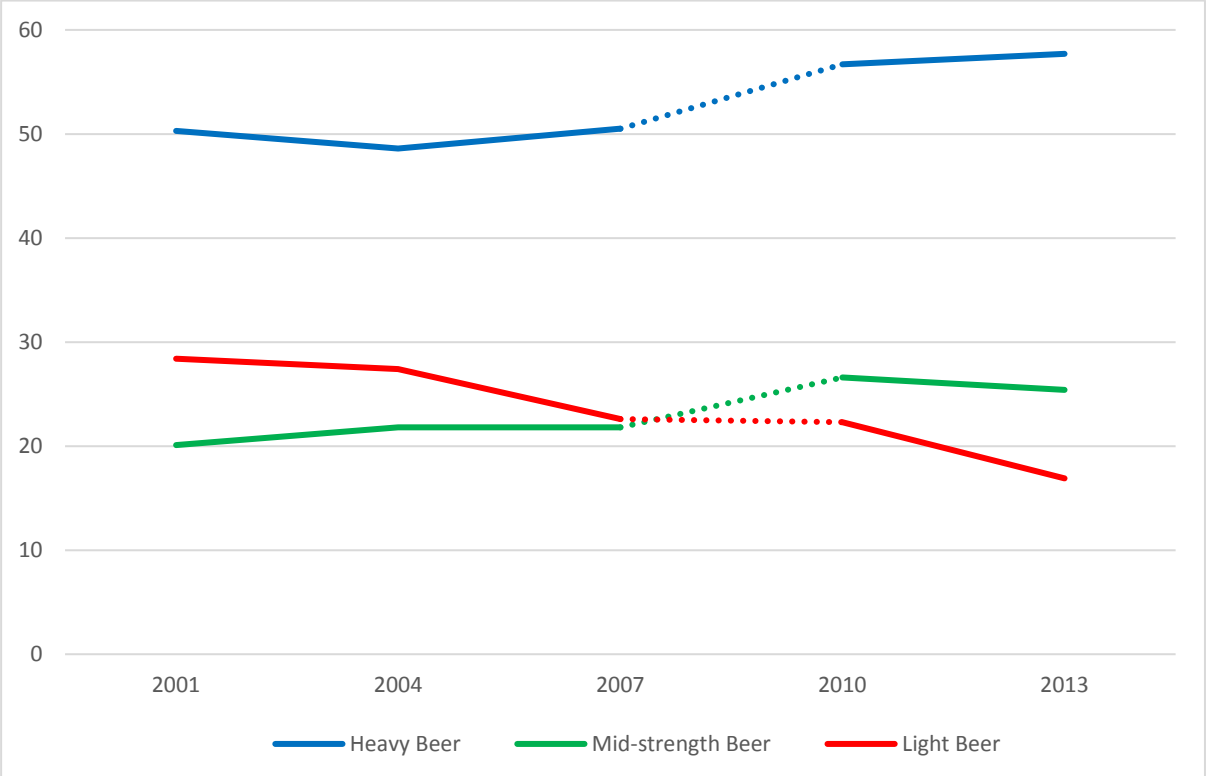

Figure 2. Trends in the prevalence (%) of low, mid and heavy beer drinkers among Australian male respondents between 2001 and 2013.

N=46,719 Dashed lines represent the break between two surveys where the wording of the question changed.

