

# A 'Wicked Problem': Towards a New Analytical Framework to Critique Sugar Tax Policies

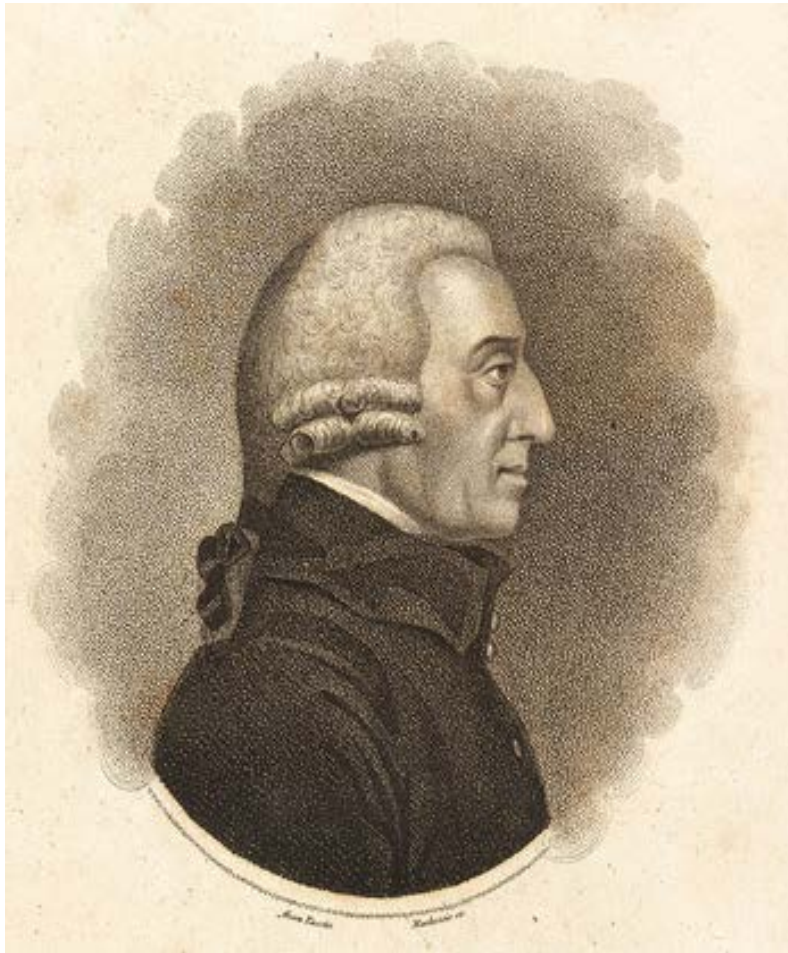
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# Adam Smith (1776)



- ‘**sugar, rum and tobacco** are commodities which **are nowhere necessities of life...** which are... objects of almost universal consumption, and which **are therefore extremely proper subjects of taxation**’  
(Smith, 1776, p445)

