

Estimates based on studies of the US population suggest that a 10% increase in the price of cigarettes would reduce overall consumption of cigarettes by adults by 3%-5%. The same 10% increase would reduce the consumption of cigarettes by youths by 13%

1. Calculate the price elasticity of demand for cigarettes among US adults and among US youths. Is the demand elastic or inelastic for each group?
2. Suggest 2 possible reasons for the different magnitude of elasticity between the two groups.
3. Explain two possible reasons why a government would charge a tax on cigarettes.

Key:

1. Estimates based on studies of the US population suggest that a 10% increase in the price of cigarettes would reduce overall consumption of cigarettes by adults by 3%-5%. The same 10% increase would reduce the consumption of cigarettes by youths by 13% (4pts)

$$\text{PED} = \frac{\% \text{change QD}}{\% \text{change in P}}$$

Adults: $3/10 = -3/10 = .3$ $-5/10 = .5$ range of PED = .3-.5 inelastic demand

Kids: $13/10 = 1.3$ PED = 1.3 elastic demand

2. Suggest possible reasons for the different magnitude of elasticity between the two groups.

For adults who may have been smoking for a long time, they may be more chemically dependent or addicted to cigarettes than kids. Therefore they would feel that cigarettes are a necessity, while kids could consider it a luxury. Thus demand is more inelastic for adults.

3. Explain two possible reasons why a government would charge a tax on cigarettes.

Governments normally place taxes on products where demand is relatively inelastic, so that the demand for the product will not fall by a significant amount, and will thus not lead to high unemployment.

ALSO the government wants to earn money to benefit from society. For products that are inelastic, the government can depend on the fact that people will still be willing to pay the tax to the government

AND the government wants to show that it cares about the health of its people. Cigarettes are bad for people and can increase health care costs so if the government taxes them, perhaps SOME people will be deterred from smoking which will reduce health care costs in the long run. This is especially true for kids. More kids will be deterred from smoking if they are more expensive according to the elasticity rates.