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Very cheap drinking in New Zealand: some alcohol is more affordable than bottled water and nearly as cheap as milk

There is a wealth of scientific evidence that policies affecting alcohol price are effective in influencing alcohol consumption, and hence reducing adverse outcomes due to hazardous alcohol use.[1,2]

Lowered alcohol prices encourage consumption and can increase alcohol-related harms, as was found in Finland, where a decrease in excise tax in 2004 led to increased deaths from alcohol-related causes.[3] Policies such as raising excise taxes, minimum pricing, incentives for low alcohol beverages/taxes on strength of alcohol and restriction on below cost sales and price based promotions can reduce consumption.

The public and taxpayers should particularly welcome such measures to reduce alcohol-related harm given that some of the interventions may be cost saving to government (e.g., alcohol taxation and advertising restrictions)[4,5] or at least be relatively cost-effective.[6]

This issue is pertinent for New Zealand, as these policies can be effective tools targeting the binge drinking culture that is placing strain on the health care system (especially emergency departments), the justice system and the private lives of many New Zealanders who live with the impacts of hazardous drinking.

Controls on price are particularly effective in targeting heavy drinkers, and youth, but are unlikely to significantly impact on the relatively 'responsible' drinker who consumes a glass or two of wine with dinner.[7]

Methods—To better understand changes in the drinking culture in New Zealand over time, and how price could be an effective policy strategy in this country, we investigated temporal trends in alcohol affordability, using data collected by Statistics New Zealand (SNZ) for the Consumers Price Index (CPI). We also considered data on average hourly earnings from the New Zealand Income Survey, which collects detailed annual information on gross income from working age New Zealanders.[8] For the CPI data, prices are collected monthly for alcoholic beverages. Data collectors from SNZ personally gather alcoholic beverage prices from outlets within the 15 main urban areas during a week-long period that ends around the mid-point of each month.[9]

For comparison data on discounted beverage prices, we accessed a specific website which documents specials and discounts on alcohol offered from outlets throughout New Zealand (www.lips.co.nz), on 20 September, 2 October, and 9 October 2010.

The price per unit was calculated using the formula: "volume of container (litres) × % alcohol by volume (mL/100mL) × 0.789 = number of standard drinks" (obtained from a NZ Government website: http://www.nzfsa.govt.nz/consumers/food-safety-topics/food-processing-labelling/food-labelling/fact-sheets/fs-2003-04-alcohol-labelling.htm).

Results—The data show that the average price of alcohol has increased over the past ten years (Table 1) and the highest increase in percentage terms has been for a glass of beer at a licensed premise and for cask/white wine.

For comparison, the price of 2 litres of milk has also increased over this time, proportionately a little more than a litre of whisky or a dozen bottles of beer.

Table 1. Average cost ($) of alcohol, milk and bottled water in New Zealand 1999–2010

Year	Whisky (liquor store, 1L*)	Cask / white wine (supermarket & liquor store, 3L, 30sd*)	Beer—1 dozen bottles (supermarket & liquor store, ~3.96L, 12sd*)	Beer glass (licensed premises, 0.4L, 1.3sd*)	Milk—standard homogenised (2L*)	Bottled water, (0.75L*)
1999	34.87	16.03	16.34	3.16	2.64	NA
2000	35.41	16.24	16.53	3.21	2.67	NA
2001	35.92	16.73	16.68	3.33	2.91	NA
2002	37.05	17.03	17.31	3.47	3.02	NA
2003	36.94	17.41	17.65	3.62	2.80	NA
2004	37.34	18.17	18.31	3.80	2.87	NA
2005	37.68	18.44	18.52	3.98	3.02	NA
2006	38.28	18.71	18.33	4.15	2.91	1.81
2007	39.41	19.39	18.43	4.33	2.80	1.85
2008	40.58	20.16	18.02	4.57	3.27	1.88
2009	42.01	20.83	18.98	4.84	3.22	2.00
2010	42.94	21.80	19.50	4.95	3.41	2.02
Overall % change (1999-2010)	**18.8%**	**26.5%**	**16.2%**	**35.1%**	**22.8%**	**10.4% (2006-2010)**

*Average over the quarters; sd = standard drink; NA = data not available for these years

Although the price of alcohol has increased over the past decade, the affordability of alcohol has actually *increased*, due to increases in average hourly earnings outstripping the percentage increases in alcohol prices. This is shown in Table 2 and Figure 1, which presents the minutes taken to earn sufficient alcohol to reach the legal blood alcohol limit (currently a blood alcohol limit of 80mg/dL), based on a conservative value of four standard drinks in each alcohol category for an average individual adult.