**‘nowhere necessities of life...’**



# Why?



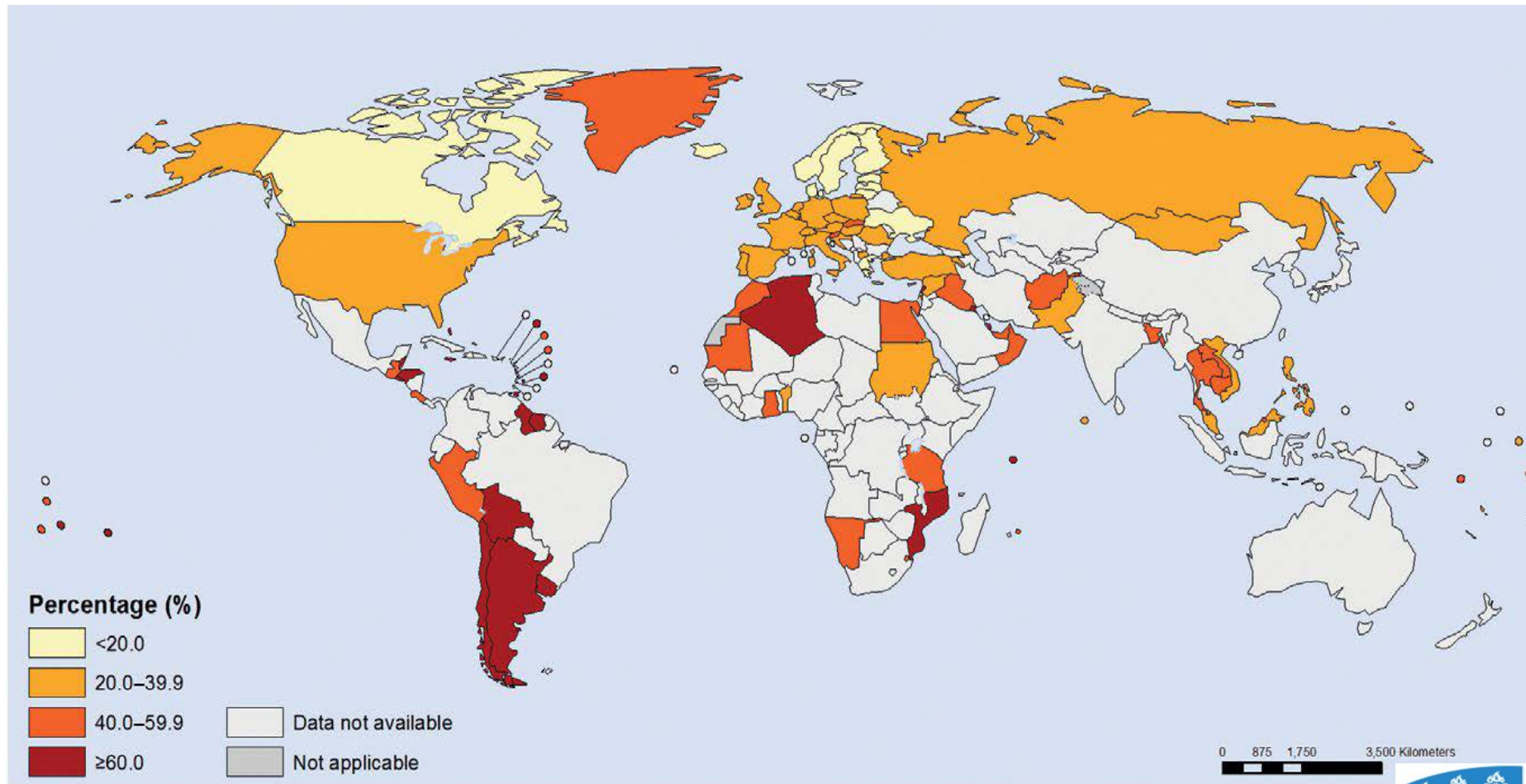
Increasing  
Prevalence of  
NCDs

Especially  
Vulnerable  
Groups

Societal  
Cost &  
Economic  
Cost



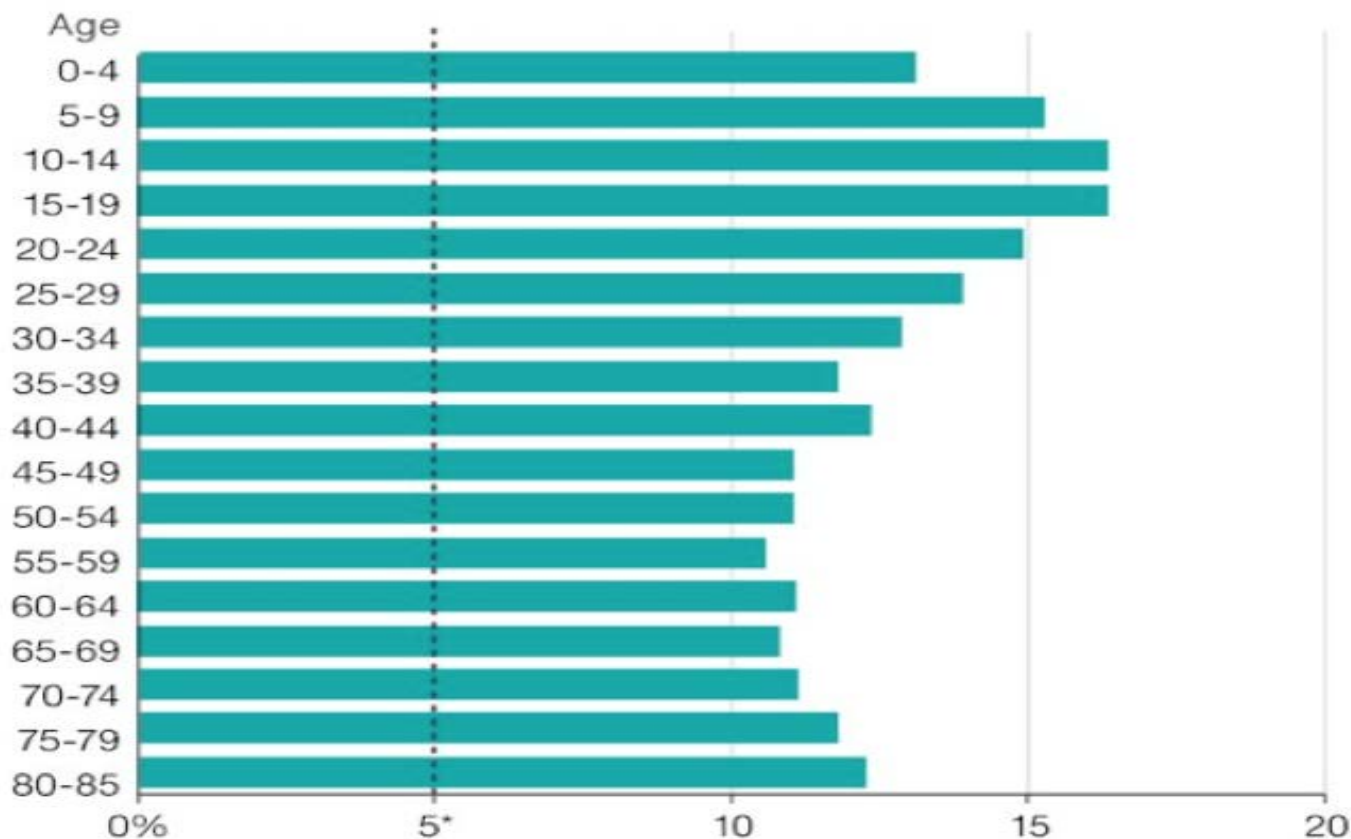
# % Adolescents who drink soft drinks *daily* (WHO 2016: HBSC Study)



# Why a SSB Tax? Over-consumption by Youth

**The average teenager consumes three times more sugar than recommended, as a share of total calories**

Percentage of calories which come from free sugars at each age



\*Note: It is recommended that we consume no more than 5% of our calories from free sugars

