

# National Food Strategy Part One







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**T**HE members of my Advisory Panel – experts from across the food system with deep knowledge of the issues we are tackling – have been both supportive and challenging throughout. I asked them to review the work as it progressed; to provide strong independent challenge; to introduce the team to people we should be talking to; and to point us towards things we should be reading.

I did not expect such a disparate group to agree with each other on all my recommendations; that would have been unlikely to the point of suspicious. But by making their arguments robustly and with open minds, and by testing my arguments hard, they have fulfilled their brief brilliantly. They are:

**Agriculture**

- Minette Batters** – President, NFU
- Helen Browning** – Chief Executive, Soil Association
- Craig Livingstone** – Farmer of the Year, 2018
- John Shropshire** – Chairman, G's Farm
- Rebecca Laughton** – Campaign Coordinator, Landworkers' Alliance

**Industry, Government, and Non-Governmental Organisations**

- Denise Bentley** – Co-Founder and CEO, First Love Foundation
- Baroness Boycott** – Member of the Food, Poverty, Health and the Environment Committee, House of Lords, former Chair of the London Food Board
- Paul Clarke** – Chief Technology Officer, Ocado
- Tony Juniper** – Chair, Natural England

**Justin King** – Former Chief Executive Sainsbury's, Non-Executive Director, Marks & Spencer

**Sarah Mukherjee** – Former Chief Executive, Crop Protection Association

**Sebastian Munden** – Executive Vice President & General Manager, Unilever UK & Ireland

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**Gerard van der Hut** – Managing Director, Rijk Zwaan UK Ltd

**Roger Whiteside** – Chief Executive, Greggs

**Academics and Experts**

**Dr. Meredith Crowley** – Reader in International Economics, University of Cambridge. Specialising in international trade

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**Prof. Theresa Marteau** – Director of Behaviour and Health Research Unit, University of Cambridge

**Jeremy Oppenheim** – Founder & Senior Partner, SYSTEMIQ

**Daisy Stemple** – Citizen

**Prof. Jonathan Valabhji** – National Clinical Director for Diabetes and Obesity, NHS England

**Tamsin Cooper**, who leads the team of civil servants working on the National Food Strategy, has gone way beyond what I could possibly have expected. Without her energy, vigorous challenges and persistent good humour this report would not have been possible.

The team has worked long and hard for months to ensure that this report is robustly evidenced, drawing together arguments from academics, citizens, industry and other government departments. I would particularly like to thank those civil servants who were seconded to address the urgent food security issues raised by COVID-19. In lockdown, they worked around the clock to stop people going hungry. The energy with which they returned to this report, just a few weeks before publication, was extraordinary. They are **Dustin Benton, Simon Davies, Oliver Dye, Sarah Haley, Jessica Heinemann, Joseph James, Daisy Lainoff, Emma Quarterman** and **Isabella Watney**.

Thanks too to **Konrad Bishop, Tamas Borbely, Bethan Campbell, Laura Chapman, Charlotte Hill, Tahsin Khan** and **Sarah Nicholas**, all of whom put in a huge amount of work prior to the pandemic.

**Anna Taylor**, my lead independent advisor and sparring partner, has been a terrific source of wisdom: meticulous, passionate and remarkably patient with me as I got up to speed on the issues she understands so well.

**Subash Viroomal, Danielle Burgs Escobar, Anna Morser** and **Michele Luzi** from Bain engaged minds, but also hearts. Thank you.

Two other external advisers, **Tom MacMillan** and **James Kane**, have made outstanding contributions. I am thankful to **Dr David Nabarro** for convening the first food system dialogue in June 2019 and for inspiring us to involve citizens and stakeholders as a central part of our approach.

I have tried to put all my arguments through rigorous quality control tests. A huge number of people have patiently helped me do that – in person and through endless emails. They include: **Albert-László Barabási, Paul Cartledge, Diane Coyle, Kevin Hall, Patrick Holden, Mike Kenny, Tim Lang, Ottoline Leyser, Rebecca Lowe, Sue Pritchard, David Runciman, Nigel Shadbolt, Matt Ridley, Christopher Snowdon**, and **Anthony Warner**.

Thanks also to **Anthony Warner** (again), **James Rebanks** and **Carolyn Steel** for allowing me to read their excellent books pre-publication.

A specific thank you to **Professor Corinna Hawkes** and **Dr Tara Garnett** for being so generous with their advice and insight, and for contributing new research to inform our thinking.

**Henrietta Hopkins** and **Suzannah Kinsella** from Hopkins Van Mil were both dedicated and deft in delivering a series of public dialogues in five locations across England. I am grateful also for the funding support of UKRI, and the guidance of **Diane Beddoes, Sciencewise** and **Dr Philippa Lang**, UKRI. **Professor Peter Jackson**, Chair, and the Oversight Group provided support and challenge to the public dialogues.

Many politicians gave their time to help me understand the issues from all perspectives. I fear that I am in an unfashionable minority in being impressed by the diligence of politicians from all sides of the house. I believe the vast majority of MPs do this increasingly unpleasant work out of a strong sense of duty. **Sharon Hodgson** – a trenchant champion of school food – has been incredibly helpful, as ever. Also: **Michael Gove, Ed Balls, Emma Lewell-Buck, Sue Hayman** and **Caroline Lucas**. My PA, **Tracey Bade**, has the rare gift of keeping her cool while handling the logistics of 1,001 meetings. I am so grateful for her tolerance, and her ability to rub everyone up the right way.

I am, as always, awash with admiration for **John Vincent** – my business partner, CEO of Leon and co-author of The School Food Plan. The hospitality industry is experiencing a perfect storm of destruction, completely out of the blue. Luckily, John has strong sea legs. As well as steering the ship we built with great nimbleness and courage, he always finds time to help me talk through the knotty problems in the food system.

Finally – my wife, the writer **Jemima Lewis**, has spent hundreds of hours, unpaid, editing this report. This wasn't simply a matter of correcting my grammar. Her insistence on clarity exposed weaknesses in my arguments, and forced me to think, and research, more deeply. I owe almost every deft phrase to her hand.



**“Our food system has just endured its biggest stress test since the Second World War. As COVID-19 swept through the UK, the entire machinery of supply and distribution had to be recalibrated, fast.”**

# Executive Summary

**W**HAT you are reading is Part One of a two-part National Food Strategy. It does not present a comprehensive plan for transforming the food system: that will follow in Part Two.

Instead, it contains urgent recommendations to support this country through the turbulence caused by the COVID-19 pandemic, and to prepare for the end of the EU exit transition period on 31 December 2020.

Our food system has just endured its biggest stress test since the Second World War. As COVID-19 swept through the UK, the entire machinery of supply and distribution had to be recalibrated, fast. The fact that, after a wobbly start, there were no serious food shortages is a testament to the flexibility and entrepreneurialism of so many food businesses, and the resilience of the system as a whole.

There have, however, been heavy losses. Workers in the food production and retail sectors have suffered some of the highest death rates from COVID-19. Those in the hospitality sector have taken the biggest economic hit, with a higher proportion of furloughed staff (and expected redundancies) than any other profession. Across the wider population, the wave of unemployment now rushing towards us is likely to create a sharp rise in food insecurity and outright hunger.

At the same time, the virus has shown with terrible clarity the damage being done to our health by the modern food system. Diet-related illness is one of the top three risk factors for dying of COVID-19. This has given a new urgency to the slow-motion disaster of the British diet. Even before the pandemic, poor diet was responsible for one in seven deaths in the UK (90,000 a year).<sup>1</sup> That is vastly more than the death toll from traffic accidents (1,780 a year)<sup>2</sup> and almost as fatal as smoking (95,000)<sup>3</sup>. This is a medical emergency we can no longer afford to ignore.



## My recommendations cover two main themes:

- Making sure a generation of **our most disadvantaged children** do not get left behind. Eating well in childhood is the very foundation stone of equality of opportunity. It is essential for both physical and mental growth. A poorly nourished child will struggle to concentrate at school.<sup>5</sup> An obese child is extremely likely to become an obese adult,<sup>6</sup> with the lifetime of health problems that entails. It is a peculiarity of the modern food system that the poorest sectors of society are more likely to suffer from both hunger and obesity.<sup>7</sup> In the post-lockdown recession, many more families will struggle to feed themselves adequately. A Government that is serious about "levelling up" must ensure that all children get the nutrition they need.
- Grasping the once-in-a-lifetime opportunity to decide what kind of trading nation we want to be. The essence of **sovereignty** is freedom – including the freedom to uphold our own values and principles within the global marketplace. In negotiating our new trade deals, the Government must protect the high environmental and animal welfare **standards** of which our country is justly proud. It should also have the confidence to subject any prospective deals to independent **scrutiny**: a standard process in mature trading nations such as the United States, Australia, and Canada. If we put the right mechanisms in place, we can ensure high food standards, protect the environment and be a champion of free trade.

I was intending to include recommendations on limiting the advertising and promotion of unhealthy foods. But just as I was about to press "send", the Government unilaterally proposed the same policies as part of its New Obesity Strategy. I am delighted to have been pipped to the post. And because these policies are liable to cause protests in some quarters, I have kept the supporting arguments for them in Chapter 3.

Furthermore, I welcome the Government's invitation to consider ways to improve public sector procurement of food and drink. This is long overdue. In Part Two, I will include a comprehensive recommendation on what the government can do to ensure that the food the state pays for directly – for example in schools, hospitals, prisons, and in government offices – is both healthy and sustainable.

In Part Two of the National Food Strategy, to be published in 2021, I will examine the food system from root to branch, analysing in detail the economics and power dynamics that shape it, the benefits it brings

and the harms it does. There will be much, much more on health and on the interwoven issues of climate change, biodiversity, pollution, antimicrobial resistance, zoonotic diseases and sustainable use of resources.

The Government has committed to publishing a White Paper six months after I publish Part Two, and has asked me to review progress six months after that.

But the crisis we face right now requires immediate action.

These recommendations are urgent, specific and carefully targeted. In this period of acute crisis they could save many thousands from hunger, illness and even death. They will also help shape a more sustainable future for this country through enlightened trade deals.

## Collaboration with Scotland, Wales and Northern Ireland

**M**OST of the governance of food and health falls under the aegis of the devolved administrations. Scotland, Wales and Northern Ireland each have their own food strategies (see Appendix D). My remit is predominantly to create a strategy for England.

However, the food systems of the UK are so tightly interwoven as to be indistinguishable in many ways. Almost 600 farms straddle the borders of Scotland and Wales to take one small example<sup>†</sup>.

Collectively, we face many identical challenges. In addition, trade policy is not devolved, so the trade recommendations I have made would – if adopted – apply to every member of the union.

Throughout this process I have shared my thinking with the teams working on food strategy in the devolved administrations. I am thankful for their time and have learned a great deal from the dialogue. I look forward to much more of it as I move on to Part Two.



# Summary of Recommendations



## Our Most Disadvantaged Children

One of the miserable legacies of COVID-19 is likely to be a dramatic increase in unemployment and poverty, and therefore hunger. The effects of hunger on young bodies (and minds) are serious and long-lasting,<sup>8</sup> and exacerbate social inequalities. The Government must move quickly to shore up the diets of the most deprived children using existing, proven mechanisms.

1. Expand eligibility for the Free School Meal scheme to include every child (up to the age of 16) from a household where the parent or guardian is in receipt of Universal Credit (or equivalent benefits).

Under this recommendation, we estimate an additional 1.5 million, 7-16 year olds, would benefit from free school meals, taking the total number of children to 2.6 million. This is estimated to cost an additional £670 million a year.

2. Extend the Holiday Activity and Food Programme to all areas in England, so that summer holiday support is available to all children in receipt of Free School Meals.

In 2019, this programme reached 50,000 children. Under this recommendation, we estimate an additional 1.1 million children will participate in the programme. This is estimated to cost an additional £200 million a year.

3. Increase the value of Healthy Start vouchers to £4.25 per week, and expand the scheme to every pregnant woman and to all households with

children under 4 where a parent or guardian is in receipt of Universal Credit or equivalent benefits.

Under this recommendation, we estimate an additional 290,000 pregnant women and children under the age of 4 will benefit, taking the total number of beneficiaries to 540,000. This is estimated to cost an additional £110 million a year, with a supporting communications campaign costing £5 million.

I am delighted that in the last week the CEOs of the Co-op and Waitrose have agreed, in principle, to supplement these vouchers with additional free fruit and vegetables. Most of the other major supermarkets and convenience stores (with support from the Association of Convenience Stores) are keen to follow suit and we are in discussions with them to explore mechanisms for delivery.

4. Extend the work of the Food to the Vulnerable Ministerial Task Force for a further 12 months up until July 2021. It should collect, assess and monitor data on the number of people suffering from food insecurity at any time, and agree cross-departmental actions, where necessary, to support those who cannot access or afford food.

In Appendix B we have also devised and evaluated a set of food guidelines for those school caterers who are supplying free school meal parcels over the summer. This will help them ensure they provide the nutrition that our children require.



### Sovereignty, Standards, Scrutiny

Britain's exit from the European Union means that, for the first time in nearly half a century, we can – and must – decide for ourselves how we want to trade with the rest of the world.

UK farmers and food producers have some of the highest environmental and animal welfare standards in the world. This is something to be proud of. There is justifiable concern about opening up our markets to cheaper, low-standard imports which would undercut our own producers and make a nonsense of our progressive farming policies.

But negotiating trade deals is hard. Any blanket legislation requiring other countries to meet our own food guidelines would make it nigh-on impossible. We already import many food products from the EU that don't meet UK standards. A blanket ban would make it impossible to continue trading even with this most closely aligned of partners.

There is a subtler mechanism we could use to put in place specific trading standards<sup>†</sup>, without requiring a universal ban.

**5.** The Government should only agree to cut tariffs in new trade deals on products which meet our core standards.<sup>††</sup> Verification programmes –along the lines of those currently operated by the US Department of Agriculture to enable American farmers to sell non-hormone-treated beef to the EU – should be established, so that producers wishing to sell into the UK market can, and must, prove they meet these minimum standards. At a minimum, these certification schemes should cover animal welfare concerns and environmental and climate concerns where the impact of particular goods are severe (for example, beef reared on land recently cleared of rainforest). The core standards should be defined by the newly formed Trade and Agriculture Commission.

**6.** The Government should adopt a statutory responsibility to commission and publish an independent report on any proposed trade agreements. The Government should decide whether this impact assessment function requires the establishment of a new body – similar to those which exist in many mature trading nations, including Australia, Canada and the USA – or whether it could be performed by an existing body or by independent consultants (as is the case in the EU).

Scrutinised decisions are likely to be better decisions. The scope of the impact report should include: economic productivity; food safety and public health; the environment and climate change; society and labour; human rights; and animal welfare. The report would be presented alongside a government response when any final trade treaty is laid before parliament. It is important that government decisions – especially those with such profound consequences as new trade deals – should be properly scrutinised.

**7.** The Government should adopt a statutory duty to give Parliament the time and opportunity to properly scrutinise any new trade deal. It must allow time for relevant select committees to produce reports on any final deal, and allow a debate in the House of Commons.



# What We Have Done

**T**HE team working on this strategy has followed two key principles: that it should be built on the strongest possible evidence, and that it should be collaborative and open. To that end, our research has included:

- Holding more than 180 meetings with experts, food representative groups and organisations seeking to improve the food system.
- Discussing what citizens want from our food system with five demographically-representative groups of roughly 40 people from each of the North East (in Grimsby), the North West (in Kendal), the South West (in Bristol), the East (in Norwich) and the South East (in Lewisham).
- Meeting representatives from 42 Government departments, committees, and public bodies worldwide, including from Japan, New Zealand and the Netherlands.
- Reading research on the food system from around the world (see Appendix D for a summary list).
- Over thirty visits to farms, ports, abattoirs, food factories, retailers, and food charities.
- Attending over 40 conferences or round tables organised by businesses, trade bodies, or academia.
- Consulting academics from 25 universities and research institutions.
- Conducting a Call For Evidence (19 August – 25 Oct, 2019). We asked to hear from anyone with good ideas to improve the food system. We received 1,600 responses from producers, processors, retailers, consumers, academics, policy specialists, inventors, farm labourers, factory workers, health care practitioners, and interested citizens. We will publish the results in Part Two.
- Conducting our own detailed research and quantitative analysis. We will publish a full compendium with Part Two. The work included:
  - Analysing typical eating patterns for ~1750 people across England to identify groups with similar eating behaviours and health outcomes.
  - Reading research and conducting dozens of interviews with academics and practitioners, to understand what works well in the UK and internationally.
  - Conducting detailed research and new quantitative and qualitative analysis on:
    - The economics of the food system and where money is made
    - Economic externalities of the food system on health and the environment
    - Eating behaviours in the UK vs. other countries around the world
    - The future scale of the obesity challenge.

<sup>†</sup> See Chapter 5: 1846 and All That – National Food Security and Trade

<sup>††</sup> While this would not amount to an outright ban – which could be challenged in the WTO – the UK's tariffs on imports of animal products without a free trade agreement are sufficiently high that very little noncompliant product would be imported.





## **Chapter 1**

The National Food Strategy: Part One – July 2020

# **Purpose**

The COVID-19 pandemic has put the global food system under severe strain, at a time when the UK was already going through major constitutional change. The purpose of this interim report is to do two things.

First, to identify where the worst cracks have appeared during the pandemic and recommend some immediate Government actions to help those most affected.

Second, to prepare for the end of the EU Exit transition period on 31st December. We will consider how to maintain the UK's high food standards, while also becoming a champion of free trade.

Much more will need to be done, beyond what is set out here, to create a food system that restores our health and our environment. These issues will be addressed comprehensively in Part Two of the National Food Strategy, to be published in 2021.

**B**EFORE the pandemic turned everyone's lives upside down, I was working on a National Food Strategy. The aim of this independent review, commissioned by the Government, was – and still is – to rethink how the whole food system should work, from farm to fork. (See Terms of Reference in Appendix C). I was due to publish an interim report in April 2020, setting out a diagnosis of the system – what good it produces, and what harms and why – but no recommendations of action. They were to be left for the final report.

Then COVID-19 hit the UK, and put our food system through its biggest stress test since the Second World War.

Supermarket shelves were stripped bare by people stockpiling as the virus began to sweep through the country.<sup>†</sup> Existing supply lines were already struggling to keep up when the Government exhorted the nation to "stay at home". This led, overnight, to the shutdown of the entire "out of home" food sector – restaurants, cafes, takeaways, and pubs – which had previously supplied 20-25% of the UK's calories.<sup>††</sup> Only a few takeaways remained open.


The whole supply chain had to realign itself, fast. Defra set up a group called the Food Resilience Industry Forum, whose job was to ensure that the nation got

fed. Every morning I sat in on the 8.15 conference call between civil servants and leaders in the food system: wholesalers, logistics companies, supermarket chains, farmers and food producers. You could almost hear the gears crunching as the machinery of supply and distribution was forced into a new mode of operation.

Food from the wholesale supply chain, which should have gone to restaurants, was donated in huge quantities to local authorities and charities, rather than see it rot.<sup>†††</sup> The UK's largest wholesalers worked with Government to deliver food to the shielded,<sup>9</sup> while others scrambled to offer their services to consumers. Flour factories that were used to churning out huge sacks of flour for wholesale now had to work out how to sell to individual consumers instead: a seemingly simple switch that actually meant reconfiguring factory lines, finding packaging suppliers capable of producing thousands of smaller bags at speed and getting the new product into the shops.<sup>10</sup> The fact that this logistical log-jam coincided with a boom in locked-down home baking explains why flour became one of the more conspicuous missing items on supermarket shelves.

The strain on the system was compounded by other worries: that the short straits between Calais and Dover (across which a quarter of our imported food is transported by ferry and tunnel) would be closed





by the French government; that social distancing rules would mean long-distance lorry drivers working alone instead of in pairs, so they would have to stop en route to rest instead of taking turns to drive; or that so many workers would be off sick that food processing factories might be forced to close in large numbers.<sup>†</sup>

At one point there was a sudden spike in the price of lemons coming into the UK. A rumour spread that drivers were being held at the border between Spain and France and told they would have to go into quarantine for a week. If true, this could have caused much bigger problems. 60% of our fruit and vegetables come from continental Europe in March (when the UK harvests are still a long way off).<sup>††</sup> But there had been no threat of quarantine from the French or Spanish governments, and GPS trackers on the vehicles of the major hauliers showed only about one hour's delay at the Spanish border.<sup>†††</sup> So what had happened to the lemons?

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<sup>†</sup> The peak demand spike was ~40% above normal, in the week immediately before lockdown.

<sup>††</sup> 20% if you include only food categories where it can be reasonably assumed that consumption is from the out-of-home (OOH) sector; 25% if you include food categories that are likely to include items purchased out of home (from the OOH or retail sectors) and items brought from home. Source: National Diet and Nutrient Survey Years 1-9, 2008/09 – 2016/17.

<sup>†††</sup> FareShare has received 1092 tonnes of food in donations so far in 2020. This is a 237% increase in food donated compared to the total for 2019 (324 tonnes). In April alone, 494 tonnes of food, equivalent to 1,176,214 meals was donated from the Food Service sector. Source: FareShare.

<sup>††††</sup> Poland and Croatia did shut their borders for short periods.

It turned out that manufacturers of hand-sanitizers had bought up huge quantities to scent their products. There are so many moving parts in our food system, you can never be absolutely sure where the next threat will come from.

The team that had been working on the National Food Strategy was redeployed to work on three urgent issues: ensuring mainstream food supplies; getting food to the clinically shielded and other vulnerable groups; and getting help to those people whose finances would be so severely affected by the lockdown that they might struggle to feed themselves.

The team has recently regrouped; and, in the light of what we have seen and learnt, I have decided to change the nature of this report.

In many ways the food system has proved extraordinarily resilient during this crisis. In difficult circumstances, it has continued to bestow on us a huge variety of reasonably-priced food that would have been unimaginable to previous generations.

But the pandemic has also brought about structural and behavioural changes that may last a long time. Many businesses will not survive the economic fallout. The hospitality industry has been all but obliterated – putting enormous pressure on the wholesalers, producers and farmers who supplied it. The road to recovery will be gruelling.

Many workers in the food system will lose their jobs, joining a great wave of the recently unemployed from other sectors. Some will face a daily struggle to feed their own families – something that would have been inconceivable to them at the start of the year.

The Government is right to focus its efforts on economic recovery. If we cannot create the jobs people need, everything else falls apart. But the economy we rebuild – the food system we rebuild – must reflect the lessons we have learned.

This crisis has created what educationalists call "a teachable moment": an unplanned window of opportunity when it suddenly becomes easier to learn

something. COVID-19 has brought into painful focus some of the flaws in our food system; not least its effect on our physical health.

The pandemic also happens to have coincided with urgent trade negotiations as the UK prepares for the end of the EU Exit transition period. The deals we make now will shape the food system of the future, affecting everything from the livelihoods of our farmers to animal welfare and climate change. The issue of how to strike trade deals without lowering food standards needs to be addressed now, before it is too late.

What you are reading, therefore, is not a diagnostic interim report. Instead, I have divided the National Food Strategy into two sections. Part One – this part – deals with the most urgent questions raised by both COVID-19 and EU Exit, and contains recommendations as well as analysis.

These recommendations tend towards the pragmatic and specific, rather than the grand and sweeping. They fall largely within the scope of Government and often use existing schemes and mechanisms to get things done. When time is of the essence – as it is for all the issues addressed here – it makes sense to pull the levers that already exist, and those that are known to work.

There is a great deal I haven't covered here. Part One does not provide a full diagnosis of the food system. It doesn't present a comprehensive vision for the future of farming or consider what a UK land strategy might look like. There is nothing on the carbon footprint of meat production or the role ruminants might play in restoring our soils. It does not address how different Government departments intervene in the food system, or what structural changes are required to make these interventions more cohesive. I do not discuss here the different ways of defining "productivity", or consider in depth the central tension of the food system: how to resolve the link between the cost of food and the harm it does to our health and to our environment.



**What you are reading, therefore, is not a diagnostic interim report. Instead, I have divided the National Food Strategy into two sections. Part One – this part – deals with the most urgent questions raised by both COVID-19 and EU Exit, and contains recommendations as well as analysis.**

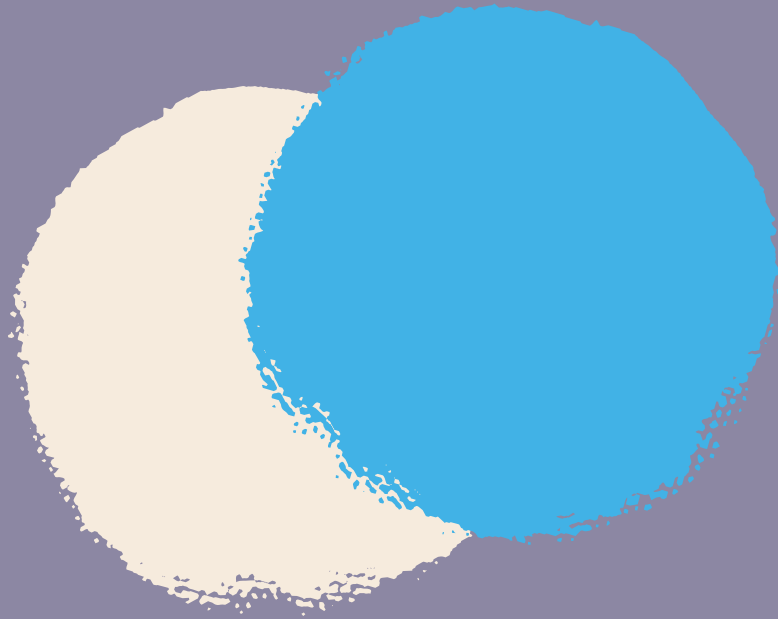


I do not examine whether debates on the edge of nutritional science – about ultra-processed foods, for example, or the microbiome – are fads or the way of the future. There is much more to say about diet-related disease in general, and about the role of science, research, innovation, and data across the whole system.

All these topics will be covered in detail in Part Two, to be published in 2021.

There is a lot of work to do if we are to rebuild a food system that delivers safe, healthy, affordable food to everyone; that is a thriving contributor to our urban and rural economies; that restores and enhances the natural environment for the next generation; that is built upon a resilient, sustainable and humane agriculture sector; and that is robust in the face of future crises.

