The impacts food taxes

Martin O'Connell

Institute for Fiscal Studies and University College London

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Diet - a role for government?

- Large increase in the prevalence of diet related disease across the developed work
- Increased calls for, and instances of, government intervention in the food market
- Some reasons to believe government may have a role in improving diet
  - Information failings
    - Evidence people are ill informed about diet
  - External costs
    - Claims that those with diet related health impose costs on others

Some policy options

- Education and information campaigns - e.g. 5 A DAY, saturated fat campaign
  - Obvious response to problem of ill-informed consumers
  - Has advantage of having no negative effects on those fully informed
  - But may be hard to reach some groups - e.g. children
- Regulation
  - Bans usually considered draconian
  - But some evidence that working with manufacturers (e.g. salt reformulation) may be effective
- Fiscal measures designed to change food prices

Food taxes

- Idea is that increasing price of unhealthy food will lead consumers to substitute towards healthier alternatives
- Effectiveness of policy depends on
  - Which goods are subject to tax
  - How peoples' consumption responds to price changes
  - How effective the tax is at changing price

Which prices is the tax designed to change?

- Many causes of poor diet - imbalance of calories, excessive salt, sugar and saturated fat consumption, insufficient fruit and veg consumption ...
- Suggested targets include
  - Particular nutrients (e.g. saturated fat)
  - Groups of goods deemed to be unhealthy (e.g. soft drinks)
  - VAT reform

Response of consumers

- Typically, all else equal, a price increase will cause people to reduce their consumption of the taxed good
- People will also respond by changing their consumption of other products
  - A price increase for strawberries may increase demand for raspberries
  - And reduce demand for cream
- Size of these effects will determine nutritional impact of any price changes
- These changes in demand are measured by the price elasticity of demand
  - Change in demand for good A with respect to a 1% price increase for good B

Elasticities across food groups

	Fruit	Vegetables	Grain	Dairy	Meat	Drink	Sweet	Savoury	Non Food
Fruit	**-0.74**	0.05	0.04	0.02	-0.17	0.07	-0.25	-0.06	0.10
Vegetables	0.03	**-0.44**	0.05	0.06	-0.14	0.00	-0.04	-0.06	-0.03
Grain	0.03	0.08	**-0.88**	-0.09	-0.11	0.26	-0.21	-0.01	0.06
Dairy	0.01	0.10	-0.13	**-0.72**	-0.20	0.32	-0.27	-0.04	0.06
Meat	-0.27	-0.37	-0.16	-0.23	**-0.09**	-0.33	0.29	0.28	-0.46
Drink	0.06	0.01	0.20	0.19	-0.13	**-1.02**	-0.09	-0.04	-0.03
Sweet	-0.23	-0.06	-0.20	-0.19	0.15	-0.13	**-0.42**	0.10	-0.08
Savoury	-0.11	-0.19	0.01	-0.03	0.31	-0.15	0.21	**-0.88**	-0.23
Non Food	0.47	0.06	0.37	0.32	-0.61	0.02	-0.08	-0.15	**-0.93**

Estimates O'Connell (2012)