Source: National Diet and Nutrition Survey, 2008-2014

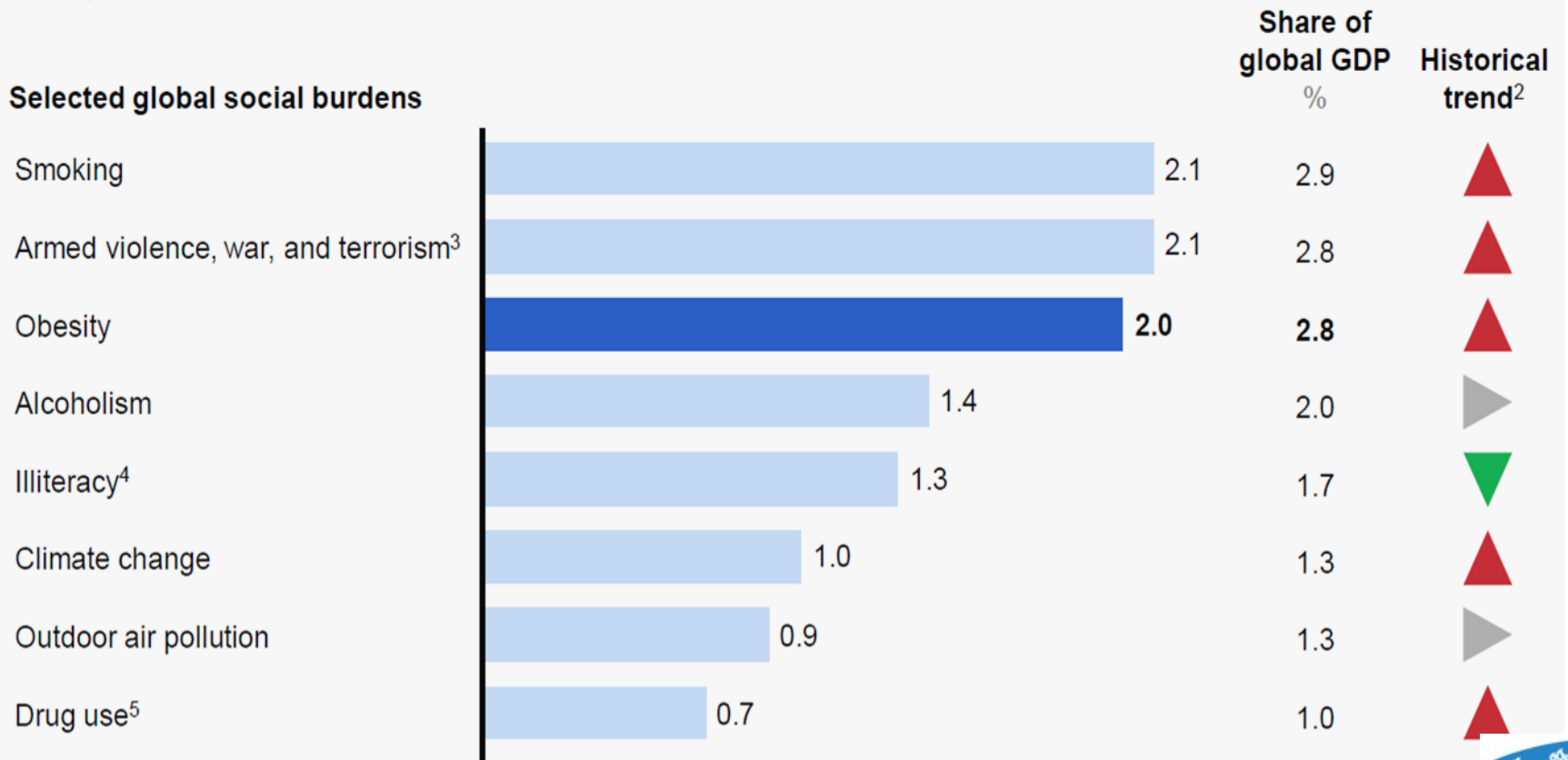
BBC



# Economic impact

Estimated annual global direct economic impact and investment to mitigate selected global burdens, 2012<sup>1</sup>

GDP, \$ trillion



Source: McKinsey Global Institute



# WHO recommendations against childhood obesity

- **Promote Taxes on sugary drinks (2017)**
- Promote intake of healthy foods
- Promote physical activity
- Preconception and pregnancy care
- Guidance for early childhood diet and physical activity
- Health, nutrition and physical activity for school-age children
- Weight management services to families





# Determinants of nutrition and eating: (DONE) School Children Analysis (2017)

## Environment Determinants

### *Meso/Macro*

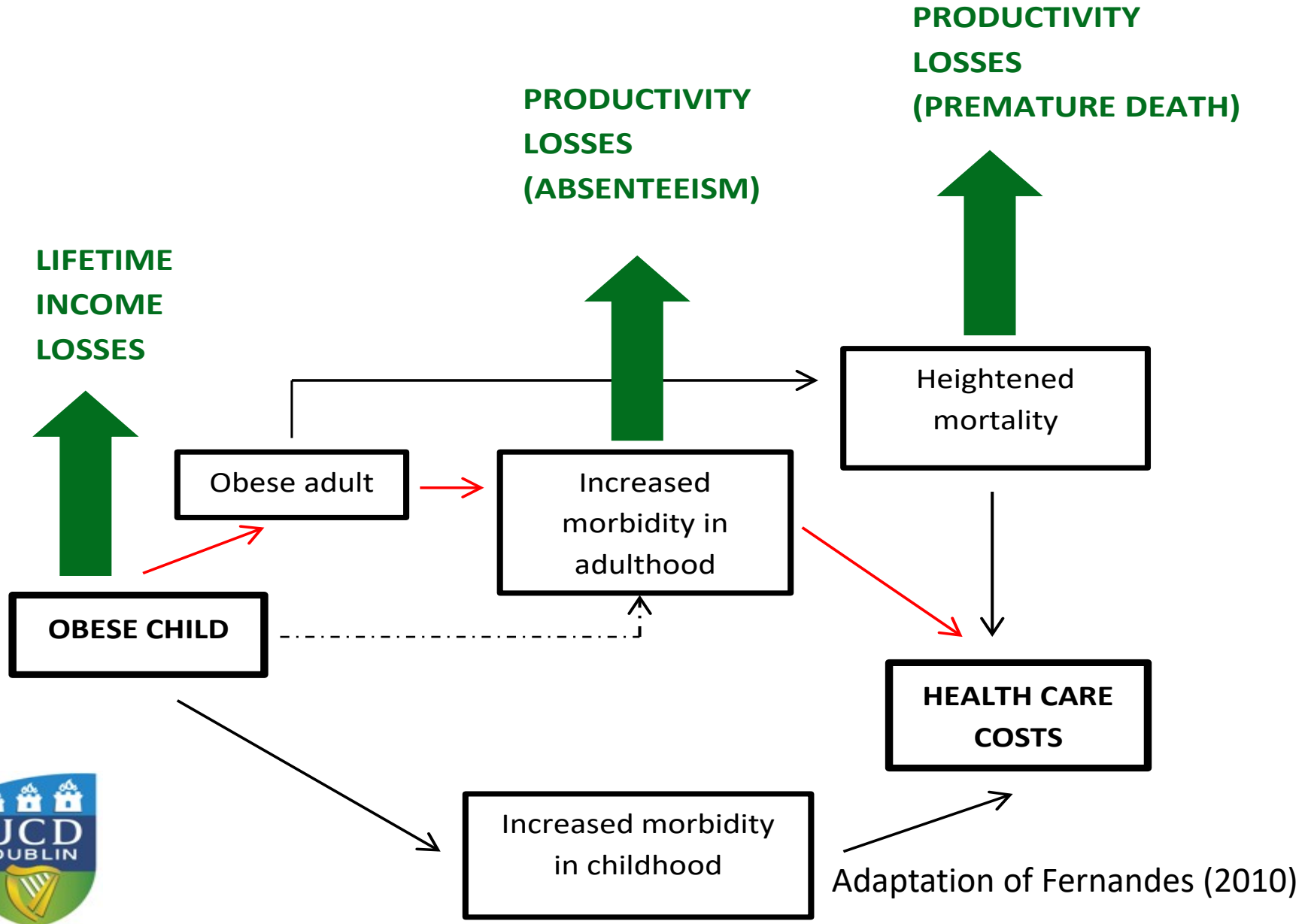
- Exposure to food promotion
- Market Prices
- Environmental Food Availability/and Accessibility
- Food Outlet Density

