

The UK sugar tax: will it reduce obesity?

Monthly update, June 2016

Exam links

The up-to-date facts, examples and arguments in this article will help you to learn and consolidate your knowledge of economics A-level in the following areas:

Market failure (negative externalities, imperfect information)

Government intervention (indirect taxation)

Government failure

This topic is examined in Theme 1.

Context

In March 2016 George Osborne announced the introduction of a UK sugar tax on soft drinks, as part of the government's strategy to reduce childhood obesity.

This article begins by focusing on the market failures associated with the consumption of sugar, including negative externalities and imperfect information. This is followed by analysis of how effective an indirect tax on sugar could be at reducing this market failure.

Market failure

The major market failure associated with the consumption of sugar, such as in soft drinks, is overconsumption due to the presence of both negative externalities and imperfect information.

Externalities

When consumers buy fizzy drinks they are unlikely to take into account the negative externalities affecting third parties. These include the strain on healthcare services from obesity-related diseases, such as diabetes, as well as reductions in labour productivity and rising sickness absenteeism for firms. In 2014, the McKinsey Global Institute stated that obesity costs the global economy an annual £1.3 trillion, and £47 billion in the UK alone.

If consumers ignore such negative externalities they underestimate the social costs of drinking soft drinks. This causes an overconsumption of soft drinks from society's point of view, leading to welfare loss and market failure.

Imperfect information

Consumers may also overconsume soft drinks owing to problems of imperfect information. They may not be aware of the long-term risks of consuming such drinks. For example, consuming large quantities of sugar in soft drinks could reduce their life

expectancy by increasing the risk of heart disease. Such health issues might also damage their future earning potential.

Government health campaigns and education of children in schools mean that many consumers *are* aware of the potential private costs incurred by overconsuming sugar. Even with this information, they may continue to drink soft drinks, as they overestimate the short-term private benefits and ignore any long-term private costs, which will be incurred well into the future.

The UK sugar tax

George Osborne is following the example of other countries that have used indirect taxation to manage obesity issues. One example is Mexico, which in January 2014 introduced national taxes on sugary drinks (10% tax on every litre of sugar-sweetened drink) and on junk food (8% tax on high-calorie food). In Mexico the sugar tax reduced sales of fizzy drinks by 12% in the first year.

The UK government is using a specific tax to target the primary source of sugar for teenagers: soft drinks. The tax will be imposed on companies, based on the volume of high-sugar drinks (excluding fruit and milk-based drinks) they produce or import. There will be two bands:

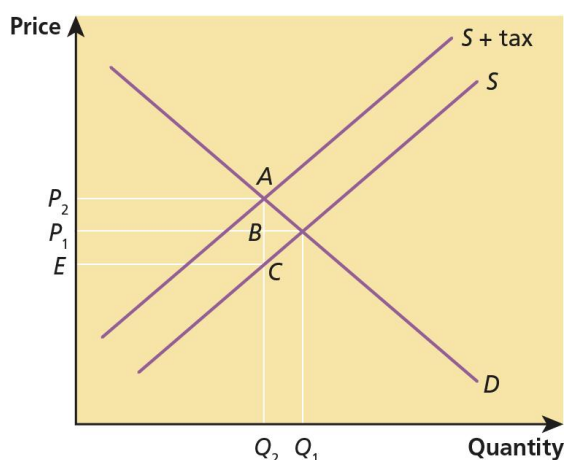
A lower band for drinks with a sugar content of above 5 g/ml, such as Fanta and Sprite, which will add about 6p to the price of a standard 330 ml can.

An upper band for drinks with a sugar content of above 8 g/ml, such as Pepsi and Coca-Cola, which will add about 8p to the price of a standard 330 ml can.

Benefits of the UK sugar tax

Internalising negative externality

The sugar tax, like other indirect taxes, will increase costs of production, reducing the incentive to supply sugary drinks, thus reducing supply from S to $S + \text{tax}$. This will have the effect of increasing the price of sugary drinks from P_1 to P_2 .