**This work must start now.**



## **Chapter 2**

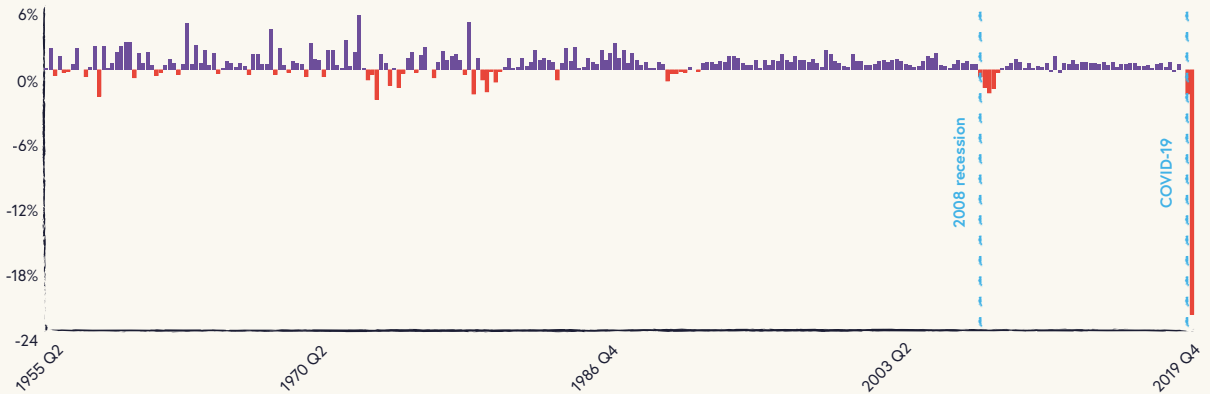
The National Food Strategy: Part One – July 2020

# **System Shock**

**T**HIS chart shows what happened to the UK economy when lockdown was announced, as measured by GDP growth. Within the food system, some sectors were much better able than others to adapt to this

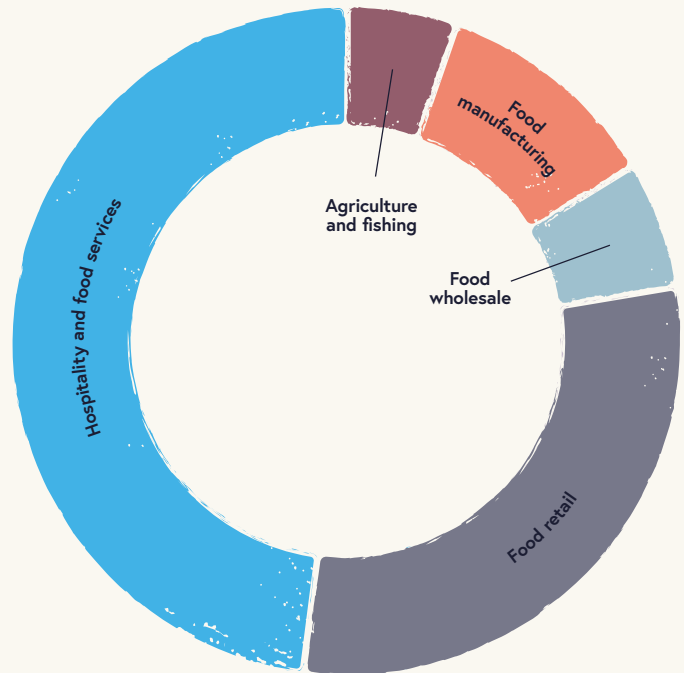
economic thunderbolt. Since then, the gap between the winners and losers in the food sector has only widened.

Figure 2.1  
**GDP has fallen ten times faster than in the 2008 recession<sup>13</sup>**



At the start of the year, one eighth of the UK workforce – nearly four million people – were employed in the food industry. Three-quarters of these worked in hospitality and food retail. When the lockdown was implemented, long-established patterns of public food consumption changed overnight.

Figure 2.2  
**Nearly half of food sector workers were in hospitality<sup>14</sup>**

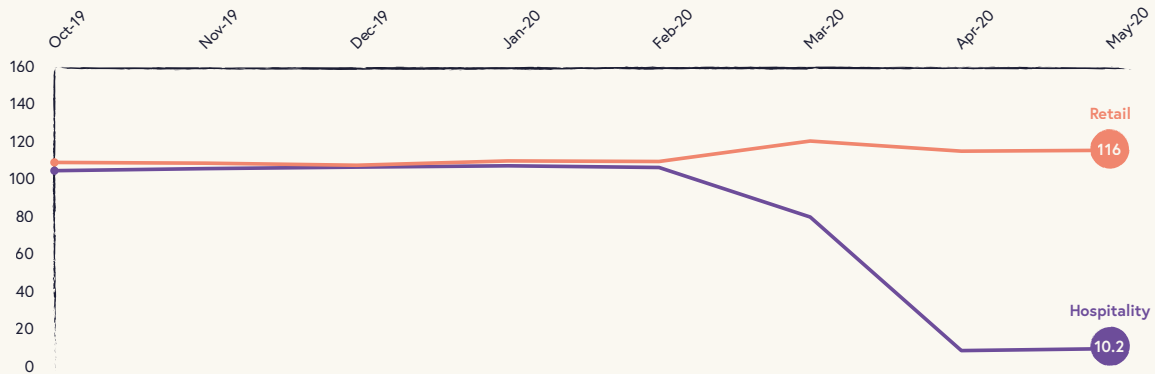


2018 data. GB employees only.

Before lockdown, we consumed around a quarter of our calories out of the home, in restaurants, cafés, pubs and fast food joints. On March 23rd almost all these businesses shut, leaving the retail sector to pick

up the slack. Trillions of calories and billions of pounds suddenly switched from hospitality to food retail.<sup>15</sup> The grocery retail sector grew by 11% within a month, while the hospitality sector sank like a stone.<sup>16</sup>

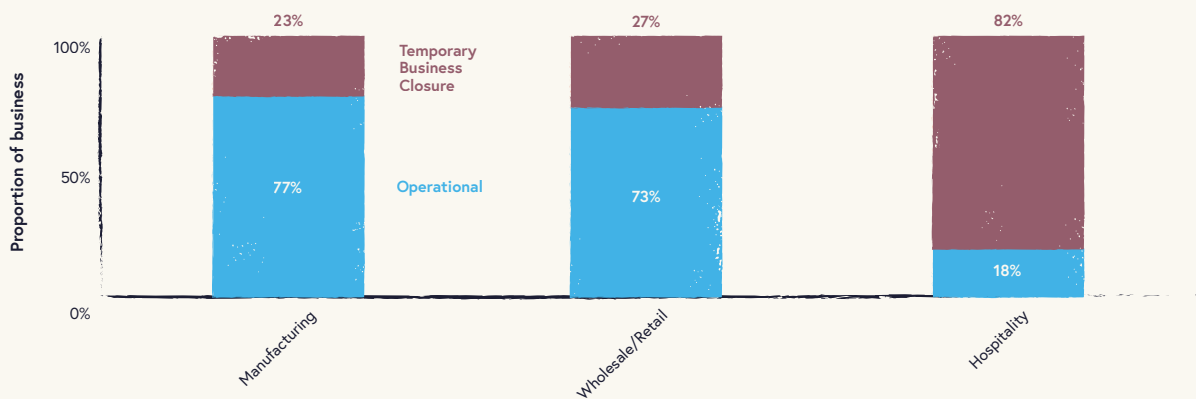
Figure 2.3  
Retail grew while hospitality sharply fell<sup>17</sup>



Retail Sales Index (retail) and Index of Service (hospitality). Index 2016 = 100.

82% of hospitality businesses were obliged to close their doors. Those in food production and retail remained largely operational.

Figure 2.4  
Lockdown affected hospitality disproportionately<sup>18</sup>

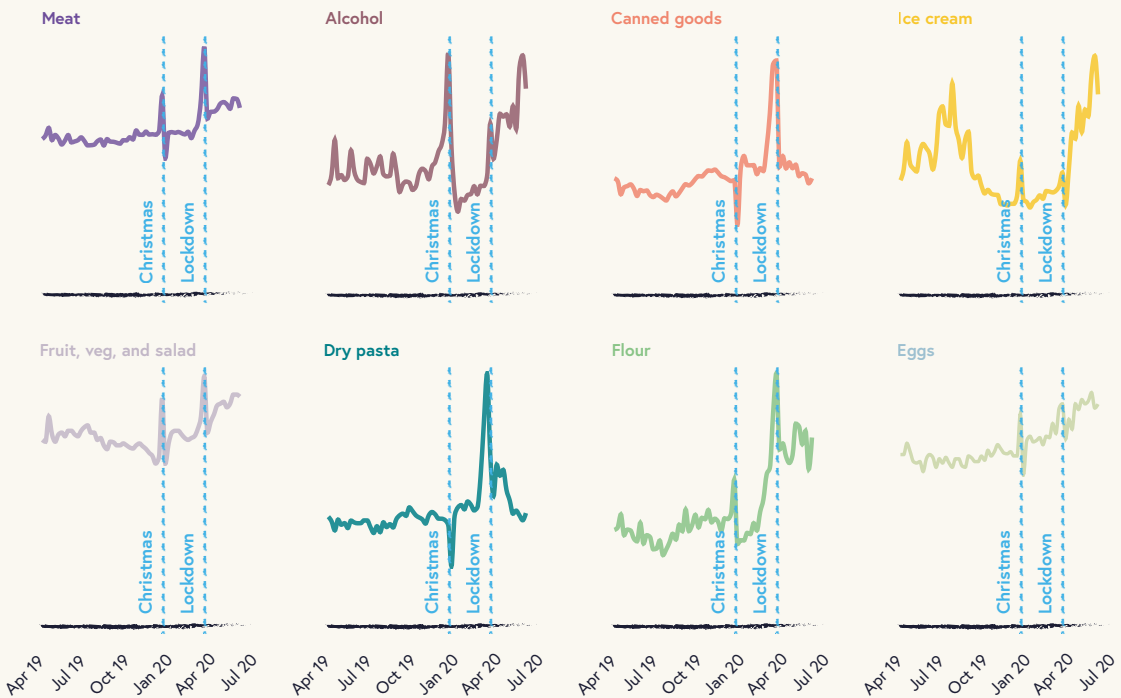


Business impacts data not available for agricultural businesses.



Demand for groceries began to rise even before lockdown, as people stockpiled in preparation. When the "out of home" sector was closed down, this caused a bigger spike, comparable to (and for some products, far exceeding) the Christmas rush for which supermarkets spend all year preparing. Surpluses and shortages appeared in some areas, as the system was forced to reorganise on a massive scale.<sup>19</sup> Since then sales of alcohol and of fresh fruit and vegetables have continued to rise, while sales of meat and canned goods have remained flat. This may suggest that on average people are cooking and eating more healthily (albeit less soberly) at home.

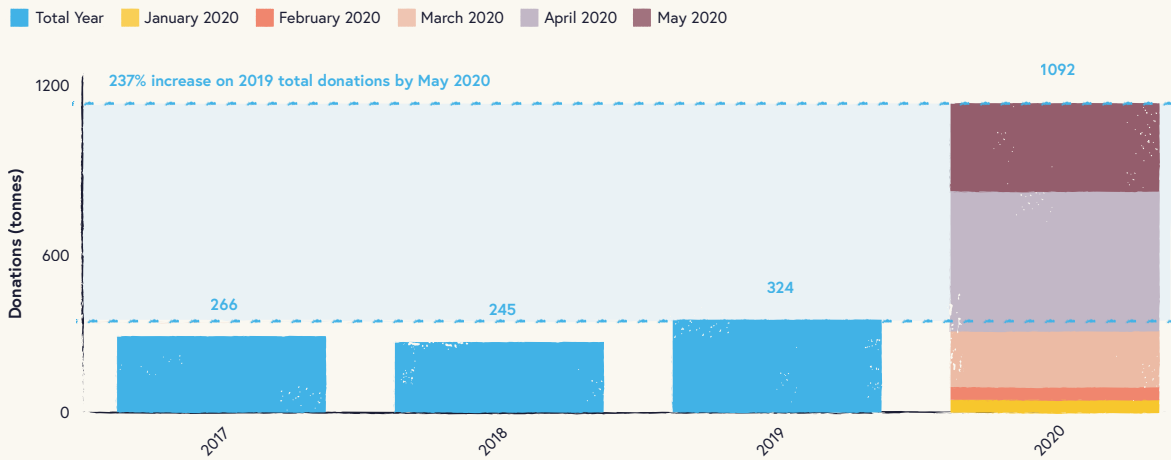
Figure 2.5  
Stockpiling created unprecedented demand for some foods<sup>20</sup>



Sales data by million kilograms, litres, or packs. Data covers week ending 6 January 2019 to 7 June 2020.

Restaurants, cafes, pubs and wholesalers donated food to charities on a huge scale, rather than see it go to waste.

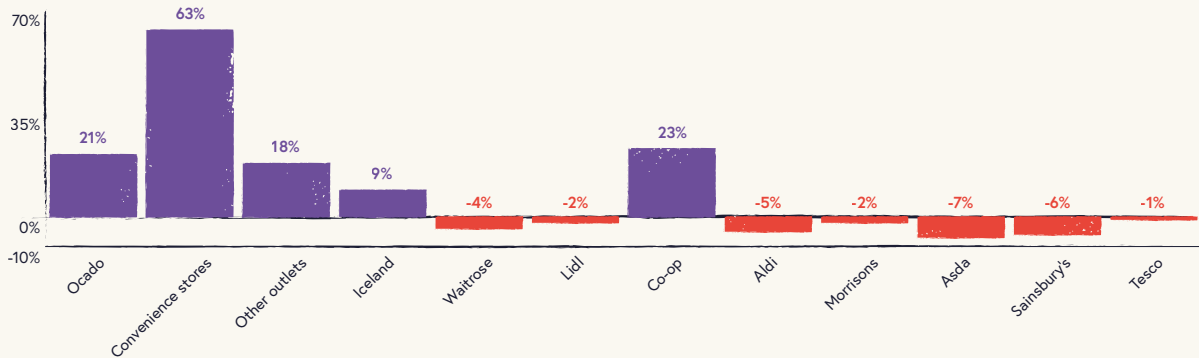
Figure 2.6  
**Food donations from hospitality more than tripled<sup>21</sup>**



In lockdown people changed their shopping habits. Veg-boxes, delivery schemes, corner shops and local food retailers all increased their share of the market, as did those supermarkets that already had well-

developed delivery systems and frozen food options. But it would be wrong to interpret this as a victory for local businesses.

Figure 2.7  
**Relative changes to market share were large<sup>22</sup>**

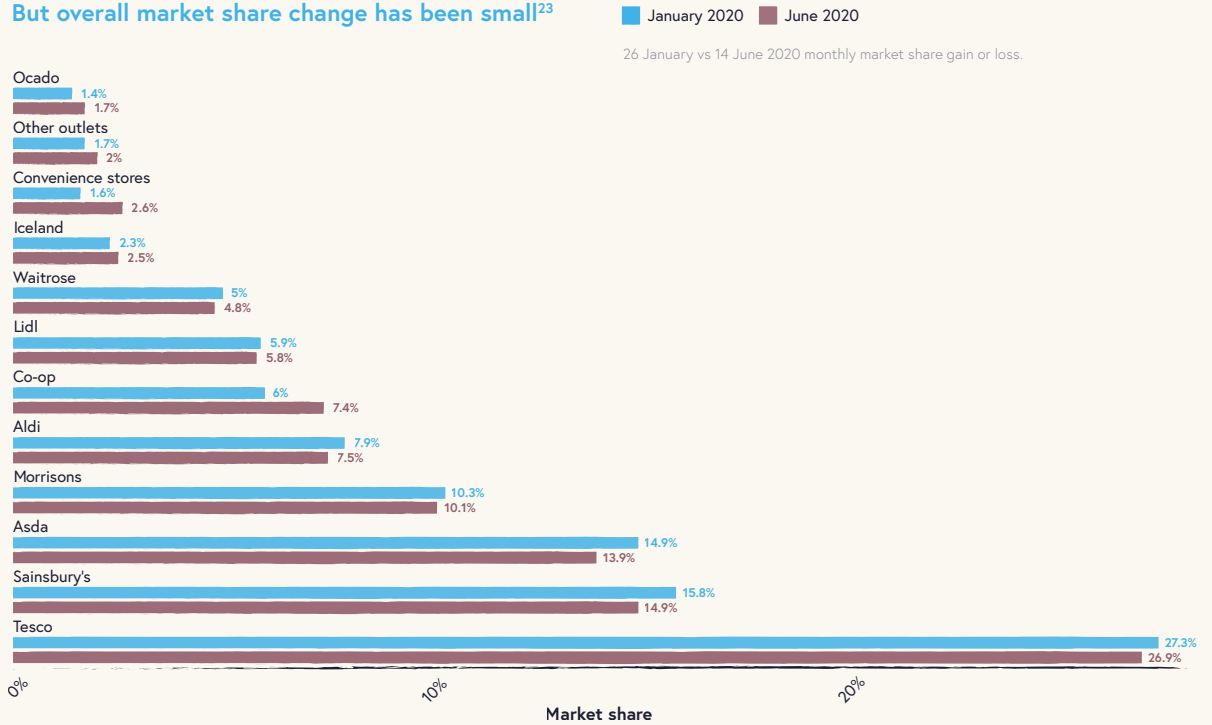


<sup>26</sup> January vs 14 June 2020 monthly market share gain or loss.

The closure of the hospitality industry – one of the most "local" sectors there is – created a bigger market for food retailers, and most of this was captured by the big supermarkets. In January 2020,

97% of the market was served by ten retailers. In June 2020, they held 96% of a much larger market. Food purchased from over 100,000 small restaurants is now being purchased from ten large grocers.

Figure 2.8  
But overall market share change has been small<sup>23</sup>



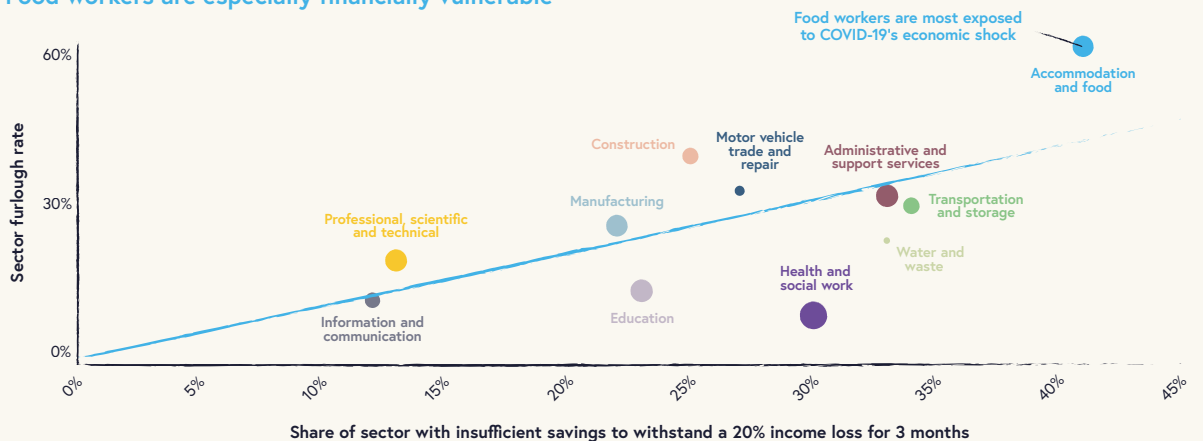
■ January 2020 ■ June 2020

26 January vs 14 June 2020 monthly market share gain or loss.

Nearly half of food sector employees have too little in savings to be able to withstand a 20% loss of income for three months – the effect of going onto furlough.

Since lockdown began, nearly two thirds of these employees have been furloughed.

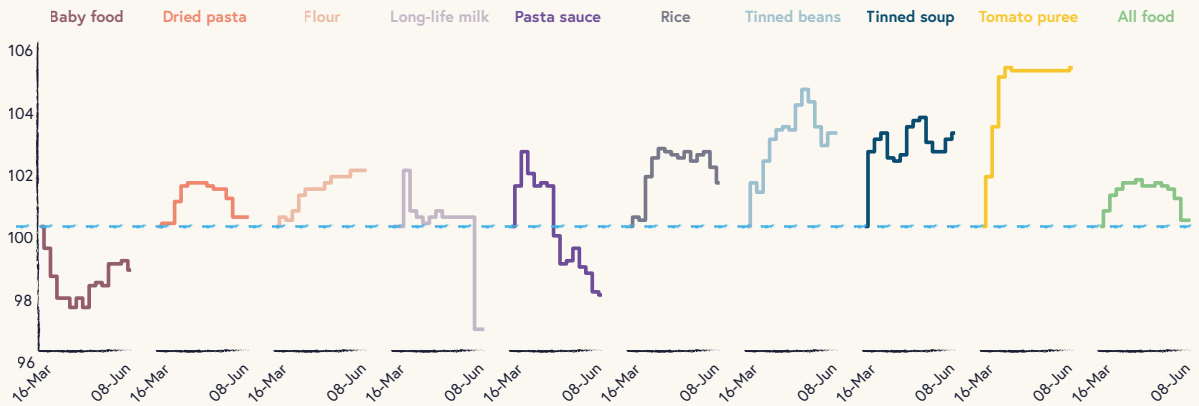
Figure 2.9  
Food workers are especially financially vulnerable<sup>24</sup>



Bubble size is proportional to number of employees.

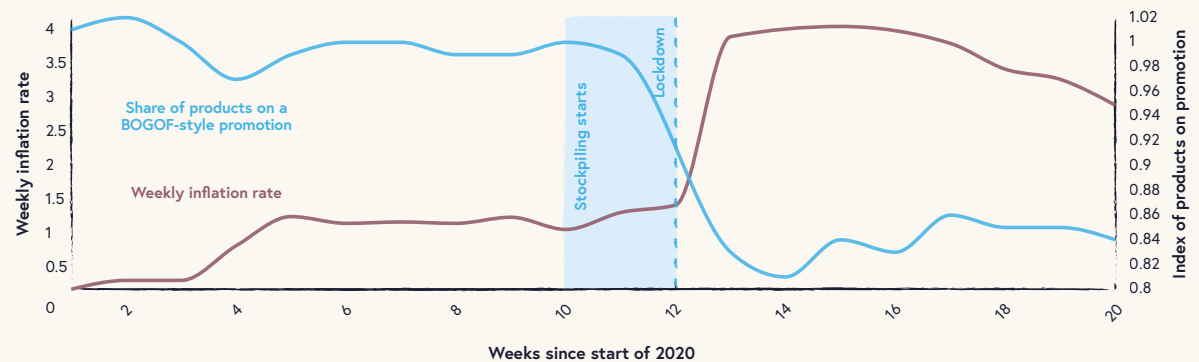
Despite the huge demand for groceries during lockdown, there was very little price inflation, and even deflation in some categories...

Figure 2.10  
Individual prices rose but then mostly fell<sup>25</sup>



...but retailers, under pressure from stockpiling, cut back hard on promotional offers. As a result, the price of food rose 2.4% in April vs a monthly average of 0.17% in the preceding four years.

Figure 2.11  
Vanishing promotions pushed food bills up<sup>26</sup>

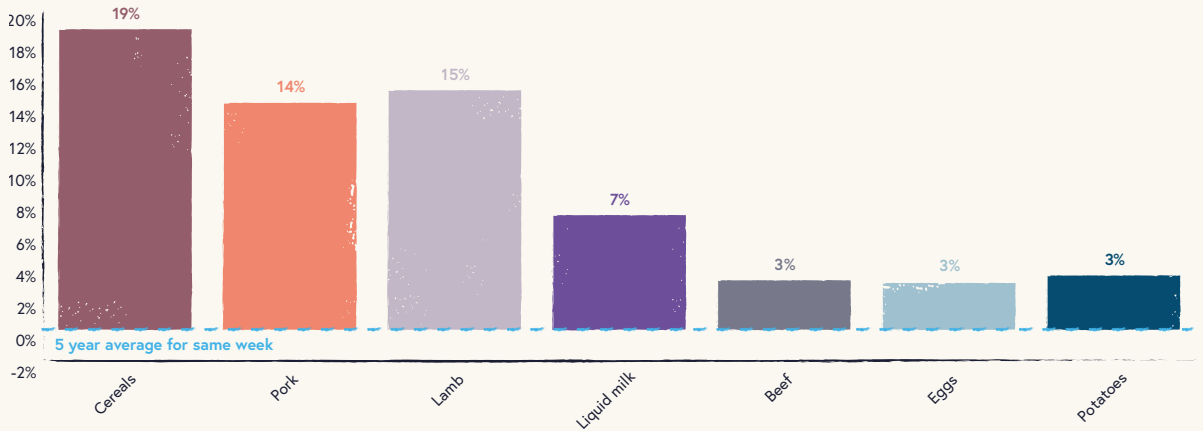


Over half of weekly inflation stemmed from reduced frequency of promotions.

Farmers who supplied directly to the hospitality industry suffered in lockdown, and there were short term drops in demand for some products (beef and potatoes, for example, because people were no

longer eating steak and chips in restaurants). But the prices of commodities, including cereals, beef, lamb, pork and potatoes, have now stabilised above their five-year average level.

Figure 2.12  
Agricultural commodity prices are up<sup>27</sup>

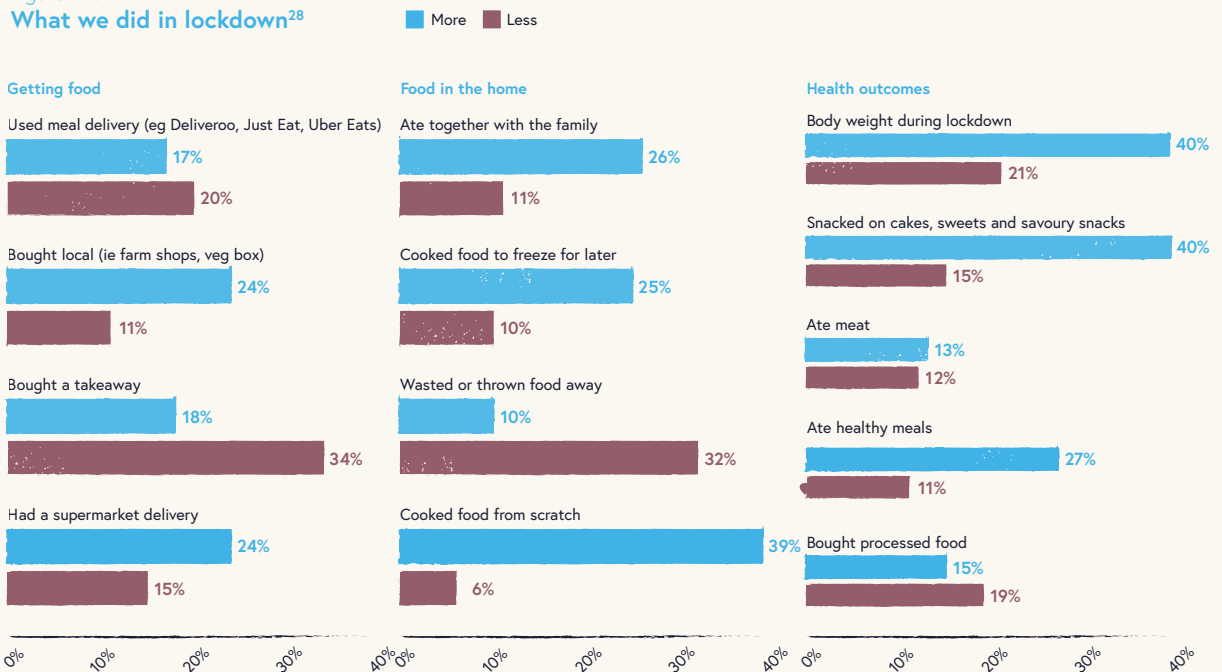


Prices for week 27, 2020 compared to their 5 year average for the same week.

