



# **A TAXING APPROACH TO CHOICE**

**How behavioural taxes deliver perverse outcomes**

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## 1.0 Executive summary

Behavioural taxes are taxes that are designed to influence behaviour against consumption. The application of behavioural taxes is fundamentally illiberal. They interfere with the rights and freedoms of individuals to make choices about their own consumption.

Behavioural taxes generally take the form of excise taxes.

Australia has a complicated and inconsistent form of behavioural tax in the form of an alcohol excise tax, with three separate taxing regimes - differing rates of excise, the wine equalization tax and customs.

The efficacy of behavioural taxes is also questionable.

Research shows that significant behavioural taxes may influence the behaviour of moderate drinkers, but not the heavy drinkers that the policy was designed to influence. Similarly, behavioural taxes for alcohol appear to be less effective with young people who have higher disposable incomes.

Not all alcoholic products have seen a decline. There has been a progressive increase in the consumption of wine, with only modest increases in the consumption of spirits and ready-to-drink beverages.

The Rudd government's 2008 alcopops tax prompted a rapid decline in consumption of RTDs. However, the evidence is that consumers substituted RTDs with privately mixed spirits, and potentially white wine and cider.

The rising price of alcohol at venues is leading young people to engage in 'preloading' by consuming large volumes of cheaper alcohol in private homes before going to a bar or club. Research also identified that there was no reduction in the consequences associated with alcohol, such as alcohol-related hospital admission rates.

Academic evidence suggests potential substitution from alcohol to illicit drugs.

Similarly, the rising cost of tobacco taxes can similarly prompt consumers to switch from legal products to illegal 'chop-chop' or counterfeit tobacco products.

The Danish fat tax has been identified as delivering equally perverse outcomes. Some consumers had been crossing national borders to buy products with saturated fat contents from neighbouring countries, while no notable change in consumer behaviour has been identified.

International analysis has identified that behavioural taxes are regressive. They explicitly target inelastic goods that make up a proportionally higher share of Australian household incomes, particularly related to food and beverages.

The consistency of taxation across all alcohol products is logical as the current taxation arrangements deliver perverse outcomes. However, any change should not be used as justification to increase tax revenue.

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## 2.0 Abbreviations

<b>ABS</b>	Australian Bureau of Statistics
<b>ANPHA</b>	Australian National Preventative Health Agency
<b>AUD\$</b>	Australian dollar
<b>EDNP</b>	Energy dense, nutrient poor
<b>GST</b>	Goods and services tax
<b>NHS</b>	National Health Service
<b>NPHT</b>	National Preventative Health Taskforce
<b>RTDs</b>	Read-to-drink
<b>WET</b>	Wine equalisation tax
<b>WHO</b>	World Health Organisation

### 3.0 Introduction

Under the banner of health and welfare, governments are increasingly seeking to influence the behaviour of consumers and ward off deemed undesirable consequences from consumption behaviour.

In recent years, Australia has been at the front of this trend with ever-expanding laws, regulations and taxes designed to steer consumer behaviour away from costly consequences incurred by public finances.

A central plank of this policy approach has been the use of behavioural taxes against 'sin' products such as alcohol and tobacco. There have also been suggestions that specific taxes should be imposed on sugary, salty and fatty foods.

While a blunt instrument, behavioural taxation has become a common proposal for advocates for greater government intervention to influence the choice of individuals. Taxation is common because it generally avoids the need for harsh and complex regulation that adds significant costs to businesses, or results in banning products for consumers.

Behavioural taxes are regularly promoted by their sponsors as one of, if not the most, effective policy instrument to influence consumer behaviour, without a holistic assessment of their consequences. Yet the model of implementation of taxes can have a significant impact on the efficacy as a measure to influence behaviour.

This paper will critically explore the intent and impact of behavioural taxation. It will look at recent examples of their application, particularly in light of recent reviews that have specifically looked at reforms of behavioural taxation. Although other goods are examined, this paper will particularly focus on the taxation of alcohol and its effect on alcohol consumption.

This paper will also assess whether recently imposed behavioural taxes have succeeded by assessing their impact against their stated objectives, as well as the unintended consequences that they have prompted, particularly looking at their targeted audience.

## 4.0 The objective of behavioural taxes

Advances in medical technology and improved standards of living have ensured people are living longer and healthier lives. The decline in previously prevalent diseases has ensured risks to people's health, especially in developed countries, come from non-communicable diseases often associated with lifestyle factors, and no longer indiscriminate communicable diseases.

This general trend is an extremely positive development for humanity and is also becoming more common in developing countries where scarcity and famine are being replaced with diseases of affluence, including obesity and diabetes.

Partly in response to the relatively indiscriminate nature of threats to population health, developed countries, in particular, implemented State-sponsored health systems throughout the 20<sup>th</sup> Century underpinned by the principles of universality and equity. In Britain, the NHS evolved after the Second World War to address the equity gap to access healthcare services. In Australia, healthcare was primarily provided through a private system of doctors and hospitals financed by individuals through private insurance and charity to ensure equity. In the 1970s, the Federal government took control of financing primary care through Medicare. Medicare built on the same broad principles that guided the development of Britain's NHS.

The intent of a single-payer model health system was to ensure that no person was unfairly denied medical treatment, but it was also based on a broad expectation of the indiscriminate nature of the health risks individuals faced. As people's health has improved, the nature of many health risks now faced are not indiscriminate, but discriminate and heavily influenced by an individual's behaviour, lifestyle and consumption choices. Because many new health challenges are essentially a consequence of people's choices and can be managed or corrected using expensive procedures (such as transplants) and technology (pharmaceuticals), the cost to the public health system has increased. These problems are exacerbated as a direct result of an ageing population where the costs of healthcare rise dramatically as older people manage chronic diseases, pain and extend their lives.

The central problem with a public health system whose costs are rising as a direct result of lifestyle choices is that the gains of people's individual behaviour are essentially private, and the costs are born by the public health system. In response, many advocate that people's individual choices should be ceased, curtailed or influenced to reduce the cost to the public health system.

In the Western liberal democratic tradition, such an approach brings with it many philosophical and practical problems. Liberal democracies are broadly designed for the State to preserve and protect people's freedoms from the excess power of government, not from each other and especially not from themselves. In a liberal democracy the individual has a right to self-determination. The principle of limiting people's choices turns these principles on their head by arguing that the priorities of a centralised government agency and collective interests takes precedence over the rights of individuals to live their own lives freely.

Similarly, the idea that the collective has a stake in every individual's health significantly belittles the dignity of the individual and their rights over their own life and choices. Such an approach also inevitably assumes that a poorly-informed and distant government knows what is in an individual's best interests. Individuals always have substantially more information about their own interests and priorities. By placing individual interest second to the collective interest, the resulting decisions take on a technocratic spirit where questions about 'whether' the government should interfere are second-order to 'how' the government should interfere. Likewise, placing individual choice behind

collective interest leads to the conclusion that the primary purpose of an individual's life is the extent that they contribute or drain from the collective. This in turn justifies measures to interfere in people's lives on the basis of their individual behaviour's positive or negative impact on productivity, economic growth or cost.

On a more practical level, problems arise on how to achieve the centralised objectives of health systems to reduce people's behaviour which may lead to costs without undermining individual choice. Recently an approach called 'libertarian paternalism', or 'nudge' theory has been proposed.<sup>1</sup> The objective of libertarian paternalism is for government to use its full policy toolkit – legislation, taxation and regulation – to influence people's choices without explicitly directing behaviour.

While health is only one of the justifications for an approach to public policy, it is also one of the most regularly cited. Because free people tend to resist blunt instruments that seek to tell them explicitly how to behave, the use of outright bans are rarely entertained. Outright bans can sometimes be proposed on the basis that all other measures have previously been implemented.<sup>2</sup> A more common measure is to propose a seemingly reasonable measure by government that influences people's behaviour. Doing so conditions the public to believe that there is a problem that should be addressed while also incrementally adjusting the public to government interference that compounds over time. There are numerous examples of such incremental measures including consumer access restrictions, advertising restrictions, product display bans, packaging restrictions, license-for-sale arrangements, consumption restrictions and additional taxes.

#### **4.1 Taxation as a policy instrument**

Taxation is arguably the most common measure used by government to influence people's behaviour. It achieves the twin objectives of influencing people's choices while raising additional government revenue, which is often argued as necessary to cover the externality costs of people's choices.

Taxation is not normally limited to generic taxes, such as sales taxes (goods and services or value-added taxes), but includes additional excise taxes that may, or may not be imposed before a sales tax. Goods targeted for "excise coverage typically exhibit one or more of the following characteristics: first, their production and sales are closely supervised by the government, that is they are sumptuary goods or services; second they are characterised by price-inelastic demand schedules; third, they have an income elasticity of demand greater than unit, that is, they are luxury goods or services; or fourth, their consumption is regarded by the government as lacking merit or as likely to cause negative externalities."<sup>3</sup>

Behavioural taxes are designed to be in addition to standard taxes to target individual goods and services and are specifically designed to "internalise negative externalities generated by the consumer."<sup>4</sup> In Australia, examples include:

- Excise on alcoholic products to steer people's choices and deliver government revenue for costs incurred from alcohol-related health and crime.

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<sup>1</sup> Thaler, R. H. & Sunstein, C. R. 2009. "Nudge: Improving decisions about health, wealth and happiness". Penguin Books. United States of America.

<sup>2</sup> Regulation against tobacco is a clear example. While there is not an outright ban, such a proposal is occasionally discussed following years of taxes and regulations that have limited access to the product.

<sup>3</sup> McCarten, W. J. & Stotsky, J. "Excise Taxes" in Shome, P. ed. 1995. "Tax policy handbook". International Monetary Fund (IMF). Washington DC, United States of America. pp100–03.

<sup>4</sup> *Ibid.*

- Excise on tobacco products to discourage consumption and deliver government revenue for health costs incurred by the public health system from emphysema, cardiovascular disease and other smoking-related health problems.
- A proposed excise 'fat tax' on salty, sugary and fatty energy-dense, nutrient-poor (EDNP) foods to cover the public costs of intervention programs, such as lap-band surgery for obese individuals, and chronic disease management, such as diabetes.

From a governmental perspective, additional taxation can also be desirable because it can act as a measure to steer people's choices without explicitly banning conduct. But like many measures taken by government in the name of public health, there are questions about the efficacy of behavioural taxation. For example, while taxation may influence some consumer behaviour, if the product is relatively inelastic it can often be imposed primarily for the benefit of revenue collection and not to steer consumer behaviour. This proposition was outlined in a recent government tax review that stated:

Compared with many other consumer goods, tobacco consumption is relatively unresponsive to price. Most estimates suggest that a 1 per cent increase in the price of cigarettes will reduce total consumption by 0.4 per cent. This suggests that taxing tobacco, like alcohol, provides a relatively efficient source of revenue.<sup>5</sup>

Taxation also has other key benefits. While taxes are desirable because they provide government with revenue to offset the cost of publicly-financed externalities, it is also desirable because of its relative ease to impose. This is especially so in jurisdictions without sophisticated data collection measures to successfully impose broad-based income and company taxes. These taxes require relatively sophisticated systems to ensure that accurate taxes are applied as shares of profits and income is collected by government in cooperation with individuals and businesses.

By comparison, taxes on sales generally provide governments with a more easily enforceable method of taxation. The use of alcohol as a heavily traded commodity and form of currency in the early Australian colonies has ensured that alcohol has almost always been taxed to provide governments with a revenue source. As identified by McCarten and Stotsky, "the most compelling reason for the use of excise taxes is that they can potentially raise a great deal of revenue with little distorting effect, generating little excess burden."<sup>6</sup> McCarten and Stotsky's proposition highlights the often contradictory nature of behavioural taxation. While excise may not result in changing people's behaviour, that is often the justification used for its introduction or increasing its rate.