In theory the tax will internalise the negative externality of consuming sugary drinks, as consumers are paying a higher price to reflect the cost of their consumption on third

parties. Therefore, the consumption of sugary drinks should fall from Q_1 to Q_2 , reducing the negative externalities and market failure.

Incentives for producers to reduce sugar content

Even if producers do not pass the cost of the indirect tax on to consumers there could still be a reduction in sugar consumption and market failure. This is because there is an incentive for producers to reduce the sugar content of their drinks in order to reduce the amount of tax they have to pay.

For example, if Pepsi reduced the sugar content of its drink below 8 g per 100 ml it would only have to pay 6p per can produced and if it could reduce the level below 5g it would avoid having to pay any tax at all.

Use of tax revenue

A final benefit of using indirect taxation to reduce sugar consumption is that it will raise tax revenue. On the diagram this is represented by the area P_2ACE .

George Osborne has estimated that the sugar tax will raise £520 million a year and these funds will be allocated to primary-school sport. Therefore, even if the tax is ineffective at reducing the quantity of sugary drinks consumed, it could help reduce obesity by promoting sport at school.

Limitations of the sugar tax

It depends on the price elasticity of demand

One criticism of a sugar tax is that if demand for soft drinks is price inelastic then a tax may not change consumer behaviour. This is because even with an increase in price only a small number of consumers will switch away. Demand for soft drinks may be price inelastic because it is a habit-forming good, which some people consume every day or at particular meals, and it takes up a low percentage of income.

Problems estimating negative externalities

The government is expecting to put a levy of 6p or 8p on each can of soft drink (depending on sugar content) to internalise the negative externality. However, it is unlikely that the negative externality is precisely 6p or 8p as it is hard to estimate the exact costs of obesity caused by soft drinks. The tax may not be set at the optimal level.

Impact on low-income groups

Like many indirect taxes this one arguably hits those on low incomes hardest (i.e. it is regressive). This is because the sugar tax will take up a larger percentage of a low-income household's budget. It can be argued that it is unfair to burden low-income groups with another tax.

Unintended consequences and government failure

Finally, there could be several unintended consequences of a tax on sugary drinks which could therefore contribute to government failure. The owner of J. D. Wetherspoons, a national pub chain, believed it would increase costs for pubs, which are already struggling to survive. The tax could in this way put jobs at risk.

At the same time, there could be an increase in secondary markets or cross-border shopping to avoid paying the tax. This could mean a reduction in tax revenue for the

UK government. Some consumers might buy substantial quantities of sugary drinks before the tax is introduced so that in the short-term there would be no impact on sugar consumption. Both cross-border shopping and short-term bulk buying were experienced when Denmark introduced an indirect tax on fatty foods.

Conclusions

Obesity, especially among children, is a significant issue that all governments need to tackle in order to reduce this market failure. Despite its limitations, the introduction of a sugar tax by George Osborne has been welcomed by many, given its initial success in countries like Mexico, and the scale of obesity in the UK. However, the sugar tax will only be part of the solution to UK obesity and the government will need to outline complementary measures. One solution is unlikely to be enough.

Summary

The consumption of sugary drinks can cause market failure as they are overconsumed from society's point of view due to negative externalities and imperfect information. This has led the governments of countries such as the UK and Mexico to introduce a sugar tax as part of their strategy to reduce obesity. If effective, this tax will cause consumers to switch to healthier drinks and incentivise producers to reduce the sugar content of their drinks. It will also raise tax revenue which will be used to promote sport in schools. However, a sugar tax may not work if demand is price inelastic, if external costs are not estimated accurately or if there is increased consumption in secondary markets. The tax could also have negative consequences for those on low income and for UK pubs.

Discussion points

Discuss the following statements:

- 1 'The most significant external costs of sugar consumption are on healthcare services rather than on businesses.'
- 2 'The main way in which a sugar tax will reduce UK obesity is through businesses reformulating their drinks rather than consumers switching to healthier drinks.'
- 3 'A sugar tax has some significant limitations but is unlikely to be an example of government failure.'
- 4 'The sugar tax is the most effective policy for reducing obesity and there is no need for other measures to solve the market failure.'