

# Should the government control what we eat?

Rachel Griffith

# Motivation

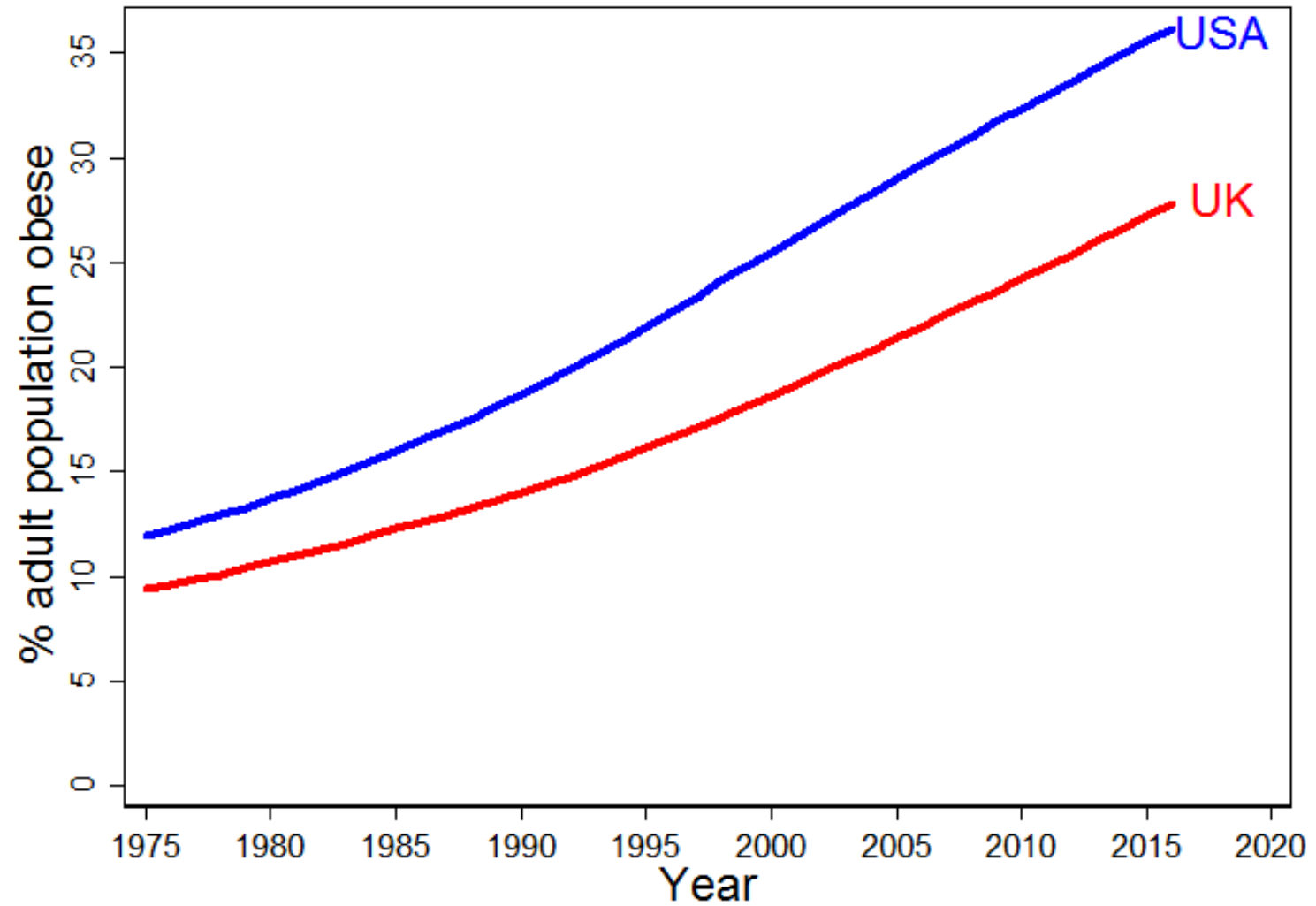
Obesity is a world wide problem

- about 13% of the world's population obese in 2016

Government are getting more involved in telling consumers what they can and can't eat as they grappling rising obesity

- some people believe that the government should mind its own business and let consumers decide for themselves what they eat
- others argues that consumers need protection from themselves and from outside temptation