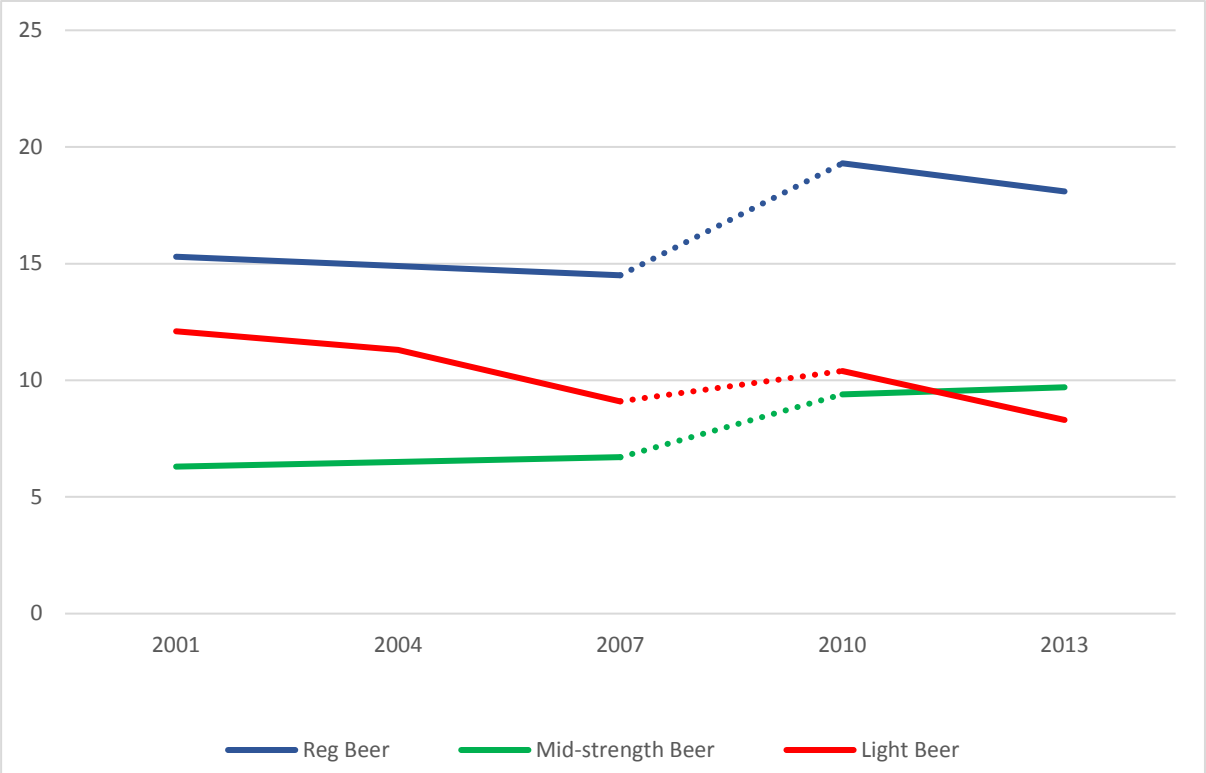

Figure 3. Trends in the prevalence (%) of low, mid and heavy beer drinkers among Australian female respondents between 2001 and 2013.

N= 54,616 Dashed lines represent the break between two surveys where the wording of the question changed.

Analyses were then split by age. In Figure 4, the popularity of the three different beer types for younger drinkers over time is shown. The relative popularity of each type of beer appears to remain fairly constant in this group. However, when discounting the changes between 2007 and 2010, the popularity of heavy and light beer appears to be decreasing over time among this group, while the popularity of mid-strength beer is fluctuating but remaining fairly stable.

In Figure 5, the relative popularity of each beer type among middle-aged respondents is shown. A rise in the popularity of heavy beer and a decrease in the popularity of light beer can be seen, both when counting and when discounting the changes observed between 2007 and 2010. Among middle-aged respondents, mid-strength beer popularity is fairly stable over time (when discounting the change between 2007 and 2010). While light beer was more popular than mid-strength beer in 2001, this reversed by 2013.

Finally, in Figure 6, the relative popularity of each beer type among older respondents is shown. This is the age group in which light beer has decreased in popularity the most. In 2001, light beer was the most popular beer type, but by 2013 heavy beer was more popular. Mid-strength beer also increased in popularity in this group, both when counting and when discounting the changes observed between 2007 and 2010.