For example, in 1999, it would have taken a working person 16.4 minutes to earn enough money (if earning the average hourly wage) to buy sufficient whisky to become intoxicated, but in 2009, it would have only taken 13.2 minutes to achieve this.

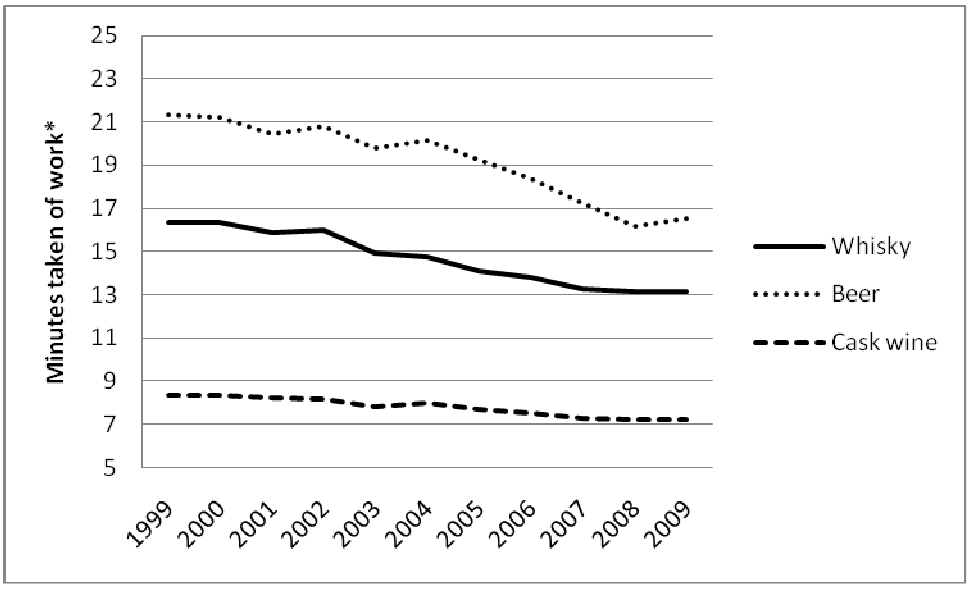
Of particular note is the absolute affordability of cask wine—if this type of alcohol is used to achieve intoxication, it is particularly cheap, costing only $2.78 for an average working adult to be legally unfit to drive in 2009.

Table 2 Alcohol affordability in New Zealand over time (1999–2009)

Year	Average hourly earnings (gross)*	Minutes taken to earn enough wages to pay for sufficient alcohol to reach the legal limit for intoxicated driving** ($ needed)					
		Whisky		Beer		Cask wine	
	$	Minutes	$	Minutes	$	Minutes	$
1999	15.33	16.38	(4.18)	21.32	(5.45)	8.36	(2.14)
2000	15.60	16.34	(4.25)	21.19	(5.51)	8.33	(2.17)
2001	16.30	15.87	(4.31)	20.47	(5.56)	8.21	(2.23)
2002	16.65	16.02	(4.45)	20.79	(5.77)	8.18	(2.27)
2003	17.82	14.93	(4.43)	19.81	(5.88)	7.81	(2.32)
2004	18.19	14.78	(4.48)	20.13	(6.10)	7.99	(2.42)
2005	19.24	14.10	(4.52)	19.25	(6.17)	7.67	(2.46)
2006	19.99	13.79	(4.59)	18.34	(6.11)	7.49	(2.49)
2007	21.35	13.29	(4.73)	17.27	(6.14)	7.27	(2.59)
2008	22.26	13.13	(4.87)	16.19	(6.01)	7.24	(2.69)
2009	22.98	13.16	(5.04)	16.52	(6.33)	7.25	(2.78)

* New Zealand Income Survey; **for the average person 4 standard units (120ml of whisky, 4 glasses (4 x 100ml) of cask wine at 12.5% alcohol, 4 x 330ml beer bottles at 4% alcohol).