As people adapted to lockdown, their food habits began to change. Unhealthy snacking rose hugely, and many people have gained weight. On the other hand,

food waste has dropped, cooking from scratch increased, and more people have eaten together than before.

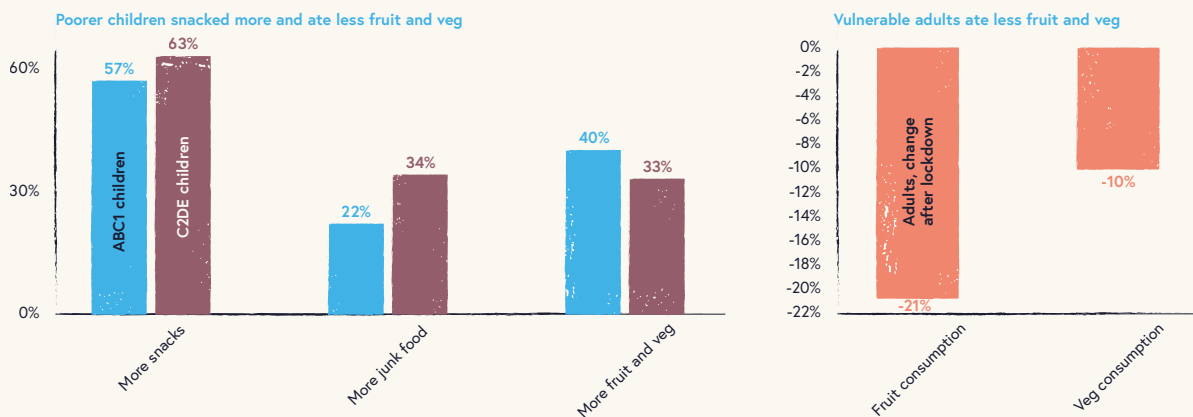
Figure 2.13  
What we did in lockdown<sup>28</sup>



All changes self-reported. Answers indicating no change not shown.

In lockdown, children – particularly from poorer backgrounds – reported that they ate more snacks and junk food. Similarly, daily diet survey data showed that vulnerable people – those with a COVID-19 health risk and the less affluent – ate nearly a whole portion less of fruit and vegetables per day in lockdown.

Figure 2.14  
**Disadvantaged people had worse diets in lockdown than their peers<sup>29</sup>**



Vulnerable adults defined as having a COVID-19 health risk, being obese, or living in low income/high deprivation circumstances. Percent change in fruit and veg consumption from before COVID-19. Post COVID-19 data for this group is from early April.

The data show that the retail sector of the food system adapted to the unprecedented shock of lockdown with remarkable flexibility, while retaining its essential shape, warts and all. This is largely a testament to the extraordinary efforts of people across the whole supply chain, from diplomats to lorry drivers. We can move fast when we must.

Just as the system adapted, so did the population. We have cooked more, wasted less, and spent more time eating together at the table. We should find ways to encourage these habits as lockdown lifts.



## Chapter 3

The National Food Strategy: Part One – July 2020

# Health: A Wake-Up Call

The fact that we went into the COVID-19 crisis with such high rates of obesity and diet-related disease has undoubtedly contributed to the UK's appalling death rate. These are among the worst risk factors for dying of the virus, demonstrating quite how damaging the modern Western diet is to the human body.

If we want to better withstand future shocks, we must address our dietary ill-health. But its causes are complex: the interplay of personality, genetics, culture and environment. Any solution will also have to consider carefully the delicate relationship between the individual and the state.

We welcome the Government's recently announced measures to kick-start this effort.





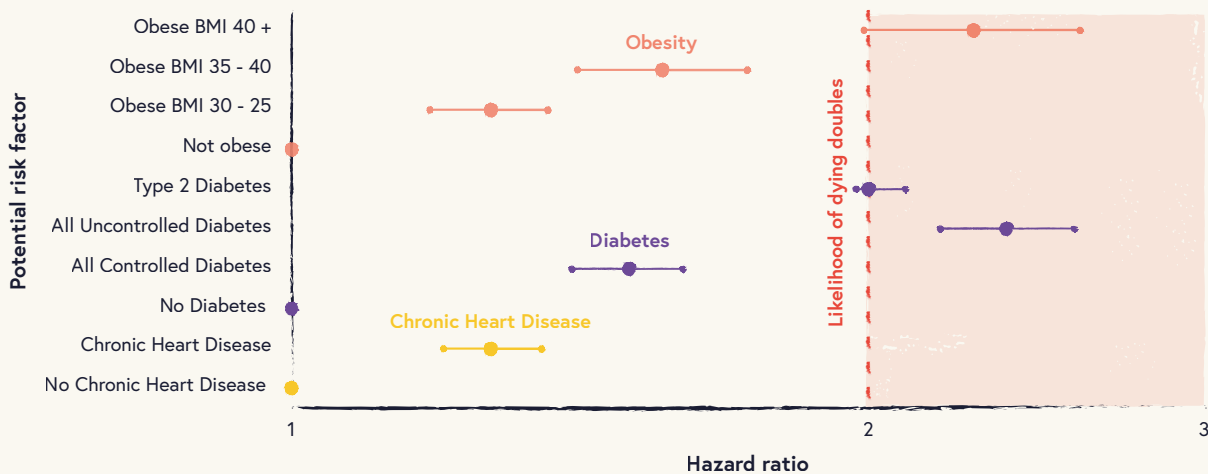
**C** **COVID-19** has not, after all, proved to be a "great leveller". On the contrary: it is a highly discriminatory virus, affecting black and Asian people more than white people, men more than women, the old more than the young and the poor more than the rich.<sup>30</sup> It preys, above all, on the physically frail.

The three biggest risk factors for dying of COVID-19 are, in descending order: being over 70; having had an organ donation, recent blood cancer or neurological

disease (other than dementia or stroke); and being severely obese or having uncontrolled diabetes. (See Figure 3.1)<sup>31</sup>

Obese people are 150% more likely to be admitted to intensive care with COVID-19, and severely obese people over 300% more likely.<sup>32</sup> People with type 2 diabetes (both controlled and uncontrolled) are 81% more likely to die from the virus.<sup>33</sup> In the age of COVID-19, a poor diet is almost as great a threat to life as cancer or old age.

Figure 3.1  
Diet-related disease sharply increases likelihood of death from COVID-19<sup>33 34</sup>



Type 2 diabetes adjusted for age, sex, deprivation, ethnicity and geographical region, all other risk factors fully adjusted. Type 2 diabetes hazard ratio attenuated to 1.81 when also adjusted for previous hospital admissions with coronary heart disease, cerebrovascular disease or heart failure. Range indicates upper and lower confidence levels.

It is extraordinary, really, that the dietary ill-health of this country hasn't been seen as a medical emergency until now. Even before COVID-19, an estimated 90,000 people died from diet-related disease every year in the UK (one in seven deaths), losing an estimated total of 1.3 million years of life.<sup>36</sup> That's an average of 14 years per person: years lost not just to them, but to their partners, parents, siblings, children and friends.

Poor diet isn't just killing us – it is also reducing our quality of life. The proportion of life spent in good health is falling. Since 1996, for example, the number of people diagnosed with diabetes in the UK has risen by 250%, from 1.4 million to 3.5 million (with another 500,000 people estimated to be undiagnosed).<sup>37</sup>

The World Health Organisation uses a measure called disability-adjusted life years, or DALYs, to quantify the burden of disease beyond early death. DALYs measure the total years lost to early death, ill-health, and disability – thus combining mortality and morbidity. To give a crude example: if you were to die of heart disease ten years before the average lifespan for your sex, and were also severely disabled by the condition for the last three years of your life, your DALYs would be shortened by thirteen.<sup>†38</sup>

In 2017, 300,000 years of good health were lost to diet-related illness or disability in the UK, with all the worry, work and logistical strain that such a situation entails for the sick person and their loved ones. Once premature deaths are factored in, the total DALYs lost to the population that year was 1.6 million.<sup>††30</sup>

There is also an economic cost to all this illness.

Obesity alone costs the NHS £6 billion a year (5% of its budget)<sup>31</sup> – and that's without factoring in the social care costs associated with many of the conditions that obesity can cause including Type 2 diabetes, heart disease, malnutrition and some cancers.

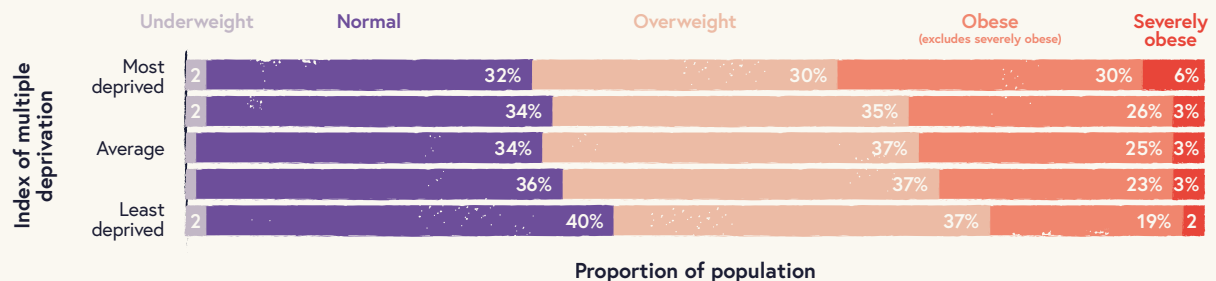
The broader cost to the economy is even more sobering. We can estimate a number by taking the DALYs and multiplying them by the average productivity of a British citizen in work. By this calculation, poor diets account for an astonishing £54 billion every year in lost earnings and profit. (Of this total, 82% is from lost years of life and 18% from years lived with disability.)<sup>†††</sup>

The suffering caused by the modern diet is felt most acutely by the poorest in society. Obesity is significantly more prevalent in the lowest income decile than in the highest (36% of the most deprived in society are obese, vs 21% of the least deprived)<sup>40</sup>. The statistics are even more skewed for children. By the age of 11, children from the poorest neighbourhoods are three times more likely to be obese than those from the richest ones<sup>41</sup>, and this gap is growing.<sup>42</sup>

But even the rich have a weight problem. As Figure 3.2 shows, this is a population-wide issue, with obesity rates above 20% across all parts of society.<sup>35</sup>

How did we get to the point where our food – our source of life-giving sustenance – is making so many of us sick? And why has it proved so difficult to do anything about it?

Figure 3.2  
Over 1/3 of the most deprived people in England are obese<sup>44</sup>



The English Indices of Multiple Deprivation are an official measure of relative deprivation in small areas in England. This graph splits the index into quintiles, from most to least deprived to show how deprivation is correlated to weight.

† In making the actual calculations, different conditions would usually be weighted for age and severity

†† Global Burden of Disease database, IHME, 2017; Note that DALYs are used here to estimate the economic impact of poor diets rather than the NHS costs directly attributable to diet

††† Costs have been assigned to DALYs on the basis of Gross Domestic Product per capita (methodology taken from the Food and Land Use Coalition (FOLU) report: Growing Better: Ten Critical Transitions to Transform Food and Land Use (2019)), to quantify the loss of life, quality of life and labour productivity from food-related illnesses in the UK; Global Burden of Disease database, IHME, 2017



## Daddy? Were you this chubby even when you were young?



### Why do we eat what we eat?

My 8-year-old daughter woke me up the other morning with a question. "Daddy?" she said, her inquisitive face looming over mine. "Were you this chubby even when you were young?" It was a bruising start to the day. And the answer, when I tried to locate it, proved elusive.

Throughout my life my weight has oscillated – sometimes gently, sometimes more violently – between the high end of what the NHS would define as normal and the low end of obese. I have tried to flatten out this roller coaster with exercise and healthy eating regimes. I have done marathons and aquathons. For a time, I used a fitness programme on my children's Wii Fit console. At the end of each workout I had to stand on an electronic plate to be weighed. My animated avatar would pump the air in celebration as confetti rained down on screen and a disembodied robot voice offered the faint praise: "Less obese!"

If you were to ask me why I struggle to maintain a "healthy" weight, I wouldn't honestly be able to tell you. I cook all my meals from scratch, eat many more than my five portions of fruit and veg a day and almost never have sweets, puddings or ready meals. But I'm greedy. I eat too fast. I drink wine. I'll snack on any passing food when I'm stressed. Maybe it's genetic: my grandfather had the same barrel shape as me. Or maybe I've damaged my metabolism with all this yo-yo asceticism.

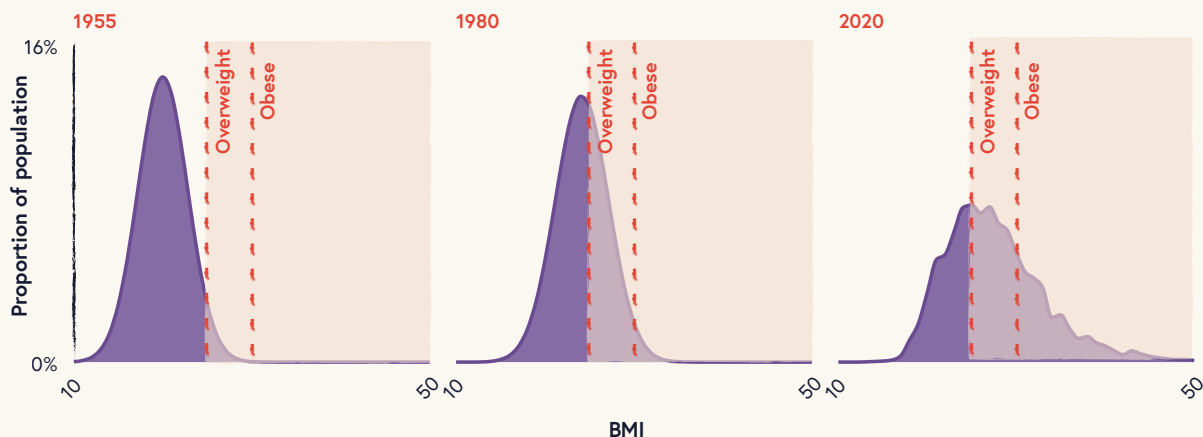
I'm not telling you this because there's something special about my predicament. Quite the opposite. If you talk to anyone in the UK whose BMI has at some point crossed the threshold into "obese", you will hear different explanations, but a similar perplexity.

The primary cause might be identifiable – a tendency to comfort eat in response to stress, perhaps, or a diet of junk food. But almost always there are many interconnecting factors that cause people to put on weight. Our lives are complex and so is the food environment we inhabit.

The average weight of the UK population has steadily increased since the Fifties (see Figure 3.3),<sup>45</sup> in sync with the growth of intensive farming, more widely available and cheaper food, the rise of the sedentary job and the proliferation of labour-saving devices. But some humans appear to be more susceptible than others to this new high-calorie, low-exercise world we inhabit. Understanding why is essential to planning any public health interventions.

Figure 3.3

The average weight of the UK population has steadily increased<sup>46</sup>



Data before 1992 are UK estimates, from 1992 onwards data is England specific. 1955 mean BMI interpolated from US historic BMI trends and UK BMI from 1977 onwards. Distribution before 1980 is directional using normal distributions around mean value and, therefore, is not an exact representation.

When researchers try to untangle the various factors that influence what people eat, they use the terms "individual", "social" and "material". (In layman's terms, nature, nurture and environment.) This is the ISM model and it is used extensively by the Government's Behavioural Insight Team (BIT), commonly known as the "nudge" unit.


"Society is a product of billions of individuals' actions," explains the Chief Executive of BIT, David Halpern, who sits on my Advisory Panel. "But those individuals are equally a product of their society."

Halpern defines the three main factors that shape our eating habits like this:

- **Individual:** "inner" psychological drivers of our behaviour, both conscious and unconscious. This includes our personal tastes and preferences, values and beliefs, but also ingrained habit, emotion, heuristics (mental shortcuts) and cognitive bias.
- **Social:** other people's influence on our behaviour, including cultural norms and narratives, peer influence and social identity.
- **Material:** the wider physical and economic context. This includes the physical environment, pricing, individual financial circumstances, mass media and advertising and technological factors – all of which shape our food environment.

These categories are not mutually exclusive. The way a product is marketed, for example, may affect all three. In the 1960s, the Milk Marketing Board decided to create an entirely new "traditional" meal. The "Ploughman's Lunch" – fashioned from a commonplace, but not well-defined, combination of cheese, bread, beer and pickle – was a branding exercise designed to sell more cheese.<sup>47</sup> Five thousand "Ploughman's Lunch Showcards" were distributed to pubs by the Board. It worked: the name stuck, and the Ploughman's Lunch became a fixed part of the material environment on menus of pubs in the UK. It is now a social norm, and for many – including me – an individual heuristic, as the thing we order in a pub without even looking at the menu.

So, all these factors interact all the time. But, to understand them properly, it is worth looking at each one in isolation and then seeing how they combine to affect the lives of citizens. We will take them in order.



1.6 million years of good health are lost to diet-related disease and death each year – not just to sufferers but to partners, parents, siblings, children, and friends.

## Individual

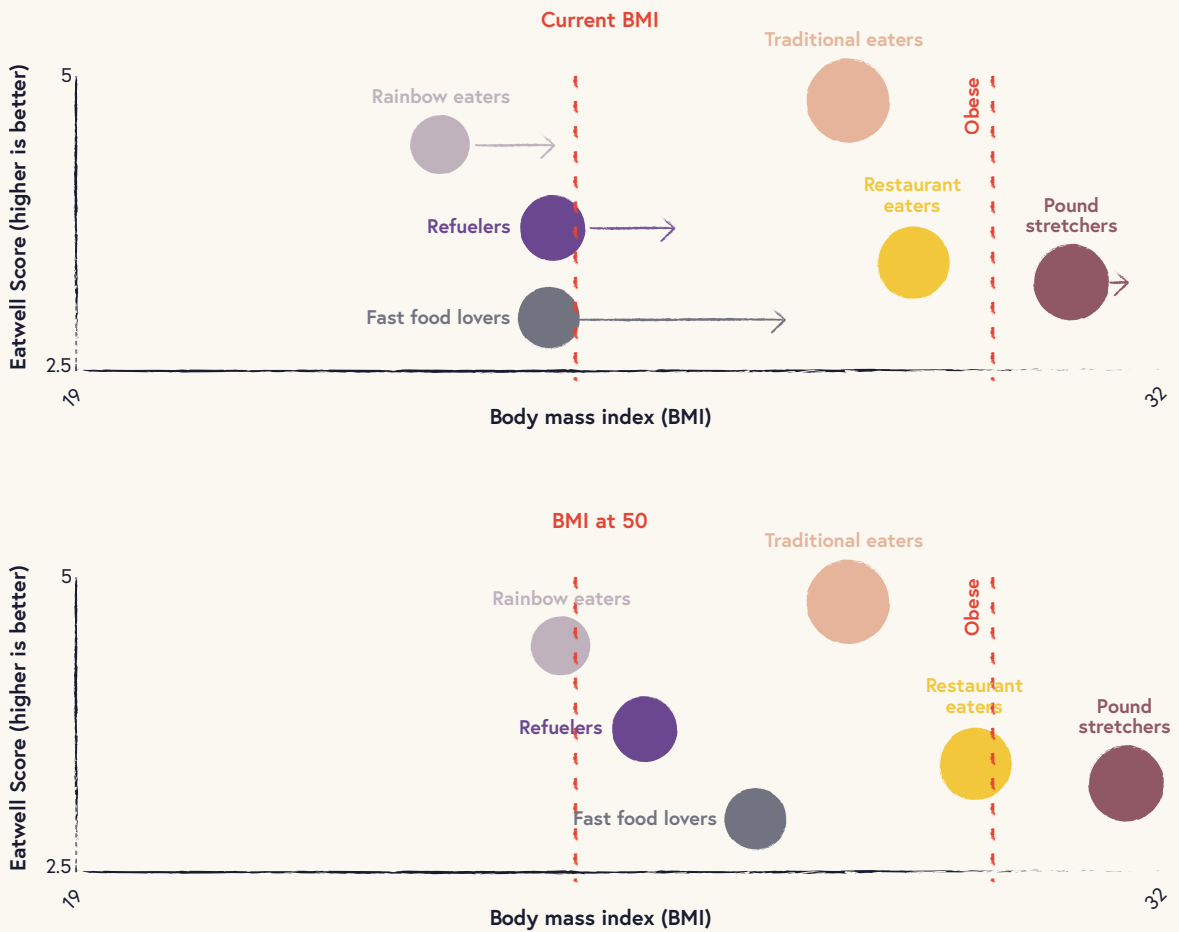
The behaviour of any individual is – as Churchill said of Russia – a riddle wrapped in a mystery inside an enigma. The quirks of upbringing, experience and DNA that shape a person's eating habits are largely beyond the scope of politicians and policymakers.

We tend, therefore, to talk in generalisations. At a dinner I attended recently to discuss the food system, a former Government minister declared confidently: "We don't have a national obesity crisis, we have an obesity crisis among poor people." This simply isn't true. As we saw above, while obesity levels are higher for the lowest income group, they are over 20% across all income levels<sup>48</sup>.

If we're going to generalise about the nation's eating habits – which to some extent we must – we should try to do so with the greatest possible accuracy. The National Food Strategy has analysed the data from dietary studies of 1,750 UK residents using a statistical technique known as latent class clustering.

We found clear patterns emerging, which enabled us to divide the adult population into six statistically distinct groups (see Figure 3.4 on following page). The members of each group share similar diets and attitudes to food and – unsurprisingly – have similar health outcomes. Understanding each group better should provide clues about the most effective ways to help different people improve their diet. In Part Two of the National Food Strategy, we will examine these groups in detail and consider how best to help each one eat well.

Figure 3.4  
Profiles of typical UK eaters<sup>49</sup>



## How we eat: profiles of typical UK eaters

**Rainbow eaters** – 25-44 year olds working with high levels of education. They are in work, but also have dependent children and often eat at the table at home. Their diets are varied with lots of fruit/veg and fish and low levels of sugar, but high in calories and fat.

**Refuelers** – Low income people who are either young adults or over 75, who often eat alone at home. Their diets are high in sugar and low in protein.

**Restaurant eaters** – High income, time poor, middle aged people who often eat out. Their diets are high in meat, salt and alcohol and low in fruit/veg and fish.

**Fast food lovers** – Young adults, in full time education, who often live at home and eat fast food at restaurants or while watching TV. Their diets are high in sugar, salt and fat and low in fruit, veg and protein.

**Pound stretchers** – Lower-income people of all ages who often eat at home alone while watching TV. Their diets are high in red meat and low in fruit, veg and fish, but also in sugar and alcohol.

**Traditional eaters** – Older people with a medium-high income who often eat at home and cook for themselves. Their diets are high in fruit/veg and fish, but also alcohol.

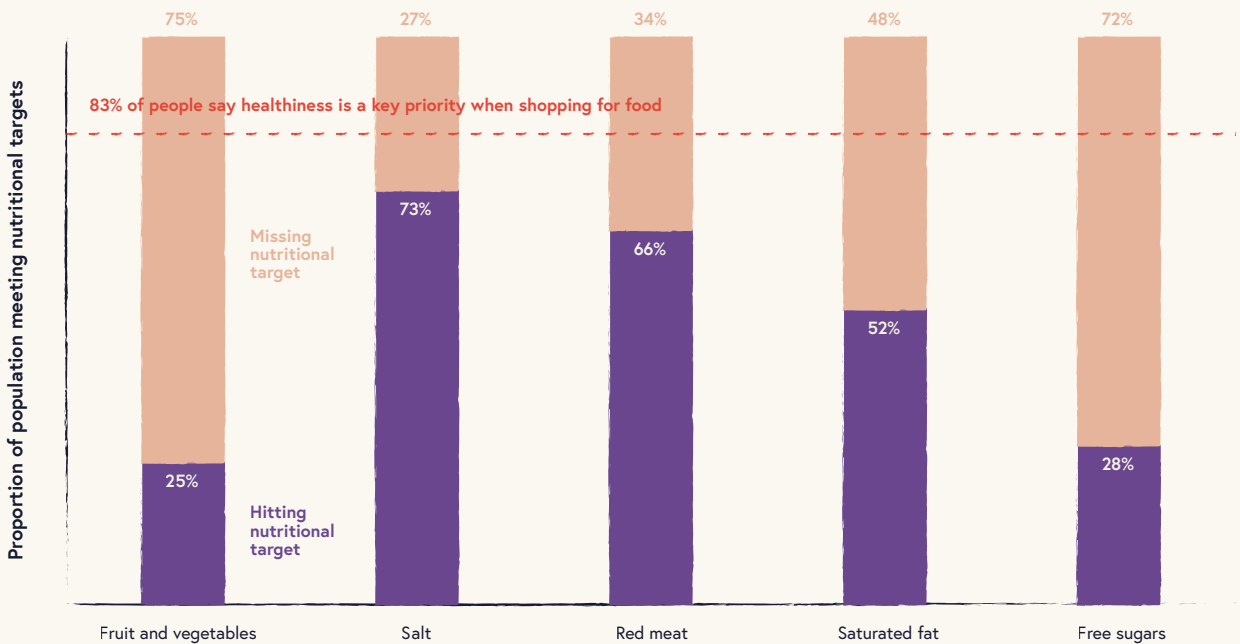
## Social

Cooking for, and eating with, other people is a mark of friendship in every culture. The word company is derived from Latin: com, "with", and pan, "bread". Literally, someone who eats with you. Food finds its way into every aspect of our social lives, including our rites of passage and religious festivals.

But the UK does not place as high a social value on food and cooking as our continental neighbours. Before lockdown forced us to take up home cooking, we spent a smaller proportion of our income on meals at home than any other European country.<sup>50</sup> We tend to rush our meals, spending almost half as

much time eating as the French.<sup>51</sup> We eat out more, cook less, and are much keener on ready meals. (Our household spend on pre-prepared food is 28% higher than in France, 64% higher than Spain, 101% higher than Germany, and a whopping 178% higher than Italy).<sup>52</sup> We eat too much salt, red meat, saturated fat and sugar and way too few fruit and vegetables – see Figure 3.5. We have eagerly adopted the new technology of home delivery apps. McDonalds announced last year that, just 18 months after its delivery service launched in the UK, an astonishing 1 in 10 McDonalds orders now reaches the customer on an Uber Eats bike.