The model of implementation of taxes can have a significant impact on the efficacy as a measure to influence behaviour. The major behavioural taxes currently operating in Australia are directed at alcohol and tobacco. Tobacco excise tax is applied consistently on a per-stick basis for cigarettes and per kilogram for loose leaf tobacco. These tax rates are indexed to the Consumer Price Index (CPI) and are also periodically increased by governments. By comparison the taxes on alcohol are exceedingly complex.

<sup>5</sup> The Treasury. 2010. "Australia's Future Tax System: Consultation paper: Detailed Analysis – Section 11: Taxes on specific goods and services". Commonwealth of Australia. Available at [http://www.taxreview.treasury.gov.au/content/ConsultationPaper.aspx?doc=html/publications/Papers/Consultation\\_Paper/section\\_11.htm](http://www.taxreview.treasury.gov.au/content/ConsultationPaper.aspx?doc=html/publications/Papers/Consultation_Paper/section_11.htm).

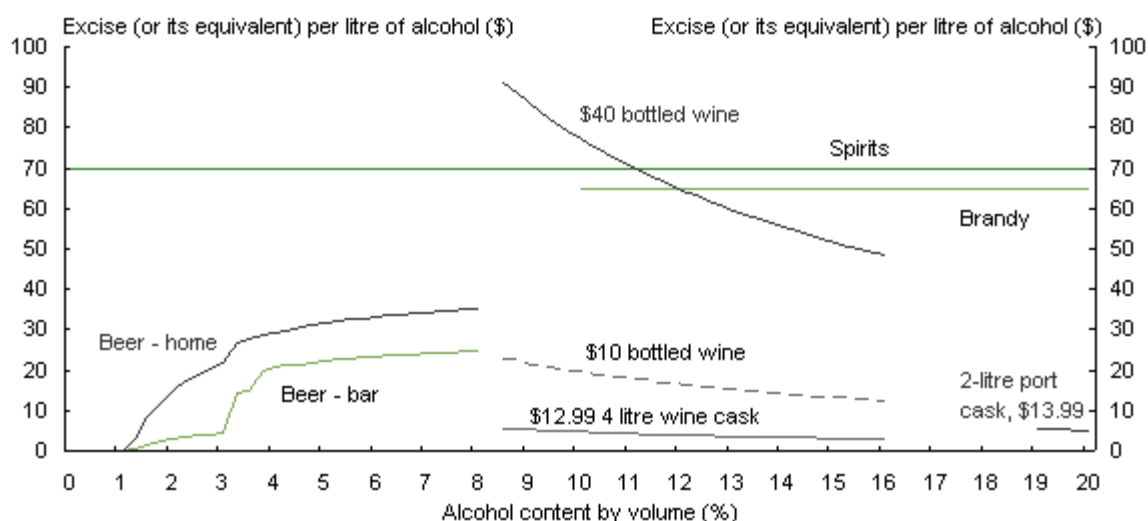
<sup>6</sup> McCarten, W. J. & Stotsky, J. "Excise Taxes" in Shome, P. ed. 1995. "Tax policy handbook". International Monetary Fund (IMF). Washington DC, United States of America. pp100–03.

Australia has three main alcohol taxes – the excise, the WET and customs:

- i. Beer and spirits attract excise based on the volume of alcohol;
- ii. WET is applied to the value of the wine product; and
- iii. Customs duty is applied to imported products and is applied with a mixture of *ad valorem* and alcohol content taxation.

In addition, the GST is applied to retail sales after all other taxes are applied.

**Figure 1 | Current effective (specific) alcohol tax by beverage**



Source: The Treasury. 2010. "Australia's Future Tax System". Commonwealth of Australia. Available at <http://taxreview.treasury.gov.au/Content/Content.aspx?doc=html/home.htm>.

The complexity and inconsistency of the applied tax arrangements on alcohol beverages is clearly outlined in Figure 1. Similarly, the nominal tax contribution to alcoholic beverages is therefore specific to the alcoholic content, volume and commercial value of the product outlined in Table 1.

**Table 1 | Excise rates for alcohol in Australia as of 1<sup>st</sup> February 2011**

<i>Commodity</i>	<i>Rate (\$ per litre of pure alcohol)</i>
Beer (per litre of alcohol over 1.15%)	
Draught beer, low strength (<=3%)	7.33
Draught beer, mid strength (<=3.5%)	23.01
Draught beer, high strength (>3.5%)	30.11
Other beer, low strength (<=3%)	36.71
Other beer, mid and strength (<=3.5%)	42.78
Non-commercial, low strength (<=3%)	2.58
Non-commercial, mid and high strength (>3%)	2.98
Other beverages, not exceeding 10 per cent alcohol content (per litre of alcohol)	72.46
Potable spirits (per litre of alcohol)	
Brandy	67.66
Other spirits, not exceeding 10 per cent alcohol content	72.46

Source: Carragher, N. & Chalmers, J. 2011. "What are the options? Pricing and taxation policy reforms to redress excessive alcohol consumption and related harms in Australia". NSW Bureau of Crime Statistics and Research.

Note: Draught beer is beer served from a pressurised keg or cask.  
Non-commercial beer is made on commercial premises for non-commercial use.



An indication of the complexity is outlined in the Australian Tax Office’s Excise Tariff Working Paper.<sup>7</sup> Table 2 outlines the taxing regime for variants of beer alone, with different methods then used for spirits and other excisable beverages

**Table 2 | Excise tariff rate per litre of alcohol**

Alcohol content of volume	Total volume	Excise tariff per litre	Where percentage of alcohol exceeds
<b>Beer</b>			
Not exceeding 3%	Not exceeding 48 Litres	\$39.01	1.15%
Not exceeding 3%	Exceeding 48 Litres	\$7.79	1.15%
Exceeding 3%, but not exceeding 3.5%	Not exceeding 48 Litres	\$45.44	1.15%
Exceeding 3%, but not exceeding 3.5%	Exceeding 48 Litres	\$24.44	1.15%
Exceeding 3.5%	Not exceeding 48 Litres	\$45.44	1.15%
Exceeding 3.5%	Exceeding 48 Litres	\$31.99	1.15%
Not exceeding 3% for non-commercial purposes, using commercial facilities or equipment	-	\$2.74	1.15%
Exceeding 3% for non-commercial purposes, using commercial facilities or equipment	-	\$3.17	1.15%
<b>Other excisable beverages</b>			
Not exceeding 10%	-	\$76.98	
<b>Brandy</b>			
Exceeding 10%	-	\$71.88	
<b>Spirits<sup>a</sup> &amp; other excisable beverages</b>			
Exceeding 10%	-	\$76.98	

**Source:** Adapted from Australian Taxation Office. 2013. “Excise Tariff Working Papers”. Commonwealth of Australia. Available at <http://law.ato.gov.au/atolaw/view.htm?Docid=PAC/BL030002/1&PiT=99991231235958>.

**Notes:** <sup>a</sup> Some spirits are excise free and have not been listed.

As the Australia’s Future Tax System review (Henry Review) identified, a partial reason for the inconsistency between alcohol taxation arrangements is a direct consequence of seeking to use taxation as a policy measure to steer behavioural choices. In response the Henry Review suggested “a common alcohol tax that does not discriminate between beverage types.”<sup>8</sup>

Even with standardisation, the capacity for excise taxes to influence behaviour is dependent on the price elasticity of a good. Price elasticity is essentially the capacity for price to change consumption behaviour. Some products are more price elastic or inelastic. For example, a household’s energy or water consumption is generally considered to be more inelastic because consumption is based on necessity. By comparison consumption of luxury items are considered to be elastic because they are discretionary.

<sup>7</sup> Australian Taxation Office. 2013. “Excise Tariff Working Papers”. Commonwealth of Australia. Available at <http://law.ato.gov.au/atolaw/view.htm?Docid=PAC/BL030002/1&PiT=99991231235958>.

<sup>8</sup> The Treasury. 2010. “Australia’s Future Tax System”. Commonwealth of Australia. Available at <http://taxreview.treasury.gov.au/Content/Content.aspx?doc=html/home.htm>.

The other objective is to make the tax system more progressive and tax wealthier individuals and households with a higher share of the tax burden compared to those on lower incomes.

Excise taxes on non-essential goods are assumed to be a good mechanism for achieving progressivity because lower income individuals and households are assumed to consume a lower share as income is apportioned towards essential goods and services.

To use excise as a mechanism to promote progressivity requires a series of circumstances to exist. First, there is low elasticity. Second, the targeted product should be consumed by upper and middle income households compared to low-income households. Third, where excise hits products consumed by lower-income households a lower differentiated tax rate should apply. Fourth, it must be efficiently applied. Finally, it must be seen by consumers as being progressive. If excise does not broadly adhere to these principles it is unlikely to successfully operate as a form of progressive taxation.<sup>9</sup>

As Section 8 of this paper details, the data suggests that behavioural taxes are often regressive.

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<sup>9</sup> McCarten, W. J. & Stotsky, J. "Excise Taxes" in Shome, P. ed. 1995. "Tax policy handbook". International Monetary Fund (IMF). Washington DC, United States of America. pp100–03.

## 5.0 Recent recommendations for behavioural taxes

There have been two recent significant reviews that have considered the role of behavioural taxes: the Henry Review and the NPHT report.

Reforming behavioural taxes was a key focus of the Rudd government's 'root and branch' review of the taxation system – *Australia's Future Tax System Review* (Henry Review). The Henry Review, which excluded the GST, was designed to propose tax reform proposals to address vertical fiscal imbalance challenges and ensuring government revenue to “address demographic, social, economic and environmental challenges.”<sup>10</sup> In the context of behavioural taxation, the Henry Review looked at reforming taxes on alcohol, tobacco and gambling.

The Henry Review did not recommend any substantial changes to tobacco taxation in Section E6 of the report beyond supporting the existing arrangements, including indexing increases to wages and not CPI and reducing duty-free allowances at airports.<sup>11</sup>

The Henry Review also did little to recommend changes to gambling taxes in Chapter E7, because the report identified that:

It is not clear how problem gamblers react to higher taxes. In some forms of gambling, the price of gambling is not easily observable. Even if problem gamblers do observe changes in price, it is not clear that they respond by reducing the amount they lose. Gambling taxes that more than recoup economic rent earned by gambling businesses do, however, impose costs on responsible gamblers, who must pay higher prices for their entertainment.<sup>12</sup>

In response the review only focused on the need for further review of gambling taxes, the removal of tax discounts on certain venues and re-assessing the method for regulating gambling between State and Federal governments.<sup>13</sup>

The Section E5 of the Detailed Analysis of the Final Report specifically considered alcohol taxation, and concluded:

- Taxes on alcohol should be set to address the spillover costs imposed on the community of alcohol abuse, when this delivers a net gain to the community's wellbeing and is more effective than alternative policies. Raising revenue is a by-product, not the goal, of taxing alcohol. The tax rate should be based on evidence of spillover costs, and levied on a common volumetric basis across all forms of alcohol, regardless of place, method or scale of production.
- While the abuse of alcohol imposes significant costs on society, these are not effectively targeted by current tax and subsidy arrangements for alcohol, which are complex and have conflicting policy rationales. In particular, the wine equalisation tax, as a value-based revenue-raising tax, is not well suited to reducing social harm.

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<sup>10</sup> The Treasury. 2010. “Australia's Future Tax System”. Commonwealth of Australia. Available at <http://taxreview.treasury.gov.au/Content/Content.aspx?doc=html/home.htm>.

<sup>11</sup> The Treasury. 2010. “Australia's Future Tax System: Final Report: Detailed Analysis – Chapter E6: Tobacco Taxation”. Commonwealth of Australia. Available at [http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/publications/Papers/Final\\_Report\\_Part\\_2/chapter\\_e6-3.htm](http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/publications/Papers/Final_Report_Part_2/chapter_e6-3.htm).