### *Micro*

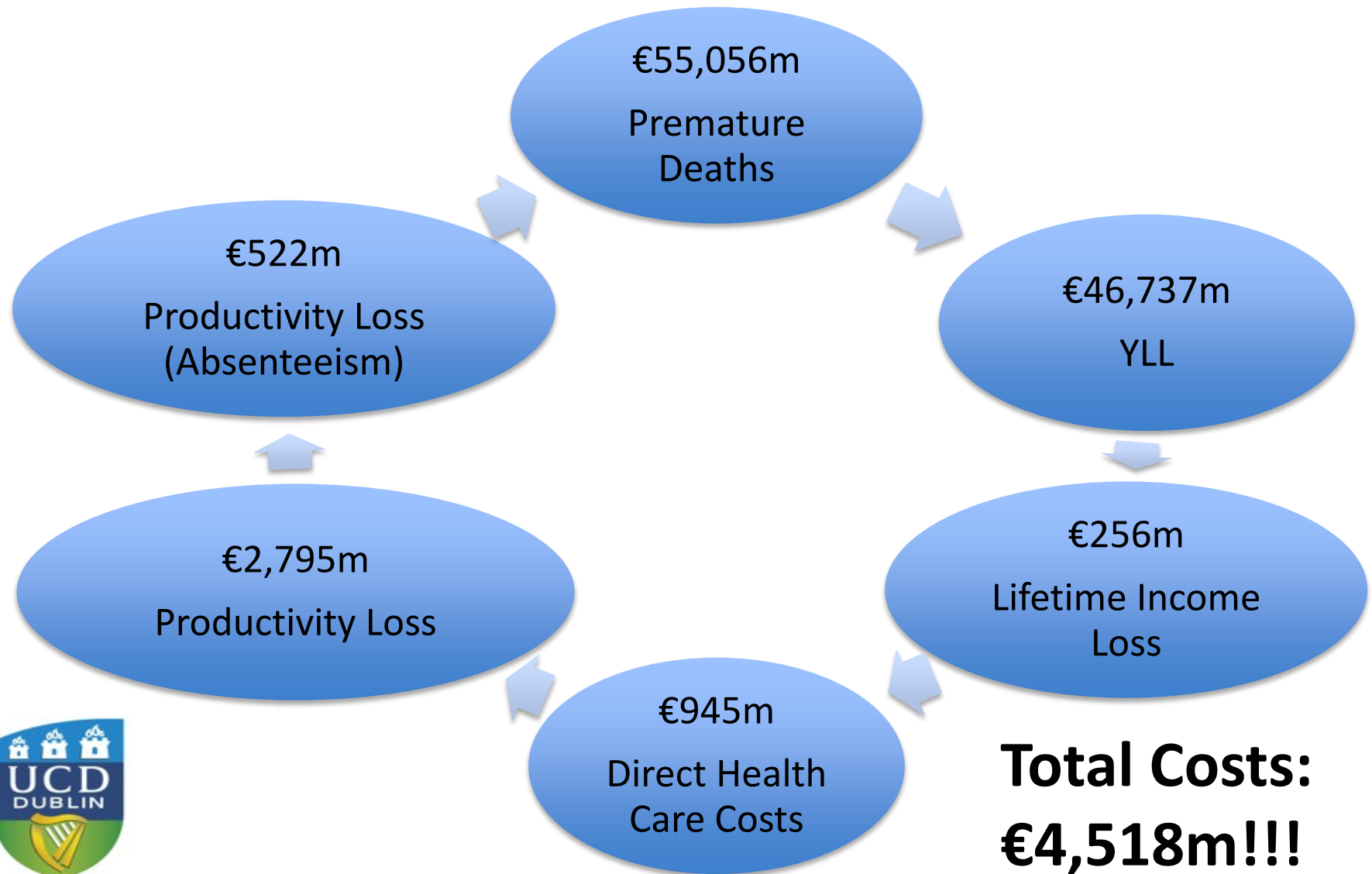
- Portion Size
- Home Food Availability/and Accessibility
- Eating Environment



