Case 2.9 Has the alcopop tax been a party pooper?

Summary

This case study shows how the effect of introducing the alcopop tax in Australia can be studied as an example of imposing an indirect tax in a competitive market.

Suggested answers

1 The following statistics appeared in an article in The Age:

‘Sales of nicotine patches and gum increased more than 30 per cent following the federal government’s 25 per cent tax hike on cigarettes, pharmacists say. And calls to Victoria’s Quitline doubled after the April 30 rise pushed the cost of a pack up from $14 to $16.50.’

(Hagan, 2010).

a Use the demand/supply model to show how the higher tax on cigarettes will affect the market outcome in the market for cigarettes.

The higher tax on cigarettes will:

i increase the price paid by consumers

ii decrease the price paid to suppliers

iii decrease the quantity traded.

b Show how the effect of the tax will depend on the own-price elasticity of demand for cigarettes. (Assume tax is imposed on supplier.)

Demand is price inelastic:

S(Ps)

S(Pc)

D(Pc)

P

PC

P\*

PS

Q\*

Qtax

Q

Figure 1

Demand is price elastic:

Figure 2

S(Pc)

S(Ps)

D(Pc)

Q\*

Qtax

P

Q

PC

P\*

PS

It can be seen that (for example) the higher is the price elasticity of demand:

i The smaller is the share of the tax paid by the consumer and the larger the share paid by the supplier

ii The larger is the decrease in quantity traded.

c Why has the higher cigarette tax caused sales of nicotine patches and gum to increase more than 30 percent?

Nicotine patches and gum are a substitute for cigarettes. Hence an increase in the price of cigarettes would be predicted to cause an increase in demand for nicotine patches and gum.

2 In early 2018 the Australian Government proposed introducing a tax of $5 on every parcel posted from overseas containing purchases of less than $1000. The tax was intended to partially recoup costs of security screening of those parcels by the government (Bagshaw, 2018). Assume that the market for the retail supply of books in Australia is: (i) perfectly competitive; and (ii) contains some online suppliers who operate internationally and ship purchases made by Australian buyers into the country, and other suppliers who are based in Australia and operate out of shops.

a Use the demand/supply model to show how the imposition of a parcel tax would affect an international supplier of books to Australia, such as amazon.com.

The imposition of a parcel tax will act the same way as an indirect tax. First, the parcel tax increases the opportunity cost for Australian consumers to purchase from international suppliers and hence total purchases will decrease. Second, the price at which international goods are purchased will alter. The cost of goods purchased by Australian consumers from overseas suppliers will increase. The price received by international suppliers from Australian consumers will decrease. The wedge between the two prices will be equal to the amount of the parcel tax. These changes to market outcomes are shown in Figure 3.

Figure 3

S (tax)

$

S (no tax)

Pc

Parcel tax = $5

Pint

Ps

D

Q\*

Qtax

Quantity

b Use the demand/supply model to show the short-run impact of the imposition of a parcel tax on a local supplier of books. How might the long-run impact differ from the short-run impact?

In the short run, the fact that Australian consumers must pay a higher price to purchase from international suppliers may cause them to substitute buying from local suppliers. That will cause an increase in demand for Australian suppliers. In the short run this will cause:

i An increase in the market price for trade with Australian suppliers

ii An increase in quantity traded by Australian suppliers and in the market quantity traded

iii Australian suppliers will earn positive economic profits.

This is shown in Figure 4.

Figure 4

Positive profits

$

MC

$

S

MR2

ATC

P2

P2

MR1

P1

P1

D2

Q2

Q1

Qty

Q2

Q1

D1

Firm

Market

Qty

In the long run, the fact that Australian suppliers are earning positive economic profits should cause new firms to enter the market. This process will continue until firms are earning zero profits.