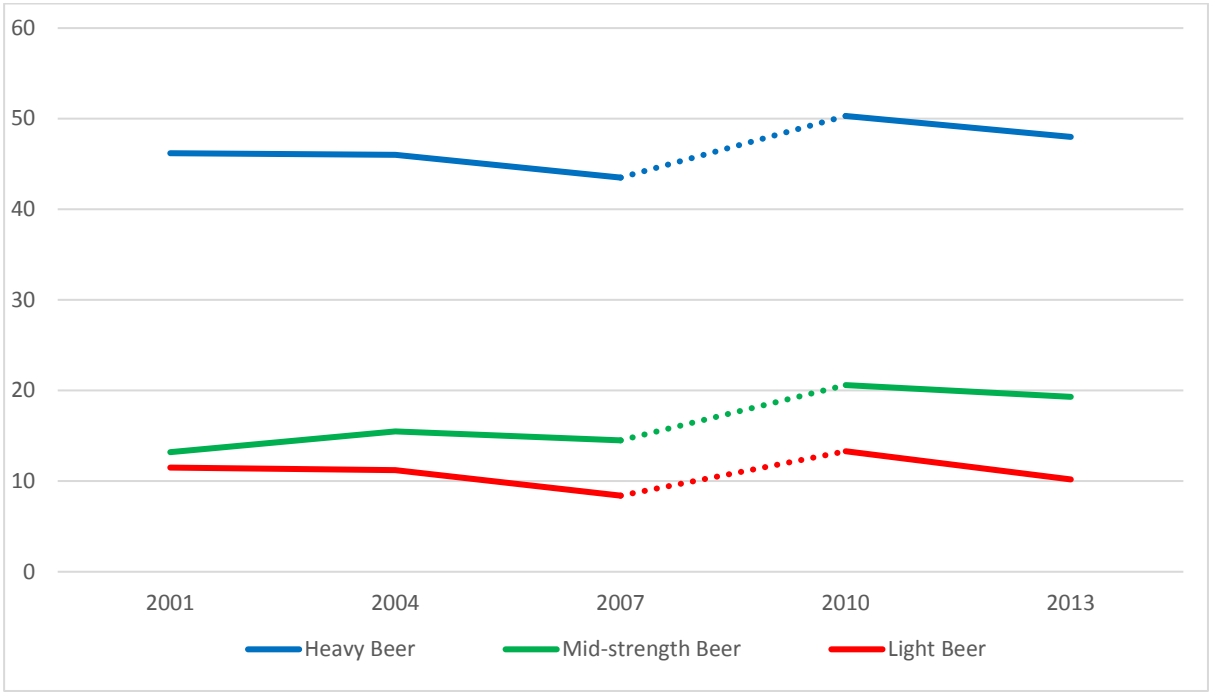

Figure 4. Trends in the prevalence (%) of beer drinkers among younger respondents (15-29) between 2001 and 2013.

N=20,837; Dashed lines represent the break between two surveys where the wording of the question changed.

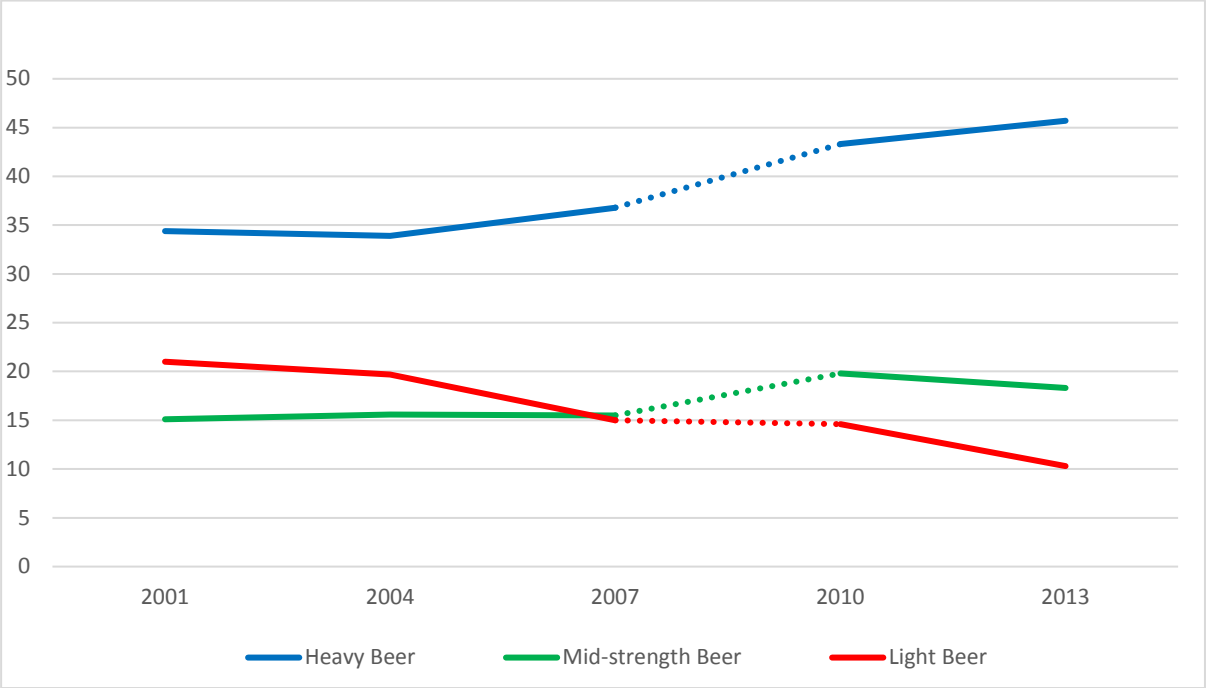

Figure 5. Trends in the prevalence (%) of beer drinkers among middle-aged respondents (30-49) between 2001 and 2013.