# JANPA Conceptual Framework (2015)



# Some Findings: Impacts & Costs of Childhood Obesity in Ireland (Janpa, 2015)



# Why a Sugar Tax? The '3 Cs'



- **Curb** Consumption



- **Change** formulations

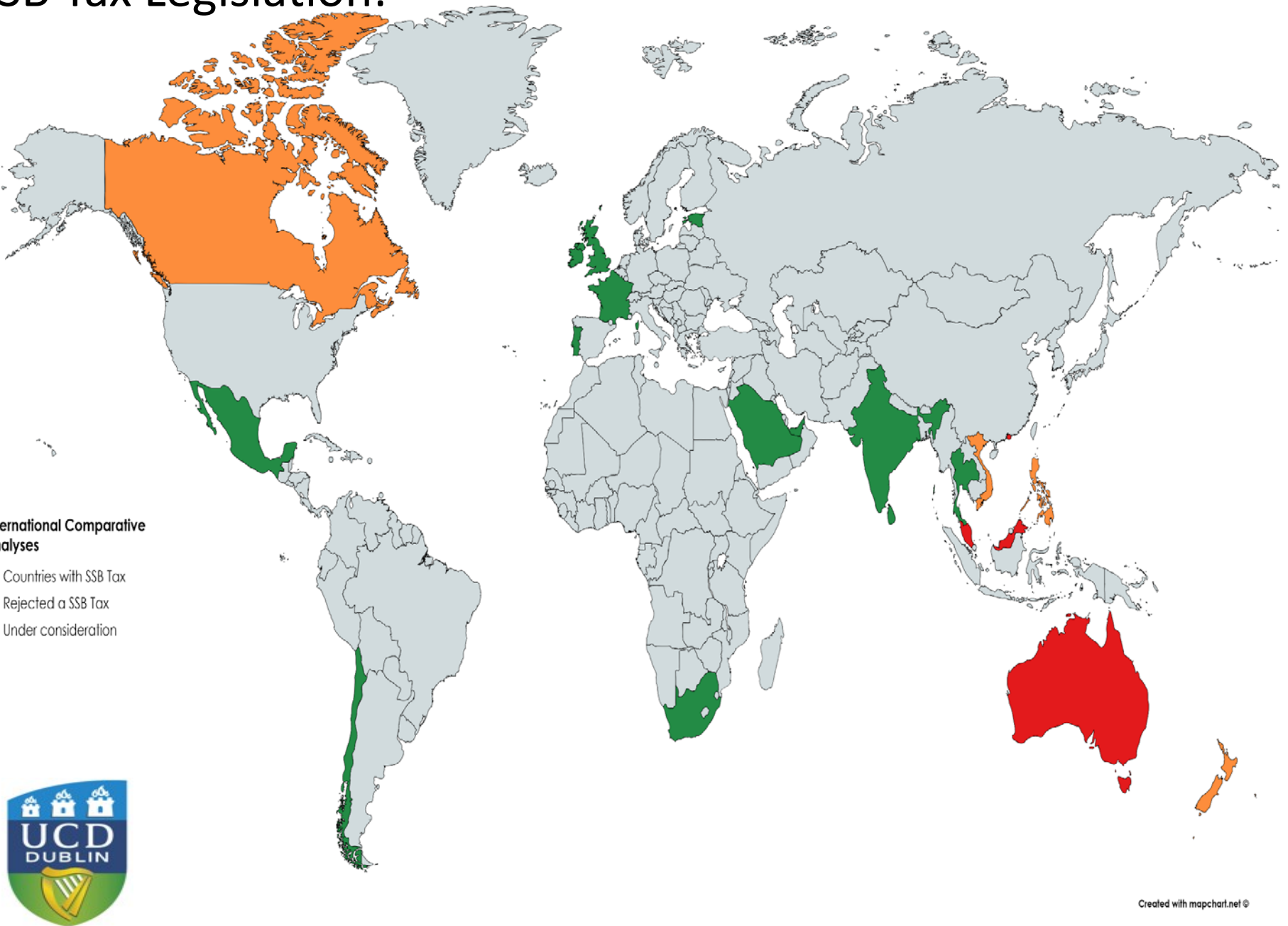


- **Create** revenue streams for public health initiatives

# SSB Tax Legislation:

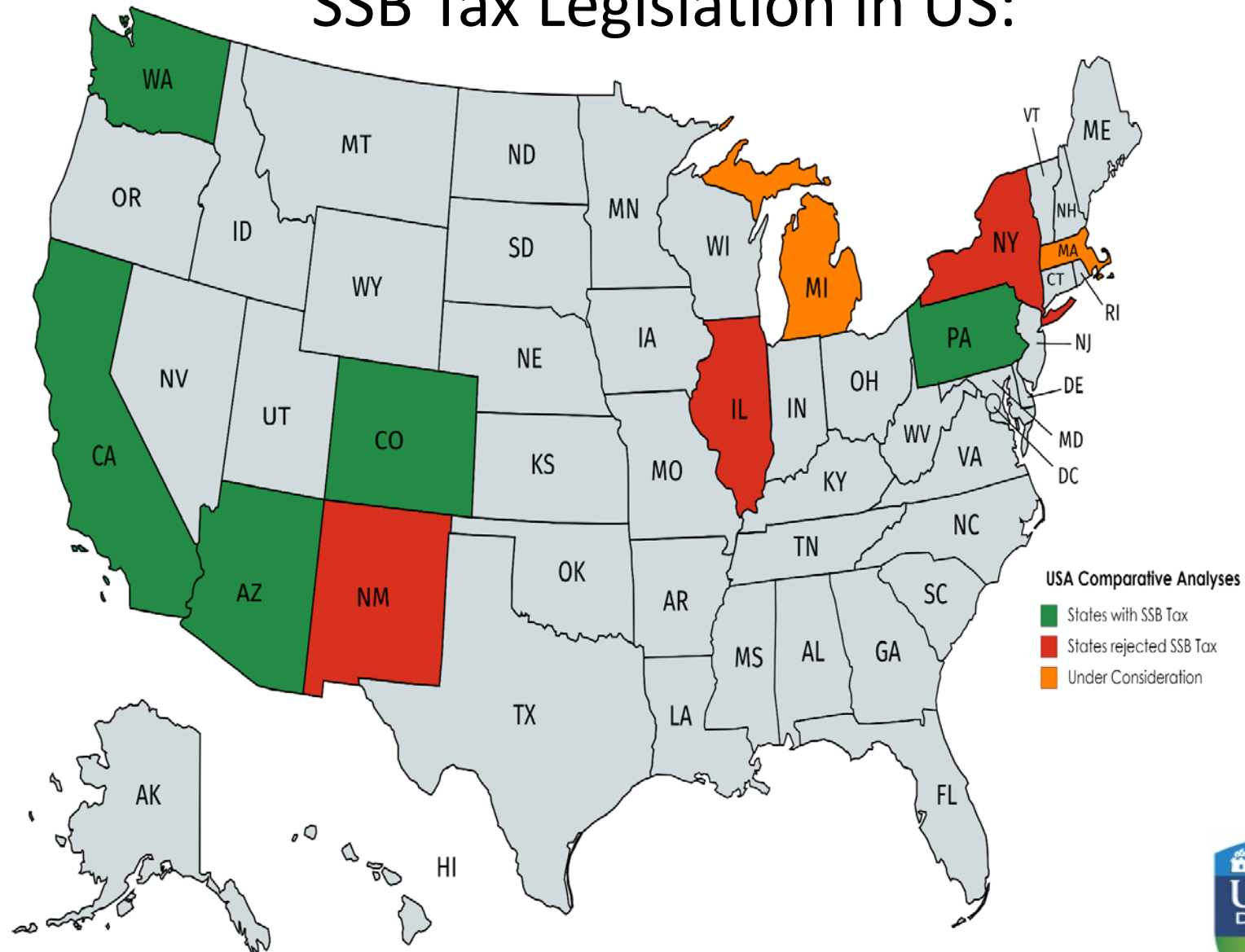
## International Comparative Analyses

- Countries with SSB Tax
- Rejected a SSB Tax
- Under consideration





# SSB Tax Legislation in US:



# Manufacturer's Response



## Manufacturers' response

**Irn-Bru** cut sugar from 10.3g to 4.7g per 100ml

**Pepsi** to cut 11g of sugar by 20% by 2020

**Ribena** cut sugar from 10g to less than 4.5g per 100ml

**Lucozade** cut sugar from 13g to less than 4.5g per 100ml

**Coca-Cola** no recipe change; remains at 10.6g per 100ml



**Kellogs?**

Source: Institute for Fiscal Studies

# Some Principles of Tax Policy Design

Guiding Principles

Equity, Efficiency, Certainty, Convenience

What to tax? How to tax?

Pigouvian Tax Model (Pigou, 1920)

Nudge Theory (Thaler & Sustein, 2008; Saghal, 2013)

# **‘Wicked Problems’ ~ How to govern ‘Wicked Problems’?**

- Rittel & Webber (1973) original definition of wicked problems (urban planning San Francisco)
