



Fat taxes:

Can taxing unhealthy food and drink improve health?

A report of the Business Forum
meeting on 22nd May 2012

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About the Business Forum

Ethical questions around climate change, obesity and new technologies are becoming core concerns for food businesses. The Business Forum is a seminar series intended to help senior executives learn about these issues. Membership is by invitation only and numbers are strictly limited.

The Business Forum meets six times a year for in-depth discussion over an early dinner at a London restaurant.

To read reports of previous meetings, visit foodethicscouncil.org/businessforum.

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Introduction

Taxing 'unhealthy' foods is currently high on the policy agenda as one way to combat rising levels of obesity and spiralling health costs.

Denmark has already introduced a 'fat tax', Hungary has imposed a 'junk food' tax on foods with high fat, salt and sugar content and various US states and France have adopted or are considering soft drink taxes. Prime Minister, David Cameron, has said they are worth considering.

Yet the idea is highly controversial not just with food companies but also with those who say such taxes hit those on low incomes hardest. Are such taxes effective in shifting diets towards healthier choices? Or simply a way for Governments to avoid more costly interventions?

The May 2012 meeting of the Food Ethics Council Business Forum explored approaches to taxing 'unhealthy' foods, the evidence of effectiveness to change behaviour and Government's mandate to intervene.

We are very grateful to our speakers, **Martin O'Connell**, Senior Research Economist at the Institute for Fiscal Studies and **Dr Mike Rayner**, Director of the British Heart Foundation Health Promotion Research Group at Oxford University. The meeting was chaired by **Michelle Harrison**, CEO of TNS-BMRB and a member of the FEC.

This report was prepared by Sue Dibb and outlines points raised during the meeting. Contributions are not attributed. The report does not represent the views of the Food Ethics Council, the Business Forum or their members.

Key points

- The term 'fat tax' can be unclear and misleading. The broader term '**health-related food tax**' better describes tax interventions to address obesity and diet-related ill-health.
- **A range of taxes have been introduced on 'unhealthy' foods in a number of countries** including Denmark, Hungary, France and many US states.
- **Food prices are key factors influencing food choices**, particularly for those on lower incomes.
- **The assumption that Government can control prices through tax policy is a simplification of reality** given the relationship between tax levied and a product's price to the consumer is not clear cut.
- Assessing the **effects of health related food taxes** is important yet currently there is limited available evidence because there are few examples of such taxes.
- Despite the current lack of consensus **policy makers shouldn't rule out health related food taxes** alongside other measures, given the nature of the challenge.
- **A trial 20% tax on sweetened soft drinks** would gather evidence on the impacts on behaviour change and for health.
- Health related food taxes are **regressive though the health gains may be progressive** by reducing healthy inequalities.
- Using tax revenue to **subsidise healthy foods such as fruit and vegetables** could increase acceptability and maximise health gains.

Definitions and language

The term 'fat tax' can be unclear and misleading. The broader term **'health-related food tax'** better describes tax interventions introduced or being considered to address obesity and diet-related ill-health. This broader term also reflects the wider range of nutrients and foods, not just 'fat', which are the focus of such interventions.

In their BMJ article¹, Mike Rayner and colleagues define health-related food tax as **'any tax levied at a higher rate on food items considered unhealthy'**.

Where have they been introduced?

A range of taxes have been introduced on 'unhealthy' foods in a number of countries (see table). In October 2011 Denmark introduced a tax on products containing more than 2.3% saturated fat; Hungary introduced a broader 'junk food tax' while this year France introduced a tax on sweetened drinks. In the US, twenty-three states have introduced soft drink taxes.

Justification for government intervention

The prevalence of obesity and diet related ill-health coupled with spiralling health costs justify a policy response. The question that then arises, is what should be the role of government to intervene in the market and the choices that people make?

From the perspective of an economist, there is no automatic rationale for intervention. If the full costs of consequences are borne by those responsible and if people have information and are able to make fully rational and informed decisions – then arguably they should be allowed to make their own choices.