<sup>12</sup> The Treasury. 2010. “Australia's Future Tax System: Final Report: Detailed Analysis – Chapter E7: Gambling Taxation”. Commonwealth of Australia. Available at [http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/publications/Papers/Final\\_Report\\_Part\\_2/chapter\\_e7-3.htm](http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/publications/Papers/Final_Report_Part_2/chapter_e7-3.htm).

<sup>13</sup> *Ibid.*

- A common volumetric tax on alcohol would better address social harm through closer targeting of social costs. A rate based on evidence of net social costs would help balance the benefits from alcohol consumption with its social costs. Moreover, by removing the distinction between different manufacturing processes, the compliance and administration cost of the existing excise system would be reduced.
- In the short term, several specific changes should be made to address the more pressing social costs of alcohol consumption, and to remove structural anomalies in the system of alcohol taxes. The transition to a common alcohol tax should be phased in over a longer term, to ensure that producers and consumers have time to adjust to the changes.<sup>14</sup>

In response to the study by the Henry Review, it was recommended that a volumetric tax be applied to alcoholic beverages with “the rate of tax on alcohol ... based on evidence of marginal social cost”.

While neither the Rudd nor the Gillard governments went on to impose a volumetric tax, the idea continues to be debated. Outside of government similar proposals have been recommended by the Australian Chronic Disease Prevention Alliance, an alliance made up of the Heart Foundation, Cancer Council Australia, Kidney Health Australia, Diabetes Australia and the Stroke Foundation. In a statement, the Alliance have outlined a broad approach to alcohol taxation, including that “all alcohol products sold in Australia should be taxed on the basis of alcohol content through the introduction of a volumetric excise duty”. Although they have also stated that “changes to tax levels should not allow prices for alcohol products to decrease, other than for low alcohol products.”<sup>15</sup>

The 2009 NPHT reviewed the role of behavioural taxes to target consumption of tobacco, salty, sugary and fatty EDNP to reduce obesity and alcohol. In assessing behavioural taxes the report concluded in a number of sections that behavioural taxation was a desirable policy instrument to influence consumer behaviour and proposed, among many other recommendations:

- Conduct[ing] research on economic barriers and enablers, policies and tax incentives to inform a national active living framework and actions” to reduce obesity rates.
- Commission a review of economic policies and taxation systems, and develop methods for using taxation, grants, pricing, incentives and/or subsidies to promote production, access to and consumption of healthier foods” to reduce obesity rates.
- Further increase price of cigarettes to keep pace with international best practice” to reduce consumption.
- Implement and enforce measures to prevent increases in illicit [tobacco] trade” that contribute to substitution.
- Commission independent modelling under the auspices of Health, Treasury and an industry panel for a rationalised tax and excise regime for alcohol that discourages harmful consumption and promotes safer consumption.

<sup>14</sup> The Treasury. 2010. “Australia’s Future Tax System: Final Report: Detailed Analysis – Chapter E5: Alcohol Taxation”. Commonwealth of Australia. Available at [http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/Publications/Papers/Final\\_Report\\_Part\\_2/chapter\\_e5.htm](http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/Publications/Papers/Final_Report_Part_2/chapter_e5.htm).

<sup>15</sup> Australian Chronic Disease Prevention Alliance. 2011. “Alcohol pricing an taxation position statement”. Available at <http://www.cancer.org.au/content/pdf/ACDPA/110930-Final-ACDPA-PS-Alcohol-Taxation-position-paper.pdf>.

- Develop the public interest case for minimum (floor) price of alcohol to discourage harmful consumption and promote safe consumption.
- Direct a proportion of revenue from alcohol taxation towards initiatives that prevent alcohol-related societal harm.<sup>16</sup>

Of the measures proposed in the NPHT roadmap, the only measures that were explicit related to taxes on alcohol and tobacco. Additional tobacco taxes have subsequently been imposed in both 2010 and 2013, with additional alcohol taxes having not yet been imposed.

In response to the NPHT report, the government released in 2010 its *Taking Preventative Action: A response to the Australia: The Healthiest Country by 2020* report.<sup>17</sup> In its response the then government “decided not to amend alcohol taxation further while Australia is in the middle of a wine glut and while there is an industry restructure under way”, however it did ask the newly formed ANPHA to “develop [a minimum (floor) price of alcohol] for further consideration by Government.”<sup>18</sup>

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<sup>16</sup> National Preventative Health Taskforce. 2009. “Australia: The healthiest country by 2020 – The roadmap for action”. Commonwealth of Australia. Available at [http://www.preventativehealth.org.au/internet/preventativehealth/publishing.nsf/Content/AEC223A781D64F40CA2575FD00075DD0/\\$File/nphs-overview.pdf](http://www.preventativehealth.org.au/internet/preventativehealth/publishing.nsf/Content/AEC223A781D64F40CA2575FD00075DD0/$File/nphs-overview.pdf).

<sup>17</sup> Australian Government. 2010. “Taking Preventative Action: A response to Australia: The healthiest country by 2020”. Commonwealth of Australia. Available at [http://www.preventativehealth.org.au/internet/preventativehealth/publishing.nsf/Content/6B7B17659424FB55CA25772000095458/\\$File/tpa.pdf](http://www.preventativehealth.org.au/internet/preventativehealth/publishing.nsf/Content/6B7B17659424FB55CA25772000095458/$File/tpa.pdf).

<sup>18</sup> *Ibid.*

## 6.0 The justification for behavioural taxes

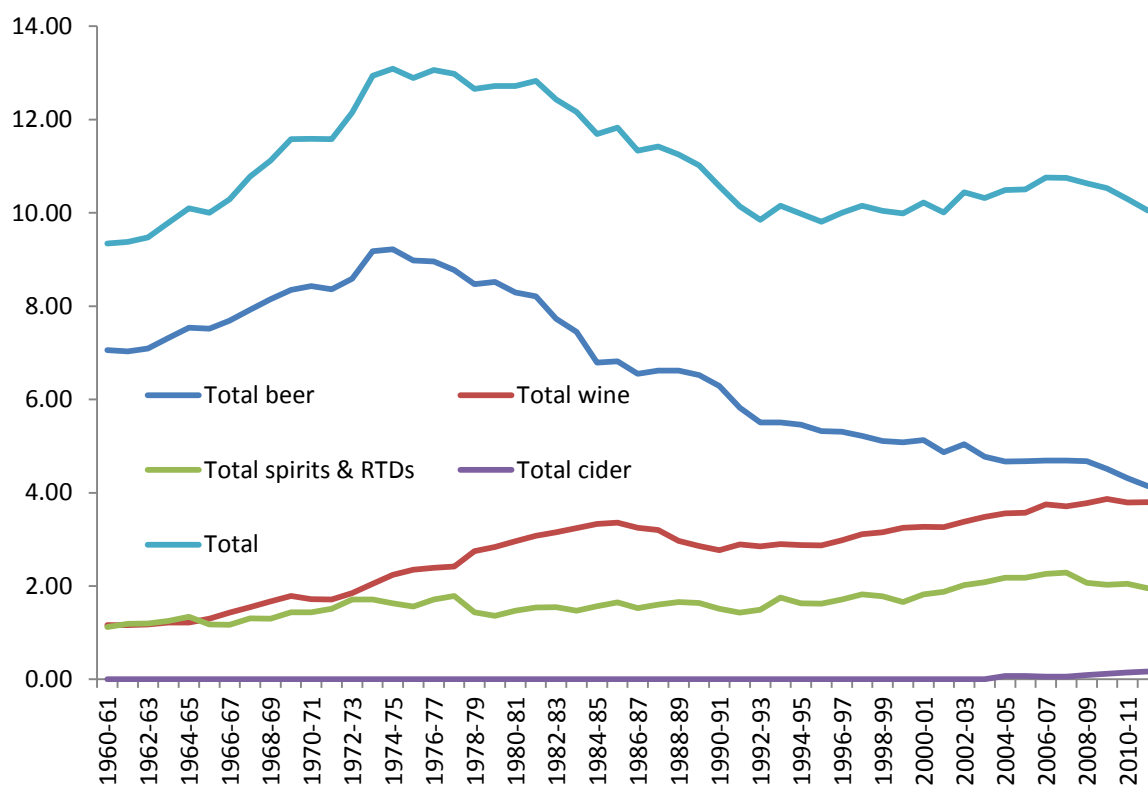
As outlined in Section 5.0, the primary objective of behavioural taxes is to influence the behaviour of individuals, with secondary objectives around the simplicity of revenue collection and offsetting the costs of publicly-incurred externalities from behaviour.

However, the imposition of behavioural taxes requires them to be justified with a known problem such as excessive and/or harmful consumption of alcohol with the view that if they were imposed, individuals would be less likely to engage in this sort of behaviour.

### 6.1 Established trends

Imposing behavioural taxes also requires there to be an established problem that can then be addressed, measured and assessed for efficacy. Part of the challenge faced by policies designed to influence individual behaviour is that they are only one part of the factors influencing consumer's decisions and cannot be easily and readily separated from other factors. The influence of individual policies also become mute when multiple policy measures are introduced that are designed to influence consumer behaviour.

**Figure 2 | Total per-capita consumption of alcohol, litres**



**Source:** Australian Bureau of Statistics. 2013. "Apparent consumption of alcohol, Australia". 4307.0.55.001. Available at [http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4307.0.55.001Main%20Features82011-12?opendocument&tabname=Summary&prodno=4307.0.55.001&issue=2011-12&num=&view=.](http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4307.0.55.001Main%20Features82011-12?opendocument&tabname=Summary&prodno=4307.0.55.001&issue=2011-12&num=&view=)

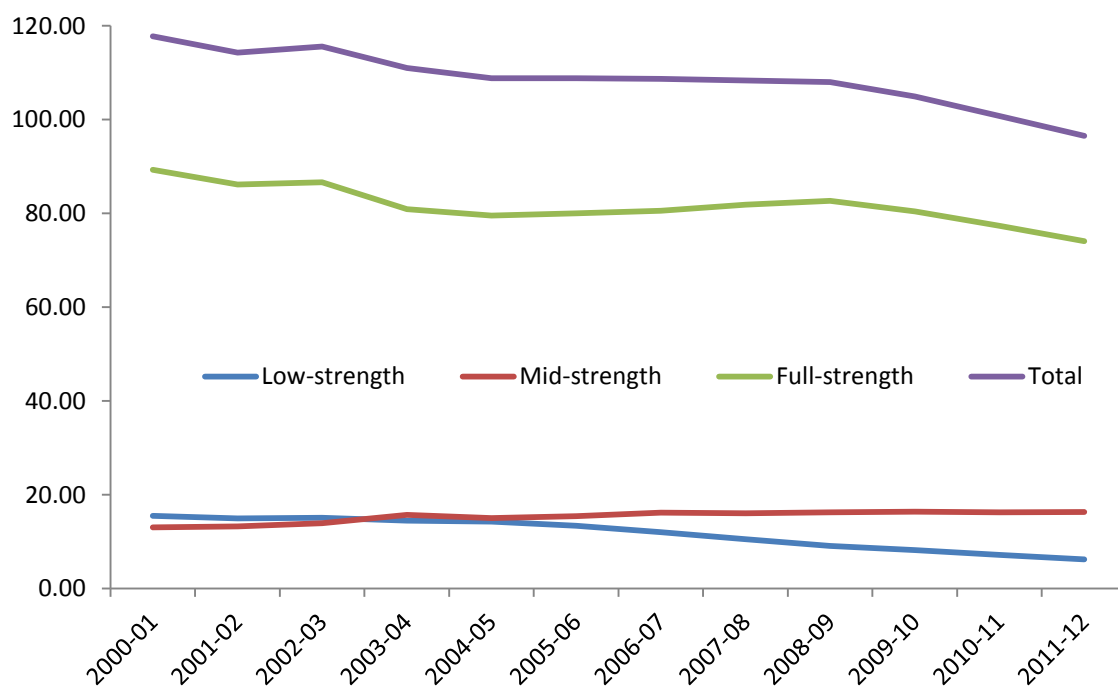
A recent example was the Federal government's introduction of plain packaging on tobacco products. The measure came into force in late 2012 and could therefore be broadly measured for its efficacy in changing consumer behaviour. However, in July 2013 the Federal government announced

further increases to tobacco excise taxes.<sup>19</sup> In doing so, any research of the efficacy of plain packaging would become increasingly difficult to separate from the influence of the additional tax increase.