- Complex societal challenges
  - Cannot be framed and understood in linear cause-symptom-effect relationships
  - Evolve unpredictably over time
  - Involve conflicts of values among stakeholders



# Characteristics of Wicked Problems

Dentoni et al(2018)	Rittel & Webber (1973)
<b>1. Knowledge Uncertainty</b>	No definitive formulation of a wicked problem
	Every wicked problem is unique
	Every WP can be considered to be a symptom or consequence of another problem
	There is not have an enumerable set of potential solutions
<b>2. Value Conflict</b>	Multiple actors influencing or affected by the WPs have different assumptions on what causes the problem and what should be done about it
	Solutions chosen have serious repercussions on societal groups
	Solutions are not true or false but better or worse
<b>3. Dynamic Complexity</b>	WP have no stopping rules
	Is no immediate and no ultimate test of a solution to a WP
	Every solution to a WP is a 'one-shot operation'



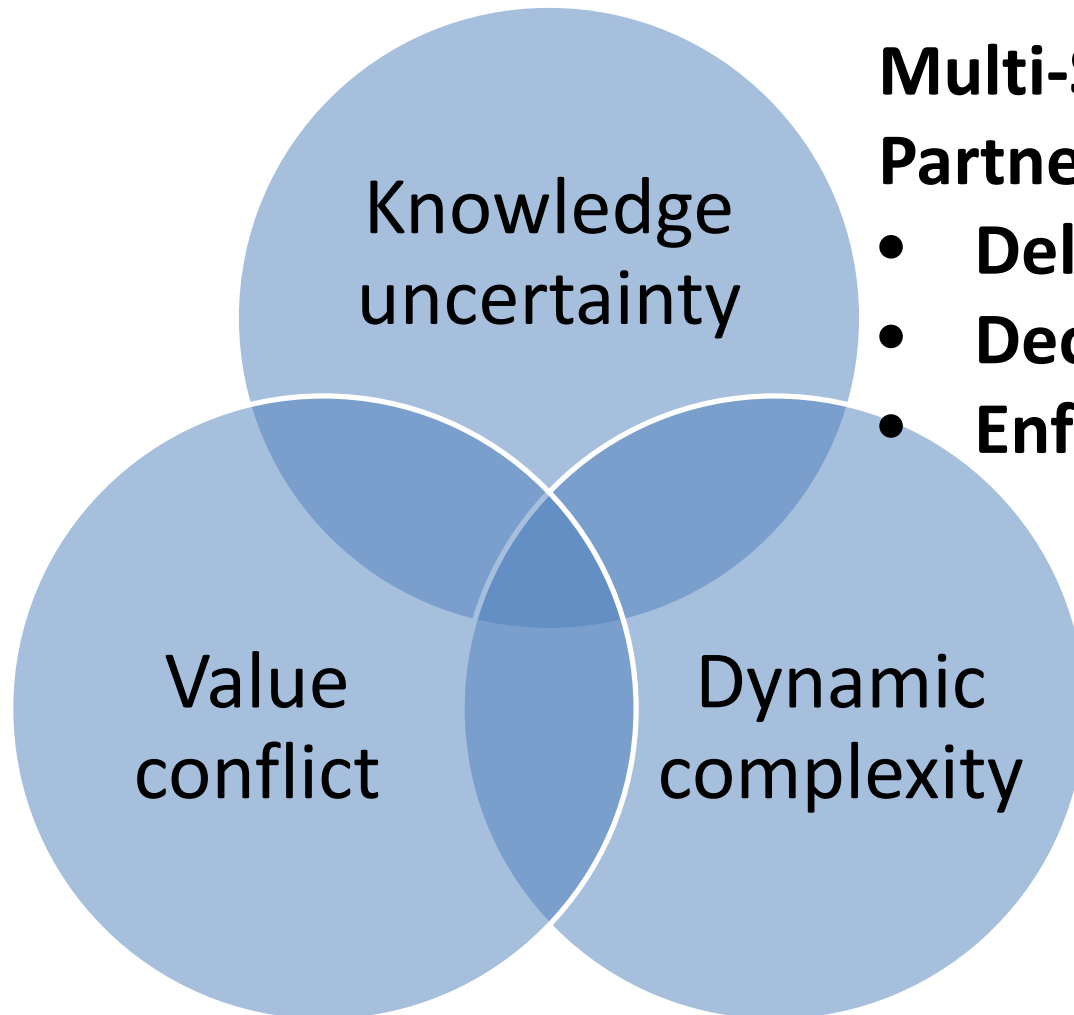
# Over-consumption of sugar – through the lens of a ‘wicked problem’

- How to tame this wicked problem?
- A multi-faceted approach from multi-stakeholders? (EVIDENCE study)
- Dentoni et al. (2018) explore whether and how multi-stakeholder partnerships may harness wicked problems?

