

# Note on BERL Reply

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## 1. Introduction

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In March 2009, Business and Economic Research Limited ("BERL") published "Costs of Harmful Alcohol and Other Drug Use," a report jointly commissioned by the Ministry of Health and ACC. BERL was asked to measure the costs of drug and alcohol abuse to New Zealand society, but not to evaluate specific interventions. BERL calculated annual social costs of alcohol and illicit drug consumption of \$6.8 billion, including \$4.8 billion in social costs from alcohol. Following the use of BERL's report by Sir Geoffrey Palmer in support of new regulation and increased taxation of alcohol, we released a working paper and a calculation spreadsheet reviewing the BERL report on June 17.<sup>1</sup>

Our review found serious deficiencies in both the method and execution of BERL's study. We found BERL's headline cost figure of \$4,794 million was overstated. Correcting for errors in method reduced the figure by \$1.8 billion, of which only \$662 million consisted of policy-relevant external costs. These were offset by \$516 million in excise for a net social cost of \$146.3 million. We argued that BERL's report rested on implausible assumptions and had no discernable basis in economics.

Our review of BERL's report attracted widespread comment, culminating on 26 June with Deputy Treasury Secretary Peter Bushnell, in an interview with the National Business Review, characterising as "shonky" that policy might be formed based on a cost-only study; he later apologized for making the comments using second hand information and for criticising BERL for not including benefits when benefits were outside of BERL's brief.<sup>2</sup> As we explain below, although BERL was not asked to consider benefits, BERL's treatment of benefits is integral to their report's findings.

BERL has responded in various forums and on 6 July published a more formal response to our critique on their web site.<sup>3</sup> This note is our reply to that July 6 response.

Our primary goal in reviewing BERL's report is to warn policy makers about its severe limitations. Alcohol abuse is a tremendously complex problem. Alcohol is at once a source of both enjoyment and tremendous costs in New Zealand society. Our wish is to see public policy makers informed by robust economic research. This note proceeds as follows:

- In section 2 we describe two corrections to our adjustments brought to our attention by BERL, and make a third adjustment for excise taxes left out of our draft review;
- In section 3 we consider other issues raised by BERL; and
- Section 4 concludes.

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<sup>1</sup> Available from [www.econ.canterbury.ac.nz/RePEc/cbt/econwp/0910.pdf](http://www.econ.canterbury.ac.nz/RePEc/cbt/econwp/0910.pdf)

<sup>2</sup> <http://www.nbr.co.nz/article/berl-economist-hits-back-alcohol-report-critics-104736>

<sup>3</sup> <http://www.berl.co.nz/1026a1.page>

## 2. Corrections

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The lead author of BERL's alcohol study has brought to our attention two errors in our calculations which we describe below. The combined effect of these corrections is to add \$36 million to our measure of external costs.<sup>4</sup> As we noted in our June 17 critique, our adjustments to BERL's cost estimates were done by reverse engineering BERL's calculations using the report's description of their calculations, BERL having turned down our earlier request for access to their underlying calculations citing protection of IP. Our task was not aided by BERL's poor citation and frequently opaque description of calculations. We are pleased by the limited size of the correction required following feedback from BERL.

### 2.1. Excess Unemployment Costs (+\$19M)

First, BERL estimates costs of excess unemployment as being \$877.5 million, of which \$469 million would have been forgone earnings and the rest multiplier effects. BERL cites Rayner (1984), who estimates that, among the top five percent of drinkers, employment rates in 1984 were ten percentage points below the average employment rate.<sup>5</sup> If five percent of the 2005 working age population had employment reduced by ten percentage points, that means that about 16,000 workers were not employed who otherwise would be employed. BERL tallies 31,100, possibly by using their less restrictive grouping of "high risk" drinkers which comprise about 8.7% of the population.<sup>6</sup> We proportionately reduce BERL's forgone wages figure by the ratio of our respective employment figures, adjust for cohort heterogeneity, and inflate by our preferred multiplier of 1.1 to arrive at a total cost figure of \$212 million, of which \$19 million is external.<sup>7</sup>