Figure 3.5  
**We mostly fail to meet dietary recommendations<sup>53</sup>**



Free sugars are typically added, and not naturally present other than in the cellular structure of foods.

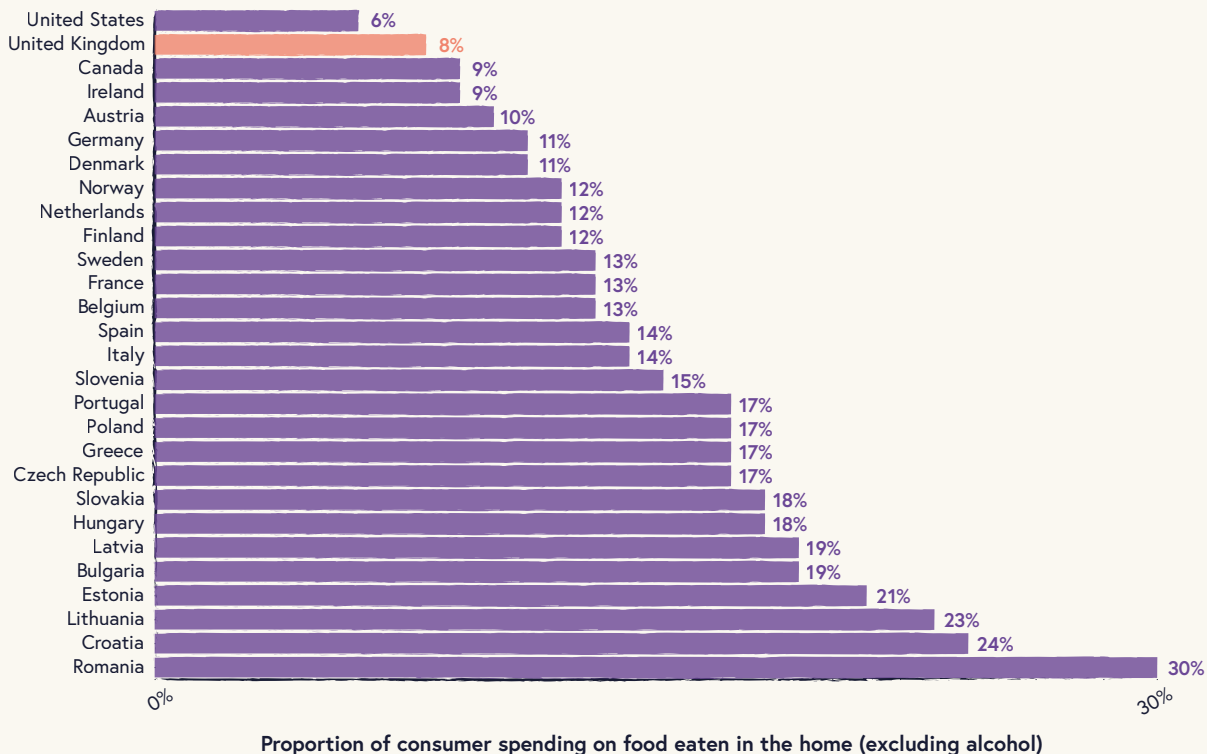
The relative weakness of Britain's food culture goes back a long way. Some historians blame the industrial revolution, which happened faster and harder here than on the continent. The British were wrenched away from the land, and from our longstanding rural food traditions, much earlier than the rest of Europe.<sup>1</sup> Closeness to land, the argument goes, gives people knowledge, familiarity and confidence with food. The Industrial Revolution severed those ancient ties.

Whether because of this dislocation (which happened later but with similar abruptness in America), or something else in the Anglo-Saxon tradition, our food culture bears more relation to that of the USA than to our European neighbours. See Figure 3.6 on next page.

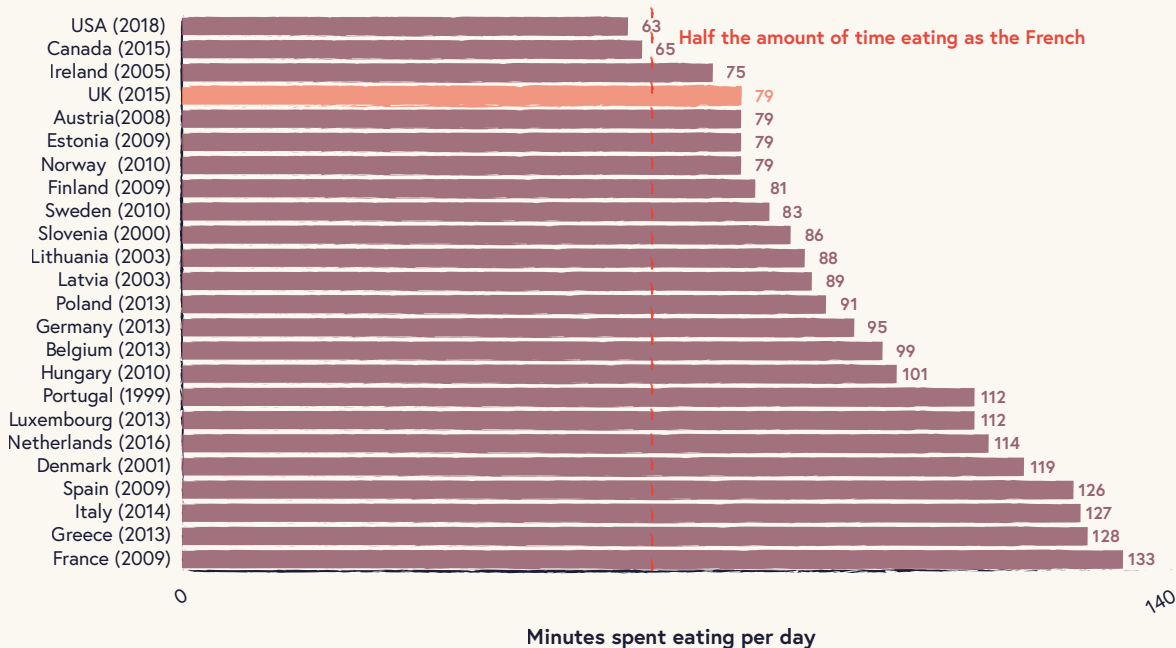
<sup>1</sup> Between 1800 and 1880, the proportion of Britons living in cities tripled, from 20% to almost 60%. By contrast, only 30% of the French and German populations had gone urban by 1880. It took France until 1950 to get to the 60% mark.

Figure 3.6

UK food spending is lower than most comparable countries<sup>54 55</sup>



British people eat quickly





# The UK does not place as high a social value on food and cooking as our continental neighbours.



Figure 3.7

We spend almost half our weekly grocery shop again on eating out<sup>56</sup>

- Eating at home: food and non-alcoholic drink
- Eating at home: alcohol
- Eating out: food and non-alcoholic drink
- Eating out: alcohol





### Material

Is there a supermarket selling fresh fruit and vegetables near you? If so, where are these foods positioned and how appealingly are they presented? Which foods are nearest the tills? Are there sweets and soft drinks placed where you might spontaneously grab them to appease a rumbling tummy or a fractious baby? These are all examples of material influences which affect the food choices we make, often without us even realising it.

The single most important force that shapes our food environment is the free market. Companies produce and promote food that they know will sell.

This doesn't mean they only sell junk food: the variety of fresh produce available in supermarkets reflects both consumer demand and capitalist ingenuity.

But too many of the manufactured food products sold in this country are of a kind that should only be eaten occasionally (See Figure 3.8).<sup>57,58</sup> Highly-processed, calorie-dense products are inexpensive because they can be made with cheap ingredients such as flour, sugar and vegetable oil. They typically have a longer shelf-life than fresh food, and – for reasons we shall examine below – they are easier to sell.<sup>59</sup>

Figure 3.8  
More than 3/4 of manufactured products sold in the UK in 2018 were 'unhealthy'<sup>† 60</sup>



Products above 3.5 HSR are considered 'healthy' and indicated in green. Grey indicates no rating is available.

There is an argument, sometimes put forward by health campaigners and public health professionals, that the imperatives of the free market make it logically impossible for the food industry to grow in value without making us ill.

The logic goes like this. The UK population is growing at 0.6% every year.<sup>61</sup> Corporations generally target growth rates much higher than that. So, in order to satisfy their shareholders, food companies must find another way to boost profits. Their options are limited. They could keep putting up their prices and risk losing customers. They could export more, persuade the domestic market to eat more, or encourage us to waste more – or any combination of the above. But the basic calculation remains the same: increased profit equals increased volume equals a heavier population.

This isn't the whole story. Recent history shows that it is in fact possible to find ways of making people pay more money for food without increasing its volume. Although the proportion of household income that we spend on food has fallen since 1957 – because we have become, on average, much richer – the amount we spend per calorie has increased.<sup>62</sup> This is because we are now prepared to spend some of our extra cash on aspects of food – such as convenience, quality and ethics – that were once considered luxuries. The rise of food delivery apps (which carry a price premium), "Taste the Difference"- style ranges, and fair trade and animal welfare marks, all demonstrate how our habits and expectations have changed.

Nevertheless, there will always be parts of the food economy that rely on increasing volume for increased growth. The economics of commodities – anything

that is traded in bulk and not as a branded product, such as wheat or sugar – create a system based on volume.

Supermarket Buy-One-Get-One-Free (BOGOF) and other multi-buy offers aren't just designed to tempt customers from one shop to another: they tempt us to buy more. In 2015, supermarket promotions in Britain reached record levels and were the highest in Europe, with around 40% of our food expenditure going on promoted products.<sup>63</sup> (In the last few months, the share of transactions on promotion has fallen by 15%,<sup>64</sup> because of the huge pressure on supermarkets caused by the closure of the out-of-home market.

But perhaps the easiest way to persuade consumers to eat more food is to give us what we crave. Humans evolved to seek out energy-dense food whenever possible and to store this energy in the form of fat.<sup>65</sup> "For millions of years, our cravings and digestive systems were exquisitely balanced because sugar was rare," writes Daniel E. Lieberman, Professor of Human Evolutionary Biology at Harvard University. "We retain Stone Age bodies that crave sugar, but live in a Space Age world in which sugar is cheap and plentiful".<sup>66</sup>

This evolutionary craving appears to be amplified when fat and sugar are present together, especially at a ratio of 2 to 1.<sup>††</sup><sup>67</sup> Human breast milk is one of the few naturally-occurring foods with this ratio. Milk chocolate, biscuits, doughnuts and ice cream all follow the same formula.

Serving sugary, fatty, high-calorie foods guarantees a market. As the shelves of any convenience store will testify, there is more money to be made from selling processed snacks than from fresh vegetables.

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<sup>†</sup> The Health Star Rating (HSR) depends on the composition of "healthy nutrients" and "risk nutrients" in packaged or processed foods. Products lose points for energy, saturated fat, sugar and salt and gain points for fruit, vegetable, protein and fibre content. A rating of 3.5 or more is classified as healthy (Access to Nutrition Initiative Profile system). The illustration shows that 77% of products sold by fast moving consumer goods (FMCG) companies have an HSR of less than 3.5. FMCG companies include: Campbell, Fresiland, Campina, Grupo Bimbo, Kraft Heinz, Danone, Arla, Lactalis, General Mills, Kellogg, PepsiCo, Ajinomoto, Unilever, Coca-Cola, Suntory, Nestle, Mars, Mondelez and Ferrero. The average HSR calculations are based on top FMCG products and portion size is not considered; Milk alternatives (e.g. Soy) accounts for 2.2% of Dairy Products and Alternatives category.

<sup>††</sup> Consumers are willing to pay more for foods with this ratio, eat more of them in one sitting, and pay more for them.

Balancing profits against moral responsibility is a growing conundrum for many food companies. How can they play their part in creating a healthier food landscape without destroying their own viability? "This is something that I wrestle with continuously," says Roger Whiteside, CEO of the high street bakery Greggs, who sits on my Advisory Panel. "We want to do the right thing, but it's difficult. Consumers won't be dictated to. If there's one thing I have learnt in 45 years in retail, it's that you must work with what consumers want.

"We do make commercially suboptimal decisions all the time. When Public Health England came to us about reducing sugar we said 'OK, we'll sign up to taking out 20% of our sugar by 2020.' We have achieved that one year early.

Most others only got to around 5%. We've also put healthy choices – such as salads – in every shop, even where we don't make any money from them. In the end though, I think you may need more regulation – a level playing field – because if I start making everything less appealing and other people are going the other way, then basically I am just opening up a vulnerable commercial front."

This is a sentiment echoed by Mike Coupe, former CEO of Sainsbury's, and Dave Lewis, CEO of Tesco. Both have said that they do not believe that the free market can solve the problems in the food system on its own and that regulation is needed to bring about change.<sup>66 69</sup>

There will always be a place for sweets and treats and things that deliver short-term pleasure and do us no good at all. I once attended a children's party where the only food on offer was carrot sticks. In the tearful eyes of the young guests, I glimpsed a joyless world.

The issue is not just which foods companies should sell, but where and how.

One of the most egregious sins of the modern food industry is its habit of clothing itself, and its products, in false virtue. "No added sugar" is the boast on Innocent's lemon and lime-flavoured Juicy Water – quite omitting to mention the eight teaspoons-worth of natural sugars from grapes and pears. "No artificial colours or artificial flavourings" trills the packaging for Percy Pig, the "soft gums made with fruit juice". These can be found near the tills at Marks & Spencer, within spontaneous reach of tiny hands. How many parents take the time to check the ingredients list? If they did, they might (assuming they know how ingredient lists work) be agog to find that the three largest

ingredients by weight are glucose syrup, sugar and glucose-fructose-syrup. (See Figure 3.9)

I single out Marks & Spencer here, not because it is the biggest sinner, but because it is such a well-trusted company. A British institution, M&S has the pledge "we always strive to do the right thing" as one of its guiding principles. If M&S – which is a great deal more scrupulous than many food companies – is guilty of such trickery, you can be sure the practice is ubiquitous.

Food packaging is increasingly littered with boasts that, if not quite lies, are at least wilfully misleading. "Low fat" often means high starch, but it never says so. The words "free from" and "less" are sprinkled around without context. "Free from" refined sugar, but rigid with fruit sugars? Nutritional values – calories, salt, sugar etc – are given "per portion", even when a portion bears no resemblance to the quantity on offer.

Two of the recommendations I was planning to make in this chapter concern the methods most commonly used to promote unhealthy products. But just as I was about to press "send", the Government stole my thunder (in a welcome way), by unilaterally proposing the same policies as part of its New Obesity Strategy.

The first is Legislating to end the promotion of foods high in fat, sugar or salt (HFSS) by restricting volume promotions such as buy one get one free, and the placement of these foods in prominent locations intended to encourage purchasing, both online and in physical stores in England. That will mean no more unhealthy multi-buy offers, and Percy Pig will no longer reside near the checkout.

The second is banning the advertising of HFSS products being shown on TV and online before 9pm and holding a short consultation as soon as possible on how they introduce a total HFSS advertising restriction online.

Both these policies have already been the subject of Government consultations and found to have solid public support. (Generally – as we will see below – the public wants more and stronger state interventions on diet-related health.)

But the restrictions on advertising – much more than the restrictions on promotions – are certain to cause squeals of protest, not least from media companies and food manufacturers. So I want to take a moment here to explain why this is the right decision.

Figure 3.9



One of the first meetings I had after starting work on this strategy, in January 2019, was with ITV. The idea of introducing a watershed for advertising HFSS products had already been floated by Government, and the television company wanted to make the case against it.

The executives I spoke to made three very articulate arguments:

1. That such a ban would cut off a significant revenue stream, and thus imperil a public service broadcaster.
2. That it might drive HFSS advertising onto less well-regulated online platforms.
3. That it probably wouldn't even make much difference to people's eating habits.

Just before the Government made its recent announcement, I heard the same arguments swirling around Whitehall – but with an added jeopardy. Advertising revenues are already forecast to be down 20% this year as a result of the pandemic.<sup>70</sup> Terrestrial television companies – which are locked in a ferocious battle for eyeballs with streaming companies such as Netflix and Amazon – simply cannot afford another loss.

The money spent on advertising HFSS before 9pm is indeed high: about £215m<sup>63</sup> per year. But introducing a watershed would not simply wipe out this revenue stream. Many companies would move to later advertising slots, or advertise different products before 9pm, or even adjust the ingredients in their products so that they no longer fall foul of the watershed.

The Department for Digital, Culture, Media and Sport has estimated that a 9pm watershed for HFSS adverts would end up costing TV companies a collective total of about £112 million. This represents 2.3% of combined advertising revenue for these companies.<sup>72</sup> However, terrestrial television companies make an increasing amount of their revenue from selling programmes and direct subscriptions, so the percentage of total revenue lost will be less than that – maybe half as much again.<sup>73</sup> And even this estimate may be too pessimistic.

<sup>†</sup> 53.44% of ITV's total revenue was from advertising in 2019/20

## Capsule 1

# The Responsibilities of Advertisers

– by John Hegarty, founder of Bartle Bogle Hegarty

**A**DVERTISING has a number of functions. The most basic is to inform the public about goods and services and persuade them of their value. It can also be seen as a marker of liberty. The freedom to have an idea and tell as many people as possible about it is an inalienable right of any democratic society. Go to North Korea and you won't see much advertising.

But to succeed in the long run, advertising also has to be responsible. Ours is a largely self-regulating industry, whose pact of trust with the public depends upon being – in the words of the Advertising Association's long-running slogan – "Legal, decent, honest and truthful".

The truth, which is now abundantly clear to everyone, is that this country is facing a health crisis caused by bad diet. It is making us ill, shortening our lives and putting a terrible strain on our health service.

Advertising junk food to children is no longer a decent thing to do. Instead of fighting the new 9pm watershed rule, the advertising industry should be using its power to help fight the health crisis. We all have our part to play in encouraging food companies to invest in healthier meals, and encouraging the public to buy them.

No one is against profit – but profiting from illness and misery is not a sustainable business model.

On commercial grounds, if nothing else, the advertising industry must do the right thing. To succeed, we must be seen as a valuable partner in a changing society, playing our role in a positive way.

There are two examples we can learn from, where advertising HFSS food has already been restricted. In 2007, it was banned from the breaks in children's TV shows, and in 2019 Transport for London banned HFSS advertising on buses and tubes. Following the 2007 children's TV ban, HFSS advertising as a proportion of all TV advertising remained stable.<sup>74</sup> In other words, food companies just advertised those products in different slots. After the TfL ban, the total advertising spend remained steady.<sup>75</sup> It seems that advertisers simply advertised other things.

I have heard it argued that these examples are atypical: that the ban on advertising in children's programmes was small in comparison to the 9pm watershed policy; and that TFL gets much of its ad revenue from smaller companies, so it is not a reliable comparison. But people who know the economics of the advertising industry better than me believe that history will repeat itself.

"We have seen this time and again," John Hegarty, advertising grandee and a founder of the agency Bartle Bogle Hegarty, told me. "First it was cigarettes, and that was followed by cigars, alcohol, gambling and other categories. Advertising always fills those gaps with new categories that in themselves become more dynamic." See Capsule 1.

The second argument against the watershed is that it will push advertising onto online platforms, which are harder to regulate. This seems to me to be an argument for improving online regulation, rather than giving up. I am pleased that the Government has included online advertising within its new restrictions.

The final argument against the 9pm watershed is that HFSS adverts don't actually influence what a child eats. This seems an odd proposition. Why spend so much money on advertising if it doesn't work? To the parents among us, it also feels intuitively wrong.

The science behind what I shall call the "half-a-Smartie" argument is based – in a convoluted way – on a study published in 2018 by the UCL Great Ormond Street Institute of Child Health.<sup>76</sup>

This study analysed evidence from a compendium of sources, including 25 experiments. It concluded "that screen advertising for unhealthy food results in significant increases in dietary intake among children".

Specifically, it found that children exposed to HFSS advertising on TV and in online games consumed an average of 13.6 more calories (equivalent to three smarties) for each minute of advertising they watched, compared to children who were not exposed to the advertising. Children who were already obese increased their consumption by almost half as much again, to 20.9 calories (or four smarties) per minute of advertising watched.

This study was the basis of the Government's impact assessment for the introduction of the 9pm advertising watershed. It concluded that the policy would save the economy £2.7 billion in NHS and social care savings and increased economic output, due to the reduction in type 2 diabetes, coronary heart disease, stroke, colorectal cancer and breast cancer across the population.<sup>77</sup>

However, the impact assessment also contained, deep within its 135 pages, a calculation more to the taste of those who oppose the watershed.

Some children get a lot of screen time. Others are strictly rationed. To work out how many calories a 9pm watershed would save overall, the Government's statisticians calculated the average amount of time spent watching HFSS adverts across the entire population of children, and then used that relatively modest figure to deduce the average calorie increase. The grand total at the end of all that was just 2.28 calories a day – or roughly half a Smartie. In other words, say critics of the watershed, it isn't worth the bother.

But there are two problems with these sums. First, almost all the experiments on which the Great Ormond Street study is based only measured "immediate consumption". The extra calories were only counted if the child ate the HFSS foods while or shortly after watching the content containing

the advertising (online or on television). Some studies only measured food eaten within five minutes of watching the advert, and most were in the 5 to 34 minutes range.

By this reckoning, if a Twix ad comes on television, the child has to leap up and immediately munch a Twix for it to be measured. If that same child goes to a shop later that day and pesters her parents to buy her a Twix, those calories don't count.

The second problem is the diluting effect of averages. Some children spend a lot more time looking at screens than others. But a significant increase in Smartie-eating among the avid screen-watchers (especially pronounced in those children whose weight is already a problem) becomes statistically insignificant when spread across the population.

You could, in fact, use this diluting effect to argue from the opposite corner. How many fewer calories do you think we as a country would each have to eat, on average, to maintain our national weight? 500? 200? 100? The answer is actually somewhere between 16 and 24<sup>78</sup> calories – or 3 to 5 smarties. This is clearly a nonsense when applied to individuals (and especially those who most need to lose weight), but mathematically it is sound. Averages are deceiving.

In the context of averages, even 2.28 calories a day – the most modest reduction predicted by the impact report – is actually a big deal. For some people, especially those already struggling with their weight, the effect would in reality be much more significant.

Even from these unpromising calculations, then, we can deduce that a 9pm watershed is likely to be effective – especially for a single intervention. It also has strong public support and, in my view, is unlikely to seriously affect advertising revenues.

The Government has made the right call.



## Capsule 2

# Should nanny tell us what to eat?

**T**HE already complex job of working out how to help different people in different circumstances is complicated by one of the fundamental questions of political philosophy: what role should the state play in the private lives of its citizens?

Libertarians and public health campaigners have fought a running battle for years over this question. But when it comes to diet, even fierce opponents of the "nanny state" now recognize that the problem is serious enough to warrant greater state intervention.

The journalist and former Tory MP Matthew Parris wrote about this in his column in *The Times* last year. "Haven't we a right to self-harm?" he mused. "Is it the business of the state to stop people hurting themselves? Individual liberty matters, and we risk numbing that most useful instinct: our sense of responsibility for our own fate." Parris listed a number of state interventions he had opposed in the past: the compulsory wearing of crash helmets and seat belts, the smoking ban, the sugar tax, and prohibitions on alcohol and tobacco advertising. He concluded that he had been wrong on every count.

"Society is a web," he continued. "Each gossamer thread is attached to others, and to the whole... People want all kinds of things from the state. It follows that the state wants all kinds of things from the people, including that they don't smoke or eat themselves to death... I do not entirely repent of my youthful libertarianism," he continued. "Unless rebuked, nanny will get too big for her boots. But I believed once that there was no need for nannies. I no longer believe that."

As I travelled the country collecting evidence for this strategy, I talked to everyone from farmers to foodbank clients to factory workers about what role they felt the state should play in helping them eat a better diet. Our team also organised more formal "public dialogues", with participants randomly selected from all parts of society.

The vast majority of those we spoke to (and almost every parent) said they were fed up with being bombarded by junk food marketing and thought the state should intervene. When we asked what form that intervention should take, most said they were comfortable with the idea of restricting advertising for junk food. A recent Savanta ComRes poll identified a similar mood, with 74% saying they would like a ban on advertising junk food before 9pm on TV and online. 72% would like shops to be prevented from displaying unhealthy snacks next to checkouts and entrances, and 62% want limits on volume-based promotions for unhealthy foods.<sup>79</sup>

It seems clear that the state has the moral authority to intervene in people's lives to help them eat better, especially given the terrible costs that diet-related disease imposes on our society. Several surveys undertaken since the outbreak of COVID-19 show that people want the Government to take stronger measures to tackle the obesity crisis and improve the nation's health.<sup>80 81</sup>

But it remains the case that what we eat is a personal choice and we experience it as a private freedom rather than a collective duty. Government interventions will only be effective if they have been decided carefully in consultation with citizens, rather than being unilaterally imposed upon them.

“

**I believed once that there  
was no need for nannies,  
I no longer believe that.**

”



### What else might work?†

Battling through the forest of studies on dietary health and Government initiatives, one thing soon becomes clear: it is extremely hard ever to be certain that intervention X leads to outcome Y. Dietary health is simply too big and complex an issue to be measurable in certainties.

So how do you go about changing things? One approach is to pull lots of levers at the same time and hope for the best. The other is to pull one lever at a time and see what works. If it doesn't work, drop it. The problem with the latter method is that societal change does not work like a sausage machine: inputs followed by outputs. It's more like an ecology. The success of any single policy might depend on how and when it is implemented and how it interacts with other policies. Human beings are complicated and often react in unpredictable ways.

Over the past 30 years, there has been much emphasis on the importance of "evidence-based policymaking". This sounds eminently sensible; indeed, you might think it the minimum one should strive for. But it has given birth to a new science of "policy evaluation", which may actually lead to cowardice in policy making.

You can't always find evidence to support a single policy. An evaluation of one intervention in a huge and complex food system might conclude that the intervention has no effect, because the effect is too small to measure. But the effect is still there, and if you press on with all the little things together, you might end up with a big effect.

There are sceptics, for example, who point out that the sugar tax has not yet produced any directly measurable reduction in obesity. But it has led to large scale reformulation of soft drink recipes, taking 45,000 tonnes of sugar out of our annual consumption from soft drinks.<sup>82</sup> Given time, and in combination with other anti-obesity strategies, that could snowball into something eminently measurable.

