

Cigarette Market Failure in New Zealand

Comparing the two policies and a final decision on overall best policy

(Student included accurate graph of tax leading to social equilibrium and explains how the tax affects price for consumers and producers and therefore their decision and allocative efficiency).

Tax Efficiency: 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; 1. Lower quantity demanded for cigarettes. 2. 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. At the same time the government uses the tax revenue gained from the tax to cover the costs of cigarette consumption; the government is able to cover 70% of the estimated costs of cigarettes to society with this tax.

A

Recently in New Zealand the government announced another 10% increase in the cigarette tax, in order to gain revenue. It is because of cigarettes addictiveness (inelasticity) that the government is able to raise the price and gain more revenue. This inelasticity also means that the incidence of tax is passed onto the consumer meaning they have a larger price increase so it is likely to affect quantity demanded more. At the same time the government uses some of the tax revenue to subsidise better alternatives to cigarettes, such as anti-smoking programs. By subsidising these programs society is able to reduce cigarette consumption more. Cigarette tax accounts for 2% of total tax revenue every year in New Zealand and it can be used by the government to over-all benefit society, even if in unrelated sectors, such as infrastructure. Even though some of the money generated by the tax is put into things other than directly lowering quantity consumed, all government spending can be seen as beneficial to society. This extra spending can be seen as transferring the losses from cigarette externalities into equally positive features to society that can 'make up' from the losses (in a perfect tax).

The current tax however is not perfect. Tax revenue only accounts for 70% of the estimated externalities. 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. It is said that the effects of cigarette consumption can last for as long as 75 years.

A

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 be hopefully mostly 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.

(Equity was also discussed).

(Student included a graph of a ban leading to social equilibrium).

Ban efficiency: Currently there are no countries that have completely illegalised smoking. Banning is a very extreme policy and the banning of a widely used product, such as cigarettes usually has many unforeseen consequences for society. An example of this would be the alcohol prohibition in America from 1919 to 1933, this was widely exploited, where black-market alcohol was available and gang activity increased in the illegal production and distribution of alcohol.

A ban's purpose is to reduce quantity produced and demand to zero, effectively eliminating the market. This is done simply by making the consumption and production of cigarettes illegal. This does two things; 1-Makes cigarettes less accessible; 2-The consumer now have to consider the consequences of smoking verses the benefit of doing it.

Because there would be fines, or even imprisonment for smoking, this affects the marginal benefit, 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 benefit of smoking is less than the consequences of doing it. ($P > MU$ for most, if not all prices). 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.

B

A ban works by lowering quantity demanded and the amount produced drastically, and in theory reducing most of the externalities caused by the consumption of the cigarettes. A ban is a much more drastic policy than the current one, tax. In terms of reducing or eliminating the market, a ban is much more effective than a tax, it raises the cost drastically for the consumer and therefore quantity demanded will also drastically reduce in a small period of time ($P \leq MU$). The problem with cigarettes however is that externalities will continue to cost the government for up to 75 years after the longest living consumer of cigarettes dies. This is 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 not subsidising until much later in life, and with costs to the government up until this point a ban will result in a 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.

B

Extra benefits to society will occur including a general increased happiness and productivity as well as possible tourism due to New Zealand's positive image. Long term smokers may have trouble overcome their addiction, this could possibly lead to clinical treatment on a small scale with a cost to the government. There would also probably be an increase in crime rates, especially domestic disputes in the first year or two which would also come at a cost to the government, but this would only be temporary. A more serious negative effect which may be seen would be the increase in gang activity due to a black market of tobacco, policing increased gang activity would come at a relatively large price to police nationwide, especially since there is such a large market for cigarettes. Gang activity could also come at a minor human cost as well as decreased tourism for New Zealand. 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 cost/benefit of the policy. *(Equity was also discussed).*

Tax and ban both have their positives and negatives. They both contain efficiencies and inefficiency's. And both have features that could be seen as equitable and perhaps not as equitable. The government must consider both the equity and efficiency of both the policies when deciding on a policy to use. The other main feature that the government must look at when deciding on a policy is the efficiency of the policy. That is how well it covers the cost of the externality in both the long and short run. *(Equity was compared and discussed).*

Efficiency must be considered as well as equity when deciding in an over-all policy. Both policies worked very differently in ways of reducing and covering the externalities caused by the consumption of cigarettes. The tax worked by reducing the costs of cigarettes over a long period of time, 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. Tax has been so far moderately successful in covering the costs caused by consumption as well as reducing quantity demanded by the market. Even though the revenue is only a secondary effect of the tax, second to lowering consumption, it is still an important part of a long term plan such as tax to cover as much of the losses while quantity consumed is lowered over a period of time.

Due to the elasticity of cigarettes, consumption of cigarettes falls very slowly relative to the price. Consumption has decreased very little from 2003 onwards, compared to larger increases from the 70's and 80's. This slow drop represents to percentage of people whose elasticity of cigarette consumption is very low, and will probably consume cigarettes until they simply cannot afford to live while still buying cigarettes. 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 leaves in a choice for consumption, instead of eliminating that choice. It makes up for most of this inefficiency with the tax revenue gained though.

C

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. Also, the ban creates its own spill-over 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 for 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 before.

C

Overall, in terms of efficiency, both policies are not perfectly efficient. Tax doesn't reduce quantity demanded by as much as the ban and over a longer period of time as well. However tax accounts for the externalities using tax revenue, and it doesn't 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 a dead-weight loss. As the dead weight loss represents a lack of allocatively efficiency, and therefore the wasted resources, and then over-all the ban is less efficient, as it will produce the biggest deadweight loss. This is because of the 70% of the externalities in the tax are covered by from the revenue gained. The ban does not cover these, nor does it take into account for how long the externalities last for, the ban also has a strong possibility to produce extra costs to society. The tax is the most efficient policy. Taking into account efficiency, and the relative fairness 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 spill-over 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 time period. Even though a social quantity will be reached, we must remember that the reason we want quantity reduced is because of the externalities, as the externalities of cigarette consumption will affect society for up to 75 years later, then the this instant zero consumption is now what society wants. Not to mention the other negative effects on society mentioned above.

C

(Student used footnotes and a bibliography).