### 2.2. Insurance Overheads (+\$28M)

BERL estimates insurance administration costs of \$132.2 million. BERL is correct that it is not double-counting to include these administration costs alongside the paid claims. However, that does not mean that their figure is correct. BERL says that they apportion total insurance overhead costs according to the proportionate share of alcohol-related claims. They note at p.123 of their report that alcohol-related car crashes cost \$45 million. We add to this \$14.75 million in claims for property damage.<sup>8</sup> Some \$60 million in claims then attribute to alcohol. Total claims were \$1,609.7 million: alcohol then contributes about 3.7% of total claims. Overheads were \$763 million: the proportionate share for alcohol then is \$28 million. We do not know how BERL determined its figure of \$132.2 million; we cannot replicate it from their stated method and sources. We conservatively apportion this cost as falling entirely externally. If insurance companies are able to charge more to those more

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<sup>4</sup> Corrections are detailed in full at <http://offsettingbehaviour.blogspot.com/2009/07/errata.html>

<sup>5</sup> BERL incorrectly described Rayner's approach as: "Rayner, Chetwynd and Alexander (1984, p47) suggest that harmful alcohol use increases unemployment in New Zealand by 10 percent."

<sup>6</sup> Note, however, that when we use their preferred 8.7% figure, we arrive at some 27,000 workers, not 31,100.

<sup>7</sup> In their July 6 response, BERL suggests the value of the correction as being \$830 million; as we had previously contacted BERL's lead author about the likely magnitude of our correction, we are somewhat puzzled by this figure.

<sup>8</sup> BERL estimates costs on this category, in Table 2, as being \$21.7 million. In the description of their work at page 122-3, they list these costs as totaling \$7.8 million. We took the average between these two figures.

likely to generate alcohol-related claims, then much of this figure really falls internally; the number then forms very much an upper bound estimate of the external insurance costs.

## 2.3. Excise Tax Adjustment (-\$197M)

A third correction to our June 17 estimate relates to excise tax revenues: our initial draft failed to include excise-equivalent duties collected by the Customs Service adding up to \$197 million. BERL noted at the New Zealand Economics Association annual conference that its presented cost figures were adjusted to remove collected excise taxes that previously had been counted as a cost by BERL, a matter for which we had criticized them. BERL may wish to make the subsequent adjustment to include the effects of excise-equivalent duties which we had neglected.

## 2.4. Summary of Corrections

Prior to corrections, we had found net external costs of \$146.3 million. Our adjustments produce a net positive figure for alcohol consumption: net external annual benefits totalling \$37.8 million, an overall adjustment of \$4,832 million from BERL's original estimate. However, given the margin of error in work of this sort, we would regard both our initial figure and our corrected figure as suggesting external costs roughly equal to collected tax revenues.

It is worth noting that our adjustments were made without access to BERL's calculations, our request for access declined by BERL on 15 May on grounds of protecting intellectual property. We provided BERL with an early draft of our paper seeking comment in case we had erred in our reverse-engineering of their figures; now, nearly a month later, they have raised objections leading to an adjustment totalling only \$36 million. We not aware of any substantive errors that remain in our critique; we welcome additional feedback. Our working paper is being revised to incorporate these changes.

## 3. Other Issues Raised By BERL

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### 3.1. Benefits out of scope

Among BERL's most frequent responses is their complaint that benefits were outside their report's scope:

*Measurement of benefits was clearly outside the scope of the project. We cannot accept criticism for not covering issues that were outside the project's terms of reference.*

Regardless of the terms of reference, BERL's treatment of benefits in their report is integral to their headline costs calculation. As BERL correctly points out at page 173 of their report, private costs can only be counted as social costs if there are no offsetting private benefits:

*When measuring the social cost of harmful AOD use, known private costs should generally be excluded...**because private costs are offset by private benefits, so there is no net social cost.**...In the case of harmful drug use, however, individual decisions are not necessarily made on a rational basis, that is, a decision where the consumer equates their costs and benefits. We argue that the consequences of irrational consumption decisions lead to private costs that are borne by the rest of society, and hence should be included as social costs...*

