
From:
Sent: Monday, 10 May 2010 6:17 PM
To: ; @health.gov.au; @health.gov.au
Cc:
Subject: RE: Tobacco excise

Security Classification:

Apologies for not getting back earlier but we have been busy finishing off a few details on the Budget.

The estimates that have been provided for revenue of around \$7.5 billion in 2010-11 are correct and correspond to the costings in BP2 for the tobacco excise change. The calculation in the email below does not take account of the impact of the behavioural response to the measure, where the increase in excise leads to an increase in price and a reduction in total tobacco consumption of around 6%. When that reduction is factored in, the costings line up with the total excise we have in our models (which are based on excise and customs duty clearance data).

The 6% reduction in the volume of tobacco consumption is equal to:

25% excise increase X excise equal to 60% of the price of tobacco before the increase in excise X price elasticity of -0.42
 $0.25 \times 0.60 \times -0.42 = -6.3\%$ change in tobacco consumption.

The costing of the tobacco change comprises the following elements:

- B0 = Total excise and customs revenue before the change in excise rate
- B1 = Total excise and customs revenue after the change in excise rate
- E = The change in excise rate
- V = The change in the volume of tobacco sold as a result of the change in excise rate
- R = The change in revenue as a result of the excise change.

$$R = B1 - B0$$
$$B1 = B0 * (1-V) * (1+E)$$
$$R = B0 * (1-V) * (1+E) - B0$$

From this we can derive the Base values of excise from the costing amount as:

$$B0 = R / (E-V-(E*V))$$

Add the costing back to this to get the revenue after the change so:

$$B1 = B0 + R$$

The calculations in the email below divided the revenue change by the excise rate and number of years to get back from the 4 year costing to the amount of excise that would be raised after the excise increase. This underestimates the base amount because it does not factor in the behavioural change elements. Put simply, the 6% reduction in base applies across the whole base and the 6% reduction in excise is an offsetting amount taken into account by the costing. The revenue gain therefore understates what 25% of excise is worth after the change and has to be adjusted before you can go from the costing to total excise collections.

The calculations below give the figures and show that, rounding down to the nearest \$500 million, the \$7.5 billion figure for the amount of customs and excise revenue in 2010-11 is OK. The figures are calculated from the BP2 costing using the formulas above.

Excise increase	25%
Proportion of packet price that is excise (initial)	60%
Elasticity	-0.42
Change in tobacco consumption from change	-6%

Revenue (\$m)

	2009-10	2010-11	2011-12	2012-13	2013-14
Australian Taxation Office	230.0	985.0	1015.0	1040.0	1090.0
Australian Customs and Border Protection Service	25.0	260.0	270.0	280.0	290.0
Total	255.0	1245.0	1285.0	1320.0	1380.0
<i>Related expense (\$m)</i>					
<i>Department of the Treasury</i>	<i>25.0</i>	<i>115.0</i>	<i>115.0</i>	<i>120.0</i>	<i>130.0</i>

Change in customs and excise revenue	1130.0	1170.0	1200.0	1250.0
Customs and excise revenue - base value before increase	6598.5	6832.1	7007.3	7299.3
Excise revenue after change	7728.5	8002.1	8207.3	8549.3

Manager
 Costing and Quantitative Analysis Unit
 Tax Analysis Division
 Ph:
 Mob:

From:
Sent: Sunday, 9 May 2010 10:23 AM
To:
Cc: @health.gov.au; @health.gov.au
Subject: FW: Tobacco excise

Grateful if you could get back to on this.

Thanks

: have passed to our Revenue Group colleagues who look after excise)

From: @health.gov.au [[mailto:](mailto:@health.gov.au) @health.gov.au]
Sent: Sunday, 9 May 2010 9:42 AM
To:
Cc: @health.gov.au; @Health.gov.au; @health.gov.au
Subject: Re: Tobacco excise []

Can you clarify how Treasury arrived at an annual tobacco excise of \$7.5b? If a 25% increase is estimated at \$5.0b over 4 yrs, then $(5.0b \times 5)/4 = 6.25b$. And if the excise, regulation and social marketing all work, this will diminish as consumption declines.

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