N=38,532; Dashed lines represent the break between two surveys where the wording of the question changed.

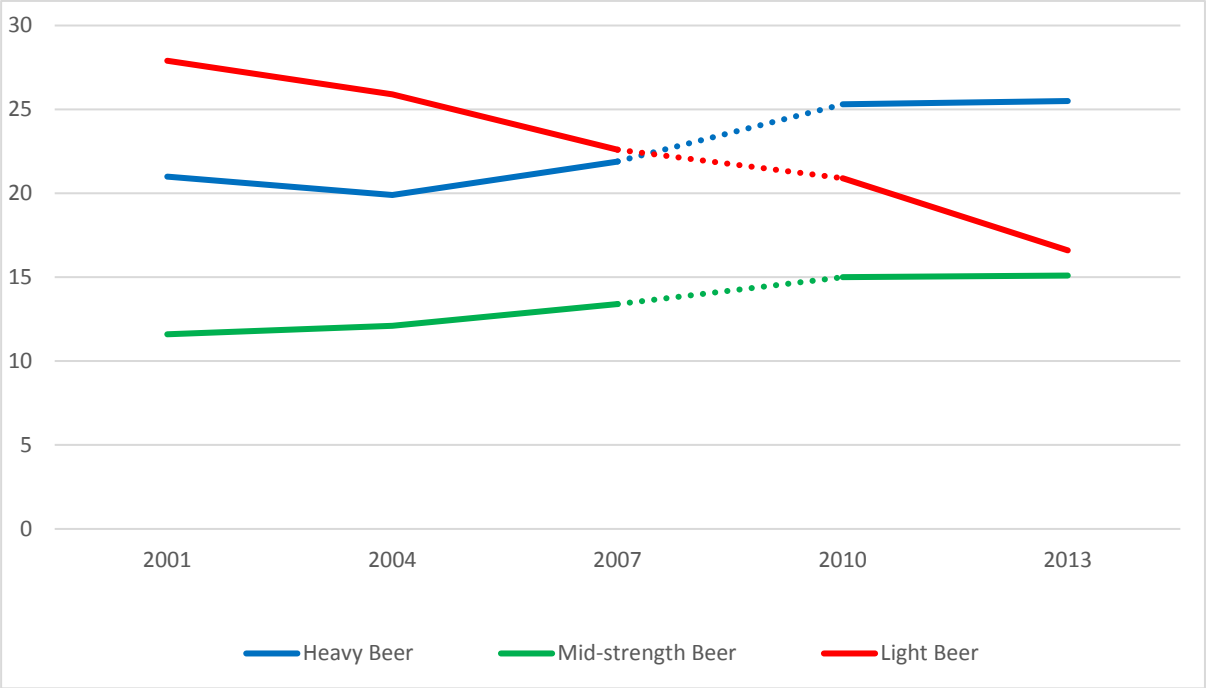

Figure 6. Trends in the prevalence (%) of beer drinkers among older respondents (aged 50+) between 2001 and 2013.

N=41,966; Dashed lines represent the break between two surveys where the wording of the question changed.

In order to ascertain if the demographics and consumption patterns of heavy, mid-strength and light beer drinkers have changed over time, logistic regression models predicting heavy, mid-strength and light beer consumption were calculated and shown in Table 2, 3 and 4 respectively. In the first column, each variable is entered separately, adjusting for the number of drinks that each individual selected as usually consumed. Multivariate models were also generated. To avoid multicollinearity, multivariate models did not include five plus or eleven plus drinking occasions as a predictor, but they did include the number of types of drinks that each person selected in order to control for the habits of those people who consume a variety of drink types, rather than mid-strength beer in particular.

In 2001, both middle-aged and older drinkers were less likely than younger drinkers to usually consume heavy beer, however by 2013 middle-aged drinkers were more likely than younger drinkers to do so. There did appear to be a downward trend in the amount consumed by heavy beer drinkers in the adjusted models, but this was less apparent in the multivariate models. However, it is possible that this was because of the changing demographics of this population.