***We assume that it is irrational to drink alcohol to a harmful level and that harmful alcohol use has zero private benefit. As such, the 50 percent of harmful alcohol consumption estimated in this study has no private benefit to match the private cost, resulting in a net social cost. These private decisions that lead to social costs are included in our estimates. (our emphasis)***

In our working paper, we argued (p. 10):

*The second effect of BERL's irrationality assumption is to give BERL the freedom to decide by how much the private benefits of harmful alcohol and drug consumption fall short of costs. Irrationality only says gross economic benefits are less than gross costs but not by how much. The difference between the two contributes to social cost. At one extreme, BERL could decide benefits are worth marginally less than costs, minimizing the contribution of private costs to social costs.*

*However, what BERL did was assume the gross private benefits of harmful alcohol and drug consumption are zero. That is, harmful drinkers and drug users receive no enjoyment, health, economic or social benefits from their consumption at all. By assuming zero gross benefits, BERL is able to include all private costs in their estimate of social cost. This assumption accounts for approximately two thirds of the headline BERL estimate of social costs.*

*Astonishingly, BERL offers no justification for these cornerstone assumptions.*

BERL's treatment of private benefits adds \$2.2 billion of private costs to their headline costs for alcohol. Plainly, and regardless of the scope of the RFT, BERL's treatment of benefits is material to their method, directly affecting their measurement of the costs of diverted resources, and more subtly affecting all of their other cost measures.

BERL calculates that half of all produced alcohol is consumed by drinkers who consume more than their threshold for harmful drinking; consequently, BERL tallies half of all household expenditures on alcohol as having no corresponding benefit.<sup>9</sup> In other areas, BERL counts the costs of harmful effects. As BERL frequently likes to graphically illustrate, some individuals suffer very high costs as consequence of having consumed too much alcohol. Those costs are very real, and it would be ridiculous to argue that, *ex post*, those costs are less than the benefits of drinking for those drinkers. But for every drinker who suffers a negative outcome from his drinking, there are many others who consume no less alcohol and enjoy a good night out without obvious negative consequence. *Ex ante*, all of these drinkers are observationally identical. Consider, by analogy, skiing: a risky, but enjoyable activity. If we wished to count the "social costs" of skiing and wanted to include all of the costs borne by those skiers who broke their legs while skiing, we would need to weigh those costs against the benefits enjoyed by all of the skiers who made it down the slope without accident. Alternatively, we could consider only the external costs of skiing. Counting all of the private costs as social costs by virtue of an unsupported assumption that gross benefits are zero does not provide a useful cost figure.

In spite of the centrality of BERL's zero benefits assumption to headline costs, BERL has not addressed the concerns we raised in our working paper. We have noted that zero benefits to harmful drinkers implies either implausible or impossible (depending on who you ask) assumptions about the utility functions of drinkers:<sup>10</sup>

*Reasonable people can argue about the extent to which the rational addiction model holds. But a reasonable application of a non-rational addiction model wouldn't assume zero benefits as soon as the two pint per day threshold were crossed:*

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<sup>9</sup> Of course, we would prefer that they count only that portion consumed above the threshold; the relevant counterfactual should be "harmless drinking" not "no drinking".

<sup>10</sup> <http://offsettingbehaviour.blogspot.com/2009/06/correcting-berl-report-part-3-alcohol.html>

*instead, it would say that once some threshold were crossed, benefits would be exceeded slightly by costs and that the difference between the two would increase the farther from the threshold you went until asymptotically reaching zero at some point far out on the consumption axis. BERL threw in a step function that I cannot believe is consistent with any plausible utility function: **prior to the threshold, benefits at least equal costs; after the threshold, benefits don't just equal zero, they're sufficiently negative to precisely offset all of the gross benefits from any prior consumption.**(our emphasis)*

## 3.2. Rationality

Another frequent objection from BERL is their view that our critique of their treatment of benefits depends on implausible assumptions about perfect rationality and perfect information. This perfect rationality critique from BERL is a response to our suggestion that for harmful drinkers a better approximation to assuming zero private benefits to drinking is that private benefits roughly match private costs. For every drinker who wakes up with regrets, others can reflect on a good night out.

