



## Worksheet 5.2

### Taxes and Cigarettes: Scramble to Buy Before Tax Kicks In

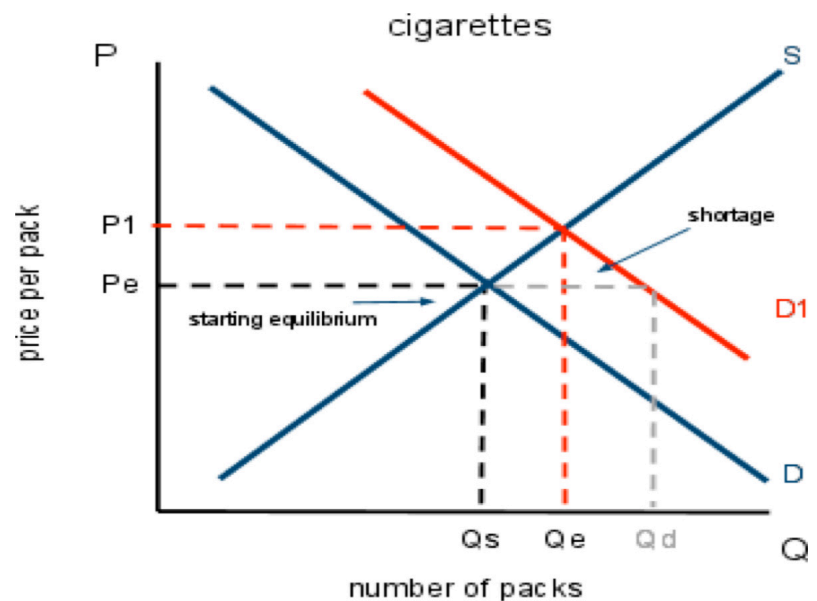
In Australia, it appears that the tax man is coming for the cigarettes. When the government announced a large hike on the tax for cigarettes, consumers responded in typical fashion. They rushed stores and bought up as much as possible before the deadline. This is an example of the determinant of demand that says consumers respond to the *expectation* of future price changes, not just the price changes themselves. Knowing that cigarettes will be significantly more expensive just a few days later, many smokers stocked up.

Figure 1 shows this effect at work. A surge in demand takes place in the days before the tax becomes law, shown by  $D1$ . At that current equilibrium price of  $P_e$ , there is suddenly a shortage, a gap between the quantity demanded ( $Q_d$ ) and the quantity supplied ( $Q_s$ ). Look at [this article](#), then read from 'He said that stock would...' to 'It's so busy...'.

This burst of extra demand will not last, however. When the law goes into effect, demand should return to normal (or might decrease a bit since many smokers will have reserve cigarettes to smoke for a short period).

However, the market will change significantly. Like all tax increases, the tax on cigarettes is going to shift supply left by the amount of the tax, which is estimated to be about \$2.16 on a typical pack of 30. How will this affect the market? The government expects the tax and other policies like negative advertising to reduce the number of smokers by as many as one million people over several years.

This suggests that the government and health officials regard smoking to be relatively price elastic. In other words, the price increase will create a strong negative response in smokers, encouraging them to stop buying cigarettes. However, at the same time, the government expects to raise nearly \$5 billion in revenue from the tax, suggesting that it will be a major and reliable source of income as well. This indicates that the government believes that smoking may well be very price inelastic, so much so that a 25% hike will not discourage smokers enough to stop paying the tax.



**Questions:**

1. Using a diagram, explain the effect on various stakeholders of this tax assuming that demand is relatively inelastic. Be sure to use specific values wherever possible.
2. Using a diagram, explain the desired market effect of the planned negative advertising campaigns.
3. Evaluate the effectiveness of government excise taxes on cigarettes.