The other problem with evidence-based policymaking is that it creates a Catch-22. You can't bring in a policy until you have the evidence to show it works; but you can't get the evidence without first introducing the policy. In the absence of data, it's all too easy to end up doing nothing rather than risk unintended consequences.

In the private sector, lack of certainty is overcome by a lot of trial and error. You go with your instinct about

what might work, supported by as much evidence as you can find and, if it doesn't work, you try something else. But you have to be brave. You have to act.

Perhaps a better model for state intervention would be "evidence-informed policymaking". That is – introduce policies where you can anticipate the likely effects and where the existing evidence suggests they will not be harmful. And build into this policy methods for continuous monitoring and improvement.

This is something I discussed with Pekka Puska, then director of the National Institute of Public Health in Helsinki, when I was working on the School Food Plan for Government in 2013.<sup>83</sup>

Forty years ago, Finland was one of the world's unhealthiest nations. Diet was poor and rates of smoking were astronomical. "In the 1970s, we held the world record for heart disease," he told me. Puska – then in his mid-twenties, and freshly graduated from medical school – had an instinctive sense that this epidemic of ill health had to be tackled at its cultural roots. In 1972, he started an experimental project in the eastern region of Finland, the Province of North Karelia, where one in 10 people of working age were on disability benefits due to diseased arteries.


There was very little evidence for what interventions might work. "We decided you have to do as many of the things that might work at the same time. You need to get stuck in. Get your boots deep in the mud," Puska told me. "The whole environment had to change: The food industry, restaurants, cafeterias, supermarkets. We had to make sure that the healthy choices became the easy choices."

Puska and his team set up lots of different initiatives. They gave free, traction shoe clamps to the elderly so they could walk in winter. They increased the number of bike paths and created safe, well-lit cross-country ski paths. They worked with local food industries, including sausage manufacturers, to reduce fat and salt levels. They improved the food and education in schools. They even created an X-Factor-style TV show where Finns competed to see who was healthiest. It was a huge hit, with over a quarter of the male population tuning in.

Within five years, risk factors and deaths from heart disease started to fall dramatically in North Karelia. Puska was asked to roll his project out across the country. By 2009, the annual mortality rate from heart

disease in men had fallen by 80% across the whole of Finland. Average life expectancy rose by seven years for men and six years for women.

Any attempt to solve the huge problem of diet-related disease in this country will require multiple, simultaneous interventions at scale, every bit as ambitious as Puska's vision for North Karelia.



### Recommendations already adopted by government

I am delighted to welcome the commitments the Government has made in the New Obesity Strategy.

- Legislating to end the promotion of foods high in fat, sugar or salt (HFSS) by restricting volume promotions such as buy one get one free, and the placement of these foods in prominent locations intended to encourage purchasing, both online and in physical stores in England.
- Banning the advertising of HFSS products being shown on TV and online before 9pm and holding a short consultation as soon as possible on how we introduce a total HFSS advertising restriction online.

The other measures proposed by the Government include (in their words):

- 66 • Introducing a new campaign – a call to action for everyone who is overweight - to take steps to move towards a healthier weight, with evidence-based tools and apps with advice on how to lose weight and keep it off.
- Working to expand weight management services available through the NHS, so more people get the support they need to lose weight.
- Publishing a four-nation public consultation to gather views and evidence on our current 'traffic light' label to help people make healthy food choices
- Introducing legislation to require large out-of-home food businesses, including restaurants, cafes and takeaways with more than 250 employees, to add calorie labels to the food they sell.
- Consulting on our intention to make companies provide calorie labelling on alcohol. 99

I welcome the Government's invitation to consider ways to improve public sector procurement of food and drink. This is long overdue. In Part Two, I will include a comprehensive recommendation on what the government can do to ensure that the food it pays for directly – for example in schools, hospitals, prisons, and in government offices – is both healthy and sustainable.

### This is only a start

In Part Two of the National Food Strategy, I will consider what a systemic intervention in the food system might look like. I will also attempt to navigate a clearer understanding between the state and citizens about how the state should intervene to improve our eating habits.

The National Food Strategy team was planning to do this using a formal Citizens' Assembly, but that requires a large number of participants (typically around 100) to be present at the same time. The current rules about social distancing make it impossible to do that in person, and our experiences of large-scale video conferences have persuaded us that it wouldn't work online.

Instead, we are exploring options to hold smaller deliberative public engagements with citizens selected to reflect the demographics of the country. We will bring politicians and representatives from the food industry into some of these discussions and cover a wide array of food policy issues – touching on climate change, the environment and health and examining the philosophical questions raised by Matthew Parris. We will set out our methodology in the autumn.



The sugar tax  
took 45,000  
tonnes of sugar  
out of our annual  
consumption from  
soft drinks.

<sup>1</sup> Thanks to Michael Kenny, Director of the Institute of Public Policy, Cambridge University, for his help in developing this thinking.




## Chapter 4

The National Food Strategy: Part One – July 2020

# Jobs and Hunger

One of the miserable legacies of COVID-19 is likely to be a dramatic increase in unemployment and therefore poverty. We examine the ways in which poverty can lead not only to people going hungry, but also to them relying on diets that are more likely to damage their health.

The most effective way to relieve this situation is to save as many jobs as possible. This is, rightly, the focus of Government activity. However, given the scale of the expected increase in unemployment, there will be people who find themselves suddenly struggling to put food on the table. We propose some measures to help.



**L**ONG after this virus has passed, we will still be able to feel its presence. It will be with us in the grief of the thousands of families who have lost loved ones. And it will have gouged an indelible mark into our economy.

As I write this, at the beginning of July 2020, the prognosis is bleak. The UK economy shrank by an unprecedented 20% in April as the country went into lockdown.<sup>84</sup> Every day we hear reports of well-known companies going bust or laying off swathes of their workforce. According to the latest figures, there have been 3.3 million new claims for Universal Credit since March 16th;<sup>85</sup> 9.3 million employees have been furloughed<sup>86</sup> and a further 2.4 million people have applied for the Government's Self Employed Income Support Scheme.<sup>87</sup> By October, when the furlough scheme comes to an end, the Office for Budget Responsibility estimates that 1.6 million more people will have been made redundant.<sup>88</sup>

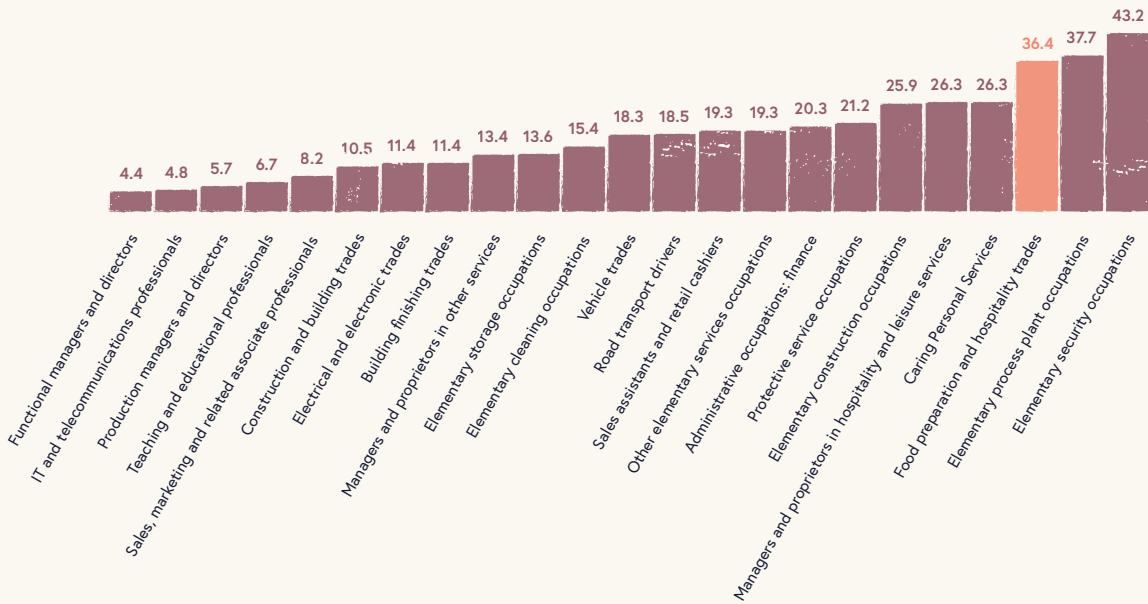
### A K-shaped scar

The economic burdens of the pandemic have not been, and will not be, shared equally. Some economists believe we are about to go into a K-shaped recession, with some sectors thriving in these new conditions (the upward tick of the "K"), while others sink.<sup>89</sup>

This is certainly true within the food industry. Workers in supermarkets and other retail outlets have experienced an entirely different pandemic from those in out-of-home businesses such as pubs, cafes and restaurants.

Those in retail, and in food manufacturing and logistics, had to keep working during lockdown, while much of the rest of the nation sheltered at home. They risked their health to keep the cogs of the food system turning, and were rightly clapped as key workers. Amongst men, four of the top ten occupations with the highest COVID-19 mortality rate were in the food system.<sup>90</sup>

Figure 4.1  
**COVID-19 death rates have been higher amongst food workers<sup>91</sup>**

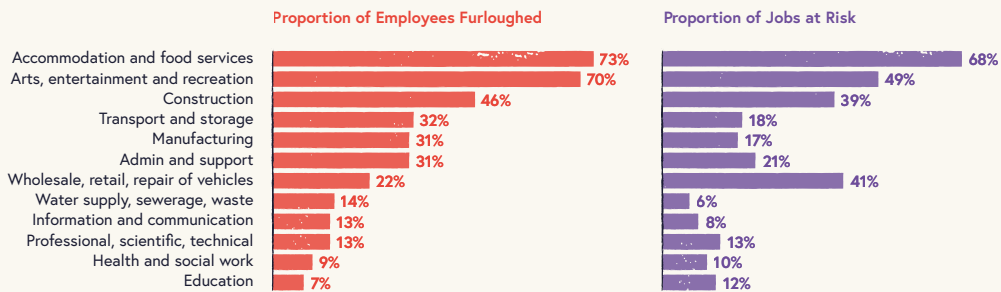


Males only, due to data gaps for females. Age-standardised rates per 100,000 population, standardised to the 2013 European Standard Population.

In the hospitality industry it was, and remains, a very different story. Sales in the hotel and out-of-home food sector dropped by 88% between March and April,<sup>92</sup> with 81% of these businesses ceasing to trade<sup>93</sup> during lockdown. A third of the UK's total fall in GDP was caused by reduced demand in hospitality, highlighting the UK's reliance on this sector. 73% of employees were furloughed, more than in any other

sector (see Figure 4.2). In many cases, furlough has just delayed inevitable redundancies. McKinsey & Company estimates that 68% of jobs in this sector are at risk,<sup>95</sup> a much higher percentage than in any other industry. For the hospitality trade, which relies on large numbers of customers to compensate for narrow margins, it will be a long and painful road to recovery.

Figure 4.2  
**Impact of COVID-19 on employment<sup>96</sup>**





The experiences of farmers have been different again. The rapid shift in consumer behaviour caused all sorts of upheavals during lockdown, and highlighted the fragilities of the farming sector. There was a sudden glut of milk<sup>97</sup> and potatoes<sup>98</sup> as people stopped buying takeaway coffees and ordering chips in restaurants. Demand for mince – easy to cook at home, and to freeze – soared, while more expensive cuts of meat went unsold.<sup>99</sup> Farmers' markets and street food events were cancelled, and many of the supplemental incomes that farmers depend on, such as camping or bed and breakfast offerings, stopped abruptly.<sup>100</sup> With margins already low, many farmers have struggled to make ends meet.

Helping businesses get back on their feet – thereby both saving and creating jobs – is the most important thing the Government can do right now. Higher employment means less poverty; less poverty means less food insecurity.<sup>101</sup> The Government has produced the biggest peacetime support package in UK history, trying to protect jobs and incomes through an array of loans, grants, rate relief, the furlough scheme and benefit changes, as well as providing targeted support to specific sectors. The cost of all of this (at the time of writing) is £132.5 billion.<sup>102</sup> over 15% of its total 2018-19 annual expenditure.<sup>103</sup>

But however Herculean the efforts of the state, many people will find themselves out of work. Poverty will almost certainly increase and with it the number of people going hungry.

### Is "food poverty" simply poverty?

While researching this strategy, I travelled all over the country visiting organisations that help feed people who might otherwise go hungry. I went to food banks and charities, a community shop in Grimsby selling discounted food to the unemployed, a café that feeds the homeless for free in Thanet, and a refuge for women who have just been released from prison in Birmingham. I wanted to better understand whether "food poverty" is in fact simply poverty by another name, or whether there are specific aspects of the food system that make it hard for people on low incomes to eat well.

At the First Love Foundation food bank in Tower Hamlets, I was offered the chance to work as a volunteer, registering new clients as they arrived. That Friday, the mobile drop-in centre – which is run by one of my Advisory Panel members, Denise Bentley – was being held in a low-rise, brown brick community centre on the doorstep of Canary Wharf, London's financial engine room. Glittering skyscrapers loomed over us as we pulled into the car park.

Everyone visiting the drop-in centre had been referred there – by a GP or social worker, the Citizens Advice Bureau or the local Jobcentre Plus. They were all given a food box, but the most critical service dispensed was advice. Every client was interviewed and triaged when they arrived and then they got to see a project worker, benefits advisor or housing expert, depending on the situation that had brought them to the food bank.

My job was to ask them what food and other essential supplies they needed. You could tell in many cases that it had taken courage to come to the food bank. They were careful to take only what they needed. "Do you want shampoo?" "No, I have enough to last a week, thank you."

The stories these people had to tell were varied and sometimes heart-breaking. One elderly woman had cancer, learning difficulties, severe depression, and no family. She was simply incapable of navigating the system to get the help she needed. I met two women, one Bangladeshi and the other Finnish, both struggling with difficult partners. (One was a violent binge-drinker, the other had manic phases during which he spent all their money on cricket memorabilia.)<sup>†</sup> Both women had failed Habitual Residence Tests, which meant their partners could claim benefits, but they couldn't.

There were many people who simply couldn't find ways to match their expenditure to the benefits they were receiving – due to sudden unemployment, for instance, or because they were being pushed gradually into poverty as their rent rose above their housing benefit cap and they couldn't bare the idea of moving to more affordable area.

The roll-out of Universal Credit was a recurring theme, as people struggled to make ends meet while waiting five weeks for their first payment. Even after the Government introduced a 100% advance payment to help bridge this gap (in January 2018)<sup>104</sup> many people

decided they would rather go without in the short term than have to pay back the advance in the form of lower payments in the longer term.<sup>105</sup>

These people's stories had nothing to do with the food system: they were problems of poverty, mental illness, domestic abuse, and often revised or delayed benefits claims. A surprising number were able to solve long-running problems – such as difficulties with claiming benefits – with help from one of the advisors. This help is at least as important as the food: more so in most cases, because it helps people re-establish their independence.

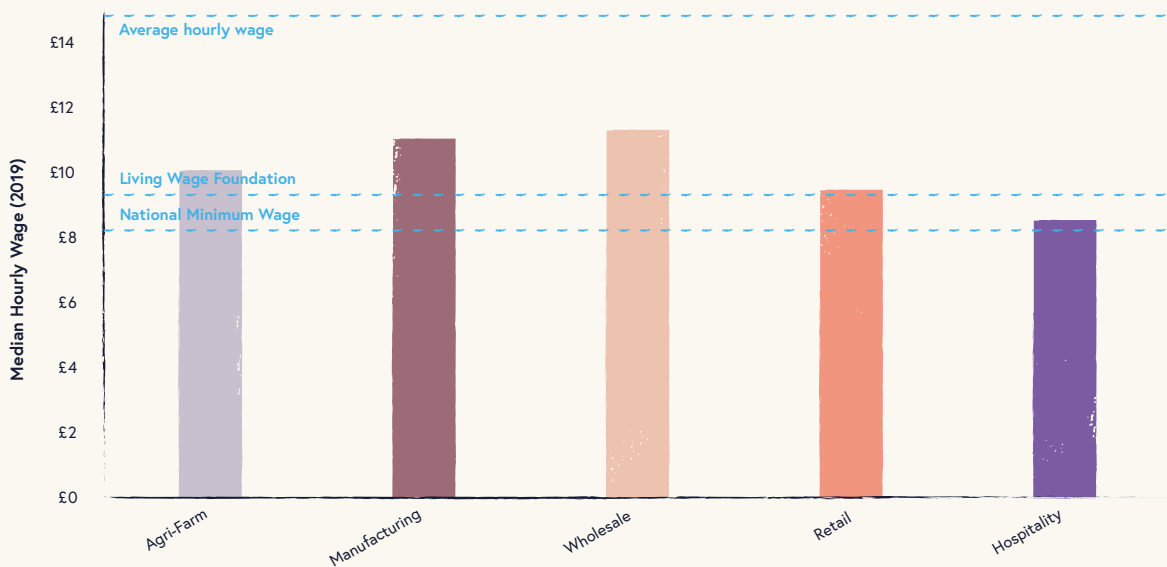
But what I observed at that drop-in centre is backed up by the many studies done on the reasons for food bank usage.<sup>106</sup> When funds run short, it is often spending on food that gets cut first.



### Hunger and the pandemic

Before the pandemic, four in ten working-age people in the UK (almost 17 million people) had less than £100 in savings available to them.<sup>108</sup> Without any financial buffer to protect them from the approaching wave of unemployment, many of these people are in danger of falling into serious poverty. In its report on the likely impact of COVID-19 on employment, McKinsey & Company predicted that most job losses will fall in sectors of the economy where workers are already low paid.<sup>109</sup> See Figure 4.2

Figure 4.3  
Food retail and hospitality wages are low<sup>110</sup>



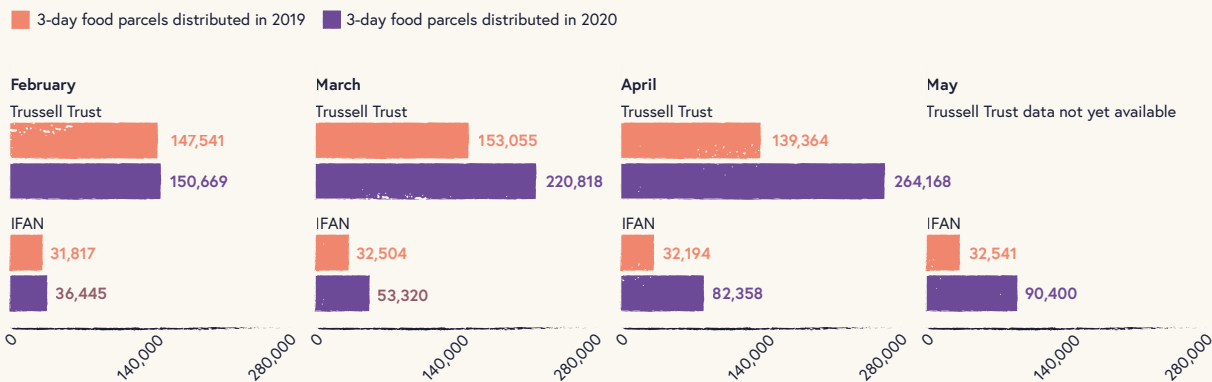
<sup>†</sup> Some of these details have been changed to protect the identity of these people



The data already show an alarming increase in food insecurity. A Food Foundation survey<sup>111</sup> conducted in early April 2020 found that 8.1 million adults had experienced some kind of food insecurity during the previous five weeks. This could have been anything from skipping a meal because the queue at the supermarket was too long, to going hungry for a day or more because of lack of funds.

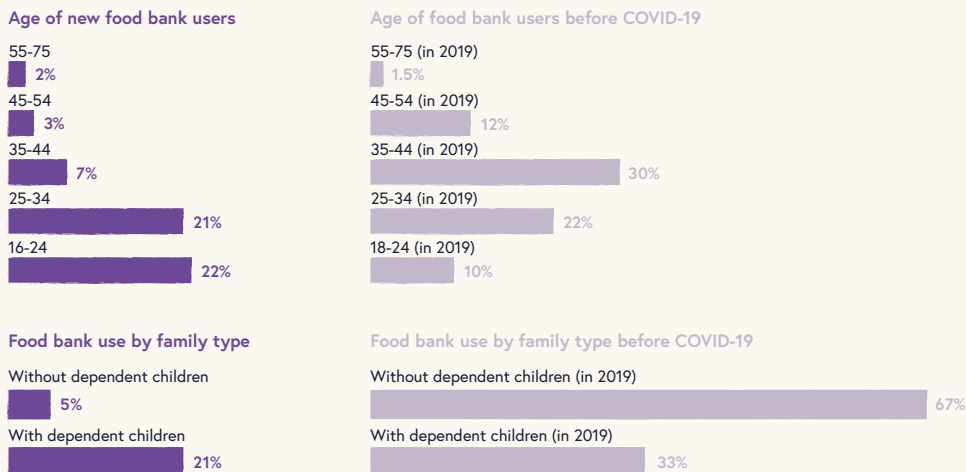
This figure dropped significantly – to 4.9 million adults – between 14-17 May 2020, once supermarket queues had shortened.<sup>112</sup> But the number of people saying they could not afford enough food rose slightly over the same period, from 1.7 million to 1.8 million in May, presumably as redundancies started to be made.<sup>113</sup> You can see a similar trend emerging in the increased use of food banks, as shown in Figure 4.4.

Figure 4.4  
Total food bank use nearly doubled in two months<sup>114</sup>



COVID-19 has seen some Trussell Trust food banks switch to 7-day parcels, which are counted as 3-day parcels here: this underestimates the total quantity of food distributed. Due to reporting times, parcel data from 18% of Trussell Trust food banks in April has been estimated.

Figure 4.5  
New food bank users are overwhelmingly children and young people<sup>115</sup>



FSA-derived numbers (in blue) sum to less than 100% because 'prefer not to answer' is not shown. Methodological differences between the surveys mean only relative differences between food bank users (not absolute percentages) can be compared.

The effects of hunger on young bodies (and minds) are serious and long-lasting.<sup>116</sup> Pregnancy and early childhood are periods of rapid growth and development, and nutrient imbalance during this period can alter body structure and function irreversibly, with long-term health consequences. (This is known as "nutritional programming".) Studies have shown an association between malnutrition in pregnancy and early years and chronic disease in adulthood (e.g. higher BMI, type 2 diabetes, some cancers).<sup>117</sup>

Nutrition during pregnancy is crucial to optimal development – especially getting the right amount of iron, omega 3 and folic acid. For example, folate deficiency can result in neural tube defects such as spina bifida.<sup>118</sup> Malnutrition in pregnancy and early years can also adversely affect brain development.<sup>119</sup>

Adolescence is another time of rapid growth, when good nutrition is essential. Iron-deficiency anaemia is particularly prevalent in this age group, and can make teenagers feel weak, tired and irritable (as if their lives weren't hard enough already). Calcium is also particularly important in adolescence, helping to build bones strong enough to prevent osteoporosis in later life.

It isn't just children's health that is affected by hunger or poor diet. Pupils who are hungry at school struggle to concentrate, perform poorly,<sup>120</sup> and have worse attendance records.<sup>121</sup> Children who experience food insecurity – most of whom already come from the most deprived families – have also been shown to suffer more from mental illness.<sup>122</sup> This is both an acute and a long-term political issue: food insecurity undermines any serious prospect of improving social equality.

At the start of lockdown, Defra set up several different working groups to tackle the threat of hunger. The first (described in Chapter 1) was the Food Resilience Industry Forum, which brought together civil servants and the food industry daily to ensure that the mainstream food system – getting food to the vast majority of the population – did not collapse. This was soon followed by a temporary Food Vulnerability Directorate, tasked with working out how to deliver food parcels to people whose medical conditions meant they had to be clinically shielded.

The final group – the Food and Other Essential Supplies to the Vulnerable Ministerial Task Force – first met on 2nd April 2020. Its remit was to identify and help other people who might be struggling to access basic goods due to practical or financial constraints: those who were self-isolating, such as the

elderly or those with underlying health conditions, or people at the end of their financial rope. It was led by Victoria Prentis, the Defra minister responsible for Fisheries, Farming and Food, and included ministers from every relevant government department: Defra (food), DWP (benefits), MHCLG (local authorities), DHSC (health), DCMS (charities), DfE (children and school food). Representatives of the Food Standards Agency and the devolved administrations of Wales, Scotland, and Northern Ireland were also present. This was an excellent example of cross-government coordination.

As well as wrestling with logistics – getting supermarkets to free up online delivery slots for the elderly, for example – this task force has been providing direct support to people at risk of hunger. It secured a £63m payment for local councils, to be distributed as emergency grants to individuals in financial trouble.<sup>123</sup> It also secured £16m for food surplus charities, which have committed to delivering millions of meals to the vulnerable.<sup>124</sup>

The sums involved may be small in the grand scheme of the Government's COVID-19 support package – which included an uplift to Universal Credit payments and vouchers for free school meals over the holidays. But they establish an important principle: that in a crisis of this scale, you need to reinforce the entire societal safety net. Central government, local government and NGOs all have a role to play.

Clearly, the best way to tackle food poverty is to tackle poverty. The way to do that is to have a strong economy alongside a benefits system (regardless of your views on whether that benefits system is sufficiently generous). There is no dignity in people having to rely on food banks, food stamps or emergency grants from councils.

In this crisis, however, the system of Universal Credit and equivalent benefits – essential though it is – cannot carry the burden alone. It wasn't designed to deal with such a rapid surge in unemployed people, including many middle-income households for whom Universal Credit won't be enough to meet fixed costs such as rent and bills, and the many more whose finances are already dangerously threadbare.

<sup>1</sup> For example higher BMI, type 2 diabetes, and some cancers

<sup>††</sup> Also known as Vitamin B12



## Recommendation for government

There are three quick and relatively straightforward things the Government could do to provide a "nutritional safety net" for children in poor households.

### 1. Expand eligibility for the Free School Meal (FSM) scheme to include every child (up to the age of 16) from a household where the parent or guardian is in receipt of Universal Credit (or equivalent benefits).<sup>†</sup>

A hot, freshly-cooked school lunch is, for some children, the only proper meal in the day, providing a nutritional safety net for those at greatest risk of hunger or poor diet.<sup>125</sup> Only 1% of packed lunches meet the nutritional standards of a school meal.<sup>126</sup>

Free school meals are currently provided to all children in the first three years of school, under the national Universal Infant Free School Meals scheme. Some local authorities already fund the continuation of free school meals through the remaining primary years. In the majority of schools, however, only children from very low-income households (an annual income of £7,400 before benefits) are eligible for FSM after the age of seven.

This threshold is much too low. Many of the families on Universal Credit who currently do not qualify for Free School Meals fall well below the government's own threshold for defining poverty. Ensuring the health and development of deprived children should be a priority.

