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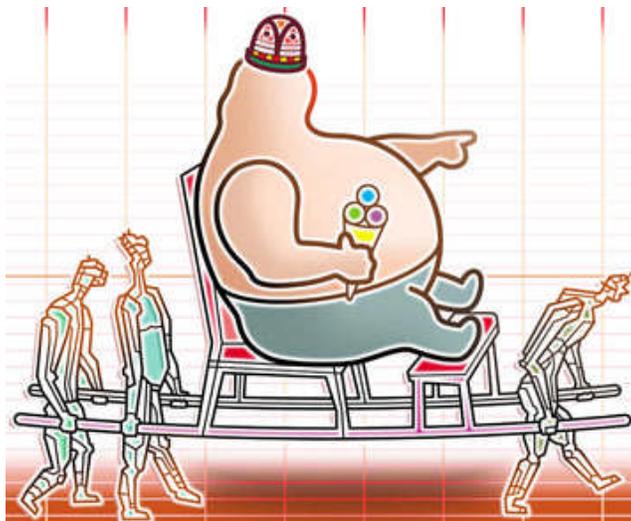
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Does a tax on junk food make sense?

Illustration by Jac Depczyk



ECONOMISTS have long recognised the arguments for imposing special taxes on goods and services whose prices do not reflect the true social cost of their consumption. Such taxes are known as “Pigouvian” after Arthur Pigou, a 20th-century English economist. Environmental taxes are an obvious example. There is also a Pigouvian case for duties on cigarettes, alcohol and gambling. Smoking increases the risk of cancer for those in the vicinity of the smoker; alcohol abuse and gambling are strongly associated with violence and family breakdown. Moreover, all three habits lead to higher medical costs. In theory governments can make up these costs, or “externalities”, with a tax that adjusts the prices people pay to puff, booze or punt. Such a tax might also encourage consumers to live healthier lives.

Support for another such tax, on junk food, is now spreading, especially in America. Congress is considering a tax on sugary drinks to help pay for the planned expansion of health-care coverage. Some analysts would like to see broader duties on junk food. On July 27th the Urban Institute, a think-tank in Washington, DC, proposed a 10% tax on “fattening food of little nutritional value” that, it claimed, would raise \$500 billion over ten years.

The logic for a tax on fattening food may seem obvious. About one-third of Americans are obese, up from 15% in 1980. Fat people are more prone to heart disease, diabetes, bone disorders and cancer. An obese person’s annual medical costs are more than \$700 greater than those of a comparable thin person. The total medical costs of obesity surpass \$200 billion a year in America, which is higher than the bill for smoking. These costs are not all borne by the obese. When health-care costs are shared, obesity becomes a burden for everyone. Thanks to government health-care plans such as Medicare half of America’s obesity-related health costs land on taxpayers. In private employer-sponsored health plans the slim pay similar premiums to the overweight.

But would a fat tax affect behaviour? Numerous studies have shown a relationship between the price of food,

especially junk food, and body weight. As fast food has become relatively cheaper, so people have become fatter. A new paper* from the RAND Corporation, another think-tank, suggests that taxing calories could have a sizeable, if gradual, effect on people's weight. The authors of the study look at changes in the weight and height of a large group of Americans aged over 50 between 1992 and 2004. They then calculate food-price indices that are skewed towards calorie-dense foods (so a change in the price of butter has more impact than a change in the price of vegetables). By controlling for individual and environmental influences on weight, such as income and health, they then measure whether food-price changes affect body-mass index (BMI). BMI, the ratio of weight in kilograms to the square of height in metres, is a common, if imperfect, gauge of whether someone is over- or underweight.

A person's BMI turns out to be hard to shift in the short term. A 10% increase in the calorie-heavy price index is associated with a small decline, of 0.22, in BMI within two years. But the effects are greater over the longer term. A 10% increase in the price of calories results in a fall in BMI of one to two points over 20 to 30 years. Such a drop would eliminate about half of the observed increase in obesity in America since 1980.

Even so, the idea of tackling obesity via the tax system has some serious flaws. First, there is the question of what to tax. Sugary drinks may not be nutritious, but hamburgers contain some protein along with their fat. More important, junk food is not itself the source of the externality—the medical costs that arise from obesity. Unlike smoking, or excessive gambling and drinking, eating junk food does not directly impair the well-being of anyone else. And because obesity is determined by lack of exercise as well as calorie intake, its ultimate relationship with health costs is more tenuous than that of, say, smoking. It is possible to eat a lot of fatty food, exercise frequently and not generate any externalities. A more direct, though controversial, approach would simply be to tax people on the basis of their weight.

Fat chance

The distance between junk food and the medical costs of obesity means that a calorie tax could have unintended consequences. A new theoretical paper in the *Journal of Public Economics* even suggests that a tax on junk food could increase obesity, especially among physically active people. If junk food, which is quick and easy to obtain, becomes relatively dearer, people will spend more time shopping for fresh ingredients and preparing food at home. That could leave less time for exercise.

Even if perverse consequences of this type look improbable, a junk-food tax may have less impact than its advocates expect. New studies on the effect of cigarette and alcohol sin taxes suggest heavy users are less influenced by price changes than others. An analysis of data from the National Longitudinal Study of Adolescent Health shows that American teenagers who smoke more than five cigarettes a day are only one-third as responsive to cigarette prices as lighter smokers. A complementary study of data from America's Health and Retirement Survey shows that alcohol taxes are far less effective for the large minority of heavy drinkers. The biggest consumers of fattening food may prove similarly resilient to price increases, so a fat tax may do little to improve health, at least for today's junk-food addicts. If these same consumers are poorer on average, it would also be regressive. One reason for this is that in some poorer neighbourhoods there may be little fresh food on sale. If junk is all there is, putting up its price will reduce real incomes and make little difference to eating habits and health. Like the foods they aim at, fat taxes look appetising but can have nasty effects.

* A full list of sources is available at Economist.com/fattaxes