The other challenge in measures designed to influence consumer behaviour results from dissecting behaviour from an established trend. Australian consumption of alcohol already has a long-term trend of declining consumption. As outlined in Figure 2, ABS data clearly shows a long-term declining trend of per capita overall alcohol consumption amongst the Australian public since the 1970s, with relatively stable overall consumption levels since the 1990s.

The most notable decline in alcohol consumption has resulted in a heavy decline in beer consumption that has almost halved in the past forty-years. As outlined in Figure 3, disaggregated data shows that the trend has been broadly consistent across all beer products with a decline in full-strength and low-strength beer, with only mid-strength beer consumption remaining relatively stable.

**Figure 3 | Per-capita consumption of low, medium and full-strength beer, litres**



Source: Australian Bureau of Statistics. 2013. "Apparent consumption of alcohol, Australia". 4307.0.55.001. Available at <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4307.0.55.001Main%20Features82011-12?opendocument&tabname=Summary&prodno=4307.0.55.001&issue=2011-12&num=&view=>.

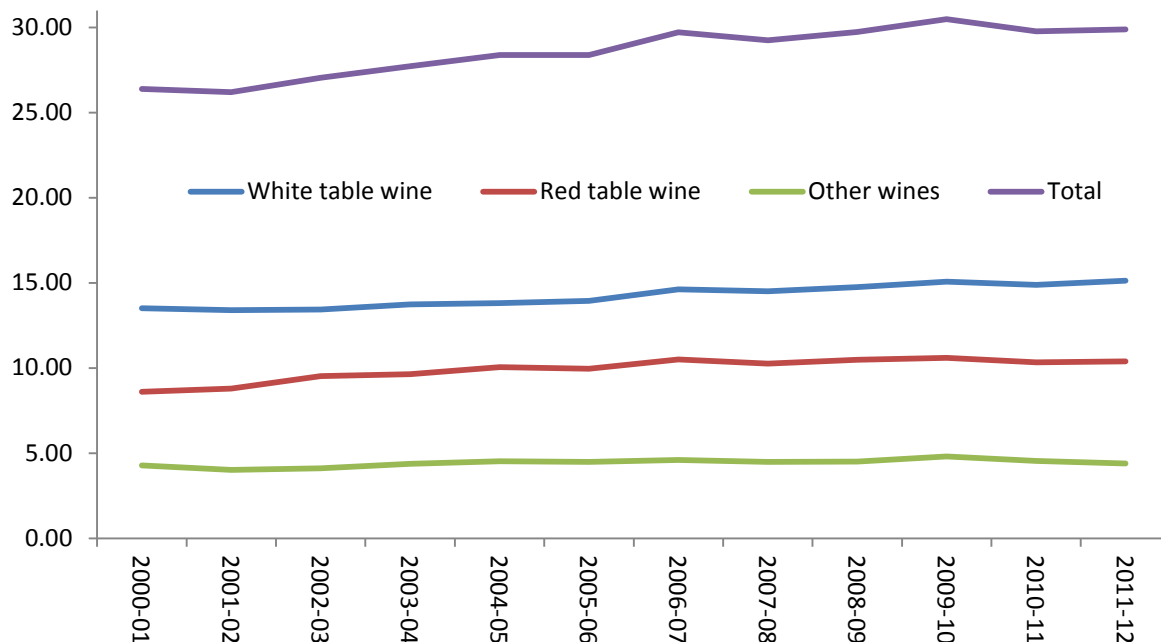
While there has been some substitution from beer to other alcoholic products, the substitution has not been sufficient to offset the overall per capita decline in consumption of beer.

During the same timeframe, the most significant growth has resulted from the increased consumption of wine which has nearly doubled. But even, as outlined in Figure 4, over the past decade the disaggregated consumption of wine has not been remarkable. Red wine consumption

<sup>19</sup> Bourke, L. 2013. "Kevin Rudd flags increase to tobacco excise ahead of release of Government's economic statement". ABC News. Available at <http://www.abc.net.au/news/2013-07-31/rudd-flags-tobacco-tax-increase/4855836>.

has increased from 8.61 litres annually consumer per capita to 10.38 litres, and white wine has grown from 13.5 litres to 15.12 litres. Total wine consumption has grown by only a little over three litres from 26.38 litres to 29.89 litres, an average growth of around 300 millilitres per year.

**Figure 4 | Per-capita wine consumption, litres**



Source: Australian Bureau of Statistics. 2013. "Apparent consumption of alcohol, Australia". 4307.0.55.001. Available at <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4307.0.55.001Main%20Features82011-12?opendocument&tabname=Summary&prodno=4307.0.55.001&issue=2011-12&num=&view=>.

Since the 1970s there has been some growth in the consumption of spirits and ready-to-drink alcoholic beverages. It has been a slow and steady increase over four decades, with a modest decline in recent years. The other alcoholic beverage that has shown significant growth in recent years has been cider, which has seen a nearly three-fold increase in consumption in the past decade, but off an exceptionally low base of nearly zero consumption.

As outlined in Figure 5, in more recent years the consumption of RTDs has increased somewhat from 0.8 litres to 1.1 litres annually per capita from 2002-03 to 2007-08, before a sharp decline in 2007-08 to 2008-09 and then a progressive decline year-on-year thereafter. The stark drop in consumption can directly be correlated to the introduction by the Rudd government of its excise on RTDs by 70 per cent, making them less affordable for consumers.

It should be noted that this is not the first time that alcopops have been taxed at differential rate. Prior to the 2000s they were taxed consistent with full-strength spirits, from 2000 to 2008 they were taxed equivalent to full-strength packaged beer,<sup>20</sup> before attracting the alcopops tax.<sup>21</sup>

However, the rapid decline in the consumption of RTDs was reflected in an immediate spike in the consumption of spirits at the same time which has remained relatively stable since. Unsurprisingly, following the alcopops tax there were reports that the intended targets, principally young female

<sup>20</sup> Excluding the 1.15 per cent excise-free threshold.

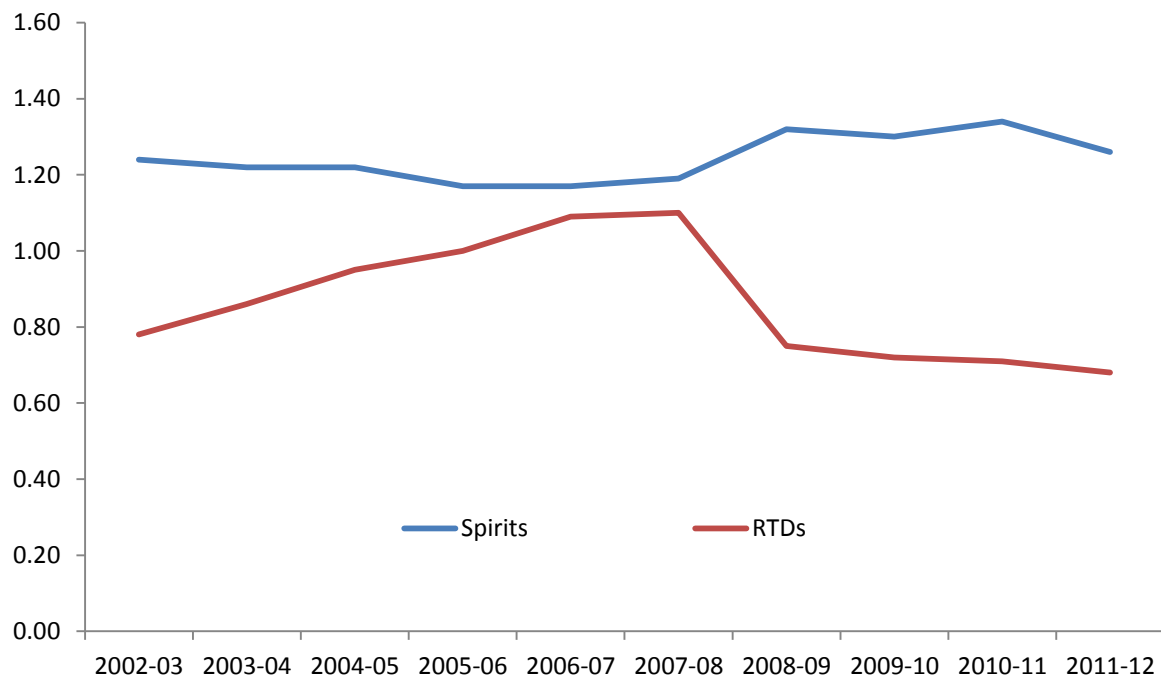
<sup>21</sup> Carragher, N. & Chalmers, J. 2011. "What are the options? Pricing and taxation policy reforms to redress excessive alcohol consumption and related harms in Australia". NSW Bureau of Crime Statistics and Research.



consumers, substituted RTDs with mixing their own spirits and cocktails to avoid the cost of the alcopops tax. By privately mixing drinks consumers didn't just avoid the cost of the tax, they were also free to establish their own alcohol to mixture ratios allowing them to increase or decrease the amount of alcohol consumed.

However, following the introduction of the alcopops tax there was no significant increase in the consumption of other alcoholic beverages from RTDs. The only modest rise that occurred, as outlined in Figure 6, was in the consumption of white table wine which has experienced extremely modest growth in the same timeframe.

**Figure 5 | Per-capita consumption of spirits and RTDs – pure alcohol, litres**



**Source:** Australian Bureau of Statistics. 2013. "Apparent consumption of alcohol, Australia". 4307.0.55.001. Available at <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4307.0.55.001Main%20Features82011-12?opendocument&tabname=Summary&prodno=4307.0.55.001&issue=2011-12&num=&view=>.