Men were consistently more likely to be beer drinkers than women. Middle-aged and older respondents were more likely than younger drinkers to select mid-strength beer as a usual drink type in each wave from 2001 to 2013. Respondents born outside of Australia were less likely to be mid-strength beer drinkers in 2010 and 2013, but only in the adjusted model. Mid-strength beer drinkers consumed overall, a similar amount to those who prefer other drink types. Mid-strength beer drinkers were more likely than other drinkers to consume five plus or eleven plus drinks in the adjusted and multivariate models.

Older and middle-aged drinkers were more likely to be light beer drinkers than younger drinkers – particularly older drinkers, who were five times more likely than younger drinkers in 2001 (decreasing down to four times more likely in 2013) to be light beer drinkers than younger drinkers. The strength of the relationship between gender and light beer drinking did appear to decrease over time as well, with men moving from nearly three times more likely to a little over two times more likely to drink light beer than women from 2001 to 2013. Light beer drinkers consistently drank less than other drinkers from 2001 to 2013. There does appear to be an increasing, albeit weak, relationship between being born outside of Australia and drinking light beer over time (multivariate OR = 0.87 in 2001 vs. 1.16 in 2013). Given that the number of light beer drinkers is decreasing, this might indicate that those failing to switch over to light beer as they age are Australian born. In the AOR model, light beer drinkers are less likely than other beer drinkers to drink eleven or more drinks in an occasion.

Table 2. Differentiation of those who usually drink heavy beer from other drinkers, on sociodemographic characteristics, alcohol consumption and drinking patterns: adjusted odds ratios and multivariate models on triennial surveys between 2001 and 2013.

		2001		2004		2007		2010		2013	
		AOR	MV	AOR	MV	AOR	MV	AOR	MV	AOR	MV
Age	Young	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Mid	0.73***	0.68***	0.72***	0.67***	0.91	0.88*	1.08	1.02	1.34***	1.27***
	Old	0.41***	0.32***	0.38***	0.30***	0.46***	0.37***	0.60***	0.46***	0.66***	0.50***
Sex	Male	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Female	0.16***	0.16***	0.17***	0.17***	0.15***	0.15***	0.15***	0.16***	0.14***	0.14***
COB	Aus	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Other	0.90*	1.01	0.91	0.94	1.01	1.08	1.04	1.08	1.16***	1.19***
Average drinks per day		1.28***	1.19***	1.27***	1.18***	1.25***	1.19***	1.23***	1.15***	1.22***	1.15***
Five plus occs	Never	1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)	
	< Monthly	1.75***		1.85***		1.54***		1.62***		1.72***	
	Monthly- weekly	3.38***		3.21***		2.79***		2.89***		2.74***	
	Weekly +	7.44***		7.30***		6.27***		5.31***		4.79***	
Eleven plus occs	Never	1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)	
	< Monthly	3.37***		2.92***		3.19***		2.48***		2.98***	
	Monthly- weekly	4.90***		4.49***		3.98***		3.32***		3.53***	
	Weekly +	6.30***		6.76***		5.13***		4.41***		4.28***	

N = 101,335. AOR: Adjusted Odds Ratio adjusted for the number of drink types that each individual selected. MV: Multivariate model: all listed variables and the number of drinks selected included in the model.
Occs: drinking occasions – the number of occasions per year where this number of drinks were consumed.

Table 3. Differentiation of those who usually drink mid-strength beer from other drinkers, on sociodemographic characteristics, alcohol consumption and drinking patterns: adjusted odds ratios and multivariate models on triennial surveys between 2001 and 2013.

		2001		2004		2007		2010		2013	
		AOR	MV	AOR	MV	AOR	MV	AOR	MV	AOR	MV
Age	Young	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Mid	1.55**	1.50***	1.35***	1.29***	1.44***	1.41***	1.61***	1.53***	1.49***	1.44***
	Old	1.38***	1.26**	1.21**	1.11	1.45***	1.34***	1.62***	1.44***	1.60***	1.49***
Sex	Male	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Female	0.27***	0.28***	0.26***	0.26***	0.27***	0.27***	0.28***	0.28***	0.30***	0.30***
COB	Aus	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Other	1.10	0.99	1.11	1.01	1.06	0.95	1.20**	1.11	1.13*	1.06
Average drinks per day		1.03**	0.99	1.04***	0.99	1.02	0.98	1.03**	0.99	1.04***	1.00
Five plus occs	Never	1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)	
	< Monthly	1.15		1.17		1.11		1.14		1.10	
	Monthly- weekly	1.33***		1.45***		1.30***		1.13		1.09	
	Weekly +	1.37***		1.33***		1.30***		1.20**		1.16*	
Eleven plus occs	Never	1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)	
	< Monthly	1.19		1.35***		1.40***		1.18		1.06	
	Monthly- weekly	1.23*		1.25**		1.04		0.99		1.01	
	Weekly +	0.70*		0.94		0.90		0.77		0.95	