BERL has found some unexpected applications for this perfect rationality argument. In their July 6 response:

*"They argue for the case that all drinking is a rational choice, but take a middle road assuming that for all drinkers the individual benefits offset private costs. They then assume that the majority of costs considered in the BERL study are fully borne by the individual and net out, and assert that these costs are not relevant to policy."*

We do not assume that costs match benefits for each and every drinker, but rather taken as an average across all drinkers across the harmful category. We do not simply assume that the majority of costs are internal; rather, we expended considerable effort in trying to assess what portion of costs fall internally and what portion fall on external parties. In doing so, we've sourced relevant international literature helping us to appropriately apportion costs.

Later, BERL returns to the "perfect rationality" argument. This from their formal response:<sup>11</sup>

*[W]e would suggest that it is nonsense to argue that a drunk driver who wraps themselves around a power pole has made a fully informed, rational choice that is consistent with their long-term welfare and should be of no concern to society.*

This example is non-sequitur: from an assumption of rationality it does not follow that drunk driving should be of no concern to society. In a rational economic framework, this behaviour can be rejected on grounds that it produces significant negative externalities.<sup>12</sup> The example fails in a second way – merely observing a strongly negative outcome *ex post* is not on its own evidence of irrational or sub-optimal behaviour *ex ante*. When occasional accidents occur in rugby or skiing, the victim is not usually accused of being irrational. Drink driving is in our view rightly condemned, but not for the reason BERL offers.

We have repeatedly and at some length explained that our analysis does not assume perfect rationality.<sup>13</sup> Yet BERL quite incorrectly and, in view of our responses already offered on this point, disingenuously persists with this line.

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<sup>11</sup> <http://www.berl.co.nz/1026a1.page>. Also see <http://www.odt.co.nz/opinion/opinion/64498/is-harmful-drinking-acceptable-choice>

<sup>12</sup> There are, of course, non-economic grounds for objection as well.

<sup>13</sup> On 4 July at <http://offsettingbehaviour.blogspot.com/2009/07/final-word-on-rationality.html>; on 1 July at the NCEA conference in response as discussant on BERL's presentation; on 30 June <http://offsettingbehaviour.blogspot.com/2009/06/jim-mora-on-berl-report.html>; on 19 June

### 3.3. The 1.87 Multiplier

Early in our examination of BERL's results, we found a particularly odd figure: after calculating the value of wages forgone due to each of premature, excess unemployment and absenteeism, BERL then multiplied total forgone wages by 1.87, the ratio of GDP to total wages. This multiplier makes sense in a world where a worker can never be replaced, either by another worker or by a more capital-intensive production process. However, those assumptions do not characterize the real world: capital and labour are not perfect complements and hiring new workers is not impossible. BERL does not, in its original report, discuss the conditions under which the multiplier makes sense.

BERL has responded to our critique of their multiplier as follows:

*"In the short run, it is not necessarily the case that factors of production can be reallocated. For example, your computer does not keep writing by itself when you have a sick day. Nor may resources be freed up for others to use if a person turns up to work hung-over.*

*In the longer run, alcohol-related work absences or premature death may reduce the human capital available to the economy. This could be a particularly substantial effect for young people whose drinking impairs their learning, experience and job prospects. There may also be substantial complementarities between workers, so one worker's alcohol-related absence disrupts other worker's productivity."*

In essence, BERL is defending their use of the 1.87 multiplier by asserting that in the short run workers and capital become perfectly complementary. To BERL's credit, this is a major step forward in their thinking, at least publicly: in their original report they considered neither time horizon (short run/long run) nor complementarity. In an incremental cost study time horizon is especially important because this in part determines whether costs are fixed or variable over the relevant increment.

That said, BERL's response is unconvincing. First, the largest component of BERL's forgone wage costs derive from excess unemployment: it is difficult to assert complementarity effects for the unemployed. The next largest component derives from premature mortality. In that case, the firm incurs one-time hiring and retraining costs; those typically are much less than a worker's annual salary, and much less than 1.87 times his wages.<sup>14</sup> Only about an eighth of BERL's calculated costs of forgone wages come from absenteeism, reduced productivity, or alcohol-related injury. Even if BERL's complementarity argument were tenable, it only really applies to about an eighth of their estimated forgone labour costs. For the rest, there are only transitional costs.