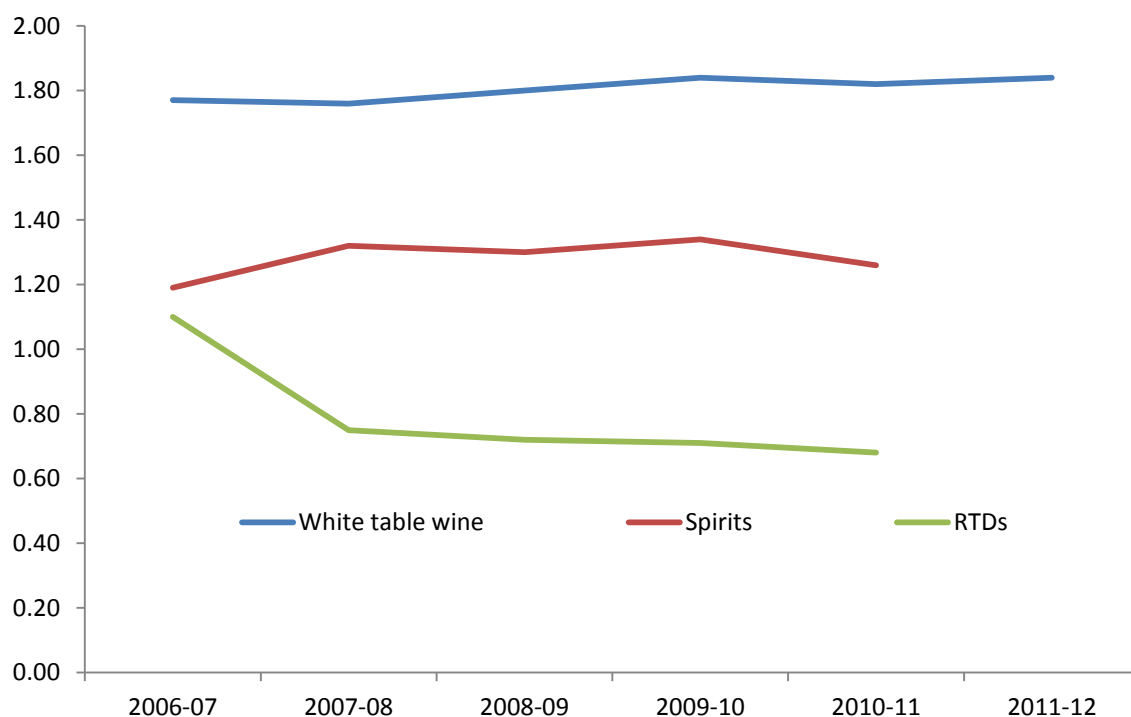
While overall consumption of alcohol has declined, the most notable driver of changing consumer behaviour is toward buying premium products. Industry data has predicted that while there is expected to be an increase by a further 20.5 per cent in the period from 2012-13 to 2017-18, that growth is predicted to be driven by the consumption of higher-cost premium products.<sup>22</sup>

According to industry research, "Australia's beer drinking palate is becoming more sophisticated, with a number of European style beers now being produced" domestically while "traditional full-strength lagers such as VB, Carlton Draught and Tooheys are losing market share in favour of cider and premium beer".<sup>23</sup> Meanwhile, despite the modest growth in the consumption of spirits, RTDs account for 64 per cent of spirits consumption.

<sup>22</sup> IBIS World. 2012. "Australians are drinking less but spending more". Available at <http://www.ibisworld.com.au/about/media/pressrelease/release.aspx?id=302>.

<sup>23</sup> *Ibid.*

**Figure 6 | Per-capita consumption of select alcoholic drinks – pure alcohol, litres**



**Source:** Australian Bureau of Statistics. 2013. "Apparent consumption of alcohol, Australia". 4307.0.55.001. Available at [http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4307.0.55.001Main%20Features82011-12?opendocument&tabname=Summary&prodno=4307.0.55.001&issue=2011-12&num=&view=.](http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4307.0.55.001Main%20Features82011-12?opendocument&tabname=Summary&prodno=4307.0.55.001&issue=2011-12&num=&view=)

Meanwhile Australia's overall alcohol consumption levels are not radically different from comparable markets, with Australia's alcohol consumption (9.8 litres consumed annually per capita) being on par with the United Kingdom at 11.75 litres and the United States at 8.61 litres.

## 6.2 Non-established trends

By comparison, the challenge faced for introducing behavioural taxes to address other known health challenges, notably obesity, is much more difficult. There are multiple dimensions to alcohol-related harm, but the primary objective is health related for consumers, as well as fuelling alcohol-related violence. These problems don't sit in isolation as the consumption of illicit drugs, with or without alcohol, contribute to health problems and crime. But at least the relationship between intoxication can clearly be made between the consumption of alcohol.

Obesity is not so clear. As demonstrated in the Federal government's National Preventative Health Taskforce's reports into obesity, the contributing factors to rising waistlines are numerous including consumption choices, physical exercise and an individual's environment. While one single influence may significantly contribute to an individual's obesity, the same cannot be consistently said on a population-wide level.<sup>24</sup>

<sup>24</sup> National Preventative Health Taskforce Obesity Working Group. 2009. "Australia: The healthiest country by 2020 – Obesity in Australia: A need for urgent action". Technical Report 1. Commonwealth of Australia. Available at [http://www.preventativehealth.org.au/internet/preventativehealth/publishing.nsf/Content/E233F8695823F16CCA2574DD00818E64/\\$File/obesity-jul09.pdf](http://www.preventativehealth.org.au/internet/preventativehealth/publishing.nsf/Content/E233F8695823F16CCA2574DD00818E64/$File/obesity-jul09.pdf).

Even from a consumption perspective obesity is technically more challenging. Almost all food and beverage products have the capacity to contribute to obesity and adding taxes on a specific product will only enable assessment on the impact of its consumption, but not its contribution to obesity, especially when substitution is easily achievable.

As a consequence, developing policy responses whose efficacy can be reasonably assessed is extremely limited. While overall data can be collected on body mass indexes, rates of diabetes and the extent of average waistlines, the contribution of behavioural taxes on products to obesity rates is not straightforward.

### 6.3 Assumed costs

As outlined in Section 5.1, a key argument in favour of behavioural taxes is their capacity to internalise the cost of externalities, such as the health, public welfare and safety costs associated with consumption to individuals and society-at-large. As a consequence there has been an increasing shift toward calculating the assumed cost of behaviours to both justify intervention and provide a comparison for cost-benefit analyses for interventions.

In any assessment of the assumed cost implications of behaviours to justify behavioural taxes are both public and private costs. Private costs involve costs incurred by the private sector, including the individual who engages in a behaviour such as direct consumption costs and incurred private costs from direct consumption, or their employer, such as through lost productivity. Public costs involve the impact on the government including costs to the public health system or an increased demand on police resources.

From a public policy standpoint the assessment of a policy should be based on public costs because all other costs are borne by private citizens who can tolerate these costs or take corrective action as they see fit. In an effort to increase the overall cost to justify interventions, policy action advocates are highlighting the ‘social costs’ of peoples’ behaviour that seeks to combine both public and private costs to inflate them and heavily justify intervention. As identified by Crampton, Burgess and Taylor:

By presenting costs drinkers impose upon themselves as social costs to the country, [cost of illness] measures ... may help build popular support for paternalistic policies. Embedding paternalism in the assumptions of the model rather than advocating paternalistic policies directly appeals to voters’ pocketbooks ... voters take the cost measures as impartial measures of the cost they’re called upon to bear due to others’ actions and shift outward their demand for corrective measures.<sup>25</sup>

**Table 3 | Estimated annual “social costs” for Australia**

Issue	Annual “social cost”
Alcohol	\$15.3 billion
Gambling	\$4.7 billion
Obesity	\$58 billion
Tobacco	\$31.5 billion

Sources: Deloitte Access Economics, Productivity Commission & Australian National Preventative Health Taskforce

<sup>25</sup> Crampton, E., Burgess, M. & Taylor, B. 2011. “The cost of cost studies”. University of Canterbury. Available at <http://www.econ.canterbury.ac.nz/RePEc/cbt/econwp/1129.pdf>.

But the validity of calculated 'social costs' are deeply dubious. The questionable nature of social costs was highlighted in research by Crompton which found that of the \$15.3 billion of social costs annually incurred as a result of alcohol consumption, only \$4 billion was public costs with the remainder private costs. Equally, the \$4 billion public costs mirrored the tax revenue raised by the government.<sup>26</sup>

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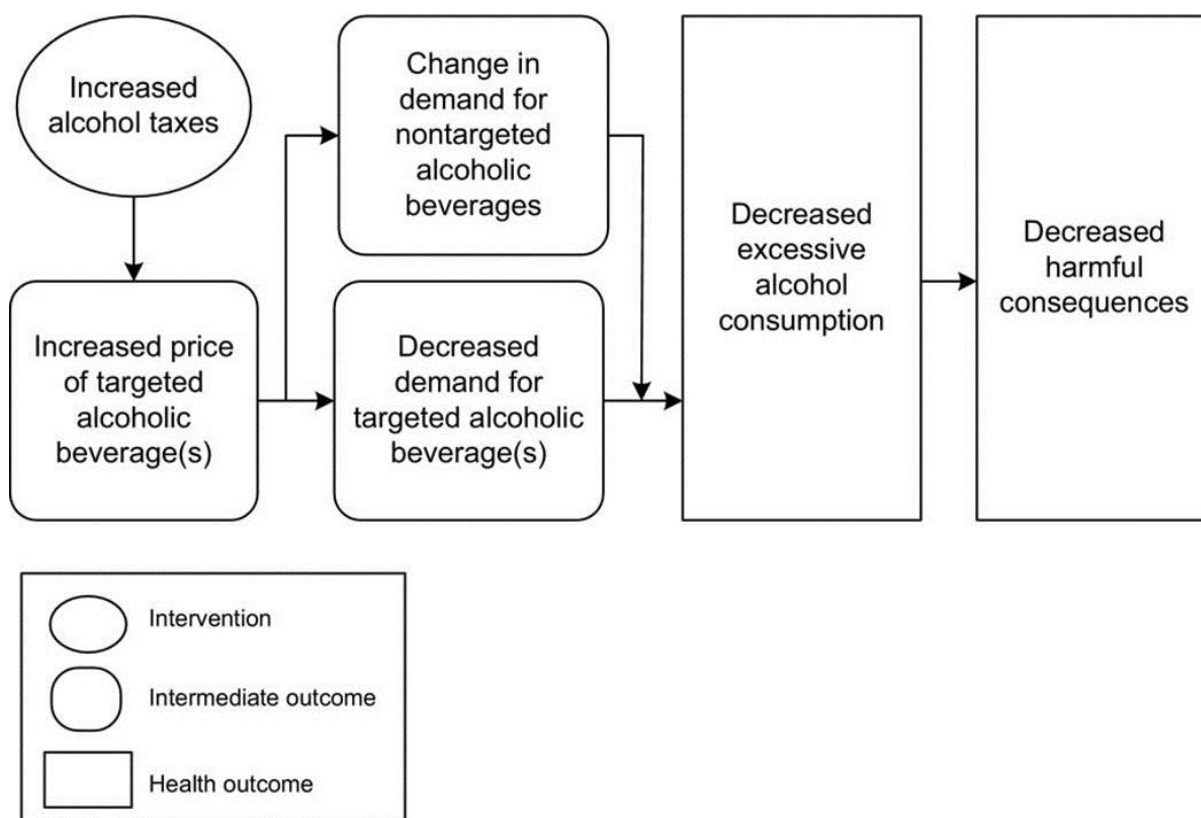
<sup>26</sup> Kenny, C. 2011. "Social costs of alcohol 'are vastly inflated'". The Australian. 08/07/2011. Available at <http://www.theaustralian.com.au/national-affairs/social-costs-of-alcohol-are-vastly-inflated/story-fn59niix-1226090176946>.

## 7.0 The efficacy of behavioural taxes

The assumption behind behavioural taxes is that the government imposes additional taxes on a deemed undesirable consumer behaviour in an effort to reduce it, or price consumers out of it. The broad-based and non-discriminatory nature of behavioural taxes makes it a straightforward policy to implement, with identified benefits to government revenue.

Figure 7 outlines the structural intent of imposing taxes on consumer products, using the example of alcohol. The connection between increased taxes is a linear relationship between consuming, excessive consumption and subsequent harmful consequences.<sup>27</sup>

**Figure 7 | Conceptual model for the casual relationship between increased taxes and decreased consumption**



**Source:** Elder, R. W., Lawrence, B., Ferguson, A., Naimi, T. S., Brewer, R. D., Chattopadhyay, S. K., Toomey, T. L. & Fielding, J. E. 2010. "The Effectiveness of Tax Policy Interventions for Reducing Excessive Alcohol Consumption and Harms". *American Journal of Preventative Medicine*. v38. i2. pp217 – 229.