N = 101,335. AOR: Adjusted Odds Ratio adjusted for the number of drink types that each individual selected. MV: Multivariate model: all listed variables and the number of drinks selected included in the model. [a] Occs: drinking occasions – the number of occasions per year where this number of drinks were consumed.

Table 4. Differentiation of those who usually drink light beer from other drinkers, on sociodemographic characteristics, alcohol consumption and drinking patterns: adjusted odds ratios and multivariate models on triennial surveys between 2001 and 2013.

		2001		2004		2007		2010		2013	
		AOR	MV	AOR	MV	AOR	MV	AOR	MV	AOR	MV
Age	Young	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Mid	2.92***	2.79***	2.96***	2.79***	2.79***	2.67***	1.97***	1.91***	1.71***	1.67***
	Old	5.36***	5.29***	5.44***	5.09***	5.94***	5.51***	4.71***	4.45***	4.35***	4.19***
Sex	Male	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Female	0.36***	0.30***	0.36***	0.30***	0.37***	0.30***	0.44***	0.38***	0.50***	0.46***
COB	Australia	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Other	1.21***	0.87**	1.21***	0.91	1.23***	0.92	1.24***	0.97	1.35***	1.16*
Average drinks per day		0.91***	0.85***	0.88***	0.82***	0.86***	0.80***	0.89***	0.84***	0.89***	0.85***
Five plus Occs[a]	Never	1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)	
	< Monthly	0.82**		0.79***		0.79**		0.64***		0.54***	
	Monthly- weekly	0.60***		0.62***		0.46***		0.48***		0.43***	
	Weekly +	0.41***		0.32***		0.28***		0.27***		0.30***	
Eleven plus Occs[a]	Never	1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)		1 (Ref)	
	< Monthly	0.56***		0.55***		0.54***		0.54***		0.50***	
	Monthly- weekly	0.48***		0.45***		0.31***		0.39***		0.40***	
	Weekly +	0.27***		0.15***		0.14***		0.25***		0.30***	

N = 101,335. AOR: Adjusted Odds Ratio adjusted for the number of drink types that each individual selected. MV: Multivariate model: all listed variables and the number of drinks selected included in the model. [a] [a] Occs: drinking occasions – the number of occasions per year where this number of drinks were consumed.

The percentage of light and mid-strength beer drinkers who report various reasons for switching to low-alcohol drinks in the last twelve months is shown in Table 5. Figures in bold indicate that respondents who drink that beer type were significantly more likely to select this reason for switching than other drinkers. Health is the most popular reason, but not higher for mid-strength and light beer drinkers than anyone else. Mid-strength beer drinkers are more likely than other drinkers to report switching to low-alcohol drinks for lifestyle and driving reasons, while light beer drinkers also reported driving as a reason for switching more than other drinkers, along with peer pressure – although the total number of respondents reporting peer pressure as a reason was very low.

Table 5.
Reasons for switching to low-alcohol drinks for mid-strength and light beer drinkers who stated they switched in the last twelve months.

Reason	Light (%)	Mid (%)
Health	60.3	58.9
Lifestyle	40.8	**49.4**
Social	44.6	43.6
Pregnant	2.8	2.8
Taste	31.7	33.6
Driving	**33.0**	**26.2**
Financial	14.9	15.9
Adult pressure	1.3	3.1
Peer pressure	**1.4**	0.8
Price	8.3	9.1
Other	4.1	4.1
N	706	723

Responses from 2010 and 2013 surveys combined. Figures in bold indicate that those who selected mid/strength or low alcohol beer, column dependent, were more likely to select this option than those who do not drink mid-strength beer at a $p < .05$ using a chi-square analysis

In the last two surveys, aside from being able to differentiate between their favourite and other usually consumed beverage types, respondents can also state if they switched their favourite drink choice in the last twelve months and what they switched from. The previous favourite drink choice among those who selected any of the beers as their favourite drink type in 2010 and 2013 is shown in Table 6. Nearly half of all people who now prefer mid-strength beer and over a third of those who prefer light beer switched from heavy beer. Twenty per cent of light beer drinkers and fifteen per cent of mid-strength beer drinkers switched from bottled wine, and twelve per cent and fifteen per cent respectively switched from premixed spirits. Meanwhile, those who switched *to* heavy beer usually switched from spirits (34 per cent from pre-mix and 30 per cent from bottled spirits).