Second, even in the case of perfect complementarity, using the 1.87 multiplier and assigning all costs as social costs requires that there is absolutely no mechanism for employers to punish staff for reduced productivity, either through reductions in the probability of promotion or salary increase, or through increases in the probability of dismissal. To the extent that employers can do this, costs should be viewed as internal to the worker.

Third, worker pay approximates a worker's marginal revenue product. Imperfectly to be sure, which is why we include a ten percent "value added" component discussed below, but wages approximating marginal revenue product forms the cornerstone

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<http://offsettingbehaviour.blogspot.com/2009/06/correcting-berl-report-part-3-alcohol.html>. It has also been attacked at <http://antidismal.blogspot.com/2009/07/unbelievable.html>.

<sup>14</sup> Barbara Davison, 2001, "The Importance of Cost per Hire", *Workforce* (January), puts US recruitment costs at an average of \$4,588, for example.

baseline for much of labour economics. If a worker's presence raises the productivity of his teammates, his wages are higher by virtue of this complementarity. Complementarity effects then are already accounted in wages paid without need for multipliers.

Fourth, BERL asserts that alcohol use can diminish human capital accumulation. Hirschberg and Lye<sup>15</sup> in a metastudy of the existing literature find no conclusive relationship between overall alcohol use and human capital formation, though there is some evidence that binge drinking can hurt a student's grades. They also find that alcohol consumption correlates positively with wages, though results in that literature might overstate alcohol's positive effects by failing adequately to correct for underlying heterogeneity. Estimates of the upper bound of the turning point for alcohol consumption on wages – the point at which further consumption ceases to have a positive effect – range from 56 grams of alcohol per day to 210 grams of alcohol per day. The point estimates range from 23 grams to 53 grams, with many studies finding a turning point well beyond BERL's threshold for "harmful" drinking. For very serious alcoholics, Hirschberg and Lye find reduced employment participation. On the whole, this is hardly overwhelming evidence in favour of BERL's assumed relationship between alcohol consumption and work prospects.

Finally, BERL leaves unexplained the other supporting assumption required to justify the 1.87 multiplier: full employment in the counterfactual. We note also that one of BERL's cited sources on the employment costs of alcoholism, Rayner, says that total forgone wages are an upper bound estimate of costs: even our 1.1 multiplier is above his upper bound. If BERL does not trust Rayner on this, why do they use his estimate of the employment effects of alcoholism?

### 3.3.1. Other Multiplier Issues

BERL further charges that

*Crompton and Burgess assume that all productive resources can be fully and costlessly reallocated, workers bear almost all the cost and count only a "value added" component of 10% as being an external cost".*

Far from assuming costless reallocation, we have allowed the 10 percent "value added" component because we recognise re-allocation is costly and that firms may not be able to internalise all of those costs. We explain this at p.20:

*We conservatively consider the "value added" component of 10% as being an external cost, noting that employers would attempt to internalise costs by applying a wage penalty to those expected to be higher cost due to alcoholism. To the extent they are successful, counting the full 10% markup on wages as external becomes excessive.*

Again, BERL's misunderstanding seems to be around treatment of policy-relevant externalities. It is not that we assume zero re-allocation costs; it is that we focus on the external component of those costs.

## 3.4. Cherry picking assumptions

BERL accuses us of "cherry-picking" assumptions that let us understate costs.<sup>16</sup> However, BERL offers nothing beyond assertion on its claims that heavy alcoholics and prisoners would have labour market characteristics identical to the average Kiwi

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<sup>15</sup> Hirschberg, Joseph and Jeanette Lye. 2009 (forthcoming). "Alcohol consumption and human capital: a retrospective study of the literature." *Journal of Economic Surveys*.

<sup>16</sup> See <http://www.berl.co.nz/1026a1.page> at section "Their assumptions: a cost-deflating bias"

but for alcohol. By contrast, we spent some considerable effort finding reliable relevant empirical estimates of these effects and have done our best to adjust for these confounding factors, which amount to a \$69 million reduction in external costs. Instead of providing contrary evidence or finding fault with the studies we cite, BERL simply asserts a lack of robust evidence either way.