As the International Centre for Alcohol Policy has identified:

The rationale behind increasing taxation on alcohol as a policy measure is relatively simple – by making beverage alcohol more expensive, per capita consumption will be reduced and with it the incidence of problems. The public health perspective, which is not necessarily concerned with economic efficiency or corporate profitability, sees curbing alcohol

<sup>27</sup> International Center for Alcohol Policies. 2006. "Alcohol Taxation". ICAP Reports 18. Available at <http://www.icap.org/LinkClick.aspx?fileticket=Gf4%2BQD%2BX1hU%3D&tabid=75>.

consumption as a means of preventing a range of social and health problems and reducing the alcohol-related burden on society.<sup>28</sup>

This is a broad assumption backed up by the WHO. The WHO's *Global strategy to reduce the harmful use of alcohol* has advocated:

Consumers, including heavy drinkers and young people, are sensitive to changes in the price of drinks. Pricing policies can be used to reduce underage drinking, to halt progression towards drinking large volumes of alcohol and/or episodes of heavy drinking, and to influence consumers' preferences. Increasing the price of alcoholic beverages is one of the most effective interventions to reduce harmful use of alcohol. A key factor for the success of price-related policies in reducing harmful use of alcohol is an effective and efficient system for taxation matched by adequate tax collection and enforcement.<sup>29</sup>

Such assumptions rely on a relatively linear approach to consumer behaviours. Figure 7 outlines that there is little consideration in addressing "decreased harmful consequences" towards behaviour that does not lead to that conclusion, such as moderate consumption.

The case of alcohol is particularly pertinent because of the direct relationship between the use of excise taxation as a blunt instrument to influence the behaviour of individuals and its efficacy. The merits of excise taxation is particularly relevant following the recent publication by the University of New South Wales that shows the overall consumption of alcohol amongst Australians continues to decline, with a small minority of heavy drinkers increasing their behaviour.

## 7.1 The fallacy of treating all consumers the same

The theory behind using taxes as a blunt and indiscriminate instrument to change behaviour assumes that it has broadly the same impact across all consumers – that it will reduce consumption. Data increasingly shows that imposing taxes doesn't have the intended effect. This was the conclusion of a recent report from London Economics that identified additional taxes did influence the behaviour of moderate drinkers, but did little to change the behaviour of heavy drinkers:

The studies that compare moderate and heavier drinkers directly using individual-level data and the comprehensive meta-analysis study mentioned above provide convincing evidence that, at the aggregate level, heavier drinkers are less responsive to price changes than moderate drinkers. This finding has important implications for policy makers. It implies that, if all alcohol prices were to increase by a similar percentage, the resulting overall reduction in alcohol consumption by heavy drinkers (also in percentage terms) is likely to be less than that of moderate drinkers.<sup>30</sup>

The study goes on outlining:

The evidence regarding the impact of price changes on substitution between alcohol products by moderate and heavy drinkers is more mixed. However, the most comprehensive study ... finds that hazardous drinkers show the greatest level of substitution behaviour:

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<sup>28</sup> *Ibid.*

<sup>29</sup> World Health Organisation. 2010. "Global strategy to reduce the harmful use of alcohol". Available at [http://www.who.int/substance\\_abuse/alcstratenglishfinal.pdf](http://www.who.int/substance_abuse/alcstratenglishfinal.pdf).

<sup>30</sup> London Economics. 2012. "Differential price responsiveness among drinker types". Working Paper. December. Available at <http://www.londecon.co.uk/wp-content/uploads/2013/02/Differential-price-responsiveness-among-drinker-types-LE-Working-paper-Dec-2012.pdf>.

switching by hazardous drinkers “is an order of magnitude greater than that estimated for moderate drinkers” for some beverage types.<sup>31</sup>

Concluding:

If all alcohol prices were to increase by a similar percentage, the resulting overall reduction in alcohol consumption by heavy drinkers (also in percentage terms) is likely to be less than that of moderate drinkers ... and targeting the price of a particular beverage type (e.g. beer or cider) is unlikely to significantly reduce the overall alcohol consumption of heavier drinkers, since these drinkers would be likely to simply switch to an alternative beverage type.<sup>32</sup>

The London Economics study is not alone. The objective of behavioural taxes can be to target all consumers equally, but that assumes that all will broadly be impacted and respond equally. Behaviour will differ between heavy and moderate drinkers, but the response also appears to be different from drinkers in different age groups.

A report completed for the European Commission into the price affordability of alcohol and harm identified that, in isolation, the efficacy of tax policies was limited in addressing harm-related issues with alcohol consumption.<sup>33</sup> And a 2007 study identified that despite their relatively low incomes, teenage drinkers “are least responsive to price” and therefore increasing taxes to change behaviour is likely to be ineffective.<sup>34</sup>

The absurdity of treating all drinkers with the same blunt instruments are now being supported by local Australian research. A recent report from the University of New South Wales’ National Drug and Alcohol Research Centre identified that consumption of alcohol has increased amongst the nation’s top 10 per cent drinkers, while moderate drinkers have reduced their consumption.

The study concluded that the top 10 ten per cent of drinkers are now consuming an additional 4-5 per cent more than a decade ago, and account for 52 per cent of all alcohol consumption. Meanwhile an increasing number of Australians are abstaining from alcohol all together and light drinkers were reducing their consumption.<sup>35</sup>

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<sup>31</sup> *Ibid.*

<sup>32</sup> *Ibid.*

<sup>33</sup> Rabinovich, L., Brutscher, P., de Vries, H., Tiessen, J., Clift, J. & Reding, A. 2009. “The Affordability of Alcoholic Beverages in the European Union: Understanding the link between alcohol affordability consumption and harms”. Report for the European Commission DG SANCO. Available at [http://www.rand.org/content/dam/rand/pubs/technical\\_reports/2009/RAND\\_TR689.sum.pdf](http://www.rand.org/content/dam/rand/pubs/technical_reports/2009/RAND_TR689.sum.pdf)

<sup>34</sup> Gallet, C. A. 2007. “The demand for alcohol: A meta-analysis of elasticities”. The Australian Journal of Agricultural and Resource Economics. v51. pp121-135.

<sup>35</sup> National Drug and Alcohol Research Centre. 2013. “Increase in heavy drinkers leading to more harm, new Australian analysis shows”. University of New South Wales. News Release. Available at <http://ndarc.med.unsw.edu.au/news/increase-heavy-drinkers-leading-more-harm-new-australian-analysis-shows>.

### Case study 1 | Australia and Denmark's 'fat tax'

In 2011, the Danish government introduced the world's first explicit 'fat tax' as a measure to promote healthier lifestyles. The additional 2.3 per cent tax applied to saturated fats to increase the price of food that was deemed to contribute towards obesity and heart disease. The tax added an additional approximately AUD\$3 to each kilogram of saturated fat product and was passed through to consumers through higher prices. From its introduction the tax faced resistance from Danes who argued that the government should not attempt to steer people's behaviour and increase the price of food. This was supported by businesses that were against increasing costs and local industries whose products became less competitive.<sup>36</sup>



The tax had many supporters arguing that taxation was an effective means to change people's behaviour and was necessary to curb rates of obesity. Health activists outside of Denmark also proposed other countries adopt a fat tax proposal, including Australia.<sup>37</sup> Australia's Obesity Policy Coalition supported the broad principle of Australia introducing a 20 per cent 'fat tax' coupled with subsidies for healthier foods. Reportedly, one of the chief advocates from this Coalition argued "Tax has been used to decrease smoking and alcohol consumption very successfully in Australia, so we need to look at how it could be used to improve our diets."<sup>38</sup>

*Continued on next page ...*

<sup>36</sup> American Broadcasting Corporation. 2011. "Denmark introduces 'fat tax' to foods high in saturated fat". ABCNews. Available at <http://abcnews.go.com/blogs/health/2011/10/02/denmark-introduces-fat-tax-on-foods-high-in-saturated-fat/>.

<sup>37</sup> Betts, M. 2012. "Fat tax to fight obesity". The Advertiser. Available at <http://www.news.com.au/money/cost-of-living/fat-tax-to-fight-obesity-crisis/story-fnagkbpv-1226360023728>

<sup>38</sup> Marriner, C. 2011. "Anyone for a great big, fat tax?". Sydney Morning Herald. Available at <http://www.smh.com.au/national/anyone-for-a-great-big-fat-tax-20111015-1lq4i.html#ixzz2fKnnT4ED>.



### Case study 1 | Continued

Despite heavy support from health activists for the Danish 'fat tax' it was subsequently dropped by the Danish government after a period of only 15 months. The government dropped the tax admitting the tax was not successful in cutting waistlines but risked jobs, with the Danish Food, Agriculture and Fisheries Minister, Mette Gjerskov, stating "the fat tax is one of the most maligned we [have] had in a long time".<sup>39</sup>

The demise of the tax drew a sharp rebuke from some Australian academics. An academic from the WHO's Collaborating Centre on Obesity Prevention at Deakin University argued food companies were behind the removal of the tax, and that the tax was not evaluated for efficacy.<sup>40</sup>

That no longer holds true. A subsequent study from the Institute of Economic Affairs following the end of the Danish experiment found that the tax was ineffective. Snowden's *The proof of the pudding* report concluded that Danes "switched to cheaper brands or went over the border to Sweden and Germany to do their shopping".<sup>41</sup>

The report also concluded that "the fat tax had a very limited impact on the consumption of 'unhealthy' foods ... [and] one survey found that only seven per cent of the population reduced the amount of butter, cream and cheese they bought and another survey found that 80 per cent of Danes did not change their shopping habits at all."<sup>42</sup>

<sup>39</sup> Bomsdorf, B. 2012. "Denmark scraps much-maligned 'fat tax' after a year". Wall Street Journal. Available at <http://online.wsj.com/article/SB10001424127887323894704578113120622763136.html>.

<sup>40</sup> Carey, K. "Denmark dropping of "fat tax" criticised by Deakin University researcher". Australian Food News. Available at <http://www.ausfoodnews.com.au/2012/11/20/denmark%E2%80%99s-dropping-of-%E2%80%9Cfat-tax%E2%80%9D-criticised-by-deakin-university-researcher.html>.

<sup>41</sup> Snowden, C. 2013. "The proof of the pudding: Denmark's fat tax fiasco". Institute of Economic Affairs. IEA Current Controversies Paper n42. Available at <http://www.iea.org.uk/sites/default/files/publications/files/The%20Proof%20of%20the%20Pudding.pdf>.

<sup>42</sup> *Ibid.*

## 8.0 The equity of behavioural taxes

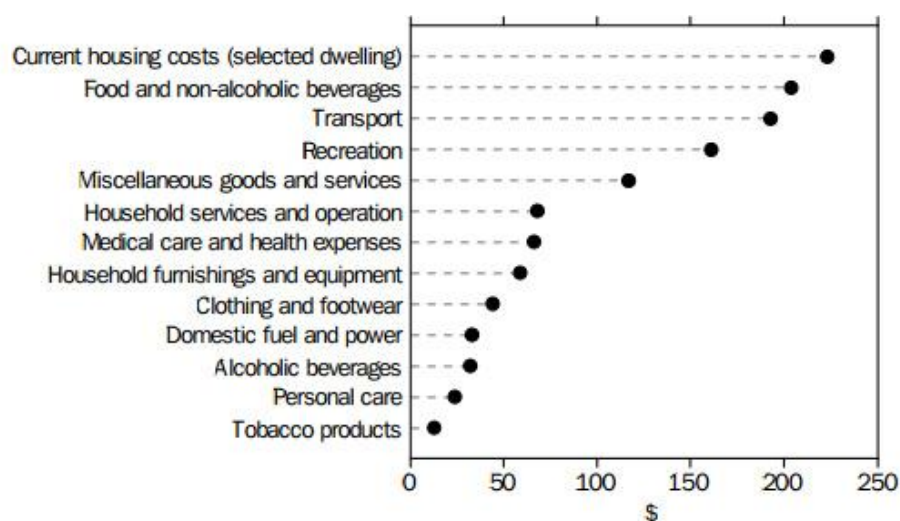
The assumption supporting behavioural taxes is that they primarily target luxury or non-essential goods and therefore contribute toward a progressive tax system as only those with sufficient disposable income are impacted. Yet, the data tends to show the reverse is the case.