# Adult obesity rates



In the WHO European Region

**1 in 3**   
11-year-olds is

**overweight**  
or  
**obese**



## Obesity

# Severe obesity among children aged 10 to 11 at record high

Official figures show 4.4% of year 6 pupils in England need medical help for obesity

**Sarah Boseley** *Health editor*

Thu 10 Oct 2019 14.31 BST



79



▲ The tax on sugary drinks has led manufacturers to cut the sugar content by nearly 29%. Photograph: Jeff J Mitchell/Getty Images



## Obesity prevalence increases with deprivation

Obesity prevalence for children living in the most deprived areas was more than double that of those living in the least deprived areas for both reception and year 6

# Motivation

These differences can have long term consequences for health as well as social and economic outcomes

Policies such as taxes on junk foods, restrictions to the availability and advertising of foods, nutritional labelling and regulation to encourage firms to reformulate products aims to encourage a healthier diet

- but these policies have sometimes proved controversial

What effects will these policies have?

Could we design them better?

# Policy aims to improve the choices people make over food and exercise to reduce obesity

- When markets function well the best outcome is achieved when people choose for themselves what to consume
  - people trade off the costs and benefits of their choices
  - the market functions better than government because people have better information about their own preferences and the trade offs they would like to make
- However, clear evidence that people are making bad choices leading to poor health, economic and social outcomes
  - these poor choices affect that person over their lifetime and affect other people
  - policy *might* be able to help consumers make better choices

# Consequences of poor choices: externalities



## The economic costs of obesity

Obesity costs  
the wider society  
**£27 billion**

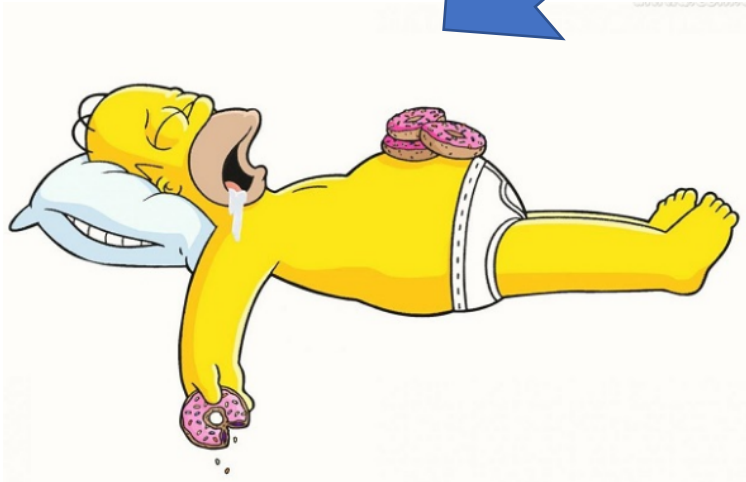
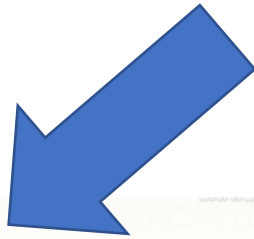


The NHS in England  
spent an estimated  
**£6.1 billion**  
on overweight and  
obesity-related ill-  
health in 2014/15

We spend **more** each year  
**on the treatment** of obesity  
and diabetes **than** we do on  
the **police, fire service and  
judicial system combined**



# Consequences of poor choices: internalities



# Well designed policy

- We want policies that help people make *better* choices
  - so that *reduce externalities* (costs imposed on wider society) and *internalities* (costs imposed on the person themselves in the future)
- To design good policy we need to understand
  - why people are making bad choices
  - how specific policies, or combinations of policies, will affect different people (i.e. will it lead people with the highest externalities or internalities to change their choices)
  - what other effects the policies might have (e.g. lead firms to change their behaviour)



**Nutrition Typical values**  
(cooked as per instructions)

	per 100g	per 1/4 pack	% adult GDA 1/4 pack	GD children (5-10 yr)
Energy kJ	1007	2014		1800
Energy kcal	241	482	24.1%	24g
Protein	8.4g	16.8g	37.3%	220g
Carbohydrate	20.6g	41.2g	17.9%	85g
of which sugars	1.8g	3.6g	4.0%	70g
of which starch	18.8g	37.6g		20g
Fat	13.7g	27.4g	39.1%	
of which saturates	5.7g	11.4g	57.0%	
mono-unsaturates	5.9g	11.8g		
polyunsaturates	1.5g	3.0g		
Fibre	0.9g	1.8g		
Salt	0.50g	1.00g		
of which sodium	0.20g	0.40g		

GDAs = Adult Guideline Daily Amounts are based on a 70kg male. GDAs are guidelines and personal requirements vary depending on age, gender, weight and activity.