In one case, we were forced by an absence of empirical literature one way or the other to make an assumption: reduction of crime costs in the absence of harmful alcohol use. Crime costs are very important in assessing the harms associated with alcohol abuse; indeed, they make up the biggest component of our external cost category. BERL uses a survey of prisoners which asks them to what extent alcohol contributed to their offending – none, a little, some, a lot, or all – and assumes that every crime in the latter three categories would disappear in the absence of alcohol. It's certainly plausible that some crime would be reduced in the counterfactual: none of the first category, a little of the second category, some of the third category, a lot of the fourth category, and all of the last category. The average of those, in our view, is not a 100% reduction in the latter three categories; absent any data on the elasticity of crime with respect to alcohol, we reduce BERL's costs by a third. We do not claim our measure is the right one, but we think that our rough ball-parking of a one-third reduction in the "some" category, two-thirds in the "a lot" category, and all of the all category is a lot closer to correct than BERL's assumption of one hundred percent of all three.

### 3.5. World View

BERL's most frequent response to our critique is that it is a difference in world view. Economics, it seems, is a matter of opinion. In a recent ODT article appropriately titled, "Is harmful drinking acceptable choice?" Dr Nana of BERL wrote:<sup>17</sup>

*In contrast, the Crampton and Burgess critique selects assumptions with a cost-deflating bias, reflecting their world view... Crampton and Burgess' world view involves consumers that are rational in their drinking decisions... It is not possible to address all the criticisms given space limitations. The criticisms are essentially founded on a different view of the world.*

It would appear world view is the cornerstone of BERL's response.

We can hardly conceive a weaker defence. In their main response,<sup>18</sup> BERL cites world view in defence of their claims that a worker's total product is irreplaceable, that addiction is irrational, and that irrational addicts enjoy zero gross benefits from drinking rather than simply benefits less than costs. In each instance we point to the literature and cite evidence to make our case. To the best of our knowledge, our critique of BERL on these points and others represent a mainstream view in economics. Yet BERL is content to assume their answers to these key issues and others in opposition to that evidence, and put the difference down to world view.

In our opinion, this is wholly inadequate. Our overarching criticism of BERL is that their methodology is inconsistent with the standard economic method. Rather than continue to assume without any justification every major component of their headline figures, as BERL appears content to do, we would have expected these economic consultants to mount a defence in economics. Let us not forget that BERL's client asked for a report on economic costs. Yet after four weeks none is forthcoming. Instead, BERL has resorted to what is essentially an attack on the personal values of its critics. If BERL thinks world view is the essential foundation for our differences,

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<sup>17</sup> "Ganesh Nana, "Is harmful drinking acceptable choice?", Otago Daily Times, 8 July 2009, p. 17.

<sup>18</sup> Available at: <http://www.berl.co.nz/1026a1.page>

then we take it they concede the economic argument. It isn't economics when the conclusion is embedded in the assumptions and when those assumptions have no foundation in either the mainstream empirical or theoretical economics literature.

### 3.6. Other Matters

Trivially, and incorrectly, BERL complains about our citation:

*The 'result' that "alcohol saves many more lives than it takes" is an assertion that requires evidence. And the idea that addiction has rational foundations clearly indicates a model view of a consumer that would be at variance with others' views, including those of some economists. Such a value judgement would not have been appropriate for an independent study such as ours.<sup>19</sup>*

The quote BERL takes is from our executive summary, not normally a place for referencing, and summarises a point we make under the heading "Alcohol Saves More Lives Than It Costs" on page 37 of our paper:

**Collins and Lapsley (2008a:38)** report alcohol, across all categories of consumption, saves more lives than it costs. Among low risk drinkers, **Collins and Lapsley** report an annual loss in Australia of 1505 lives, and 6,605 lives saved (compared with a counterfactual of complete abstinence). Across all drinking categories, **Collins and Lapsley** report a net saving of 2,300 lives per year. (emphasis added)

Has BERL read beyond the executive summary of our critique?