Under this recommendation, we estimate an additional 1.5 million 7-16 year olds would benefit from free school meals, taking this to a total of 2.6 million children. This is estimated to cost an additional £670 million a year.

### 2. Extend the Holiday Activity and Food (HAF) programme to all areas in England, so that summer holiday support is available to all children in receipt of Free School Meals.

Summer holidays are a particularly hard time for households experiencing food insecurity. An estimated 3 million children are at risk of hunger in the school holidays,<sup>127</sup> and data from food banks shows the need for emergency supplies accelerates over the summer.<sup>128</sup>

In 2019, the HAF reached 50,000 children. Under this recommendation, we estimate an additional 1.1m children will participate in the programme. This is estimated to cost an additional £200 million a year.

### 3. Increase the value of Healthy Start vouchers to £4.25 per week, and expand the scheme to every pregnant woman and to all households with children under 4 where a parent or guardian is in receipt of Universal Credit or equivalent benefits.

**I am delighted that in the last week the CEOs of the Co-op and Waitrose have agreed, in principle, to supplement these vouchers with additional free fruit and vegetables. Most of the other major supermarkets and convenience stores (with support from the Association of Convenience Stores) are keen to follow suit and we are in discussions with them to explore mechanisms for delivery.**

Under this recommendation, an additional 290,000 pregnant women and children under the age of 4 will benefit, taking the total number of beneficiaries to 540,000. This is estimated to cost an additional £110 million a year, plus the cost of a £5 million communications campaign.

### 4. Extend the work of the Food to the Vulnerable Ministerial Task Force for a further 12 months up until July 2021. It should collect, assess, and monitor data on the number of people suffering from food insecurity at any time, agree cross-departmental actions where necessary to support those who cannot access or afford food, and coordinate efforts across government, local authorities and the voluntary sector.

The problems of personal food insecurity will ebb and flow over the coming year, depending on what happens to the economy, but it seems almost certain that hunger will become more of a problem, not less. As the full economic impact of this crisis becomes clear, it will be vital for government to track the most vulnerable groups, identifying specific problems they face and finding targeted ways to help those who are not being sufficiently supported by the mainstream benefits system.

# Is it possible to eat well on a tight budget?

**T**HESE DAYS, poverty is not only – perhaps not even primarily – associated with hunger. It is also associated with eating worse food, and too much of it.

There is such a strong, well-evidenced correlation between income and dietary ill-health, as we can see in Figure 4.6, that it might seem surprising that the causality of that correlation is hotly debated.

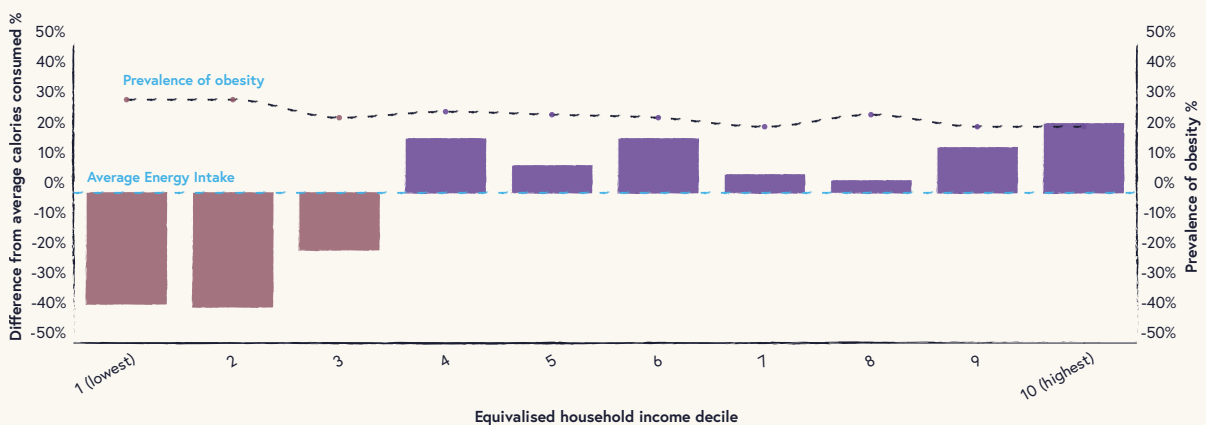
Analysis of the National Diet and Nutrition Survey shows that adults and children in the lowest income decile on average eat 42% less fruit and vegetables than recommended (the wealthiest eat 13% less). In the most deprived areas of England, the prevalence of excess weight is 11 percentage points higher than in the least deprived areas.

Figure 4.6  
People on low incomes are around a third less likely to eat their 5 a day<sup>129</sup>



Team analysis

Figure 4.7  
People on lower incomes appear to be heavier despite consuming less<sup>130</sup>



Team analysis of years 7, 8 and 9 of the National Diet and Nutrition Survey.

The cheapest processed foods consist chiefly of the cheapest (and least healthy) ingredients, such as sugar, vegetable oil and refined carbohydrates (mostly from wheat and maize). To this extent, there is an obvious trade-off between health and wealth. But there isn't much reliable evidence that it is impossible to eat a healthy diet on a tight budget.

I have an ongoing debate with a policy wonk friend about this question. Recently I sent him a paper by a group of academics from Oxford University which found that the cost of eating the Eatwell Plate – the Government's template for a balanced diet – was £5.99 per day. This is similar to the amount spent by the average UK citizen on daily food, but well above the average of £2.83 spent by those in the least affluent decile of the population.<sup>131</sup> He emailed me this response.

"I agree that western societies have a problem with poverty, but I remain unconvinced that food that is bad for you is cheaper than food that is good for you.

What evidence is there for this proposition? Veg is very cheap. Asda will sell you peas for 68p a kg, which is cheaper than their cheapest oven chips. No-one thinks that there are a meaningful number of people out there who can't afford economy frozen chips.

Asda have a special offer on cheese and tomato pizza today – 70p. That is about as low as a prepared ready meal goes (their cheapest frozen ready meal is 90p).

For 70p, I can get a jacket potato (200g, 13p), 10g of butter (5p), one chicken drumstick (125g gross, 72p net, 23p), 80g of peas (5p), and 240g of broccoli, carrots and cauliflower mix (24p).

My meal would fill you up much more: it weighs 600g rather than 330g, and it has 488 calories rather than 391. It is really hard to find a cheaper thing than veg. My meal has bulk and protein (chicken, peas).

Many fruit items are cheap as well. Bananas are 18p in Iceland today, and peaches are 9p in Tesco. That is cheaper than a KitKat or packet of crisps, although I accept that there are hyper-economy biscuits that are cheaper still. Grapes are £1 for 400g in Asda today. Black or Green. I bought both! Apples are 20p each (your choice of Braeburn, Gala, Golden Delicious or Granny Smith).

Markets tend to be cheaper still for fruit and veg, so using supermarket prices means I have a bias against myself.

I was poor as a child, but that was a long time ago. It is tough being poor. You are tired most of the time. The lure of the chippy is real. But the problem – I think – is poverty and exhaustion, not the price of bread, yoghurt, or vegetables."

Strictly speaking, he has a point. Many of us know people who manage to eat healthily on a very tight budget – often highly-skilled cooks from the thrifty post-war generation. But those kitchen skills and confidence are not, now, in broad circulation.

It may be possible in theory (and for some, in practice) to assemble a healthy meal for just 70p. But the practicalities are not straightforward. You can't buy a single chicken drumstick, a handful of peas or a 10g blob of butter from the supermarket. You have to buy a pack of drumsticks and a bag of frozen peas and a pack of butter, which would immediately take you over the 70p threshold. Assuming you can pull together enough money to pay for all this, you could store the extra food to make future meals: but only if you have a big enough freezer. (Or any freezer at all.)

The dietary inequalities we see in Figures 4.6 and 4.7 are caused by many interlocking, and well-documented,<sup>132</sup> factors: stress, and the impact stress has on appetite and energy, lack of equipment (1.9 million people are living without a cooker and 900,000 people without a fridge)<sup>133</sup>, poor skills, the cost of energy and a fear of waste that comes from having no margin for error.

I discussed this last point with Naomi Eisenstadt, who was the first director of New Labour's Sure Start Programme. "The women that I worked with knew what a healthy diet was, but they couldn't afford the risk of food waste," she told me. "Better-off mothers may say to their children, 'Well, try it – if you don't like it, you can have something else.' Instead, poorer mothers fed their children the less healthy stuff that was certain to be eagerly received."

Daisy Stemple – a member of my Advisory Panel – explains with characteristic eloquence the multiple pressures that shape the food choices of people living in poverty.

## Daisy's Experience – 2019


I think one of the main things I'd like people to know is that when you're poor your food budget has to be flexible. It's not always a priority. My girls can't walk around with shoes that don't fit, or no coat in the cold weather, but they can eat beans or egg on toast multiple times a week. So, if there is an unexpected expense like shoes, or an unusually high heating bill, my food budget will be the first to take a cut.

It's this that makes school dinners so important to me. If you know your child has had a big, healthy meal at school it takes the pressure off at home. Which is why during school holidays my food costs increase dramatically. This summer I was really lucky to have the Summer Kitchen at my girls' school. Three evenings a week we could go and eat for free in the school canteen and sometimes there would be extra fruit or veg or tins to take home. This was a huge help to us, and the girls really enjoyed it as there was sports equipment and craft stuff out in the school field at the same time.

In September I went on to Universal Credit, which meant for 5 weeks I had no income at all.<sup>†</sup> Having the Summer Kitchen in August meant I could save up as much as possible and give us a bit of a cushion for when September hit - with two lots of uniform to buy!

Another point I'd like to get across is the fact that it IS cheaper and easier to eat less healthy food. I work three jobs, and cooking from scratch around them is very hard indeed. I also have a TINY kitchen, so I don't have the storage space to bulk buy or batch cook. Healthy Start vouchers, which were fantastic, ended when each of my girls turned four, so I don't have as much to spend on fresh fruit and veg and don't have the freezer space for much frozen. But it's true that these are all choices I make, I could (and do) cook from scratch if I really put the effort in every day. It's just more effort than more well-off people need to make.

It's not just fruit and veg though. To illustrate my point, I'll give you some examples. Peanut butter with palm oil and sugar added is a third of the price of the good stuff that's just squashed peanuts. Yoghurts with sweeteners are a quarter of the price of organic no added sugar ones.



Four in ten working-age people in the UK have less than £100 in savings.

White bread that has an ingredient list full of chemicals is a quarter of the price of a store baked wholemeal loaf. A bottle of squash is cheaper than juice. I could go on and on.

Feeding my kids nutritious food is such an enormous priority for me and most of the mums I know who are in the same position. I would rather keep my heating turned off and go without three meals a day myself if it means buying better quality food for them, but I just think there must be a better way. I live in an area surrounded by farms and the sea; why is it cheaper and easier for me to feed my family powdered mash and sausages with a 5% meat content (we're actually vegetarian, but looking at my friend's shopping was an eye opener) than local veg and decent food? I know a sack of potatoes from my local farm shop is cheap and good quality, but I can't get there without a car.

One last point is that an awful lot of the women my age I know don't have a clue how to cook. This is an area of multi-generational poverty. When I was little, I didn't know any adults who weren't on the dole. The majority of my peers grew up eating crap, or very simply indeed. We've lost the skills our nans had. Women like me don't make toad in the hole anymore because Yorkshire pudding is a cheap way to bulk out a dinner. We buy frozen Aunt Bessie ones cos they're £1 in Iceland. The only reason I'm any different is because my mum's a hippy and I know how to cook."

<sup>†</sup> Daisy decided, in common with many recipients, that she did not want to take an advance to cover the five week wait. Source: Health Select Committee. (2020). Written Evidence from Joseph Rowntree Foundation. House of Commons. [online]. Available at: <https://committees.parliament.uk/writtenevidence/1909/html/>





## **Chapter 5**

The National Food Strategy: Part One – July 2020

# **1846 and All That - Food Security and Trade**

Although the food supply chain proved resilient in the COVID-19 crisis, the convulsions it suffered remind us that there is no room for complacency when it comes to food security.

We look at the role of global trade in our food supply, discuss the principles that should sit behind the UK's future trading relationships, and make three recommendations for the Government's approach to ongoing talks.



**W**HEN the COVID-19 pandemic began to sweep through the UK in March, you could have been forgiven for thinking we were weeks away from serious food shortages and a return to wartime rationing.

As supermarket shelves were stripped bare by people stockpiling, some commentators were quick to argue that the UK must start growing more of its own food to protect us from the vagaries of our long global supply chains.<sup>134</sup> Others called for the immediate rationing of fruit and vegetables,<sup>135</sup> and the clamour grew loud enough for the Government to deny that it had any such plans.<sup>136</sup>

Four months later, it is striking to see how quickly the system has righted itself. Although some products, such as pasta and tinned tomatoes, were initially in short supply, the UK as a whole always had plenty of calories to feed itself.<sup>†</sup> Supermarket shelves are now fully stocked again, offering the cornucopia of choice to which the modern consumer has become accustomed.

But this doesn't mean there was never anything to worry about. And it certainly doesn't mean we can afford to be complacent.

The fact that the system didn't, in the end, break down is largely due to the nature of this particular crisis. In global economic terms, the COVID-19 pandemic has manifested itself as a succession of very local, very severe restrictions on the demand side of the economy, taking place over a period of months worldwide. These restrictions were imposed by governments, and governments were therefore able to take the necessary measures to ensure the continued production and transport of food. While the virus itself might be considered an "act of God", outside human control, the lockdowns have been voluntary responses, imposed and mitigated by governments.

The businesses that have been hardest hit by the pandemic are those providing non-essential products or services that require you to leave the house – such as those in my own sector, hospitality.<sup>137</sup> The collapse of large swathes of the restaurant industry is likely to cause terrible economic hardship and a surge in unemployment.<sup>138</sup> But things could have been even worse.



**The fact that the food system didn't, in the end, break down is largely due to the nature of this particular crisis.**



Climate change is currently the biggest threat to food security: perhaps the most serious the world has ever seen. The problems it creates are likely to be disruptions of supply rather than demand. One worst-case scenario would be the failure of multiple harvests worldwide. If that happened, there might not be enough food to go around. This is a food security issue on a grand scale.<sup>139</sup>

<sup>1</sup> The most vulnerable members of society faced, and still face, serious and specific difficulties with food security, as outlined in Chapter 3.

### Growing our own

It is often assumed that growing more food locally is the best way to improve the security of the food supply. But the opposite can sometimes be true.<sup>†</sup> Indeed, the fragility of an entirely local food supply is one of the reasons why, since the mid-nineteenth century, our island nation has relied on imports for a significant part of our diet.

The Corn Laws that were introduced after the Napoleonic wars, effectively banning imports of wheat, were justified at the time as a way of protecting British supply. But they were widely recognised (and loathed) as protectionism: a method of ensuring British landowners could command a high price for their crops, thereby enriching the gentry at everyone else's expense.

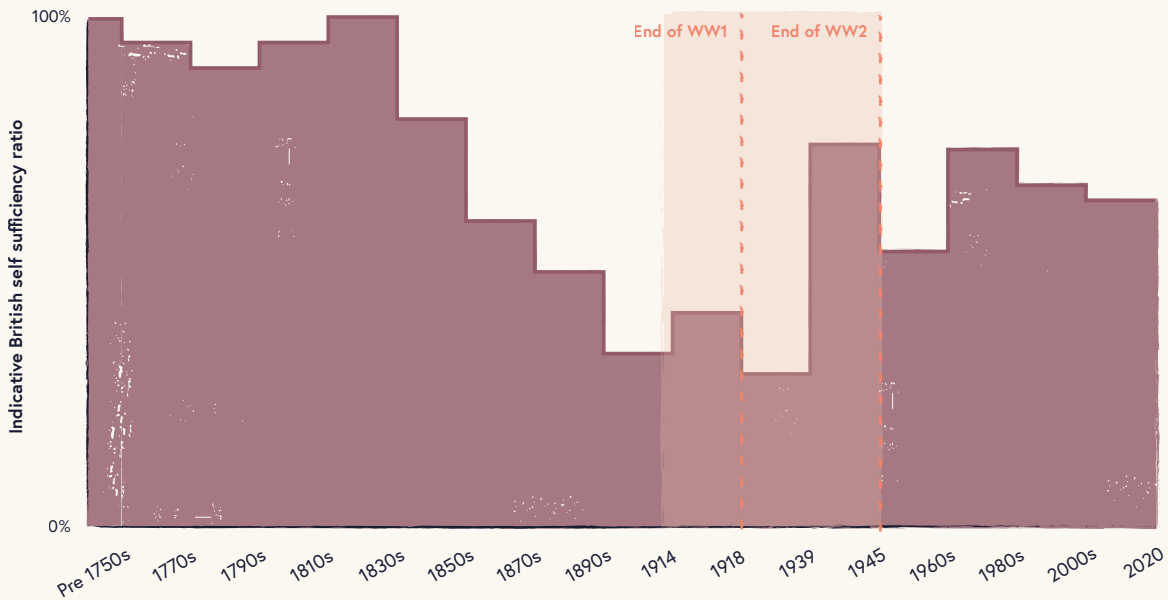
The abolition of the Corn Laws in 1846 has traditionally been seen as a victory for Britain's rising class of industrialists against the landed gentry, because it freed up a huge workforce to move from the land into the factories. But the historian Boyd Hilton argues that food security was an equal consideration. Widespread harvest failures, combined with the Irish potato famine the year before, had demonstrated with painful clarity the dangers of relying exclusively on local agriculture.<sup>140</sup>

The "self-sufficiency" of the British food system – i.e. the proportion of our food produced in this country – has oscillated since then, as can be seen in Figure 5.1. Towards the end of the 19th century, a growing population was largely fed on imports from around the Empire and beyond, brought in by Britain's merchant navy and guarded by its vast fleet. In 1911, Rudyard Kipling explained how...

**the bread that you eat and  
the biscuits you nibble,  
The sweets that you suck and  
the joints that you carve,  
They are brought to you daily  
by All Us Big Steamers  
And if any one hinders our  
coming you'll starve!<sup>141</sup>**

During the two World Wars, their coming was hindered – and Kipling's warning was very nearly realised. UK self-sufficiency soared again, as the nation was urged to "dig for victory".<sup>142</sup> Farmers did their patriotic duty by grubbing up hedgerows in order to grow food on every available bit of land. After the last war, agricultural subsidies were introduced in an effort to ensure the nation's food security.<sup>143</sup>

Figure 5.1  
**The UK has been a net importer since the 1830s<sup>144</sup>**



Axis intervals uneven 1914 - 1945 to capture world war one and two.

In 1973, Britain joined the Common Agricultural Policy, with its system of subsidies largely designed to encourage food production within the EU. This led to surpluses, and eventually the famous butter mountains.<sup>145</sup> The subsidies were tweaked, and UK self-sufficiency began to decline again. Currently 64% of the total food consumed in the UK is produced domestically – although the figure for food that can be grown most efficiently in Britain's climate, such as meat and cereals, is rather higher.<sup>††</sup>

In Part Two of the National Food Strategy, I will examine in detail the issue of self-sufficiency. Is there an optimal percentage number that we should be targeting, whether in aggregate or varying across the seasons and for different foodstuffs? Or should we be using different measures altogether to quantify our food security? For the purposes of Part One, however, it must suffice to acknowledge that some established import routes for food are desirable, and absolute autarky is not.

<sup>†</sup> As the Irish economist Robert Torrens wrote in 1815, "A free internal trade between the districts of a considerable agricultural country, obviates famine; but, a free external trade between all growing countries, would render it next to impossible that we should be visited even by a dearth". *An Essay on the External Corn Trade*. London: J.Hatchard, 1815, p. 28.

<sup>††</sup> Based on the value of agricultural products leaving the farm, just over half (53%) of our food we consumed in 2019 was grown in the UK. Some of the food we grow is exported. If the food we export was consumed in the UK, our self-sufficiency ratio would be 64% for food in general, and 77% if we consider only the sorts of food we'd typically be able to grow in the UK (e.g. wheat, meat, dairy and root vegetables). Source: Department for Environment Food and Rural Affairs. (2020). *Agriculture in the United Kingdom 2019*. HMG. [online].

The global food system currently accounts for 20-30% of greenhouse gas emissions.

### How do we want to trade?

As a result of our exit from the European Union we can, and must, decide for the first time since 1973 how we want to shape our trading relationships with the world. We can, if we choose, make radical changes to how and on what terms we buy our food. 2020 is the 1846 of our time.

The public debate over what our new trade deals should look like has been categorised crudely as a fight between protectionism and unfettered globalism – or as one newspaper put it, the Waitrose Protectionists vs the Lidl Free Marketeers.<sup>146</sup> This is an entertaining idea, but not a helpful one. In all the conversations I have had with farmers, academics, cabinet ministers, business leaders and trade negotiators, I have encountered very few who take either of these extreme positions.

Instead, most belong to a category that I will call the Progressive Free Trader. They believe in the power of free trade to improve the lot of mankind globally, but also that trade can, and ideally should, reflect certain values. No-one I have met thinks we should be importing food produced in ways that destroy the environment, accelerate climate change or inflict misery on animals.

One of the best arguments for free trade is that, by making things where it is most efficient to do so, mankind can create more wealth<sup>i</sup> and lift more people out of poverty. If each country specialises in the things it does best – through whatever accident of geography, climate, politics or demographics – it can produce and sell things more cheaply, and thus we all end up with more money in our pockets. This idea, known as the law of comparative advantage, was originally proposed by the economist David Ricardo in 1817.<sup>ii</sup> (Some historians believe that reading Ricardo convinced Robert Peel that the Corn Laws had to go, even though most of his own party disagreed and voted against the Prime Minister. He was forced to resign as soon as the Act was passed.)

Ricardo's theory is vindicated by history. Between 1820 and 2015 the proportion of people living in "extreme" poverty across the globe fell from 84% to 10%.<sup>147</sup> Over the same period, life expectancy rose from just under 30 to just over 70, while child mortality fell from 43% to 4.5%.<sup>148</sup> Even if you believe that the wealth generated by free trade has been grotesquely unfairly distributed, it is hard to argue that the global reduction in poverty, or increase in life expectancy, would have happened without it.

It is now more essential than ever that we harness the power of free trade. If we are to overcome the economic effects of the COVID-19 pandemic and address the climate crisis, every country needs to do what it does most efficiently. But these new challenges require us to redefine what we mean by "efficient". We must still produce things where they cost the least. But we need to understand these costs not just in terms of pounds, euros or dollars, but in terms of carbon emissions, biodiversity losses or the exhaustion of scarce water resources.

The global food system currently accounts for 20-30% of greenhouse gas emissions and is the single greatest UK (see Chapter 6). The British government has recognised the fundamental need to transform modern agriculture to address these issues. Its Future Farming and Countryside Programme will, if properly implemented, create one of the most enlightened agricultural systems in the world. Its system of grants, subsidies and legislation is designed to incentivise farmers to work their land in ways that protect the environment, promote animal welfare and restore the landscape.

But this will only work if our trading arrangements reflect the same values. Otherwise, businesses and consumers may simply replace food that has been produced in this country to high ethical standards with cheaper imported food produced at lower standards. This would make the whole future farming programme a charade. We would not be preventing the harms we want to prevent – carbon emissions, biodiversity loss, animal cruelty – but simply moving them overseas. It would discredit this enlightened model of farming and make it less likely that other countries adopt it. And it would also risk putting UK farms out of business by subjecting them to unfair competition.

The Government recognised this in the 2019 Conservative manifesto, pledging: "In all of our trade negotiations, we will not compromise on our high environmental protection, animal welfare and food standards."

So far, so consensual. The disagreements begin when it comes to putting these principles into practice.

Given the vigour with which campaigners are fighting to prevent an influx of low-standard food into the UK, it may surprise the casual observer to learn that we already allow the import and sale of food produced to standards that would be illegal here.

Supermarkets sell Danish bacon from pigs whose mothers were kept in sow stalls, for example. Sow stalls were banned in the UK in 1999 on the grounds of cruelty. Likewise, the legal maximum stocking density for chicken is 42 kg/m<sup>2</sup> in the EU,<sup>149</sup> compared to a somewhat more humane 39 kg/m<sup>2</sup> in the UK<sup>150</sup>

Such divergences are not restricted to animal welfare standards. We currently import large quantities of oilseed rape, which has been grown from seeds coated in neonicotinoids: a pesticide banned across the EU and thought to be partly responsible for the decline in the number of bees and other pollinators. Livestock reared in the UK are fed genetically modified soya that would be illegal to grow here.

In an ideal world, we would not allow such anomalies. We would, as Neil Parish, Chair of the House of Commons select committee for the Environment, Food and Rural Affairs, proposed in an amendment to the Agriculture Bill,<sup>151</sup> stipulate that any "any agricultural or food product imported into the UK under [a trade] agreement will have been produced or processed according to standards which are equivalent to, or which exceed, the relevant domestic standards and regulations".<sup>151</sup>

<sup>1</sup> Strictly speaking it is not wealth that it creates, but stuff. As Ricardo put it, the "extension of foreign trade...will very powerfully contribute to increase the mass of commodities, and therefore the sum of enjoyments". The object of trade in his mind is happiness, not wealth. Money is just a mechanism to achieve happiness and an (imperfect) way we seek to measure it.

<sup>11</sup> Ricardo's law of comparative advantage also explains why British workers (were) increasingly moved from the fields to the factories in the second Industrial Revolution of the late 19th century. The country could make more money per head of population if we focussed on making things to sell abroad rather than farming. The profits from the exports could then be used to buy imported food.