¹ Mytton et al, Taxing unhealthy food and drinks to improve health, BMJ 2012;344:e2931

Country	Date introduced	Foods taxed	Tax rate
US	Various	Sugar sweetened drinks (in 23 states)	1-8%
Norway	1981	Sugar, chocolate, and sugary drinks	Variable
Samoa	1984	Soft drinks	0.40 tala/L (€0.11; €0.14 \$0.18)
Australia	2000	Soft drinks, confectionary, biscuits, and bakery products	10%
French Polynesia	2002	Sweetened drinks, confectionary, and ice cream	60 franc/L (€0.41; €0.55; \$0.66) for imported drinks
Fiji	2006	Soft drinks	5% on imported drinks
Nauru	2007	Sugar, confectionary, carbonated drinks, cordial, and flavoured milks	30% import levy
Finland	2011	Soft drinks and confectionary	Soft drinks €0.075/L (€0.06; \$0.10); confectionary €0.75/kg
Hungary	2011	Foods high in sugar, fat, or salt and sugary drinks	10 forint (€0.03; €0.04; \$0.05) per item
Denmark	2011	Products with more than 2.3% of saturated fat: meat, dairy products, animal fats, and oils	Kr16/kg (€1.76; €2.15; \$2.84) of saturated fat
France	2012	Drinks containing added sugar or sweetener	€072/L

Source: Mytton et al, BMJ 2012;344:e2931

However in the case of diet there are factors which support government intervention. Firstly, the costs of poor diet and ill-health are not solely borne by the person themselves. Costs are imposed on others in society including employers (sick leave) and other tax payers (health care costs). Individuals have little incentive to take these 'external' costs into consideration, hence providing a strong rationale for intervention.

Secondly, some people may not be fully informed about good diet and the risks associated with poor diets. An obvious response is to provide more information. Examples of this include the '5-a-day' government information campaign to encourage more fruit and vegetable consumption and to encourage more user-friendly labelling, such as front of pack nutrition information. But we also have to recognise that some people are hard to reach; children being the most obvious group, and information alone, without other incentives, has limited effects on behaviour.

On these grounds, it can be argued that there is a strong case for a government role. In this respect, Government has already indicated its desire to change behaviour and reduce the

incidence, impacts and costs of obesity and diet-related ill health. Hence the question is not whether to intervene, but how?

Government has already intervened in the market through introducing restrictions on junk food advertising to children, by encouraging reformulation by industry of products such as with its salt reduction campaign and by setting minimum nutritional standards for school meals. Governments also intervene in the market through agricultural subsidies and payments, for example through the Common Agricultural Policy (CAP).

Income and cost of food are key factors influencing food choices, particularly for those on lower incomes. Hence, there is a rationale for increasing or reducing the cost of particular foods or nutrients to bring about change in consumption patterns.

However, explicit pricing structure, as a means to incentivise healthier choices by consumers has seen little government or industry intervention. Current VAT differentials do exist between 'luxury' and 'staple' foods though these are not transparent to consumers, were not designed to reflect health considerations and anomalies remain as recently exposed by the 'pasty tax' proposal.

Would they be effective?

Using price to influence consumer behaviour may be justified, but would it work? Tax on tobacco products has been used successfully, alongside other measures, to deter smoking. Currently minimum pricing on alcohol is also being considered.

Raising relative price does shift choices, but we also need to understand what level of price increase would be effective in influencing change; how consumers would respond, including potential unintended consequences as

well as understanding how beneficial any changes would be for health.

The relationship between tax levied on a product and its price to the consumer is not clear cut. It would be rational to expect that a £1 tax on a product would increase its price by £1. But the relationship between tax and price is not direct and has been little studied. There is no certainty that prices would increase by the same amount – it may be less or more.

In a highly competitive consumer food market there is uncertainty about how the market would respond. Market power largely determines the relative price to the consumer raising the question as to whether companies would absorb some or all of the tax to prevent lost customer sales.

Hence the assumption that Government can control prices through tax policy is a simplification of reality.

Small price changes are obviously unlikely to produce significant changes in food choices though larger changes would. Studies on health-related taxes of all types shows that a tax of around 20% is needed to have demonstrable effects. Moreover effects (both positive and negative) even at lower tax levels, are likely to be greatest for those most price sensitive including the young and those on low incomes.