Why are people making bad choices?

They lack information?



Why are people making bad choices?  
Poverty and cognitive overload?

POVERTY AWARENESS MONTH



## HOW POVERTY TAXES THE BRAIN

The poor often behave in less capable ways, which can further perpetuate poverty.

**THEORY:** Poverty reduces cognitive capacity because poverty-related concerns consume mental resources, leaving less for other tasks.



# Why are people making bad choices?

Poverty and cognitive overload?

## POVERTY AND THE BRAIN



### FINDING 1

Human mental bandwidth is finite

#### THE RULE OF 7

The largest number of discrete pieces of information the average brain can manage is around seven.

#### CHUNKING

Way to improve memory  
Like phone numbers  
123-456-7890 =  
groups of 3 + 3 + 4 numbers



# Why are people making bad choices?

## Poverty and cognitive overload?

### FINDING 2

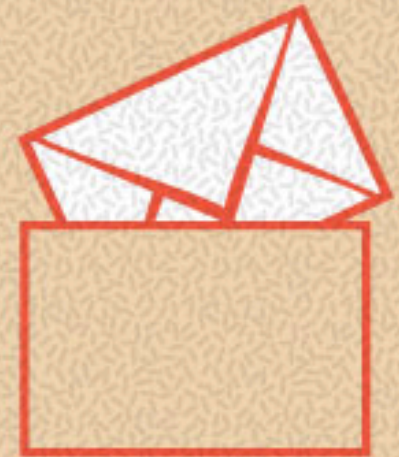
Poverty imposes such a massive cognitive load on the poor that they have little bandwidth left over to do many of the things that might lift them out of poverty like:



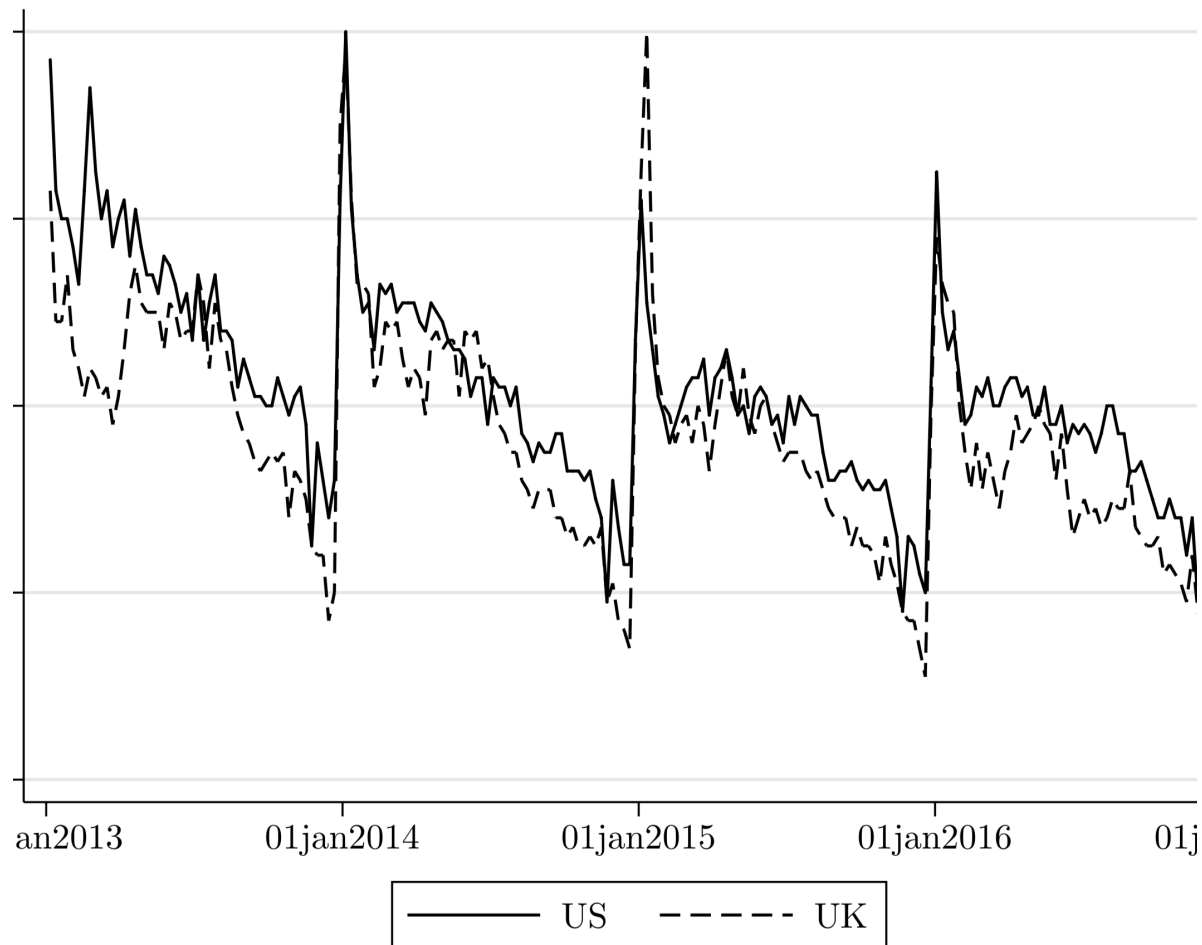
Going to night school



Searching for a new job



Remembering to pay  
bills on time



Why are  
people  
making bad  
choices?

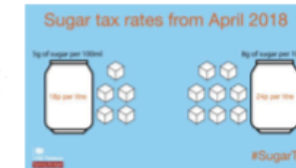
They lack  
self-control?



Why are  
people  
making bad  
choices?

Advertising?

There are many policies, what are they aiming to achieve?







Red means this food is **HIGH** in sugar. Think about how often you choose it and how much of it you eat.



Amber means this food has a **MEDIUM** amount of sugar. This makes it an OK choice, although going for green is even better.



Green means it's **LOW** in sugar, which makes it a healthier choice.



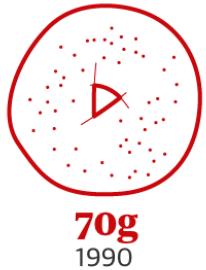
LOOK OUT FOR  
**HIDDEN  
SALT**

What do these policies aim to correct?

provide information

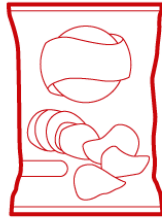
**Portion sizes have increased substantially since the 1990s, and research shows that larger portions encourage people to eat more**

The size of a bagel has increased by 29% since 1990 ...



**70g**  
1990

... a packet of crisps by 50% ...



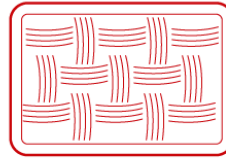
**100g**

... pizza by 53% ...

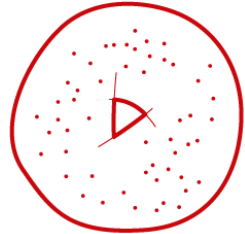


**200g**

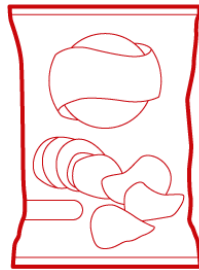
... while cottage pie has more than doubled



**200g**



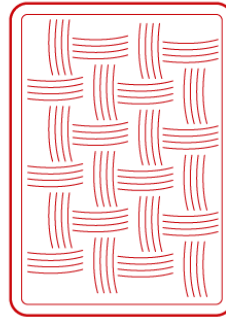
**90g**  
2019



**150g**



**305g**



**425g**

Guardian graphic. Source: UK government's chief medical officer, Portion Distortion, British Heart Foundation, 2010 and 2019

What do these policies aim to correct?

self control





What do  
these policies  
aim to  
correct?