Figure 1. Time trends in alcohol affordability in New Zealand (data as per Table 2)



* Minutes taken to earn enough wages (on the average wage) to pay for sufficient alcohol to reach the legal limit for intoxicated driving (see Table 2 for further details).

Discussion—These results indicate how alcohol has become more affordable in this last decade and it is probably the cheapest recreational drug on the New Zealand market (though we do not have good data on average cannabis prices). However, our results for average affordability are somewhat simplistic in that we considered "gross hourly earnings" and New Zealand adults are subject to variable income tax rates

(albeit with relatively little change in tax structures over this last decade). So it is likely that a few extra minutes would need to be added to the results in Table 2 for the "average" working adult to purchase the "average" priced beverage to reach intoxication levels.

But countering this is that price-sensitive consumers (especially youth) can easily purchase alcohol at way below the average prices in Table 2. For example, our searches (using the website www.lips.co.nz, see *Methods*) showed that 3 litres of white cask wine can be bought for as little as $16.99 (62c per standard drink at 11.5% alcohol; other specials on 13% alcohol content cask wine translate to 63c per standard drink) and a standard 750ml bottle of wine can sometimes be bought for $5 (65c per drink). Similarly, a litre of spirits can be bought for $25 (in two for $50 specials, 78c per standard drink for spirits containing 40% alcohol) and 12 bottles of 5% beer for $9.99 (64c per standard drink).

By way of comparison, a glass of milk (250ml) costs 43c using the average 2010 CPI prices and a glass of bottled water costs 67c. Thus a glass of wine or a bottle of beer can cost not much more than a glass of milk, and less than a glass of bottled water. Ready-to-drink (RTD) alcohol drinks, premixed with soda, and highly laden with sugar, flavours and sometimes caffeine, are a more recent phenomenon that have not been monitored by SNZ in their data collection for the CPI. These commonly retail at around $1 to $1.50 per standard drink although discounts occasionally offer these at less than a dollar per unit of alcohol.

Given this background we favour a situation where the negative externalities of alcohol use (to public health and society) are better reflected through higher alcohol prices (via taxation). We certainly do not need a situation where the affordability of alcohol keeps increasing and is as affordable as bottled water and nearly as affordable as milk. We favour government action on raising alcohol excise tax, as recommended by the Law Commission's Review document.[10] Consideration should also be given to:

- Bans on below cost discounts and any marketing around beverage pricing;
- Having a minimum price per alcohol unit (which would help address the issue of relatively cheap cask wine and RTDs). But we acknowledge that much higher alcohol taxes and bans on price-related marketing may obviate the need for minimum prices;
- Possibly other restrictions on RTDs, given their likely key role in fuelling the binge drinking culture in New Zealand.

These actions should ideally be done in conjunction with other particularly cost-effective interventions of restrictions on alcohol marketing and sponsorship; restrictions on alcohol availability through limiting the density and opening hours of off licence premises and reducing the legal blood alcohol level for driving. Ultimately New Zealand society might wish to strive to create an environment where the pattern of alcohol use is as per the traditional one of such European countries as Spain and Italy, where alcohol is generally consumed with meals. Perhaps a citizen jury or citizen panel could be convened to explore if this type of direction should be pursued?

Finally, New Zealand needs to have an alcohol price surveillance system for collecting all relevant price data and regularly reporting it to the public and policy

makers. Ad hoc unfunded research (as in this study) should be replaced by a routine government-funded surveillance system.

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Disclaimer: Both authors have taken advantage of low cost alcohol prices during the conduct of this study.

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