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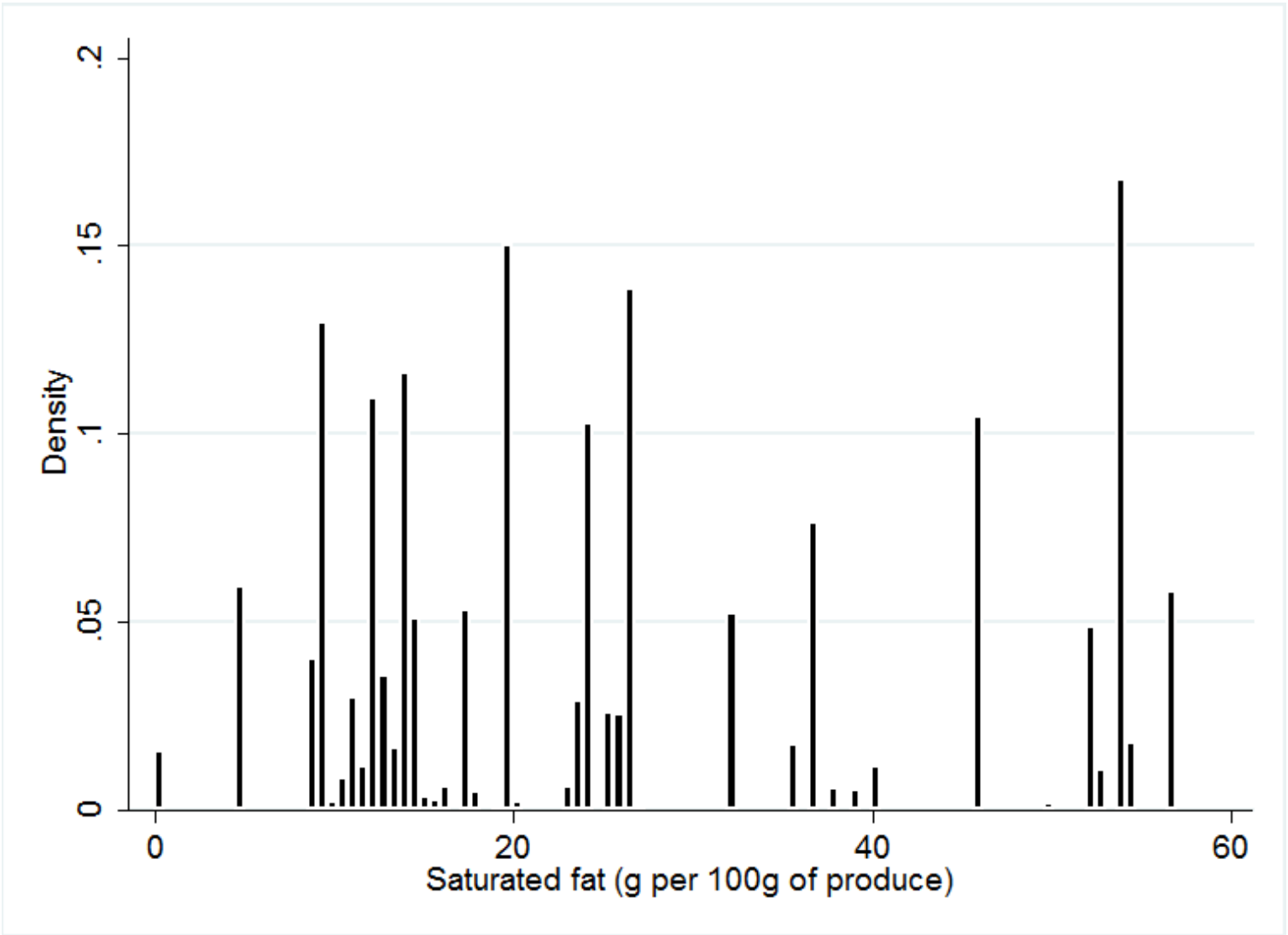
Within food group substitution

- Most of the literature focuses on simulating effect of a tax on demand for broad food groups
- Assumes consumers do not substitute among the disaggregate products that comprise the food group
- But similar products are generally seen as closer substitutes with each other
  - If the price of full fat milk increases most consumers would switch to semi-skimmed milk before moving away from dairy
- And products within food groups often have very different nutritional contents ...