The progressive nature of excise taxes on sin commodities was identified by the IMF. According to McCarten & Stotsky “empirical evidence suggests that excises on tobacco products and beer are regressive. The empirical results for liquor are mixed ... [and] sugar taxes are typically highly regressive and for this reason should be avoided.”<sup>43</sup>

Taxes that target sugar, salt and fat – such as the Danish fat tax (See Case Study 1) – explicitly act as regressive taxes because they harm all consumers on broadly non-essential goods. They also act as regressive taxes because they proportionately hit a larger share of household expenditure, especially for lower income earners.

As Figure 8 outlines after housing costs, food and non-alcoholic beverages are the second highest cost for the average Australian household. Combined with alcoholic beverages, food and non-alcoholic beverages become the highest weekly household expenditure group exceeding housing.

**Figure 8 | Average weekly household expenditure on goods and services**



Source: Australian Bureau of Statistics, Household expenditure Survey, Summary of Results, 2009-10, catalogue no 6530.0.

The costs for food and all beverages is not just borne by all households - they disproportionately impact on poorer households. Based on ABS data the contribution of food and non-alcoholic beverages to household income is disproportionately higher amongst the lowest-income families in Australia. As Table 4 outlines, nearly 20 per cent of the lowest quintile household incomes spent on food and non-alcoholic beverages, compared to only 15 per cent for the highest quintile households. While alcohol is a less regressive tax, that is likely a result of the fact that the tight financial position of those on the lowest income quintile can only marginally afford alcoholic beverages, and combined lower income households spend a greater share of their household income on these consumer products.

<sup>43</sup> McCarten, W. J. & Stotsky, J. “Excise Taxes” in Shome, P. ed. 1995. “Tax policy handbook”. International Monetary Fund (IMF). Washington DC, United States of America. pp100–03.

**Table 4 | Percentage of household income spent on food and alcoholic and non-alcoholic beverages**

	Lowest income quintile	Second income quintile	Third income quintile	Fourth income quintile	Highest income quintile
Food and non-alcoholic beverages	18.33	18.27	16.75	16.62	15.19
Alcohol	1.92	2.40	2.67	2.67	2.62
Food & alcoholic beverages	20.25	20.68	19.42	19.29	18.01

Source: Australian Bureau of Statistics, Household expenditure Survey, 2009-10, number 6530.0.

The cost burden becomes even more regressive when assessed against households on the vulnerability of low-income households, including those dependent on welfare. Australians on aged pensions spend a disproportionately high share of their income on food and non-alcoholic beverages in comparison to even those on the lowest income quintile, and especially in comparison to those on the highest income quintile.

**Table 5 | Percentage of households on government support spent on food and non-alcoholic beverages**

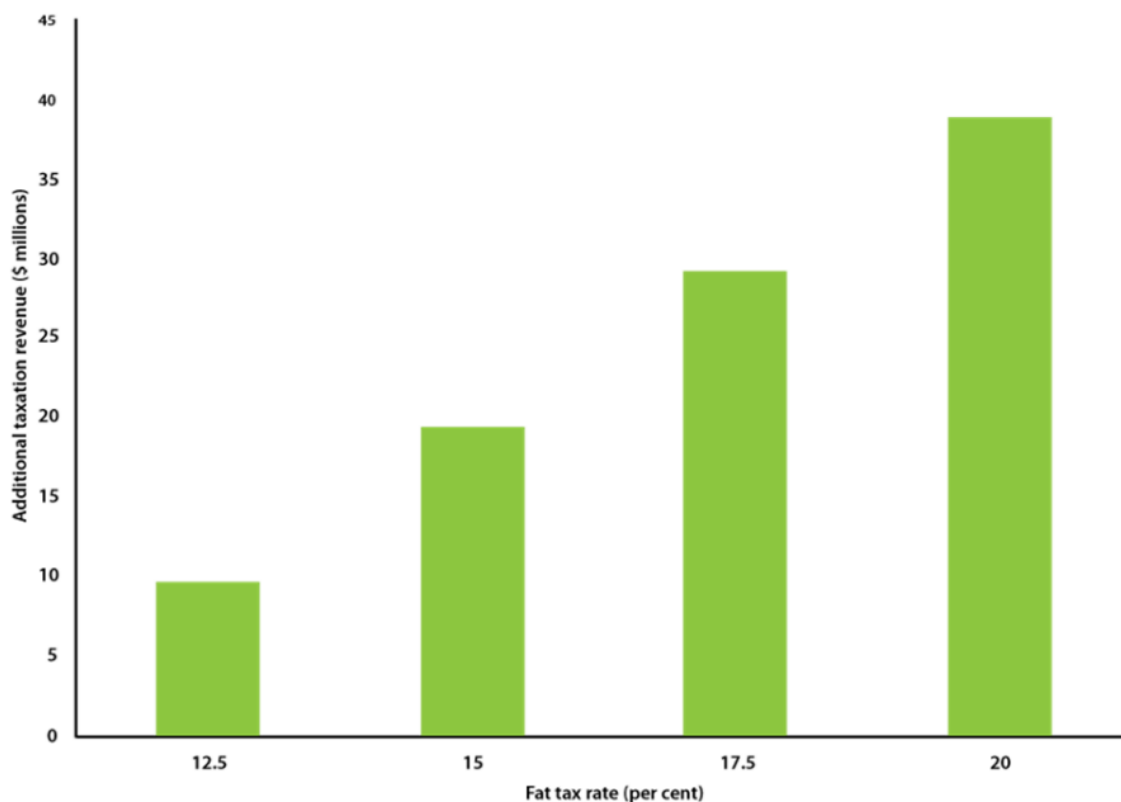
Receives age pensions	Receives disability and carer payments	Receives unemployment & study payments	Receives family support payments	Receives other payments
20.8	18.1	20.5	19.5	20.9

Source: Australian Bureau of Statistics, Household expenditure Survey, 2009-10, number 6530.0

While proposals for ‘fat taxes’ are regularly flagged, it is regularly ignored that Australia already has an unintended, operational ‘fat tax’. During negotiations to introduce the GST, the Howard government and the Australian Democrats negotiated to exclude fresh, unprocessed foods from attracting the 10 per cent tax. As a consequence, processed and non-fresh food products attract a ten per cent tax and have done so for a decade at a time when it has been argued that obesity rates have risen.

The explicitly regressive nature of proposed behavioural ‘fat taxes’ designed to reduce consumption of salty, sugary and fatty foods was addressed by the Institute of Public Affairs in 2012. According to Novak’s *Nanny State Taxes: Soaking the Poor in 2012* report a ‘fat tax’ would disproportionately hit lower-income families as it increased the overall share of their disposable income on food products, while delivering a boom for government revenue. Using ABS data Novak calculated a proposed 20 per cent *ad valorem* ‘fat tax’ could increase government revenue by an additional \$268 million per annum. Of that additional \$268 million, a share of \$39 million would hit low-income households acting as a deeply regressive tax against the poor to buy food staples.

**Figure 9 | Additional government revenue from low-income household due to a fat tax**



**Source:** Novak, J. 2012. "Nanny state taxes: Soaking the poor in 2012". Institute of Public Affairs. Available at [http://www.ipa.org.au/library/publication/1335389416\\_document\\_novak\\_nannystatetaxes.pdf](http://www.ipa.org.au/library/publication/1335389416_document_novak_nannystatetaxes.pdf).

## 8.1 Substitution issues

As outlined in Section 5.0, the objective of behavioural taxation is designed to reduce consumption of an identified product that is targeted by excise taxation. This method assumes that the targeted product can be isolated and consumers will not then substitute for alternative products.

Assessing substitution can be difficult, especially when law-abiding consumers substitute their legal consumption behaviour to illegal conduct. Unsurprisingly otherwise law-abiding consumers are unlikely to report that they have substitute from a legal product to an illegal one. Assessing the prevalence of substitution has been a common problem with the efficacy of policies surrounding illicit drugs, because data can only be collected on the basis that consumers admit they have engaged in unlawful activity.<sup>44</sup>

The same broad challenges surround substitution for tobacco products, because substitution from legal tobacco products can be presumed to lead to consumers switching to black market tobacco products such as loose leaf 'chop-chop' or counterfeit tobacco products. There appears to be little data available, as identified by Pra and Arnade, of data on the impact of behavioural taxation that

<sup>44</sup> Carragher, N. & Chalmers, J. 2011. "What are the options? Pricing and taxation policy reforms to redress excessive alcohol consumption and related harms in Australia". NSW Bureau of Crime Statistics and Research.

considers “the cross-price effect or substitutability of cigarettes with other tobacco-containing products”.<sup>45</sup>

Section 7.1 outlined the changes in consumer behaviour following the introduction of the alcopops tax. It is not in dispute that the alcopops tax did have an impact on the consumption of RTD beverages. A study by Doran and Digiusto identified the rate of consumption of RTD beverages increased in the lead up to the imposition of the alcopops tax from 11.52 litres per year in 2004 to 11.79 litres in 2007, before falling to 11.55 and 11.41 litres in 2008 and 2009, respectively.<sup>46</sup>

However, the perceived benefits of reduced consumption may have been over-stated. A 2011 study by the New South Wales Bureau of Crime Statistics and Research concluded:

In general, it appears that the increase led to an immediate reduction in alcopops sales; however, there is evidence of some substitution with other alcoholic beverages and the most recent sales data suggests that the downward correction may be over.<sup>47</sup>

Despite the tax cutting the rate of consumption of RTDs, the data suggests that consumers partly substituted for straight spirits and possibly white wine. The substitution for straight spirits is particularly concerning because the tax prompted consumers to switch from pre-measured, pre-mixed drinks to self-measured and mixed drinks with the potential to actually increase consumption.

The problem with the alcopops tax, as shown by the other collected data sets, is that it did little or nothing to cut overall drinking rates, reduce alcohol-related violence or prompted the key targets of the policy to substitute.

Some researchers have suggested that the alcopops tax was ineffective because it was too specific and didn't succeed in reducing overall alcohol consumption. A study completed by the University of Queensland concluded that a product-specific tax was unlikely to change consumer behaviour and using hospital admission rates in the Gold Coast as a data set, the tax didn't change the incidence of alcohol-related harm.<sup>48</sup>

The broader concern relating to substitution extends beyond the targeted product category. An increasing concern surrounding behavioural taxes is that consumers don't just seek to substitute within the same product category, an alcopop for straight spirits or white wine, but they substitute for goods that provide comparable perceived 'benefits', including illicit drugs.

As identified by the New South Wales Bureau of Crime Statistics and Research:

Research evaluating the impact of alcohol price on illicit drug use in the general population is sparse, inconclusive and largely limited to cannabis use. Some studies provide evidence that

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<sup>45</sup> Pra, M. D. & Arnade, C. 2009. “Tobacco product demand, cigarette taxes and market substitution”. Paper presented at Agricultural & Applied Economics Association and American Council on Consumer Interests.

<sup>46</sup> Doran, C. M. & Erol, D. 2011. “Using taxes to curb drinking: A report card on the Australian government's alcopops tax”. *Drug and Alcohol Review*. v30, i6. pp677-680.