# How to tame a 'wicked problem'?

- Dentoni et al., (2018) advocate collaborative forms of governance to address the wicked nature of problems via **Multi-Stakeholder Partnerships**
  - **Systemic change** requires the use of **less conventional approaches** to bring about a **remarkable shift in power structures** while supporting change across multiple societal spheres and subsectors (voice & power)
  - **Multi-Stakeholder Partnerships** require a fluidity & continuous negotiation between the actors

# ‘Wicked Problems’ ~ How to govern ‘Wicked Problems’?



## **Multi-Stakeholder Partnerships**

- **Deliberation**
- **Decision-making**
- **Enforcement**

# Call for a new model of strategic research to target 'change agents'



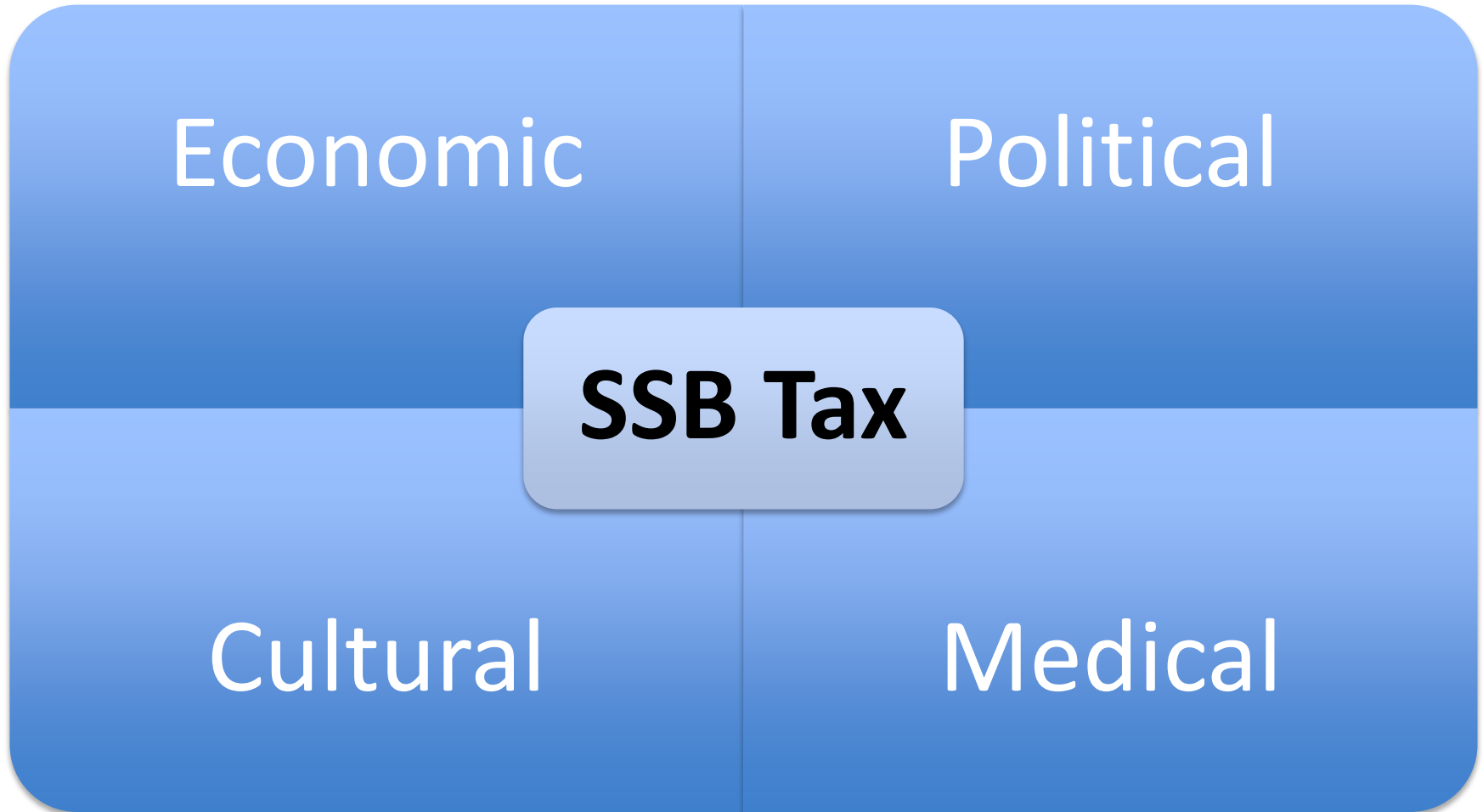
# Prior Studies of Sugar Taxes

- **Method**
  - A systematic Literature Review (680 articles)
- **Categorise by methodology**
  - Modelling Studies
  - Experiments (Country Specific Studies)
  - Randomised Controlled Trials of price changes
  - Surveys
- **Meta-analyses**
- **A consensus** – taxes on sugary products do influence consumption decisions





# How to evaluate SSB Tax?



**Ethical Dimension!**



# How to **evaluate** the impact of a SSB Tax?

## 1. Who are the **stakeholders**?

- How does each stakeholder respond to the Tax?
- How do we measure the response?

## 2. Are there **economic, political, medical, cultural and ethical considerations** at play?

- How do we measure these considerations?