self control

# Ban eating on public transport to tackle obesity, urges outgoing chief medic

**Dame Sally Davies says government must put children's health before company profits**

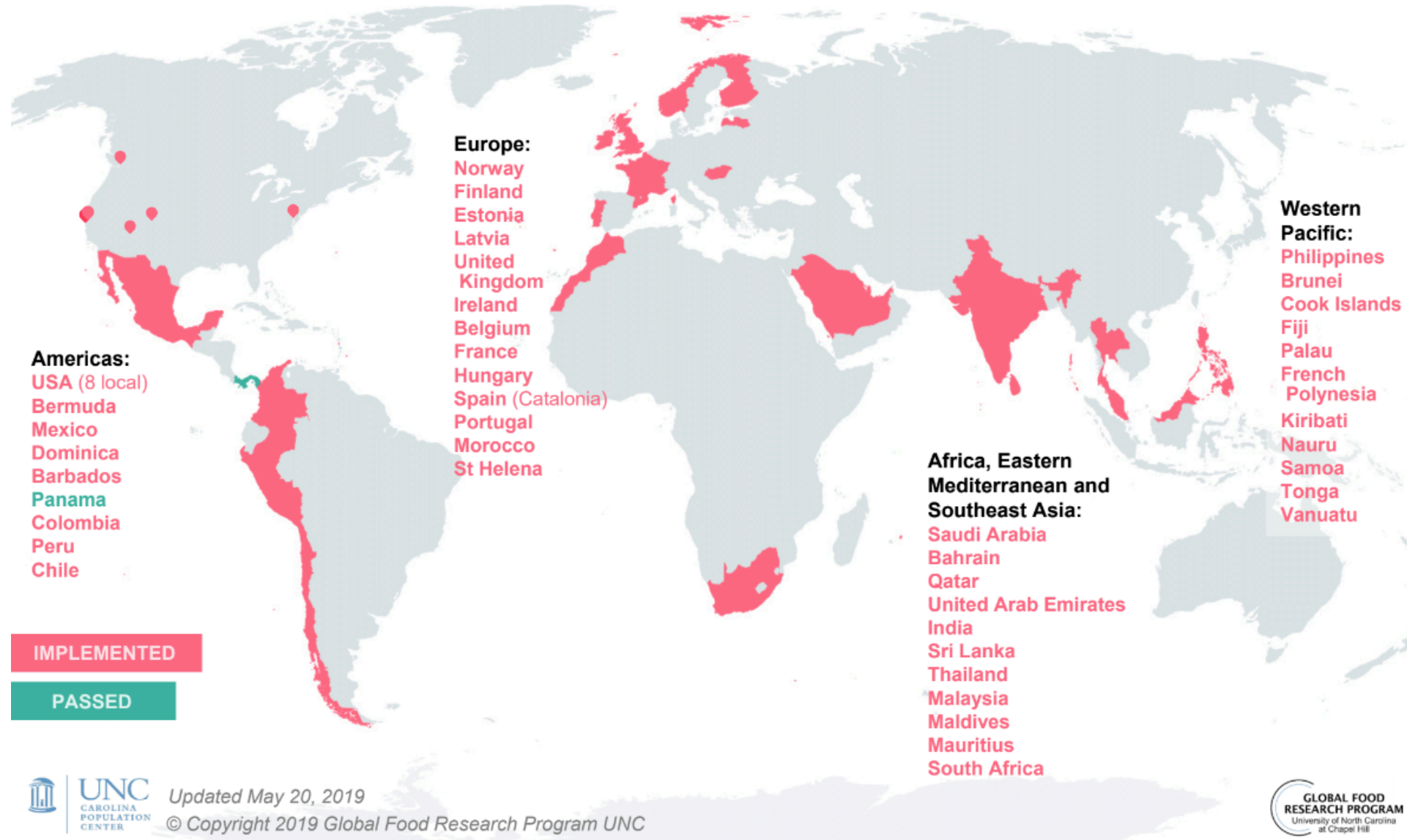


▲ 'Children are drowning in a flood of unhealthy food and drink options', says the chief medical officer, Dame Sally Davies. Photograph: Clark and Company/Getty Images

What do  
these policies  
aim to  
correct?