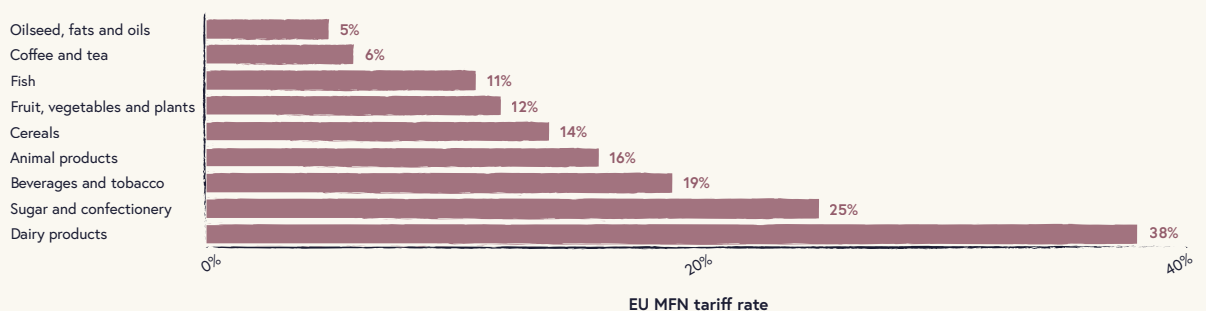
<sup>111</sup> One of over 300 amendments proposed by MPs and Lords

In practice, however, few countries would be willing to trade with the UK on such terms – and almost certainly not the EU or the US, the UK's two largest trading partners.<sup>152</sup> It would also prevent us from carrying over many of the trade deals with non-EU countries that we benefited from while in the EU – such as the CETA arrangement between the EU and Canada, which does not prohibit the import of crops grown using neonicotinoids.<sup>153</sup>

We could find ourselves without any viable trade deals at all, thereby threatening both our food security and our prosperity. A purist Progressive Free Trade approach would end up progressive, but trade-free.†

Another obstacle to a purist approach is the World Trade Organisation (WTO). One of the stated objectives of the WTO is to tackle protectionism, to ensure that developing countries can compete on a more level playing field. Protectionism is, and always has been, most rife in the marketplace of food. The average tariff on agricultural goods coming into the EU from nations that do not have a trade deal (known as the Most Favoured Nation or MFN tariff) is 11%, compared with 4% for non-agricultural goods.<sup>154</sup> See Figure 5.2.

Figure 5.2  
Food tends to have high tariffs compared to other goods<sup>155</sup>



MFN tariffs apply where no trade deal exists.



## **It may surprise the casual observer to learn that we already allow the import and sale of food produced to standards that would be illegal here.**



The WTO is institutionally suspicious about countries seeking to restrict international trade by stealth. It therefore stipulates that, while countries can put tariffs on any good, the tariffs must be the same for all nations except those with whom you have a trade deal. Countries are also not allowed to ban the import of goods outright. Exemptions to these rules are set out in Article XX of the General Agreement on Tariffs and Trade (GATT).<sup>156</sup> They include measures necessary to protect public morals (originally intended to prevent trade in pornography, but recently used to stop the trade of seal products into the EU), measures to protect "exhaustible natural resources" and measures to protect human, animal or plant life or health.

However, these exemptions do not cover the way goods are produced. This is because there is a long history of countries using process-based stipulations as a way of discriminating against other countries. Famously, in 1904 Germany cut its tariffs on the import of "large dappled mountain cattle reared at a spot at least 300 metres above sea level and having at least one month's grazing each year at a spot at least 800 metres above sea level".<sup>157</sup> While the tariff reduction was theoretically open to everyone, in practice it benefited only Switzerland.

As far as the WTO is concerned, we cannot ban chlorinated chicken because of the production process alone. We could legally ban it on the grounds that the chlorine could make people sick (for which there is little to no evidence), but not on the basis that the

chlorine is required as a result of production practices that are harmful to the welfare of animals (for which there is some). The EU's ban on chlorinated chicken, which was made on public health grounds, has been challenged by the US under WTO rules. (The appeal was suspended in 2009<sup>158</sup> in the hope, thus far in vain, of finding a negotiated solution.)

The same is true of hormone-reared beef. This was first banned by the EU in 1981 following the "hormone scandals" of the late 70s, in which Italian schoolchildren showed signs of premature development which were thought to be linked to hormones in imported veal. President Reagan imposed \$100 million in retaliatory tariffs against the EU – including 100% tariffs on beef, Roquefort cheese, truffles, chicory, preserved tomatoes, and Dijon mustard. When the WTO was formed in 1995, the US lodged an appeal against the hormone beef ban. After much legal arm-wrestling, the case was finally resolved when the EU and the US agreed a "grain-fed" beef quota, which allows 45,000 tonnes of hormone-free, grain-fed beef to be imported into the EU tariff-free each year.

The EU is the only trading bloc that bans hormone-injected beef. Chlorine-washed chicken is also permitted essentially everywhere else. The Singaporeans banned it until 2016, but withdrew the ban under US pressure. Even countries such as New Zealand, which many believe to be progressive, allow it in.<sup>11</sup>

<sup>1</sup> Perhaps not quite trade-free: we would still trade with the world on WTO terms, but this would both harm the UK's ability to export its goods and services around the world and drive up prices in the UK

<sup>11</sup> There is less of a consensus on the import of pork from pigs treated with the growth promoter ractopamine. It is banned in China and Russia as well as the EU.



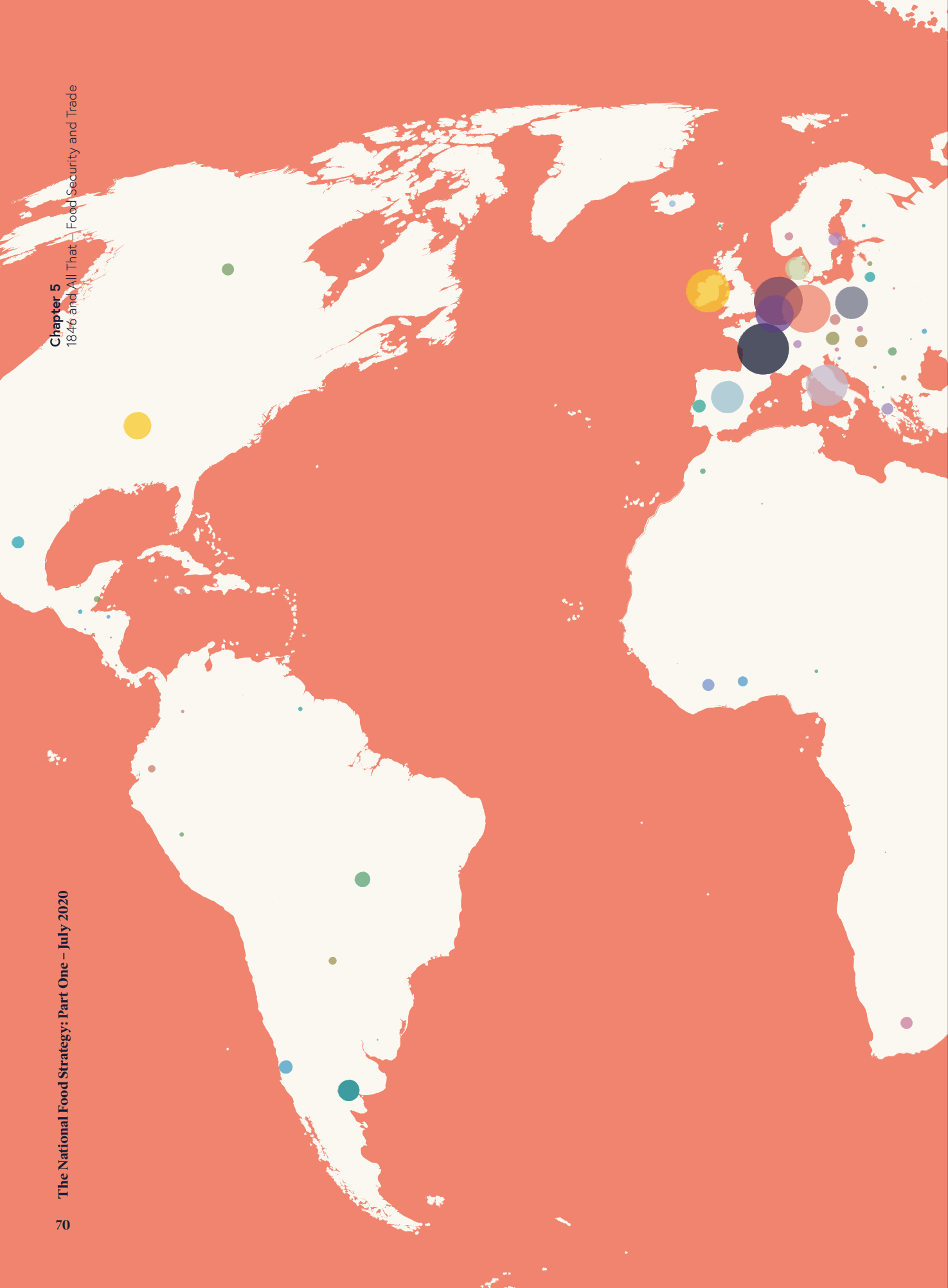


Figure 5.3 Origin of UK Food Imports  
**The UK imports food from 160 countries**

Bubbles sized by 2018 UK food imports (by dollar value).



## Going global

It is not surprising that the debate over our future trading model is heated. This the first time we have needed to debate these issues in 40 years. The nub of it, however, is not whether we should have an ethical or unethical trading policy. Rather, we need to be asking what the best way is to achieve our common aims: finding new markets for our products, reducing poverty here and abroad, safeguarding people's health, protecting the environment, improving our own food security, and ensuring the welfare of animals. Do we follow a globalist model – freeing up our trading system to the greatest possible extent – or attempt something more regulated?

A range of arguments are made for the globalist model. They generally include some or all of the following:

1. The best way to spread our values is to link our markets by trade rather than becoming isolationist.
2. There are huge opportunities for us to snap up: the US is the world's second largest importer of lamb, for example.
3. A globalist approach doesn't mean a free-for-all. It requires structural support from two parallel systems: the WTO, to stop protectionism and encourage free trade; and a handful of other international organisations to create a transparent rules-based system for environmental protections and animal welfare. These bodies would typically include Conference of the Parties (COP, for climate change), the Convention on Biological Diversity, Codex Alimentarius (which is responsible food safety), and the World Organisation for Animal Health (OIE), which currently has the legal responsibility for setting global animal welfare standards. The WTO's job – its essential purpose – is to ensure the freest possible trade given the global standards set by the other organisations.
4. The risk to our farmers of being undercut by cheaper imported goods is not as great as people make out. Without any tariffs, US hormone injected beef, for example, would only be marginally cheaper than ours by the time it reaches these shores, on account of the freight costs.<sup>†</sup> Chicken from the States would have to be frozen, which would massively reduce the market for it. (In 2019, 94% of the total take-home volume of poultry and game was fresh,<sup>††</sup> and fresh meat accounted for 85% of sales of meat products in UK retailers).<sup>†††</sup>
5. Food standards in the US and other countries are not necessarily lower than in the UK or EU. In some areas, they may even be higher (see Figure 5.4 for a comparison of UK and US standards).
6. Where there are large differences in cost – Brazilian beef, for example, is typically much cheaper than ours<sup>159</sup> – quotas could be introduced into the deals to prevent UK farmers being undercut. You can also include "snap back" clauses which allow you to put tariffs up again if the UK were being flooded with imports.
7. In addition, you could subsidise food that is produced to higher standards in this country, effectively reducing its cost.
8. Once all that is in place, consumers can make up their mind if they don't want to buy food produced in this way.<sup>††††</sup>
9. If we attempt to force our own values onto our trading partners, we won't get (m)any trade deals. The EU is the only bloc that has attempted this approach. It has done so in an extremely small number of areas. And where it has been successful, it has only been in return for concessions elsewhere.
10. Requiring poorer countries to meet our standards would in many cases make it difficult or impossible for them to export to us. We are rich enough to afford the luxury of a conscience: we should not force poorer countries to carry burden of our ideals.
11. Finally, if challenged on whether the benefits of trade deals are even worth it (DIT has estimated that a trade deal with the US, for example, would only increase GDP by 0.16% over 10-15 years),<sup>160</sup> the globalists retort that these estimates are not a reliable prediction of the future. They may have a point on this. As the American writer Evan Esar put it: "An economist is an expert who will know tomorrow why the things he predicted yesterday didn't happen today."

**I do not subscribe to this argument.**



Figure 5.4

Table of UK and US standards - Examples

	UK standard	US standard
<b>Laying hens</b>	All cages must have a perch, nest box and litter and provide at least 750 cm <sup>2</sup> of space per bird.	No federal standard; voluntary guidelines suggest cages should be at least 432 cm <sup>2</sup> . But California will require entirely cage-free housing from 2022, with other states expected to follow.
<b>Broiler chickens</b>	Stocking density may not be higher than 39 kg/m <sup>2</sup> . Chemical washes banned.	No federal legal maximum stocking density. Chemical washes widely used.
<b>Beef cattle</b>	Growth hormones banned since 1981.	Growth hormones widely used.
<b>Dairy cattle</b>	Bovine somatotropin (BST) hormone banned since 1990. Maximum somatic cell count (SSC) 400,000.	BST widely used. SCC maximum 750,000.
<b>Animals in organic systems</b>	Antibiotic use permitted for therapeutic use on a veterinarian's prescription.	Total ban on antibiotic use.
<b>Pigs</b>	Sow stalls banned since 1999. Ractopamine (beta-agonist used as growth promoter) banned.	Sow stalls legal in 41 states (but banned in California and several others). Ractopamine used in 60-80% of pigs.
<b>Welfare in transport</b>	Maximum legal journey time 12 hours; livestock density set by law.	Maximum journey time 28 hours; no maximum legal stock density.
<b>Antibiotic use</b>	Average antibiotic use in food animals limited to 29.5 mg/kg.	Average antibiotic use in food animals limited to 160.7 mg/kg. (Except organic).

<sup>†</sup> As of May 2020, US beef was ~20% cheaper than UK beef. However, these prices fluctuate but as recently as January 2020, the price difference was marginal. Source: [https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/world-beef-weekly-prices\\_en.pdf](https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/world-beef-weekly-prices_en.pdf)

<sup>††</sup> In the UK in 2019 (52 w/e 29th December 2019), fresh poultry & game accounted for 94% of the total take home volume of poultry & game purchased. Frozen poultry & game accounted for the remaining 6%. Source: Kantar FMCG data

<sup>†††</sup> In UK food retailers (excluding discounters e.g. Lidl) in 2019, fresh meat accounted for 85% of the total sales value of meat products, frozen meat for 13% and ambient meat or substitute meat products for the remaining 2%. Source: Nielsen Scantrack data

<sup>††††</sup> The argument is effectively the same as that made by the Conservative MP Gathorne Hardy in opposition to the 1860 Adulteration of Food and Drink Act: "where nothing [is] done that was positively injurious to health, why [should there be] a different law for the sale of articles of food from that which extended to the sale of calico, cutlery, and similar articles? The State ought not to pretend to protect the buyer... in the one case more than in the other".

## A pragmatic proposal

I agree that trade deals can be powerful forces for good. And I believe that Neil Parish's amendment to the Agriculture Bill – while noble in principle – would, by attempting unilaterally to force our standards on others, cause unintended damage both to our economy<sup>†</sup> and to our global environmental ambitions.<sup>††</sup> Trade deals are complicated and require compromise.

I also believe, however, that it is not unreasonable or crazily idealistic to have lines that we will not cross – and that we should require our trading partners, in return for privileged access to our markets, not to cross them either. There is no point leaving the EU in search of greater freedom, only to align ourselves, abjectly, to the values of another trading bloc.

Opinion poll after opinion poll shows that this is a view shared by the vast majority of the British public, from every demographic group. 82% would prefer to retain current standards (IPPR, March 2018; polling by Opinium, 19-22 January 2018). 93% think food standards should be maintained after EU Exit (Which?, January 2020; polling by Populus 17-18 July 2019). 81% of respondents would be concerned if the UK government relaxed laws on meat standards to secure trade deals with the USA and the rest of the world (Unison, February 2020; polling by Savanta ComRes, 24-27 January 2020).

These "red lines" would not apply to all farming standards. Some are required for particular reasons in particular areas and do not need to be observed globally.<sup>†††</sup> (It would clearly be absurd, for example, to apply the same water preservation rules to products from southern Australia and from rain-soaked Wales.) Others, however – including standards of food safety, animal welfare, and the prevention of severe environmental impacts (for example, the clearing of rainforest for beef grazing) – should be applied without exceptions. It makes no sense to impose the highest standards on our own farmers, only to transfer the harms abroad in the form of imports.

It is not enough to leave it to global quangos to raise standards. They may be effective at stamping out some of the worst practices, but they will never be able to enforce the best. The World Organisation for Animal Health (OIE), for example, works by unanimity, and its membership ranges from liberal democracies to Islamic theocracies to communist dictatorships. It is inevitably slow to question the moral and ethical principles of its 182 member countries – only 32 of which recognise animal sentience in law.<sup>161</sup>

We must work to form trading relationships with like-minded countries that address these problems; and we must be prepared to hold other countries to our standards if they want to trade with us on preferential terms.

Mechanisms already exist to put in place specific trading standards, without requiring the kind of legislative ban that would make trade deals so hard to do. US farmers can certify their pork and beef, for example, to EU standards in order to export them. Likewise, organic farmers exporting milk products into the US must be certified to US standards, where controls on the use of antibiotics in organic food are stricter.<sup>162</sup>

Rather than going into trade negotiations with our hands tied by legislation, we should take each deal on a case by case basis. Using similar mechanisms to the US, it would be possible, wherever the two sets of standards diverge significantly, to create tailored certification systems to ensure that food imports into this country meet the same standards we set for our own domestic products. Such certification systems would not be required for trading with the EU, to which we are already so closely aligned, or for deals with other countries that we hope to carry over from the EU.

There are some who argue that imposing any standards at all will push up the price of food. But standards are not the same thing as protectionism. Any new free trade agreements would open our markets to a great many new products from the US, Australia and around the world, thus creating competition and pushing down prices. Using tailored certification systems would allow us to get these deals done without compromising on our core values.

This is still a free trade policy. The EU's agricultural trade policy is openly protectionist: it protects European farmers from competition, whether that competition is fair or not. It applies the same prohibitive tariff on an American steak whether it comes from a barren feedlot or an organic family farm whose cattle are fed beer and given daily massages.

The system I propose here would be much more liberal: all of the products we currently import would continue to come into the UK, and more would be added. It would allow us to continue trading with the EU – which is, if not perfectly aligned with our domestic standards, as close as you can get – with no tariffs and no quotas.

But it would also allow us to get new deals over the line without having to surrender our standards to the pressures of realpolitik.

At present, under EU rules, the poorest developing countries have tariff-free access to our markets whether or not they reciprocate. This is the right thing to do given the UN's Sustainable Development Goal 1 to end poverty by 2030, and I would not propose to restrict it.

The trade deals we do now will last for 25 years. The Government has stated that it wants to have deals covering 80% of UK commerce in the next three years.<sup>163</sup> We must get them right. I believe that this approach – firm on our principles, but more flexible than the legislation proposed by Neil Parish and others – offers the best chance of reconciling all our competing interests.



### Recommendation for Government

The Government should only agree to cut tariffs in new trade deals on products which meet our core standards.<sup>164</sup> Verification programmes – along the lines of those currently operated by the US Department of Agriculture to enable American farmers to sell non-hormone-treated beef to the EU – should be established, so that producers wishing to sell into the UK market can, and must, prove they meet these minimum standards.

These certification schemes should not only cover animal welfare but also environmental and climate protections where the impact of a particular product is severe (for example, we should not cut tariffs on beef reared on land recently cleared of rainforest).

The full set of core standards should be defined by the newly formed Trade and Agriculture Commission.

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<sup>1</sup> Since even the European Union is not compliant with the full panoply of UK food standards, we could be left trading on WTO terms with the UK's largest trading partners – the EU and the US – as well as many other countries. One of the prices of being a global leader on animal welfare is that most of our trading partners are well behind us.

<sup>164</sup> At the same time, there are no UK standards that require beef not to be grown on land cleared of tropical rainforest – for the obvious reason that there are none in the UK. (Or at least they were cleared many thousands of years ago.) Even if it were workable, requiring our trading partners to meet UK standards would not eliminate the environmental harm that we should try to avoid in our trade policy.

<sup>165</sup> Indeed, some environmental standards are not required universally even in the UK. Restrictions on farmers' use of nitrate-based fertilisers are stricter in designated Nitrate Vulnerable Zones than elsewhere.

<sup>166</sup> While this would not amount to an outright ban – which could be challenged in the WTO – the UK's tariffs on imports of animal products without a free trade agreement are sufficiently high that very little noncompliant product would be imported.

### Compromise and Scrutiny

Compromise is not in itself a mark of failure. On the contrary, it is the prerequisite of every successful negotiation. As the UK government conducts its trade negotiations with the world, it will need to combine idealism with realism, reflecting carefully on what compromises it will and will not make.

Only Ministers can conduct these negotiations. There is a long-standing (and pragmatic) precedent that Parliament does not involve itself in every offer and counteroffer of complex treaty negotiations. But it is important that Government decisions – especially those with such deep and long-lasting consequences as international trade deals – should be open to scrutiny from both Parliament and the public. Scrutinised decisions are likely to be better decisions. Moreover, it is important for the democratic legitimacy of these deals that they be made in a spirit of openness.

This is why every major trading nation or bloc has a process for scrutinising its own trade agreements before they are ratified. There are two elements to this process, although not all countries use both. The first is a government-commissioned assessment of the impact of any new trade deal on, variously, the economy, society and the environment. The second is a requirement for trade agreements to be formally approved by the legislature. In Figure 5.5 we show some of the ways that other trading nations (the G7 and the antipodean countries) go through this process.

Figure 5.5

## Scrutiny of trade agreements

	Impact assessment	Legislative approval
<b>Australia</b>	The government completes a National Interest Analysis and a Regulation Impact Statement once negotiations are concluded. These documents mainly cover economic and fiscal impacts. They are reviewed by the Joint Standing Committee on Treaties (a cross party committee similar to a select committee), which reports on them before the implementing legislation goes to Parliament.	Parliament must vote on legislation to implement the trade agreement only where it requires changes to national laws. However, tariffs are set in statute in Australia so this also effectively gives parliament a vote on trade treaties. For TTIP, for example, the House spent two days debating the treaty and the Senate one day.
<b>Canada</b>	The government carries out a wide-ranging assessment of the impact of any trade agreement. Since 1999, this has included a Strategic Environmental Assessment. A draft assessment is released when negotiations begin and a final assessment when they conclude.	As in Australia, Parliament does not have a formal vote on treaties. The executive must lay a deal before Parliament for 21 days, before any action to implement the agreement is taken. But again, as in Australia, Canada's tariff is set in statute. So Parliament inevitably needs to vote on the deal as a whole as well as any implementing legislation. CETA was debated by the House for thirteen days and the senate for four days with eight days of committee hearings.
<b>EU</b>	Independent consultants perform a Trade Sustainability Impact Assessment (TSIA) to consider the impacts of the deal on the economy, society, and the environment. The TSIA is published before the agreement is finalised and the European Commission must explain how it proposes to respond to it.	The International Trade Committee of the European Parliament reports on the proposed agreement. To be ratified, it must have the approval of a majority of members of the European Parliament. It then goes to the Council of the European Union (informally known as the Council of Ministers) for their agreement by qualified majority (55% majority representing 65% of the EU population).
<b>New Zealand</b>	The government prepares a National Interest Analysis (NIA) once negotiations have concluded. The NIA is published and presented to Parliament for the scrutiny process. A parliamentary select committee then produces its own report on the agreement based on extensive consultation before a final decision is made.	Parliament must vote on legislation to implement the trade agreement. In effect this means that the treaty is only voted on by the house if it requires a change in domestic legislation.
<b>USA</b>	The independent US International Trade Commission has a statutory responsibility to provide a report to the President and Congress on the impact of any proposed trade agreement on the US economy. In addition, the US Trade Representative publishes an environmental review of major trade agreements following public consultation.	Congress sets out ground rules for the administration in negotiating trade deals. Once the deal has been negotiated, Congress passes a law to approve the treaty. The treaty cannot be amended, and a vote cannot be delayed by filibuster. The Senate can pass it with a simple majority, rather than a 60/40 majority.
<b>Japan</b>	No formal requirement	The approval of the National Diet (the Japanese parliament) is required for any trade agreement to come into force.
<b>Switzerland</b>	No formal requirement	All trade agreements must be approved by the Federal Assembly (the Swiss parliament). If 50,000 Swiss citizens request, they must be put to a referendum.



Because the UK has not negotiated independent trade agreements for almost fifty years, we do not yet have an established procedure for scrutinising them. We must develop one fast.

In February 2019, the Government committed to publishing a scoping assessment at the start of new trade deal negotiations. (The scoping assessments for negotiations with the US, New Zealand and Australia were all published earlier this year.) It also committed to publishing a final impact assessment as each deal concludes.<sup>164</sup> This will cover the impacts on GDP and trade, as well as labour and environmental impacts. Environmental impacts considered will include the likely effects on greenhouse gas emissions, energy and renewables, and other environmental metrics such as resource use and transport emissions.

In addition, the Trade Secretary, Liz Truss, recently announced the creation of a new Trade and Agricultural Commission, to publish a report on the impact of any trade deals on UK farmers.<sup>165</sup> Its remit is to identify new opportunities for British exports; to consider how the government can ensure that British farmers are not undercut by food produced to lower standards, taking into account the interest of citizens both here and in developing countries; and to set out how we can engage the WTO to raise animal welfare standards worldwide.

This commission is welcome, as is the commitment to publishing a final impact assessment. Together, these measures will give us a more rigorous assessment process than Australia, New Zealand, Japan or Switzerland – as shown in Figure 5.5. However, it will still leave us with weaker assessment arrangements than the USA, the EU and Canada.

Neither of the Government's proposed reports will be independent. The impact report will be produced by the same department – the Department of International Trade – that has been responsible for negotiating trade deals, and that inevitably wants to see them implemented. This creates a clear conflict of interest, and, in my view, will undermine public trust.

Nor will these reports – or the Commission – cover the full range of possible impacts: economic productivity; food safety and public health; the environment and climate change; society and labour; human rights; and animal welfare.

As a newly-independent trading nation, the UK should aspire to a "gold standard" level of scrutiny. This would best be achieved by commissioning an independent impact report covering all the possible impacts, which

could be presented alongside a Government response when any final trade treaty is laid before Parliament.

As for legislative approval: the closest thing we have to a mechanism for Parliamentary scrutiny of trade deals is contained in the Constitutional Reform and Governance Act 2010 (CRAG). Among a package of constitutional reforms introduced by Gordon Brown's government, there is a section on the ratification of treaties. This was introduced after Jack Straw (the former Foreign Secretary) expressed incredulity at how easy it had been for him to sign treaties without Parliamentary scrutiny.

CRAG was designed for scrutinising all international treaties rather than specifically trade deals (we were still in the EU at the time, so that element was not required). It doesn't serve either purpose very well. The Lords Constitution Committee described it last year as "anachronistic and inadequate".

Here's how it works. The Government must lay a treaty before Parliament for 21 days before it is automatically ratified. A motion to delay the ratification can be put before the House of Commons, but only during an opposition day debate (or, strictly, in the unlikely event that the Government proposes the motion itself). If a straight majority vote in favour of such a motion, the treaty will be blocked for 21 days. MPs can then keep repeating this process ad infinitum, as long as they hold each vote within the 21-day period.

