## *Comments on EY report Evaluation of the tobacco excise increases as a contributor to Smokefree 2025 (2)*

[redacted]

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1. **Accuracy**
   I suggest that EY take another look at the report, and check the accuracy of the methods' section and presentation of quantitative results. Some of the errors are material. Examples of some of the issues to be checked include:

   - There are missing or incorrect titles for some of the figures but, more seriously, some places where the text and the figures don't match. For example, Figure 3 & Table 10 do not appear to show widening ethnic inequities as stated in the text; Figures 2 and 3 either the scale is wrong or the x axes are mis-labelled; Table 10 – need to be clear about what the integers refer to (? Proportion of adult population); and so on.

   - pp.29-30 has an incorrect formula for calculating price elasticity – which should of course be % change Q / % change P, not average Q * average P as stated in the paper. How was price elasticity actually calculated?

   - Figure 20 – is this nominal? Perhaps consider CPI-adjusted rates?

   - Page 80 – states that Maori are more price sensitive – but if I have interpreted the information correctly, Maori are spending more after the introduction of a tax, which suggests lower price sensitivity.

   - And so on.

2. **Price elasticities**
   Price elasticities are central to understanding the likely impact of future tax increases, so the findings of the EY report will be important in informing decisions.

   I would like to understand why, when calculating the price elasticities EY have not tried to separately identify changes due to price vs due to other factors – including uptake of e cigarettes and other measures. At the very least, the analysis should consider quit rates before the introduction of the excise tax as a counterfactual.

   Moreover, would like to see some estimates of price elasticityfor different socio-demographic groups (with transparency about assumptions).

The literature cited in the report, about price elasticities, is thin. In addition to the BODE study, the report cites only two NZ studies (p.46) – for energy and alcohol. I am surprised that these are the only published empirical studies of NZ price elasticities. I think the purpose for seeking these studies is to get estimates of relative price elasticities across different socio-economic groups, in New Zealand, to help inform assumptions about differences with respect to tobacco, and I cannot see that in the report.
Moreover, I would have expected a discussion of some of the innovations in estimating and applying measures of price elasticities – at least a discussion of Deaton's work on estimating Almost Ideal Demand Systems, given the centrality of price elasticities to this issue.

The empirical estimates of price elasticity (p.84ff) are hard to interpret, given the level of year on year variation. Moreover these results are at a high level of aggregation without controls for other factors, so are likely to be confounded by other variables. Moreover, need to be clear about how the estimates have been derived, given the note above about error in methods section.

As noted below, I would like EY to marry their qualitative work with the literature review and quantitative work – the qualitative work suggests a significant number of people say they are not motivated by price, notably members of particularly vulnerable groups.

3. **Choices re quantitative work**
I would like to understand why EY have not attempted multi-variate analysis, perhaps using some well-known techniques (which from memory they referred to in their proposal) to control for time trends and to identify causation. This is particularly important given that it is clear that this is a heterogeneous population, with many different factors affecting decisions re smoking.

I would also like to understand why they did not use the HES data from StatsNZ rather than the IDI - since the former is more complete and up to date, and from a quick look includes all of the socio-demographic variables EY have used in their analysis.

Moreover, why have they used average household expenditure? (or have they used average national expenditure?) I don't understand why, if we can identify individual households in the data, we cannot separate volume and expenditure effects (cf. top para of second column, p.36). This is very important in the context of estimating price elasticities – as Prof Gibson of Waikato University and others have shown, analysis based solely on total expenditure will overstate price elasticities by failing to identify brand substitution. The authors might refer to Prof Gibson's work on cigarette purchases, albeit work that is based in a low-income country.

4. **Information about the supply side including industry strategies**
I had expected a thorough empirical view of the supply side, in line with the purpose statement:

> "understand any strategies the tobacco industry has implemented to minimise the impact of the tax increases" (p.10); and "identify past and possible future strategies employed by the tobacco industry in response to increases in the tobacco excise, determine the impact of these strategies" (p.25).

This might include information about prices and sales across brands and over time – page 36 notes that the authors did not know retail prices, however it would be feasible to at least get a snapshot

from retail outlets, and I would like to know whether any of the large national sales-data suppliers can provide relevant information.

Two studies (p.43) and respondents' views are cited suggesting that the tax is shifted to premium brands (presumably purchased by less price-sensitive consumers). This is an important area and is given only a light touch in the report.

Vaping and e cigarettes are an important and relatively new part of the supply-side picture - there are references to demand for these across the report. It would be helpful to consolidate this information and provide clear market data about sales, and take this into account when analysing the impact of price on sales of old fashioned tobacco products. As the report notes, omitting consideration of the uptake of these substitutes means overstating the impact of the excise on demand.

A key supply side economic issue is why NZ has the third highest price, but is only 33rd with respect to proportion of price attributable to tax (cf. p.70) – is price inflated by transport costs? By monopoly profits? What is the distribution of prices? These are important issues to understand, if we are to be able to consider the likely impact and incidence of future tax rises.

**5. Equity impacts**

The literature review refers to international evidence and commentary suggesting that the net effect of excise is pro-equity, because low income households benefit more from the health effects and avoided spending if they change their behaviour. However if, as suggested by EY's qualitative analysis, low income households do not change their behaviour this assumption does not hold and the excise is not pro-equity.

I would like EY to bring the qualitative and quantitative evidence together, and consider the impact on their conclusion of their qualitative findings that low income and Maori and Pacific peoples tend to not be price sensitive, and instead respond to price increases by brand substation or reducing other consumption.

EY recommend better support for vulnerable groups to quit – the report contains some evidence supporting unequal access to the right support for quitting. It would be easy to look at access to NRT by different socio-economic groups to establish this quantitatively (cf. p.67).

**6. Summary of costs and benefits across the various impacts**

We need to see a summary of the costs and benefits, pulling together all of the information, as outlined in the proposal. At the moment the relevant section cites only the BODE work. As noted above, a substantial proportion of people in vulnerable groups have indicated they are not price sensitive – this means we need to consider as one input to decisions, the impact on them of continued excise increases as well as other adverse impacts, compared to the benefits. If there is no good data for some impacts, such as crime, this analysis might perhaps draw on international evidence (being clear about the assumptions), or do some form of break-even analysis, ie to estimate the level of harms equivalent to estimated benefits.