self control

# Sugary drink taxes around the world

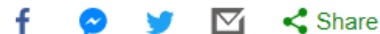


# UK Soft Drinks Industry Levy



## Sugar tax on soft drinks raises £154m

20 November 2018



### Boris Johnson

This article is more than 3 months old

## 'Sin taxes': Boris Johnson vows to review sugar levy

Pledge came just days before green paper is due to advocate its extension to milkshakes

Heather Stewart *Political editor*

Wed 3 Jul 2019 12.46 BST



108



▲ Boris Johnson said 'sin stealth taxes' seem to 'clobber' the poorest. Photograph: Ian Forsyth/AFP/Getty Images



# International evidence on effect of soda taxes

- Soda taxes have been implemented in 50 jurisdictions
  - 27 studies of taxes in 11 jurisdictions
- All studies find that taxes lead to increased prices
  - pass-through is lower in smaller jurisdictions; in settings like the UK taxes are fully passed through to prices
- Most studies find that taxes
  - led to substantial reductions in purchases of soda

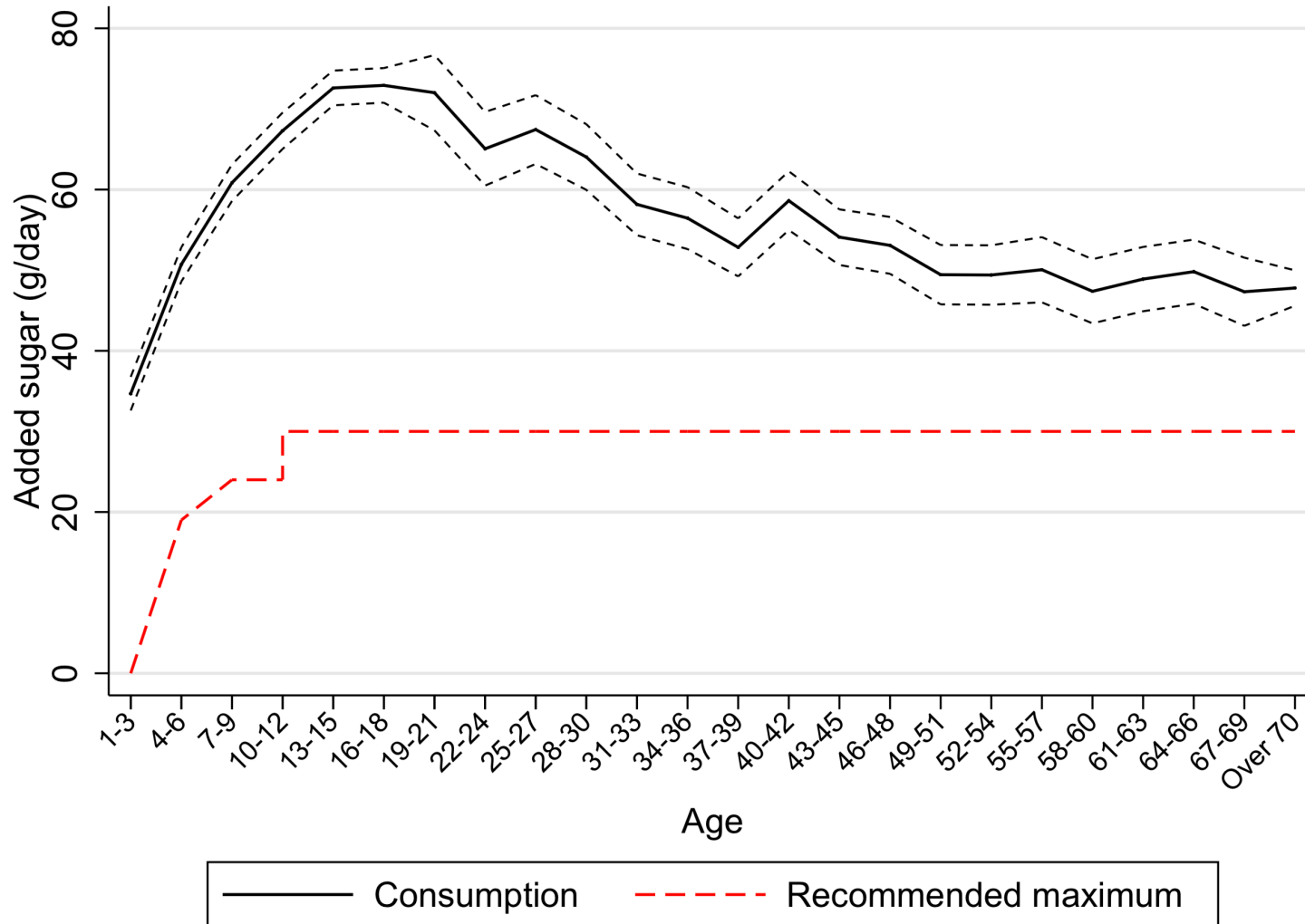
# Difference between economic and public health approaches