Variation in saturated fat in butter/margarine



Elasticities across most popular butter/margarine

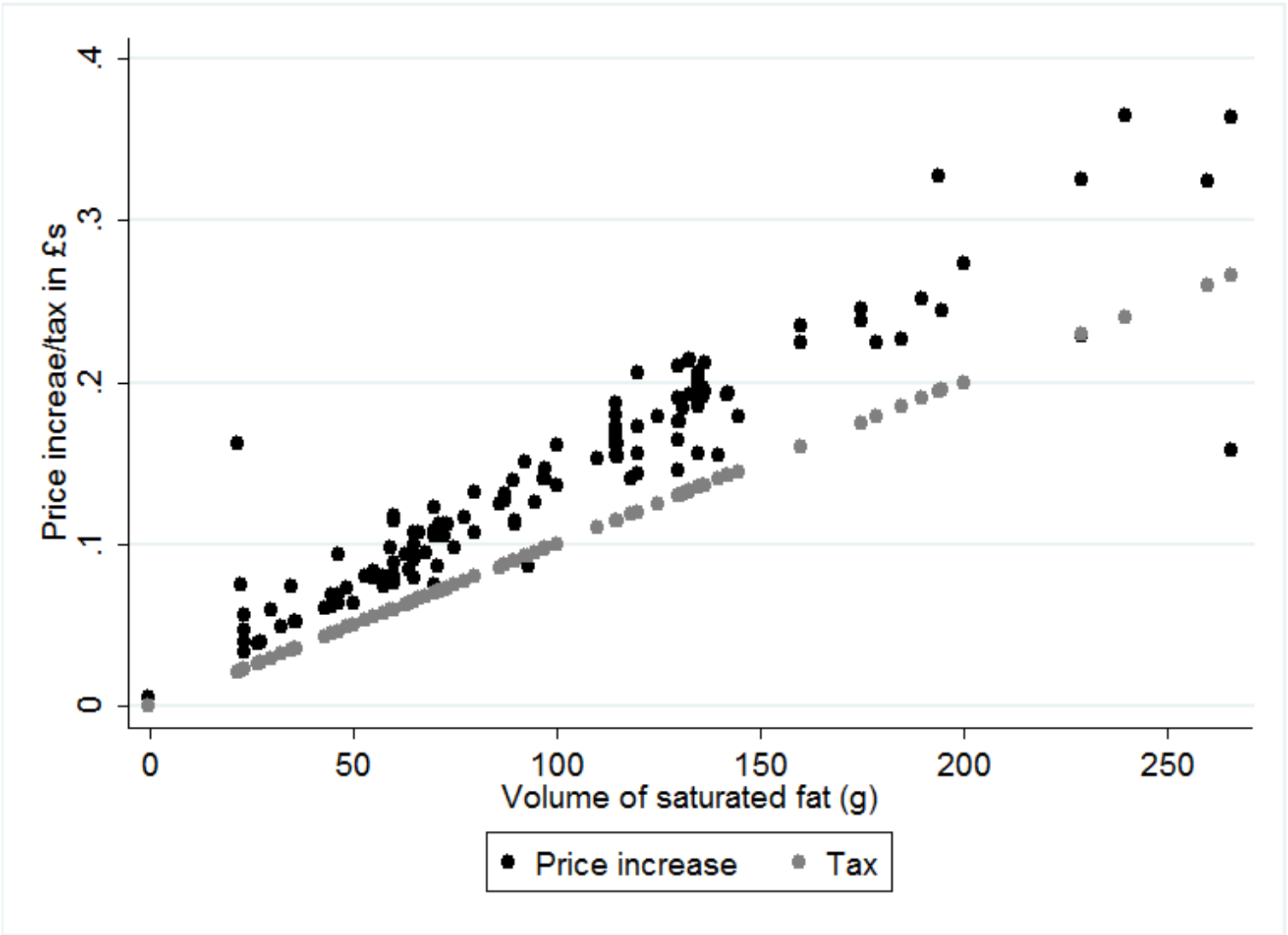
	Country Life 250g	Clover 500g	Flora Light Low Fat 500g	Flora Light Low Fat 1Kg	Can't Believe 500g	Utterly Buttely 500g	Lurpak 500g	Tesco Value Butter 250g	Lurpak Lighter 500g
Country Life 250g	**-2.481**	0.044	0.043	0.045	0.032	0.030	0.042	0.025	0.046
Clover 500g	0.018	**-2.719**	0.050	0.072	0.035	0.033	0.054	0.020	0.060
Flora Light Low Fat 500g	0.019	0.052	**-2.667**	0.068	0.034	0.032	0.052	0.021	0.058
Flora Light Low Fat 1Kg	0.014	0.054	0.048	**-2.602**	0.030	0.029	0.023	0.013	0.027
Can't Believe 500g	0.019	0.048	0.045	0.056	**-2.536**	0.033	0.042	0.024	0.046
Utterly Buttely 500g	0.018	0.048	0.045	0.057	0.035	**-2.558**	0.041	0.024	0.047
Lurpak 500g	0.016	0.050	0.045	0.029	0.028	0.026	**-2.444**	0.014	0.018
Tesco Value Butter 250g	0.020	0.038	0.039	0.034	0.032	0.030	0.030	**-2.165**	0.032
Lurpak Lighter 500g	0.016	0.050	0.045	0.031	0.028	0.026	0.017	0.014	**-2.440**

Estimates from Griffith, Nesheim and O'Connell (2010)

Response of firms

- Often assumed introduction of £1 tax mechanically results in £1 increase in price
- But conditions under which this is true are very restrictive
- How firms choose to adjust prices in response to tax depends on
  - Structure of tax
  - Portfolio of products produced/sold by firm
  - Intensity of competition among firms

Example - tax on saturated fat in butter/margarine



Summary

- Food taxes are one of many options in tackling poor diet
  - What is the rationale for government intervention?
  - Is taxation the most appropriate response?
- Impact of food taxes are complicated
  - Response of consumers and firms are key to understanding impacts
  - Both are complex and vary depending on what tax is levied on