Student 1: Low Excellence

NZQA Intended for teacher use only

Tax is the current policy used in New Zealand, with the first substantial tax put into place in 1985, with a 54% increase in price. The primary objectives of the tax are to lower quantity demanded for cigarettes, and raise tax revenue for the government. The New Zealand cigarette tax uses these two objectives in combination to effectively lower the quantity consumed and hence the cost of the externalities. This is shown on the graph by the shaded area illustrating the gains to society of less being consumed.
[Model showing a tax was used, student explained how the tax affects price for consumers and producers and therefore their decisions, moving the market closer towards MSB=MSC and allocative efficiency]. (1)
Tax is seen as only an intermediate stage to the over-all goal of zero consumption and zero externalities. This is done because of the special nature of cigarettes that the effects can last a person's life, and will mostly be seen in later life, i.e. a life-long smoker may not cost the government much until they die early in later life, even after 20 or so years of smoking.

The government accounts for this by lowering quantity over time, with increasing tax revenue-tax in New Zealand is planned to increase by 10% every year. By doing this, tax revenue can be maximised and costs should mostly be covered for by the time that the last person dies from smoking. This idea is why young people are so strongly identified in anti-smoking programs - one new smoker means 75 years of costs to society. The price where MSB intersects with MC+Tax is the socially optimal price (Ps) and consumers are consuming a socially optimal quantity (Qs). Therefore, social DWL is eradicated by an increasing tax policy as the long-term health effects incurred from the consumption of cigarettes is covered by the incremental tax increases. *(Equity and the regressive effect of a tax, on households with lower incomes being affected more than those on higher incomes, was also discussed).* (1)

Banning is an extreme policy and the banning of a widely used product, such as cigarettes usually has many unforeseen consequences for society. A ban's purpose is to reduce the quantity produced and demanded to zero, effectively eliminating the market. This is done simply by making the consumption and/or production of cigarettes illegal. (2) This does two things; 1-Makes cigarettes less accessible; 2-The consumer now have to consider the consequences of smoking verses the benefit of smoking. Because there would be fines, or even imprisonment for smoking, this affects the marginal utility (MB), by either making it so low that it is not possible to purchase it at an equal price, or it is negative, where the over-all utility (MB) of smoking is less than the consequences of doing it. (P>MU for most, if not all prices). (2) Although, a ban will eliminate most consumers and producers due to the new added consequences of smoking, a minority will still, taking into account the consequences, demand and be willing to produce the illegal substance. This creates a new, Black-Market.
A ban is a much more drastic policy than the current one, a tax. In terms of reducing or eliminating the market, a ban is much more effective than a tax; it raises the costs drastically for the consumer and therefore quantity demanded will drastically reduce in a short period. (3)
The externalities continue to cost the government for up to 75 years after the longest living consumer of cigarettes dies, due to decreased productivity due to lower life expectancy and healthcare costs of the smoker being especially prevalent in later life. A ban will therefore not account for this prolonged cost to the government due to the loss of revenue from the absence of the currently used tax policy. A ban however will mostly reduce the instant effects of smoking, due to most of the more severe effects of smoking happening much later in life,

and with costs to the government up until this point a ban will result in a large dead-weight loss. This deadweight loss will occur, as not all of the losses of surpluses will be transferred to society when the ban is first implemented, this will mean that the banned market will not be allocatively efficient. It will take up to 75 years for the externalities of cigarettes to stop costing the government with the dead-weight loss being eliminated. A serious negative effect, which may be seen, would be the increase in gang activity due to a black market of tobacco, policing nationwide increased gang activity would come at a relatively large cost, especially since there is a large market for cigarettes. Overall, costs of the ban would be great initially, with decreased costs over time. Some costs may linger and would have to be taken into account when considering the costs/benefits of the policy. *(Equity issues around a ban were also discussed).*

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Both policies work very differently in ways of reducing and covering the externalities caused by the consumption of cigarettes. The tax works by reducing the costs of cigarettes over a long period, while using tax revenue to cover the current costs of cigarette consumption. Some of this tax revenue was used to subsidise programs to reduce smoking as well as using the remaining tax revenue to benefit society. Due to the inelasticity of cigarettes, consumption of cigarettes falls very slowly relative to the price. These consumers represent the problem area in the efficiency of the tax, tax does not reduce quantity demanded as well as a ban would, this is because it still allows for the choice of consumption, instead of eliminating that choice. It makes up for most of this inefficiency with the tax revenue gained though.

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In some ways, a ban is far more efficient than a tax; it instantly removes most of the consumption and the instant externalities of cigarette consumption. However the primary costs to the government of cigarette consumption are not short-term, they are long term. These costs include reduced productivity due to early loss of life, including long-term health care. The ban creates its own spillover effects, mostly including increased crime rates and gang, or illegal activity. These spill-over effects add extra cost to society with increased police costs as well as family support services and addiction services, for people going through withdrawal. Although the ban reduces consumption consumed, it does not cover the externalities, this means that a large deadweight loss will occur, even if a social quantity has been reached, social equilibrium has not due to costs to society being very similar to what they were before the ban.

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Tax does not reduce quantity demanded by as much as the ban and over a longer period as well. However, tax accounts for the externalities using tax revenue, and it does not create extra substantial externalities as well as the current ones that the ban could possibly create. Due to the inefficiencies of the two policies, neither of them will fully reach social equilibrium and both will result in some dead-weight loss. DWL represents a lack of allocative efficiency and wasted resources, and overall the ban is less efficient as it will produce more deadweight loss. This is because the tax revenue gained covers at least 70% of the externalities.

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Taking into account efficiency, and the relative fairness, equity, of the two policies, tax is clearly the best policy option**.** Not only is it fairer, affecting only the smokers, with the possible moral issues being minor compared to the spillover effects of the ban. It is also clearly the most efficient policy covering a lot more of the losses from the externalities than the ban. Even though the ban reduces quantity consumed, it is not practical and does not cover costs in a reasonable period, and the tax revenue from cigarettes is lost.