- Economics: how does the policy change individual's trade off of the benefits against the costs of consumption
  - where costs include prices, future health, social and economic costs to the individual, and any externalities they have on others
- Public health: how does the policy affect population outcomes
  - does it reduce risk factors for diseases
  - this does not value the benefits individuals get from consumption
  - and often does not pay attention to impact on individuals, and eg. inequalities

# How effective are these policies?

- how do individual consumers respond? do the policies change behaviour of *the target group of consumers*?
- how do firms respond?
- ex post analysis
  - use data to compare outcomes before and after a policy reform in a ``treatment'' and a ``control'' group
- ex ante or ``structural'' analysis
  - use data and economic theory to figure out both what will happen if the policy is implemented (the ``treatment'') and what will happen in the absence of the policy (the ``control'')
  - importantly, helps us to understand the mechanisms through which policies works

# Massive over consumption of sugar

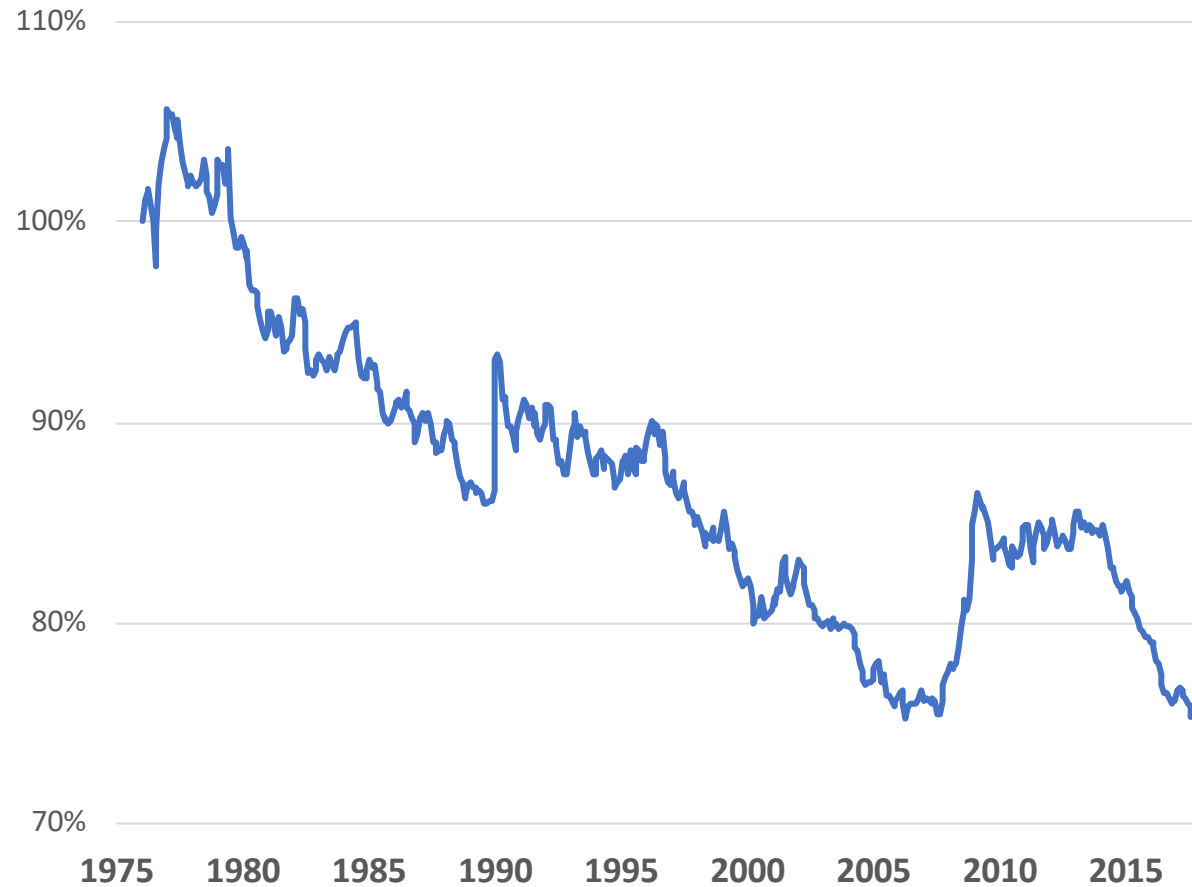




# Are soda taxes effective?

- Who is the target population?
  - people with largest internalities; young and heavy consumers?
- Are these groups responsive to taxes
  - if they are then tax reduces welfare, because they can't buy a product they like, but they gain in the long run due to reduced internalities
  - if they aren't then tax reduces welfare, because they have to pay higher prices, and they still experience internalities in the long run
  - evidence suggests that the young are, but not heavy consumers
- What is the scope for further use of taxes?