Table 6.

Previous favourite drink choice among those who switched to light, mid-strength or heavy beer as their favourite drink in the last twelve months.

Drink	Light %	Mid-strength %	Heavy %
Heavy beer	36.5	45.9	-
Mid-strength beer	14.1	-	3.7
Light beer	-	4.0	2.2
Home brew	0.6	1.5	1.2
Pre-mix spirits	12.3	15.1	34.4
Cask Wine	4.1	2.5	3.3
Bottled Wine	20.5	14.9	19.1
Bottled Spirits	7.4	12.6	30.3
Cider	0.8	2.5	4.1
Fortified Wine, Port, Vermouth	0.9	1.1	0.3
Other	2.7	0	1.4
N	110	194	399

Responses from 2010 and 2013 surveys combined.

Finally, in Table 7 the proportion of regular, mid-strength and low-alcohol beer drinkers who drink the other beer types is shown. Half of all people who drink mid-strength beer also drink light or heavy beer, in particular, 46 per cent drink heavy beer. The results were similar for low alcohol beer drinkers. Conversely, three-quarters of those who drink heavy beer did not drink mid-strength or low-alcohol beer.

Table 7.

Percentage of people who drink each beer type who also drink other types of beer

	Regular (%)	Mid-strength (%)	Light (%)
Light	3.6	3.9	-
Mid-strength	10.8	-	5.3
Regular	-	24	11
Both	9.9	22.1	30.1
Neither	75.6	50	53.6
N	6173	2981	2361

Responses from 2010 and 2013 surveys combined. Both = consumes both other types of beer (that is, all three beer types). Neither = Consumes neither of the other beer types (that is, only the beer type listed at the column header).

Discussion

ABS statistics indicate that mid-strength beer consumption is increasing, while both light and heavy beer consumption is decreasing (ABS, 2018). Survey data from the current study indicate that the popularity of mid-strength beer has remained fairly steady, while light beer's popularity has decreased. The popularity of mid-strength beer has increased in women, however, light beer's popularity decreased rapidly among both genders over time. Unlike older and middle-aged respondents, mid-strength beer was already slightly more popular than light beer among younger Australians in 2001. In contrast, light beer was the most popular beer type among older Australians in 2001, and then steadily decreased in popularity up to 2013. Meanwhile, the relative popularity of heavy beer has increased, so that heavy beer was the most popular beer type in all three age groups in 2010 and 2013.

It is important to note that these findings contradict the ABS Apparent Alcohol Consumption statistics, which indicate that heavy beer consumption is declining, from 4 litres in 2001-2 to 3.3 litres in 2013-4 (ABS, 2018). This is most likely due to the survey asking about which beverage type was usually consumed, not the amount of beer that each person consumed. As such, it seems that the decrease in heavy beer consumption in Australia is not due to fewer people consuming it, but due to those who do consume it consuming less. However, as our regression models indicate, they are not drinking less overall; rather, they are drinking less beer. Meanwhile, the decrease in light beer's popularity does appear to be due to a shift in the number of people drinking it.

While the proportion of Australians drinking light and mid-strength beer has shifted from 2001 to 2013, the demographic make-up of these groups has shifted very little. This analysis finds some evidence to suggest that the typical age of light beer drinkers may be slowly decreasing and that the proportion of light beer drinkers that are female may be slowly increasing. However, light beer drinkers remain predominantly male. Furthermore, the drinking habits of those who usually consume both of these beer types has not appeared to change much over time. Both groups are less likely to consume eleven or more drinks in an occasion. Mid-strength beer drinkers do not seem to differ from other drinkers in terms of the total amount they drink, while light beer drinkers drink less. There are some indications that light beer drinkers are increasingly made up of people born outside of Australia.