Another uncertainty is how consumers would respond. We can assume that consumers would shift to alternatives but this would depend on the available substitutes. It is relatively easy to find substitutes for individual foods, but more difficult to find substitutes for whole groups of foods. Price differentials within food categories are already large, so the result would be a shift within a category to cheaper products in the range – rather than away from the food category itself.

Thought also needs to be given as to what dimension of diet to focus on, for example, specific nutrients such as saturated fat or

subsets of food such as confectionery – as well as to what consumers would switch to. Substitutes would also need to provide health benefits in comparison to those foods being substituted – otherwise the shift would provide no benefits. Nutrient profiling can be used to determine healthier/less healthy foods as a basis for choosing foods to include/exclude from taxation.

Evidence of effectiveness

Assessing the effects of interventions is important yet currently there is only a limited amount of research available. The Danish and Hungarian experiences will inform debate as data emerges. In Denmark it is predicted that butter consumption will fall, and it will be interesting to see if this happens. Currently there appears little to learn from the French experience as the tax level is low.

Existing evidence can be categorised into three types of studies:

Experiments in closed and simulated environments. Seven such studies have been conducted in canteens or virtual grocery stores. For example, one study showed that a 35% tax on sweetened soft beverages in a canteen led to a 26% decline in sales. Despite this evidence of changing consumption, it's important to bear in mind that these studies are not conducted in the real world. Compensatory behaviour, for example consumption of more drinks, might occur away from the study environment.

Natural experiments can provide the most convincing evidence of effect, though only a few studies have explicitly examined the health effects of food taxes – largely because the taxes themselves have only been introduced in a few countries. Two studies, both from the US, where many states have introduced small taxes on sweetened drinks, failed to find a significant association between taxes and the prevalence of

obesity at a state level. The taxation level at 1-8% may have been too low to observe an effect on population health. However a study of soft drinks taxation in Ireland during the 1980s found an 11% decrease in consumption for each 10% increase in price.

Modelling studies use economic data (price elasticity measures) to estimate how price changes will affect consumption and diet. Modelling the effects of diet on health is relatively new.

Modelling studies on sugar sweetened beverages in the US predict a daily reduction in energy consumption of up to 209 kJ per person for a 20% tax. This is predicted to reduce the prevalence of obesity by 3.5% – though no state currently imposes a tax as high as 20%; the average is around 5%.

In the UK the predicted effect of a tax would be lower, reflecting the lower consumption of sugar sweetened drinks. Larger reductions would be predicted for regular consumers, who are a greater risk of developing obesity and diabetes. Even apparently small changes in diet can lead to meaningful changes in important risk factors across the whole population resulting in substantial health benefits. For example a seemingly small 5-10kcal/day reduction would avoid around 400,000 cases of obesity and avert about 2,000 premature deaths.

From the evidence, nutrient based taxes seem to be more effective than food based taxes. However there is also the likelihood of adverse substitution effects. Taxing one nutrient, such as saturated fat, may have negative effects on consumption of other nutrients such as salt.

Impacts on low income consumers

Health related food taxes are regressive; they effect the budgeting of people on low incomes hardest as they pay a greater proportion of their

income in tax than those with higher incomes. However due to health inequalities, the health gains may be progressive, or benefit the poorest most, potentially narrowing health inequalities. Estimates of price elasticity vary by different types of consumers. The question is 'will it be beneficial to the right people?'

As people on lower incomes consume less healthy food and have a higher incidence of most diet related diseases, the absolute reduction in disease incidence would potentially be greater among poorer groups. In addition, those on restricted incomes are more likely to be sensitive to price changes and so would experience greater dietary improvements.

What matters overall is ensuring the progressive nature of whole tax system, rather than individual tax measures. For example when Jersey introduced a 3% GST on all foods, the regressive nature for low income consumers was countered in the benefits system.

Acceptability and feasibility

From research in the US, views on the acceptability of health-related food taxes vary widely. Support is greater when health benefits are emphasised, though such surveys pre-date rising food prices and growing food poverty.