## Long term decline in food prices in the UK

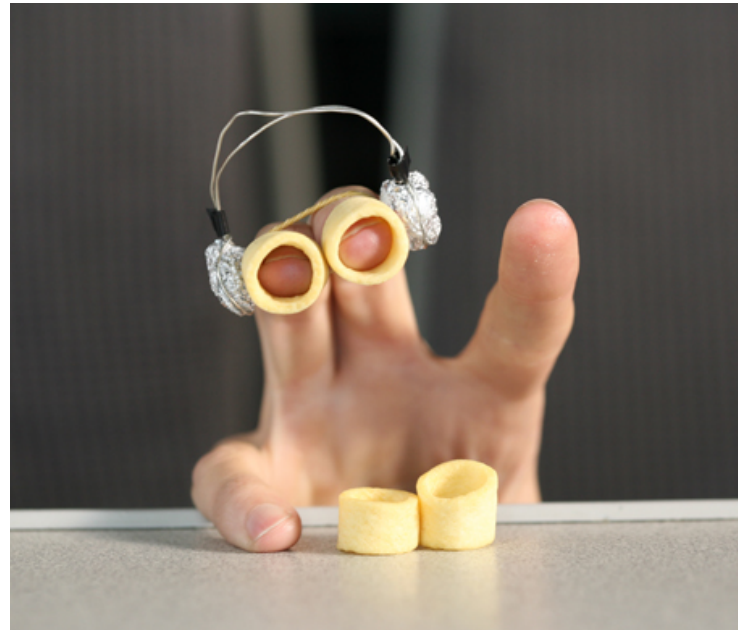


Lower food prices have led to important welfare gains for poor households

- Poorest households (lowest 10% income)
  - food is 15% of expenditure
- Richest households (highest 10% income)
  - food is 7% of expenditure

What effects do advertising restrictions have?





Advertising of junk foods

---

# The impact of banning junk foods adverts

- Adverts of junk food
  - are persuasive, distract people from other characteristics of the product (price, bad health consequences)
  - lead people to choose to buy more junk food (than in the absence of adverts)
- Firms compete in advertising and in prices
- Banning advertising means
  - consumers pay more attention to price and other characteristics
  - firms can't compete in advertising, so they compete more in prices
  - both of these mean that price competition increases and prices fall
- A reduction in prices leads to increased purchases

# Concluding comments

There is compelling evidence that people are making suboptimal choices regarding food consumption

Policy can potentially make people better off by protecting them from themselves and from outside temptation

- however, there are many reasons that individual and firm behaviours might undermine the ability of policy to achieve this aim
- to be effective policies must address market failures and be well targeted
- policies can make things worse and might even reduce welfare of the people they are aiming to help - be wary of unintended consequences
- doesn't mean we shouldn't implement policies, but do so intelligently
- substantive policy reforms such as education and lifting households out of poverty are likely to have bigger long term impact