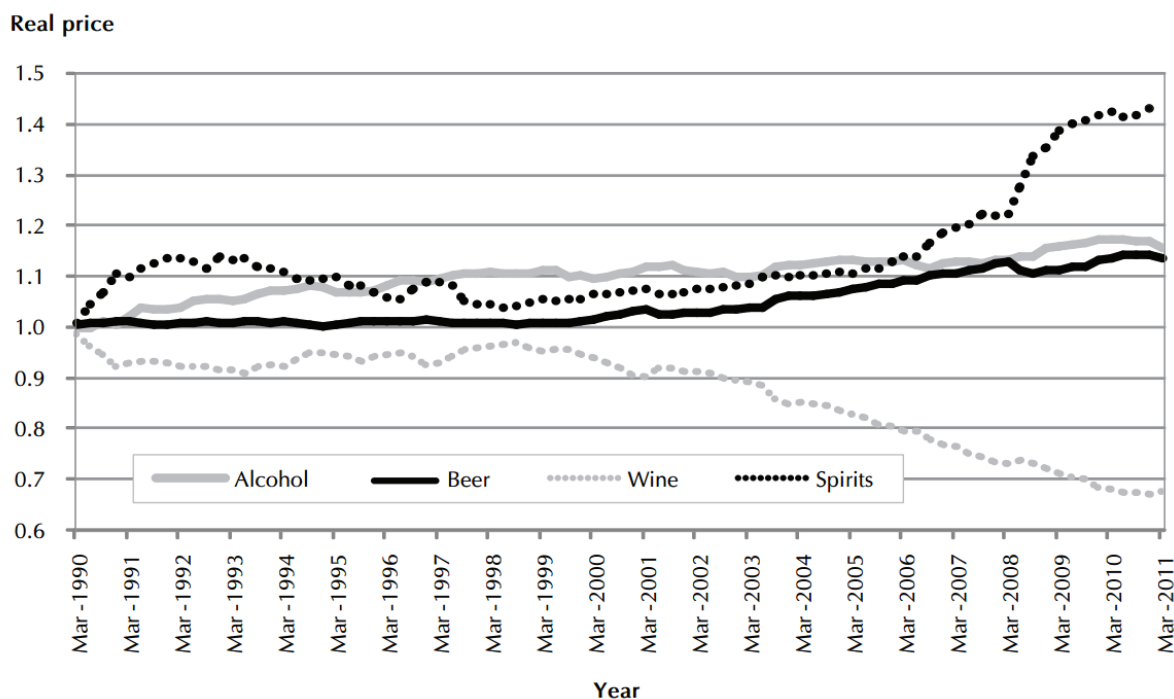
<sup>47</sup> Carragher, N. & Chalmers, J. 2011. “What are the options? Pricing and taxation policy reforms to redress excessive alcohol consumption and related harms in Australia”. NSW Bureau of Crime Statistics and Research.

<sup>48</sup> Kisely, S. R., Pais, J., White, A., Connor, J., Quek, L. Crilly, J. L. & Lawrence, D. 2011. “Effect of the increase in “alcopops” tax on alcohol-related harms in young people: a controlled interrupted time series. *Medical Journal of Australia*. v11. i195. Available at <https://www.mja.com.au/journal/2011/195/11/effect-increase-alcopops-tax-alcohol-related-harms-young-people-controlled>.

cannabis acts as a substitute for alcohol in Australian samples whereas other studies have found inconclusive results or evidence that alcohol is a complement to other drug use.<sup>49</sup>

However the data now appears to be more conclusive. Following the introduction of the alcopops tax researchers have identified that some consumers may have substituted for illicit drugs.<sup>50</sup> Further, recent research from Deakin University finds that should taxes increase sufficiently on alcoholic products, consumers will substitute for ecstasy or marijuana.<sup>51</sup>

**Figure 10 | Prices of alcoholic beverages relative to prices of all consumer items (December 1989 is parity), Australia, March 1990 to March 2011**



Source: Carragher, N. & Chalmers, J. 2011. "What are the options? Pricing and taxation policy reforms to redress excessive alcohol consumption and related harms in Australia". NSW Bureau of Crime Statistics and Research.

The other risk of substitution results from increasing consumption to offset potential cost increases. A trend has emerged where young Australians going out at night preload on cheaper alcoholic beverages or illicit drugs in their, or their friends' homes before going to nightclubs to avoid higher alcohol costs at venues.

Figure 10 outlines the potential cause for this behaviour. In recent years, excluding wine,<sup>52</sup> alcohol has seen a significant increase in price compared to other consumer items. Beer and spirits have all experienced significant price rises, but the most notable spike relates to spirits at the same time as the introduction of the alcopops tax.

<sup>49</sup> Carragher, N. & Chalmers, J. 2011. "What are the options? Pricing and taxation policy reforms to redress excessive alcohol consumption and related harms in Australia". NSW Bureau of Crime Statistics and Research.  
<sup>50</sup> Johnston, C. & Argoon, A. 2010. "Alcohol price spike fuels switch to ecstasy". The Age. 23/10/2010. Available at <http://www.theage.com.au/national/alcohol-price-spike-fuels-switch-to-ecstasy-20101022-16xvj.html>.  
<sup>51</sup> Miller, P.G. & Droste, N. 2013. "Alcohol price considerations on alcohol and illicit drug use in university students". Journal of Alcoholism & Drug Dependency". v1. i2. Available at <http://www.esciencecentral.org/journals/JALDD/JALDD-1-109.pdf>.  
<sup>52</sup> Wine has experienced a glut in recent years which has partly contributed to a reduction in retail prices.

A study by Turning Point Alcohol Drug Centre identified that three-quarters of Victorians between 18 and 24 were now preloading on alcohol before attending a late night venue.<sup>53</sup> Broadly similar data has been identified by the Foundation for Alcohol Research and Education with 57 per cent of pre-loaders identifying they engage in this behaviour to save money.<sup>54</sup>

The relevance of pre-loading identifies the risks of substitution when individual product or venue-specific taxes are imposed. Those targeted, particularly young people, are acutely aware of the financial implications and therefore adjust their behaviour to avoid incurring additional costs, but avoid changing their overall consumption intent and behaviour.

## 8.2 Risks of increased consumption

The assumption behind behavioural taxes is that they will influence and reduce the targeted consumer behaviour by making it more expensive and less affordable for consumers. But that assumes that all consumers are price-sensitive, and that there are limited avenues for substitution to other products. As outlined in Section 8.1, there is clearly an issue around substitution from legal products to illegal products, as well as to other 'like' products as a consequence of the introduction of behavioural taxes.

Data also suggests that, despite the intent of reducing overall consumption, behavioural taxes can have the reverse impact and actually lead to greater consumption.

The current extent of tobacco excise taxes has essentially made the products unaffordable for many Australians and subsequently priced consumers out of the legal market. However that assumes that all consumers only seek legal alternatives and then don't consume illegal products that can be purchased at lower prices enabling them to consume more.

While the author has not identified that behavioural shift occurring with tobacco products, it does appear to have occurred with increased behavioural taxes on alcohol products. Researchers at the Californian Prevention Research Centre used Swedish sales and price data sets from the mid-1980s to mid-1990s to assess the impact that taxes had on consumption behaviour.

The subsequent 2009 study found that increasing behavioural taxes on alcohol can increase consumption amongst some groups as consumers switch from buying premium brands and purchase higher volumes of cheaper brands.<sup>55</sup>

The role that taxes can play to create perverse incentives was outlined earlier in the Henry Review. As the Henry Review outlined in its assessment of alcohol taxes:

Taken together, current alcohol taxes reflect contradictory policies. They encourage people to drink cheap wine over expensive wine, wine from small rather than large producers, beer in pubs rather than at home, and brandy rather than spirits, and to purchase alcohol at airport duty-free stores. As a

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<sup>53</sup> VicHealth. 2012. "Experts warn against 'preloading' on alcohol ahead of schoolies". News Release. Available at <http://www.vichealth.vic.gov.au/Media-Centre/Media-Releases-by-Topic/Alcohol/Experts-warn-against-preloading-on-alcohol-ahead-of-Schoolies-Week.aspx>.

<sup>54</sup> Foundation for Alcohol Research and Education. 2013. "Drinking before going to a pub, club or bar (preloading)". Available at <http://www.fare.org.au/research-development/community-polling/annual-alcohol-poll-2013/drinking-before-going-to-a-pub-club-or-bar-preloading/>.

<sup>55</sup> Gruenewald, P. J., Ponicki, W. R., Holder, H. D. & Romelsjö. 2006. "Alcohol prices, beverage quality, and the demand for alcohol: quality substitutions and price elasticities". *Alcoholism: Clinical and Experimental Research*. v30. i1.

consequence, consumers tend to be worse off to the extent that these types of decisions to purchase and consume, which may have no spillover cost implications, are partly determined by tax.<sup>56</sup>

These examples outline the risk that product-specific taxes ultimately lead to perverse consumption behaviour. The claimed 'benefit' of introducing such taxes can also be outweighed by unintended consequences.

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<sup>56</sup> The Treasury. 2010. "Australia's Future Tax System: Final Report: Detailed Analysis – Chapter E5: Alcohol Taxation". Commonwealth of Australia. Available at [http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/Publications/Papers/Final\\_Report\\_Part\\_2/chapter\\_e5.htm](http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/Publications/Papers/Final_Report_Part_2/chapter_e5.htm).



## 9.0 Conclusions

Good intentions are pointless if they are matched with perverse and damaging outcomes. This is often the story of behavioural taxes that appear to deliver unintended consequences for both governments and consumers alike.

With the 'costs' of private consumption choices being passed onto the public through single-payer healthcare systems, there is an increasing focus by government about how behavioural taxes can be used to internalise the cost of externalities and use taxes to discourage deemed undesirable behaviour.

Behavioural taxes, notably excise taxes, are a blunt instrument that is assumed to be an effective tool to influence behaviour. As a blunt instrument behavioural taxes are imposed on the public consistently, but the consequences on consumers are not always consistent.

The most perverse, unintended consequences of behavioural taxes appear to result from alcohol taxation. The perverse consequences of alcohol behavioural taxation are likely a result of the nature of the product – it is broadly consumed and there is a complex matrix of applied excise taxes.

Recent data from the imposition of the Rudd government's 2008 alcopops tax provides a clear indication of how a well-intended policy can lead to highly undesirable consequences.

The claimed objective of the alcopops tax was to cut consumption rates of RTDs amongst women. While there was a decline in the consumption of RTDs, consumers substituted with privately mixed straight spirits and white wine, which saw an immediate consumption spike.

There is also increasing academic evidence that higher alcohol taxes may lead to consumers switching to illicit drugs. The alcopops tax in particular prompted some consumers to substitute expensive RTDs with illicit drugs.

The unintended consequences are not just limited to the application of the alcopops tax. The generally rising price of alcohol at venues, which is heavily influenced by behavioural taxes, is leading young people to engage in risky 'preloading' by consuming large volumes of cheaper alcohol in private homes before going to a bar or club.

Similarly, behavioural taxes for alcohol appear to be less effective on young people who have higher disposable incomes, and recent data suggests that they are effective in changing the behaviours of moderate drinkers, but not heavy drinkers. Increasing behavioural taxes can lead consumers to switch from fewer, expensive products to consuming higher volumes of cheaper products, prompting a rise in the consumption of products that are intended to be reduced.

By comparison food-specific, non-sales taxes are relatively recent and governments are only starting to experiment with them, though so far with limited or no 'benefit'.

The Danish experiment with a 'fat tax' did not deliver the claimed benefits proposed when it was originally introduced. There was no significant, identified reduction in the behaviour that the government sought to target – a reduction in the consumption of saturated fats. However there were unintended changes in behaviour such as a decline in the competitiveness of Danish food manufacturing and a rise in the number of consumers who shopped across-borders to avoid paying the tax. Unsurprisingly the consumers in the best position to shop across national borders are also those who are less likely to be price sensitive.

There are clear unintended consequences from tobacco behavioural taxes. The highly-regulated nature of the sector and declining consumption rates show that the principle concern is on the switch from a very expensive and highly-regulated legal product to less-expensive and illegal or counterfeit product.

As identified by the government's own tax reviews, the complexity and inconsistency of alcohol taxes is leading to perverse and unintended consequences. The Henry Tax Review recommended the adoption of a standardised volumetric tax for alcohol.

This paper does not assess the relative merits of volumetric taxation, but the principle of standardisation to treat all alcohol products equally does have merit on the grounds of non-discrimination. However, any change in taxation should not be used as a justification to increase taxes on existing alcohol products.

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