Among those who stated in 2010 or 2013 that they had switched to drinking mid-strength or low-alcohol beer as their main drink in the past twelve months, heavy beer was the most popular beer type they had switched from. The second most likely drink type to switch from for low alcohol beer drinkers was mid-strength beer, and for mid-strength beer it was bottled wine. This finding that people tend to decrease the strength of their beer type over time matches trends in age and does not necessarily contradict ABS findings, or those in this report, that suggest that the increase in popularity of mid-strength beer is at the expense of low-alcohol beer. Instead what we may be seeing here is a reduction in people making this switch, or alternatively delaying it, where those aged 50 and over are switching to a light beer later in life than previous cohorts did, particularly those born in Australia. This is noteworthy in the context of a range of findings suggesting that, while young people's alcohol consumption is declining, such reductions are not being found in older drinkers (Livingston, 2015). Furthermore, alcohol-related ambulance callouts are now most likely to be for men in their 50s (Lloyd et al., 2005). It is possible that previous generations were switching to lower alcohol beers as a harm reduction measure and that current older drinkers, by not making the same switch, are exposing themselves to increased harm from alcohol as they age.

HEALTH PROMOTION AND POLICY IMPLICATIONS

Those who do make the switch to lower-alcohol products are most likely to do so for their health. Health promotion campaigns aimed at reducing harm in older drinkers may benefit from a message of moderation or switching to a lower-alcohol beer type in the future. Aside from health, one of the most popular reasons for switching to mid-strength beer was lifestyle – drinking mid-strength beer may be seen as conducive to more social drinking without negative consequences. It is also worth noting that some people switching to lower-alcohol beer cited price as a reason. So, increases in tax rates for stronger beers could possibly encourage some drinkers to switch to lower-alcohol beer types. However, generally, younger drinkers are thought to be more price responsive than older drinkers (Chaloupka, Grossman, & Saffer, 2002; Kuo, Heeb, Gmel, & Rehm, 2003). Finally, drink driving laws were also a popular reason for switching to lower alcohol beers, this could be used in health promotion campaigns encouraging drinkers to make this switch in the future.

LIMITATIONS

The results presented in this report have a number of limitations that need to be taken into account when interpreting results. Firstly, as detailed in the methodology, there was a change in the wording of the questions on favourite drink type between 2007 and 2010; this change has been reflected in the graphical presentation and interpretation of the results. Secondly, the question on preferred drink types measures the proportion of people who express a preference for a particular drink type, not the proportion of alcohol consumed. Finally, these results have all the limitations inherent to self-report surveys, including social desirability and typically relatively low Australian response rates. However, on the latter point, there are indications that the NDSHS does reflect shifts in consumption also found in more objective measures (Livingston & Dietze, 2016).

Conclusion

Survey data presented here paints a slightly different, albeit theoretically compatible, picture on the relative popularity of beer types over time. Light beer is decreasing in both popularity and the amount consumed, while mid-strength beer consumption is increasing despite a fairly steady proportion of drinkers reporting that they drink it. A similarly steady proportion of drinkers reporting heavy beer consumption has been found despite a decrease in the proportion of sales. The most likely explanation for these findings is that older drinkers are failing to switch to light beer as they age at the same rate as generations before them, leading to a decrease in the popularity of light beer and a decrease in the total amount of heavy beer consumed. Health promotion efforts aimed at reducing alcohol-related harm in older drinkers could benefit from a focus on switching to reduced-alcohol beer. Furthermore, tax policies that encourage consumption of lower alcohol beer could reduce rates of harms from alcohol.

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Appendix 1

Table 1.
Range of strengths (% alcohol) of light, mid-strength and heavy beer from the Australian Tax Office (ATO), National Drug Strategy Household Survey (NDSHS) and Australian Bureau of Statistics (ABS), and associated excise rates.

		Min	Max
ABS (2018)	Light[1]	>1.15	≤3
	Mid-strength	>3	≤3.5
	Heavy[2]	>3.5	-
ATO (2017)	Light	0	<3
	Mid-strength	3	<3.5
	Heavy	3.5	6
NDSHS (2014)	Light	1	2.9
	Mid-strength	3	3.9
	Heavy	4	6
Excise (on/off premise)	$0/$0	0	1.15
	$8.34/$41.7	1.15	3
	$26.12/$48.57	3	3.5
	$34.21/$48.57	3.5	6

[1] and beer brewed on commercial premises for non-commercial purposes with an alcohol volume <3.0%; [2] and beer brewed on commercial premises for non-commercial purposes with an alcohol volume >3.0%. Table headers are also acting as sources, full references found in the reference list.

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