The question of what would be considered an acceptable level of taxation has largely been unexplored. For example, tax on cigarettes has gradually increased as public opinion has changed.

It is unclear how such taxes are best introduced and enforced. Should the tax be levied on the raw ingredients or on the final product? Should all sweetened drinks be taxed, as in France, or just sugar sweetened? How much sugar needs to be added before the drink is taxed?

Most recently introduced health-related taxes have not been popular, viewed more as an

instrument to raise government revenues than a considered measure to improve public health.

It's also been argued that the inherent costs in operating such a tax regime on business would have detrimental consequences for what is spent by industry for example on reformulation of products. One solution for testing out the impacts would be to introduce measures slowly on a pilot basis while assessing the impacts.

Acceptability is also likely to be influenced by the use to which tax generated will be used. For example taxes could be used to subsidise healthy foods such as fruit and vegetables which would help to alleviate the regressive nature of food taxes as well as maximise the health gains.

Changing behaviour

It can be argued that changing behaviour is about changing normative behaviour. For example with smoking in public places, views on what is acceptable and normal have changed significantly.

For diet, normative behaviour is currently taking us in the wrong direction. The role of price in this behaviour is hard to pin down. While food has become relatively cheaper, at least until recent price rises, it can be argued that the rise in consumption of soft drinks is due to their ubiquity and lack of free water as an alternative, not just about price.

An important question to consider is how would taxes change normative behaviour? Would the act of taxing unhealthy foods convey 'information' and change normative behaviour? Conversely could any impact on behaviour be temporary. Would higher prices become the new norm?

And how would the effects of any new taxes impact at a time of overall rising food prices, changes in income, and loss of benefits – all of which are having a profound impact currently on individuals and the overall market?

Where next?

Our current understanding of health-related food taxes can be characterised by: 'It might work but we're not sure.' Health-related food taxes are new phenomena and therefore relatively unexplored. Thus the evidence for their effectiveness is limited and for some, the arguments for such taxes are not compelling.

However as a tool to change behaviour, it's an idea in development and worthy of discussion. Given the nature of the challenge, policy makers shouldn't rule it out as a possible approach alongside other measures, despite the current lack of consensus.

There is a need for more evidence. One way to gather such evidence on behaviour change impacts for health could be a 20% tax on sweetened soft drinks.

Speaker biographies



Dr Michelle Harrison is CEO of TNS-BMRB and the founding Chair of the Institute for Insight in the Public Services (a joint think tank between BMRB and the Futures Company). She has held numerous public appointments and is currently a Commissioner to the Green Fiscal Commission, and a Director of the charity Involve. As an academic, she worked with Professor Tim Lang on publications including 'Inconvenience food: the struggle to eat well on a low income' (Demos). She is a member of the Food Ethics Council.



Martin O'Connell is a senior research economist at the Institute for Fiscal Studies. A major strand of his work involves modelling consumer and firm behaviour in the food market, including how consumers choose between the multitude of products on offer and, given this, how firms compete over the products they offer, the prices they set and their advertising strategies. Understanding the behaviours of the main actors in the market is crucial for assessing pre-existing or proposed policy. Policies Martin works on include assessing the impact of introducing a fat tax, evaluating the impact of government information campaigns and tracing out the impact of income transfers on diet. Martin is also currently studying for a PhD at University College London.



Mike Rayner is Director of the British Heart Foundation Health Promotion Research Group which is based within the Department of Public Health of the University of Oxford and which he founded in 1993. The Group carries out research in two areas: the burden of cardiovascular disease and population based-approaches to the promotion of healthier diets and increased levels of physical activity. Mike is also Vice Chair of Sustain and Chair of its Children's Food Campaign. He is a trustee of the UK National Heart Forum, a member of the Public Health Interventions Advisory Committee of NICE (the National Institute for Health and Clinical Excellence), Chair of the Nutrition Expert Group for the European Heart Network based in Brussels and a member of the Scientific Advisory Panel of the International Obesity Task Force. He is also an ordained priest in the Church of England.



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