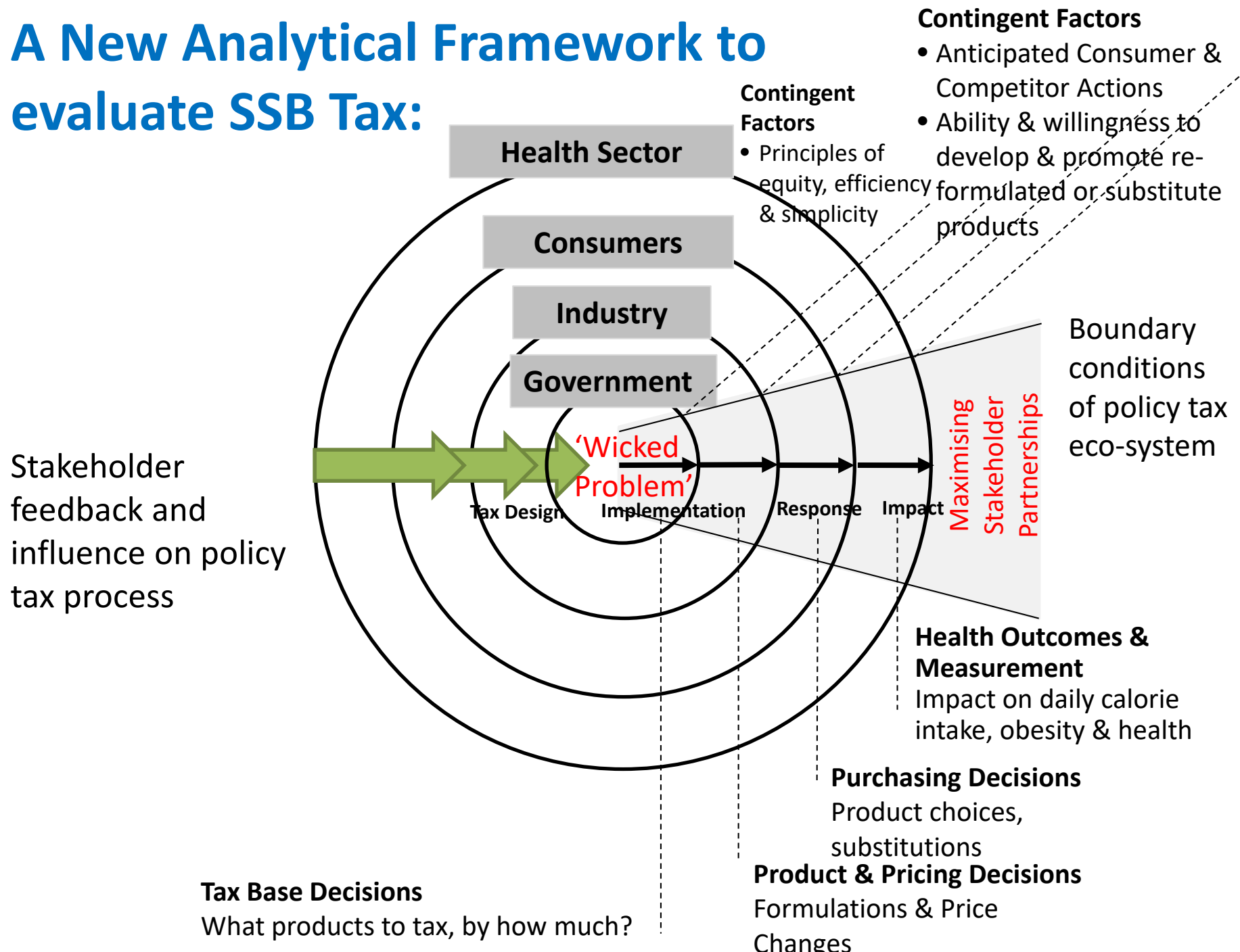
## 3. How do we measure **distal health outcomes**?

- Over what period of time?

## 4. Feedback to **inform future SSB tax policy and other food related taxes**?



# A New Analytical Framework to evaluate SSB Tax:



# Future Research

- Draw upon this **new interdisciplinary framework** for a critical analysis of the effects of a SSB tax which is **reflective of the**
  - **complexity of human behaviour** and
  - **nexus of the economic, political, medical, cultural and ethical dimensions, and**
  - **complex system and problems which are non-linear in nature, dynamic where value conflicts prevail**



# Calls for and Current Research Agenda

- **WHO – targeting policy tools towards overweight or obese children**
  - H2020 BigO Project ([BigOprogram.eu](http://BigOprogram.eu))
  - UCD Campus Study
  - Gaisce Partnership – ‘Sugar Tax Challenge’
- **International Comparative Analyses**
  - At risk groups/vulnerable groups
  - The ‘Bigger Picture’ Campaign (UCSF)  
[thebiggerpictureproject.org](http://thebiggerpictureproject.org)



**GAISCE**  
**THE PRESIDENT'S**  
**AWARD**

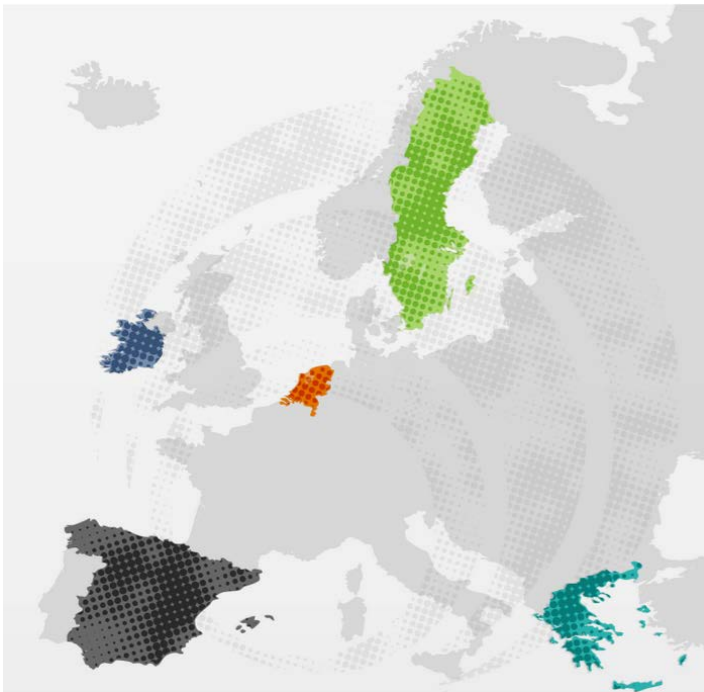


# *Big Data against Childhood Obesity*



## **Aim:**

BigO will collect and analyze **big data** on **children's behaviour and their environment** to enable public health authorities to plan and execute effective **programs against obesity**





# HealthyUCD

#healthyucd



## OUR VISION

A global health promoting university that ensures the holistic health and well-being of every member of the UCD community.



# Proposed Comparative Study

- US and the island of Ireland
- Build upon the multi-disciplinary expertise of both research teams
- To evaluate interventions aimed at addressing this complex global societal challenge
- **Focus** on evaluation of the effectiveness of SSB Tax and **Obesity amongst young people**

Thank you for the kind invitation and  
warm welcome 😊

Thank you to my fabulous co-authors:  
Marius Claudy, Lisa Marriot, Shane  
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*Gerardine*