## 4. Conclusion

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In responding to our criticisms, BERL has usefully pointed out two corrections required to our adjustments to their costs. However, even with these corrections, we find net external costs to be zero once full account of excise taxes is made. It also is encouraging that BERL seems to have taken on board one of our critiques: that they ought not have included collected excise taxes as a cost of harmful drinking.

BERL has chosen not to defend its economic cost report on grounds of economics. Instead, BERL's main strategy has been to attack the personal values and world view of its critics. BERL's use of analogies suggesting our personal acceptance of murder<sup>20</sup> and drink driving are in the nature of personal smears. BERL disingenuously continues to allege that our results hinge on perfect rationality and perfect information, in spite of our repeated rebuttals of that point. Their complaint that benefits are out of scope and beyond criticism is obviously incorrect: their treatment of benefits is the basis on which private costs are included alongside external costs. BERL's treatment of benefits defines the methodology.

What is most striking about BERL's response is what was left out. BERL has not justified, or been able to cite formal theory or evidence in support of, the following aspects of the report. Between them, these unsupported assumptions produce over 90% of BERL's headline costs:

- All harmful drinkers are irrational (BERL p. 173; for discussion see our critique pp. 9-10)

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<sup>19</sup> <http://www.berl.co.nz/1026a1.page> at "Their world view and considerations beyond the scope of the BERL study".

<sup>20</sup> Mitchell Hall, "Berl economist hits back at alcohol report critics", *National Business Review*, 3 July 2008, available at <http://www.nbr.co.nz/article/berl-economist-hits-back-alcohol-report-critics-104736?headsups=1>

- All irrational drinkers receive zero gross economic benefit from all drinking, both above and below the threshold for harmful drinking (therefore all private costs are social costs) (BERL p. 173; for discussion see our critique pp. 9-10)
- An epidemiological threshold determines the cut off point for all economic benefits (BERL footnote 9, p. 7; for discussion see our critique pp. 8-9)
- In the counterfactual, all harmful drinkers are perfect complements for capital and are irreplaceable (implied by scaling wages by ratio of GDP/wages; see BERL p. 129; for discussion see our critique pp. 19 and 35); if the defence for the multiplier lies rather in worker-worker complementarities, some evidence for the magnitude of such effects might be desirable
- Other than differences in age and gender, prisoners have the same characteristics as an average member of the population (BERL p. 114; for discussion see our critique pp. 25-26)
- Other than differences in age and gender, heavy drinkers would have the same characteristics as an average member of the population but for their drinking (BERL p. 114)
- Using average population values and ignoring most cohort characteristics of heavy drinkers and prisoners
- Up to 50% of social costs of harmful drinking are potentially avoidable (BERL p. 69; for discussion see our critique pp. 14-15)<sup>21</sup>

BERL's headline figures depend on these assumptions but we don't think there is a rigorous defence for any of these assumptions.

BERL's nearly total lack of response on economic grounds, lack of references to any theory or evidence in the literature in response to our criticisms, combined with their continued willingness to assume all of the key elements supporting their headline costs, indicates to us that BERL has conceded the economic argument.

Most seriously, BERL has not explained what policy makers can do with a cost report that by BERL's admission has no policy relevance absent benefits. Without this explanation, we are left to observe that the methodology used by BERL produced very large headline cost figures, their report repeatedly mischaracterised those costs as welfare measures, that these costs were misinterpreted by at least one group of policy makers and BERL did not to our knowledge make any attempt to correct this misinterpretation until after our critique of their work was released and picked up by the mainstream media. It is this non-response by BERL that motivated our review. Identifying a use for BERL's report on the important issue of alcohol misuse is a matter that remains unexplained.

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<sup>21</sup> BERL cites Collins and Lapsley (2008b) in support of this assumption, but we found the argument unconvincing. As we note in our critique, the 50% avoidable costs BERL assumes is not supported by Collins and Lapsley (2008b), who report smaller values. The Collins and Lapsley (2008b) estimate has been strongly criticised in commissioned work by Access Economics, who raise a similar set of concerns as we did in our critique of the BERL's report. At page 15 of our critique we cite evidence that suggests the 50% avoidable cost estimate is grossly overstated.