Leaving aside the peculiarity of a system that forces MPs to keep batting away an unpopular treaty forever, the logistics are painful. There are only 20 days allocated for opposition day debates in every parliamentary session (which typically lasts for a year). This means there might not be an opposition day debate scheduled at all during the period in which a trade agreement is submitted to Parliament. And even if there is, and the motion is won and the deal delayed, there might not be another opposition day debate within the 21-day window for securing another vote to delay. The longer MPs try to keep up this game of legislative paddleball, the harder it becomes for them to hit the ball.


When it comes to legislative scrutiny of trade deals, therefore, this country is under-served. Indeed, all the countries in Table 5.5 require more parliamentary scrutiny than the UK, with the exception of New Zealand. Like New Zealand, the U.K parliament would have to vote on any "implementing legislation" – any changes to our own laws that would be required as part of a deal. For example, if a trade deal with the USA allowed the import and sale of hormone injected

beef, we would have to make that sale legal in this country. But there would be no debate or vote on the deal as a whole.

The Government has, however, signalled that it is minded to strengthen Parliament's oversight of future trade deals. Greg Hands, Minister for trade policy, told the House on 20 July that the Government would allow relevant select committees the time to produce reports on any proposed trade deals "where practical"; and that it might consider a Parliamentary debate on trade deals "subject to parliamentary timetabling".

Making both these things a matter of statutory duty, would, in my view, have no downsides and would considerably improve the quality of the debate.

However – again, like all other nations – any vote after a debate should be restricted to a straightforward yes or no. Allowing Parliament to amend treaties would undermine the vital principle of ministerial responsibility, and make trade negotiations impossible. No other country would agree to a trade deal if they knew it could be altered piecemeal. It is the job of the executive to negotiate treaties, and the job of the legislature to scrutinise them.



### Recommendation for Government

**The Government should give itself a statutory duty to commission an independent report on all proposed trade agreements, assessing their impact on: economic productivity; food safety and public health; the environment and climate change; society and labour; human rights; and animal welfare. This report would be presented alongside a Government response when any final trade treaty is laid before Parliament. Sufficient time must be guaranteed for the discussion of these documents in the House of Commons, the House of Lords, and by the relevant select committees.**

The Government should decide whether this impact assessment function requires the establishment of a new body – similar to those which exist in many mature trading nations including Australia, Canada and the USA – or whether it could be performed by an existing body or by independent consultants (as is the case in the EU).

As a newly independent trading nation, the UK should aspire to a "gold standard" level of scrutiny. This means any impact report should have five key attributes:

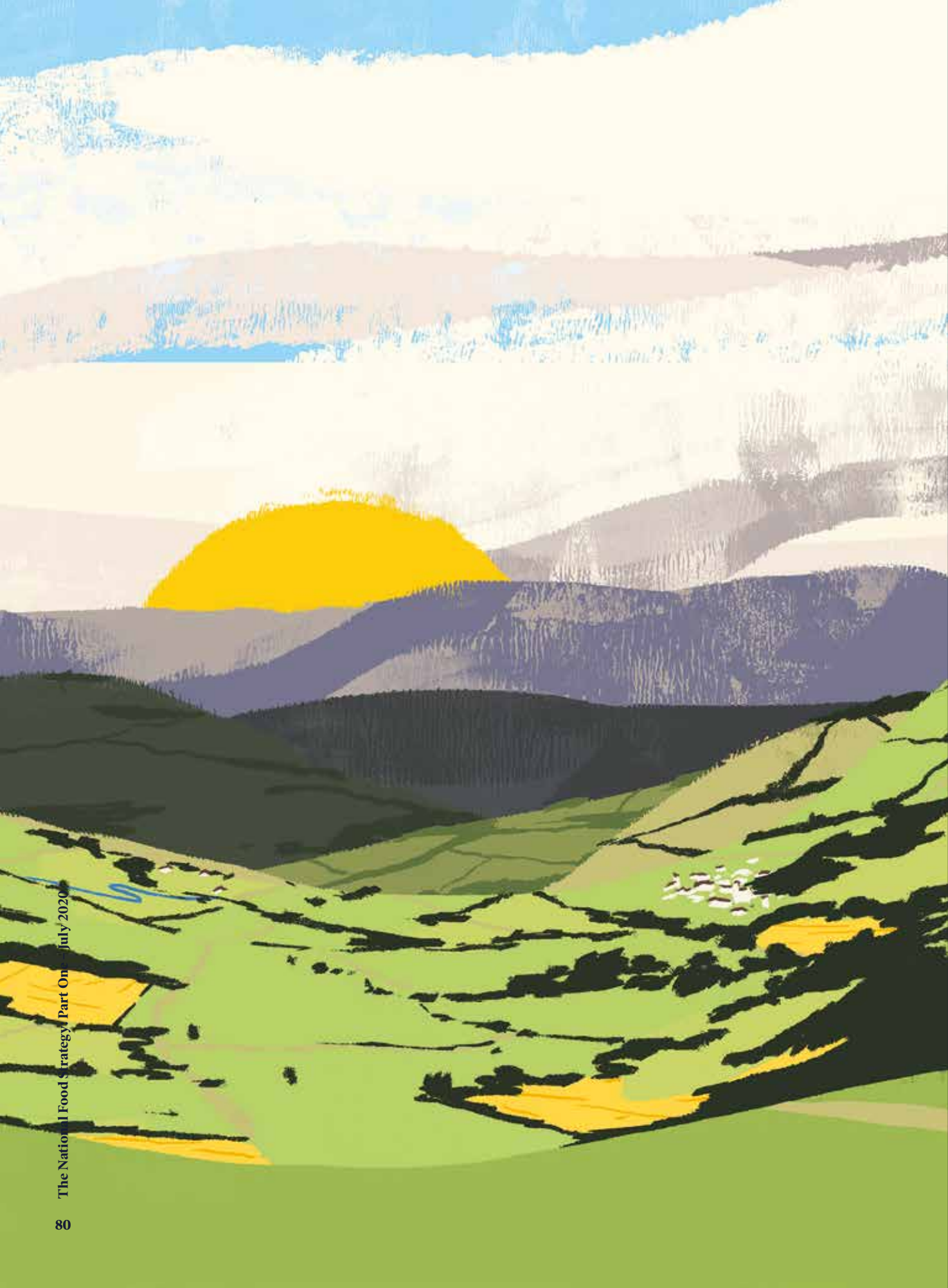
1. It should adopt a **holistic** view. It would assess not only the economic impacts of a deal (particularly where it is likely to impact certain groups of citizens disproportionately), but also the environment and climate change, labour practises and human rights (both here and abroad), food safety, public health and animal welfare.
2. It should be **independent**. The purpose of these impact assessments is to help Parliament scrutinise the agreement, and to build public confidence that the deals the Government has negotiated genuinely serve the national interest. Some countries, including the United States, have independent, nonpartisan-bodies responsible for their trade impact assessments,<sup>†</sup> while others make use of independent consultants whose report is published without prior scrutiny by the executive.<sup>††</sup>
3. The impact assessment should be performed by **experts**. Those conducting and overseeing the assessment should be selected as recognised experts in their field, and not (like the Trade and Agriculture Commission) a combination of experts and representative groups. There is often a fine line between the two, but recognising the principle is an important first step.
4. The impact assessment function would be **permanent**. The UK will be negotiating trade agreements for several years to come, and each of these will need to be assessed individually. While the Trade and Agriculture Commission will undoubtedly produce a useful report, its six-month term means it will not be able to assess the impact of any agreements concluded after that point. (Which will be most if not all of them.)
5. The impact assessment – and subsequent parliamentary scrutiny – should have a **statutory** basis. There should be a legal obligation for the government to ensure that the impact assessment is published well before the ratification of any trade agreement, to allow appropriate parliamentary scrutiny.<sup>166</sup>

### Recommendation for Government:

**The Government should adopt a statutory duty to give Parliament the time and opportunity to properly scrutinise any new trade deal. It must allow time for relevant select committees to produce reports on any final deal, and allow a debate in the House of Commons.**

<sup>†</sup> For example, the United States International Trade Commission or the Australian Productivity Commission.

<sup>††</sup> Such as the European Union's Trade Sustainability Impact Assessments.



## **Chapter 6**

The National Food Strategy: Part One – July 2020

# **A New Green Revolution**

**This crisis, painful though it is, may soon pale into insignificance compared to the turbulence created by climate change and the collapse in biodiversity.**

**The current food system does terrible damage to the environment. Building a better future – one where our food no longer makes us, or our planet, sick – will be the biggest challenge of all.**

**T**HERE'S a wise saying, in military circles, about the danger of always preparing for the last war, instead of the war to come. Another crisis will hit the food system, perhaps quite soon. Next time, it will most likely be climate related.

Our current food system proved fairly robust under the particular pressures of COVID-19, but it is not well prepared for the dangers of climate change: floods, droughts, rising sea temperatures and shifting weather patterns, all of which could lead to catastrophic harvest failures and food shortages.

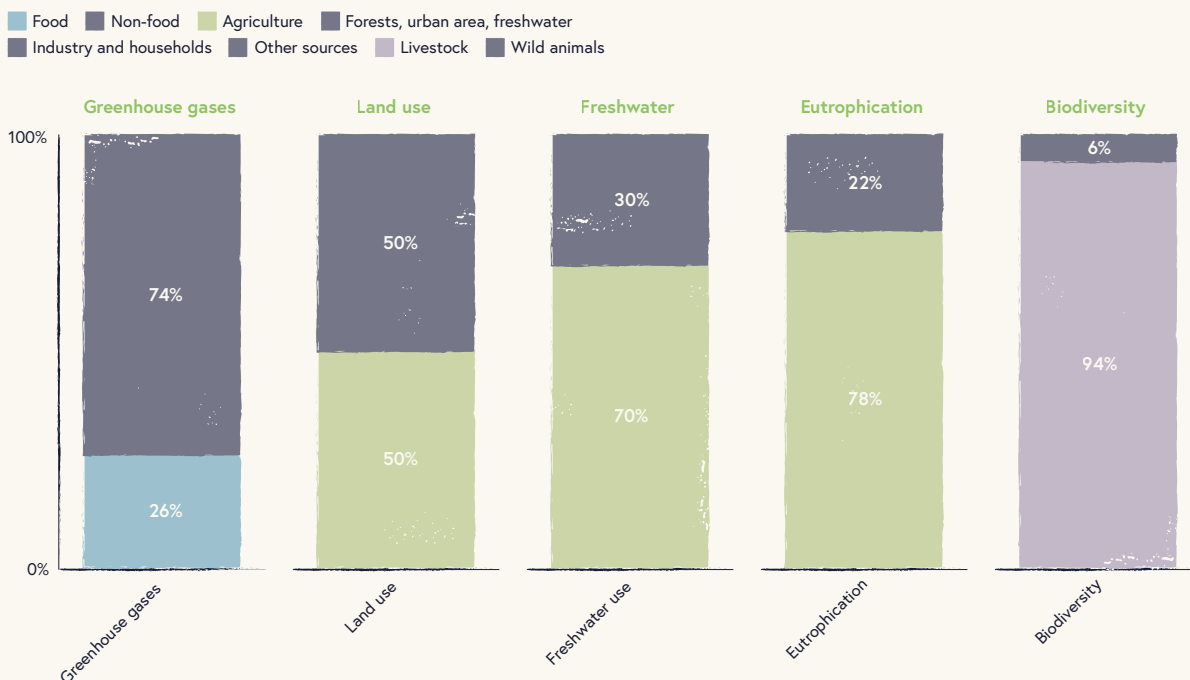
Worse, the food system is a major contributor to climate change. Part Two of this report will cover in some depth the history and effects of the so-called Green Revolution, which began in the 1960s.<sup>167</sup> This was the dawn of modern intensive farming: a new kind of agriculture that used selectively-bred crops alongside fertilisers, pesticides and advanced farm machinery to massively increase the amount of food that could be produced from the land.

For now, suffice to say that what began as a response to the threat of starvation, caused by a booming global population, has been disastrous for the environment.


Every stage of the farming process exacerbates the carbon crisis: the forests cleared to plant crops; the energy-intensive manufacture of fertiliser; the release of carbon from degrading soils; the methane produced by rice paddies and livestock; the energy used by manufacturing plants and retail outlets; and the fuel used to power the vehicles in the supply chain.

The global food system is responsible for an estimated 20-30% of total greenhouse gas emissions.<sup>168</sup> It occupies half the world's habitable land, uses 70% of the freshwater we consume, causes three-quarters of all water pollution, and is the single biggest contributor to biodiversity loss (see Figure 6.1). The way we produce our food is the mother of all sustainability issues.

Figure 6.1  
Globally, food has a very large environmental impact<sup>169</sup>







The scale of the problem is unarguable. But the debate over how to solve it has become (like so many debates these days) fiercely tribal. Whether quarrelling over the correlation between meat-eating and greenhouse gas emissions, local versus global supply, genetically engineered foods such as golden rice, or the potential of vertical soil-free farming, the various protagonists are polarised, and the arguments tend towards the moralistic.

The science writer Charles C. Mann analyses this ideological tussle in his book *The Wizard and The Prophet*.<sup>170</sup> In discussions about the environment and sustainability, he says, people tend to fall into one of two tribes. There are the Wizards who – coarsely put – believe that science will come to the rescue, allowing economic growth to continue unimpeded; and there are the Prophets, who believe that we are living so far beyond the planet's means that we must drastically reduce consumption in order to survive.

"Wizards view the Prophets' emphasis on cutting back as intellectually dishonest, indifferent to the poor, even racist (because most of the world's hungry are non-Caucasian)," writes Mann. Following this route, they believe, "is a path toward regression, narrowness, and global poverty". In return, "Prophets sneer that the Wizards' faith in human resourcefulness is unthinking, scientifically ignorant, even driven by greed (because remaining within ecological limits will cut into corporate profits)." Following this route, they say, "at best postpones an inevitable day of reckoning – it is a recipe for what activists have come to describe as 'ecocide'... As the name-calling has escalated, conversations about the environment have increasingly become dialogues of the deaf. Which might be all right, if we weren't discussing the fate of our children."

This problem is amplified by social media, which forces us to entrench. Rather than examining our own positions, we expend all our energy defending ourselves from enemy attack, whether we dismiss that enemy as a Luddite, an industry shill or a so-called "watermelon" (green on the outside but commie red on the inside). We seize on evidence that supports our arguments and ignore what doesn't.

Self-righteousness serves only to blind us to complexity and nuance. In the words of Adam Smith: "Virtue is more to be feared than vice, because its excesses are not subject to the regulation of conscience."

The good news is that – within the food system, at least – these tribes are now finding ways to edge closer together. This is partly thanks to the fast-developing science of "complex systems", which is changing perspectives on both sides. In his book *Linked*,<sup>171</sup> the physicist Albert-László Barabási argues that we need to start thinking about nature's networks in a different way. Barabási describes how the hubs and spokes within complex networks (any complex network – the internet, human cells, or the natural food chain) can be arranged and rearranged, and how small changes in their topography can radically change their characteristics.

Until now, scientists have tried to understand nature by disassembling it – breaking matter down into elements and then into electrons and nucleons, for example, or looking at nutrition as simply a matter of vitamins and minerals, proteins and carbohydrates – rather than considering how all the different components work together. We have spent "trillions of research dollars" on this dissection project, "like a child taking apart his favourite toy", he writes. "Now we are close to knowing just about everything there is to know about the pieces. But we are as far as we have ever been from understanding nature as a whole... We have learned that nature is not a well-designed puzzle with only one way to put it back together. In complex systems the components can fit together in so many ways that it would take billions of years for us to try them all. Yet nature assembles the pieces with a grace and precision honed over millions of years".

Improving the complexity of soil is a good example of how this new strand of scientific thinking can bring together the Wizards and the Prophets. Both sides now regard a healthy soil biome as vital to sustainable agriculture: the Wizards because of their faith in network science; and the Prophets because of their instinctive sense that we must work with nature and not against it.

### Capsule 3

# Getting Serious About Externalities

**E**VERY economist since Adam Smith has recognised that the incentives of the free market do not work properly if "negative externalities" are not priced into the system.

A negative externality is a cost that falls on a third party when two other parties make a transaction. Suppose, for example, a farmer has a contract to supply carrots to a supermarket. In growing the carrots, he pollutes a nearby watercourse with fertilizer. The cost of that pollution would be a "negative externality" that falls on us, the public, because our environment is polluted. If neither the farmer nor the supermarket (nor indeed the end consumer) is forced to cover the cost of cleaning up the watercourse, the market does not provide any incentive to the farmer to avoid such destructive practices. Which is why negative externalities ought to be priced in.

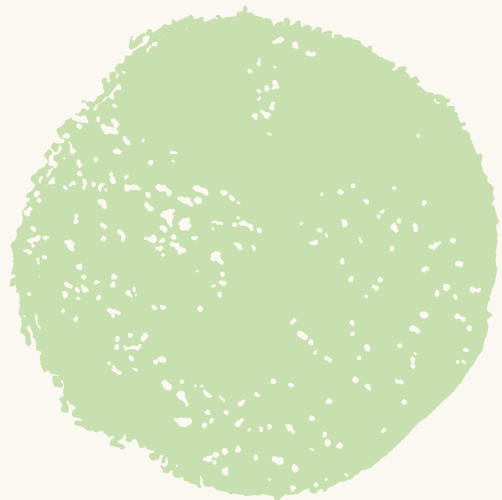
This principle is accepted by economists and politicians of every persuasion. Yet it is almost never applied.

The food system is riddled with negative externalities: polluted water and air, greenhouse gas emissions, antibiotic resistance, biodiversity loss, even the cost of diabetes treatments. All of these are costs imposed on third parties – namely, all of us – by the food system. In theory, they should all be costed into the system.

But they aren't. Worse – they are not even measured. There is no government department in the UK that has any idea, or is even tasked with trying to find out, what the true costs of food production are.

In its *The Hidden Cost of UK Food* report, the Sustainable Food Trust attempted this calculation.<sup>172</sup> It estimated that for every pound we spend on food there is an un-costed 97 pence worth of harm being done to the system. According to this analysis the true cost of our food is almost twice what we pay for it at the till.

It is hard to say whether this is an exaggeration or not. But that is rather the point. We will never understand the scale of the damage that is being done by the lack of accountability within the free market, and what remedies are appropriate, until we invest the appropriate energy into attempting to measure them. I will propose how this could be done in Part Two.



The same is true of the role of the gut biome in diet-related disease, and the recent mathematical modelling that confirmed what Prophets have always known: the greater the biodiversity within an eco-system, the more robust and productive that ecosystem will be.

It seems to me that our only real hope of creating a sustainable food system lies in diversity: both practical and ideological. A diverse system, in which there are lots of different ways to produce food, is more flexible: if one part of the system gets struck by disaster, the others can pick up the slack. By letting many flowers bloom, we can develop methods of farming and food production that better suit our rapidly changing world.

My ideal Food-topia would contain organic farms as well as solar-powered high-rise greenhouses growing fruit and vegetables in cities; rewilded landscapes, as well as traditional upland farms. I want to see massive investment into biodiversity, but also into agricultural science and innovation, so that farmers can increase their yields and cut back radically on the quantities of chemicals they use. I want weed-picking robots and blight-spotting drones to become as much a part of the landscape as cattle from local native breeds restored to their natural environment.

In the best version of the future, we will still get our sustenance from the seas and the land, but also – at a vastly reduced carbon cost – from proteins fermented in vats fed by solar power. Instead of using pesticides, we will use photons of light of a specific frequency to switch on the immune systems of crops as a natural defence against harmful diseases. None of this is science fiction: these are all real innovations currently being developed in universities across this country.

The Government already has initiatives underway to tackle the problem - its Environmental Land Management (ELM) scheme, for example, which will pay English farmers £2.4 billion a year to deliver public goods, such as capturing carbon and increasing biodiversity.<sup>173</sup> It will transform our countryside if implemented well.

There have been calls to delay ELM on the grounds that farmers already have too much on their plates with EU exit. I would argue that now is the moment to act. Not only should the Government press on with the scheme, it should accelerate the implementation. Be bolder. Go faster. And get as many farmers as possible onto the pilots before the full planned roll out in 2024. This will be critical to ensuring we are on track to meet our net-zero goal prior to COP26.

But this is just a start. In Part Two of the National Food Strategy, I will attempt to lay out a blueprint for a better food system: one that no longer makes us, or our planet, sick.

We must build a healthier world, the better to withstand the next big crisis. For all this, we will need the wisdom of both Wizards and Prophets.

Only by bringing true diversity into food and farming can we build a system fit for the future.



**The government should press on with the Environmental Land Management Scheme. Be bolder. Go faster.**







The National Food Strategy: Part One – July 2020

# Appendices

## National Food Strategy: Part One

# Summary of Recommendations

### Recommendation 1

**Expand eligibility for the Free School Meal scheme to include every child (up to the age of 16) from a household where the parent or guardian is in receipt of Universal Credit or equivalent benefits.†**

The impact of COVID-19 on some families has been acute, with a clear rise in food insecurity. In the first two weeks of lockdown, food bank use amongst families with children doubled compared to March 2019.

Children who are hungry at school struggle to concentrate,<sup>174</sup> perform poorly, and have worse attendance records.<sup>175</sup> More generally, children who experience food insecurity suffer worse physical and mental health outcomes.<sup>176</sup> This is both an acute and a long-term issue: food insecurity undermines any serious prospect of improving social equality.

Only 1% of packed lunches meet the nutritional standards of a school meal.<sup>177</sup> A hot, freshly-cooked school lunch is, for some children, the only proper meal in the day,<sup>178</sup> providing a nutritional safety net for those at greatest risk of hunger or poor diet.

Free school meals are currently provided to all children in the first three years of school, under the national Universal Infant Free School Meals (UIFSM) scheme. After this point, only children from very low-income households are eligible for Free School Meals (those with an annual income of £7,400, or less, before benefits).<sup>179</sup>

This threshold is much too low. Many of the families on Universal Credit who currently do not qualify for Free School Meals fall well below the government's own threshold for poverty. Ensuring the health and development of our children should be a priority.

We recommend that the Free School Meals scheme should be expanded, with new money, so that every child up to the age of 16 from a household on Universal Credit or equivalent benefits is eligible. The UIFSM policy should also be maintained.

More work must be done to ensure that all school meals are as healthy and appetising as they can be. I will be returning to this issue in Part Two of the National Food Strategy. Even a bad school lunch, however, is likely better than a packed lunch.

Under this recommendation, we estimate an additional 1.5 million 7-16 year olds would benefit from free school meals, taking this to a total of 2.6 million children. This is estimated to cost an additional £670 million a year.

### Recommendation 2

**Extend the Holiday Activity and Food Programme to all areas in England, so that summer holiday support is available to all children in receipt of Free School Meals.**

Summer holidays are a particularly hard time for households experiencing food insecurity. An estimated 3 million children are at risk of hunger in the school holidays,<sup>180</sup> and data from food banks shows the need for emergency supplies accelerates over the summer.<sup>181</sup> This issue has been exacerbated by the economic fall-out from COVID-19.<sup>182</sup>

During term time, teachers make valiant efforts to ensure equality of opportunity for their pupils. During the holidays, much of that work unravels.

Evidence suggests that children from disadvantaged families are less likely to access organised out-of-school activities,<sup>183</sup> more likely to experience social isolation,<sup>184</sup> and more likely to experience "unhealthy" holidays in terms of nutrition and physical health.<sup>185</sup>

Conversely, providing enrichment activities and healthy food over the holidays can help pupils return to school engaged, invigorated and ready to learn.<sup>186</sup> Plugging the summer holiday gap will be essential if the Government is to fulfil its promise of "levelling up".

The Holiday Activities and Food Programme – which has been running since 2018 – provides healthy meals and fun activities for disadvantaged children. This summer the Government is funding the delivery of the programme by 10 coordinators (a mixture of Local Authorities and voluntary organisations) in 17 Local Authority areas, at a cost of £9 million. The aim is to provide a programme of activity for all children entitled to Free School Meals in these Local Authority areas, for four hours a day, four days a week, for four weeks of the summer holidays.<sup>††</sup>

Children on these holiday schemes receive at least one meal a day which meets the school food standards. The programmes include an element of nutritional education, to improve children's knowledge and awareness of healthy food, as well as training and advice sessions for families and carers on how to source, prepare and cook nutritious, low-cost food. They also provide activities to help children develop new skills and knowledge and get plenty of exercise.

Evidence suggests that such schemes have a positive impact on children and young people<sup>187</sup> and that they work best when they involve children (and parents) in food preparation.<sup>188</sup> An evaluation of a Welsh pilot, the Food and Fun School Holiday Enrichment Programme found "evidence of multiple positive impacts on children's activity levels, diet and attitudes to eating more healthily, social isolation, and opportunities for learning and engagement with school".<sup>189</sup>

We recommend that the Government extends the Holiday Activities and Food Programme so that provision is available in all areas in England, rather than just in the 17 Local Authority areas in which the scheme currently operates. It should be made available to all children in receipt of Free School Meals.

In 2019, the HAF reached 50,000 children. Under this recommendation, we estimate an additional 1.1 million children will participate in the programme. This is estimated to cost an additional £200 million a year.

### **Recommendation 3**

**Increase the value of Healthy Start vouchers to £4.25 per week, and expand the scheme to every pregnant woman and to all households with children under four where a parent or guardian is in receipt of Universal Credit or equivalent benefits**

**I am delighted that in the last week the CEOs of the Co-op and Waitrose have agreed, in principle, to supplement these vouchers with additional free fruit and vegetables. Most of the other major supermarkets and convenience stores (with support from the Association of Convenience Stores) are keen to follow suit and we are in discussions with them to explore mechanisms for delivery.**

Healthy Start is a means-tested scheme for low income pregnant women and families with children under the age of four. It is also a universal entitlement for mothers under 18 years of age. The scheme provides coupons for vitamins and vouchers which can be used to buy fruit and vegetables, as well as milk. The voucher is currently worth £3.10 per developing child per week, or double that for babies under 12 months.

Studies on the effects of Healthy Start have shown that it plays an important role in helping pregnant women and their children access healthier foods.<sup>190</sup> Women registered for the scheme report that Healthy Start made them think more about their health and diet and led to better dietary choices.<sup>191</sup>

<sup>†</sup> "Equivalent benefits" is a term drawn from DWP. It covers any of the legacy benefits which Universal Credit is replacing i.e. working age Jobseeker's Allowance (income-related), Employment and Support Allowance (income-related), Income Support, Child Tax Credit, Working Tax Credit and Housing Benefit.

<sup>††</sup> In 2019, the HAF reached 50,000 children out of an eligible 142,000, with a take up of 35%.

However, the current scheme needs improving. The value of the voucher has not changed since 2009. Uptake of the scheme has been falling and is currently at 48%.<sup>†</sup>

We recommend that the Government:

- Increases the voucher value to £4.25/week in line with the Best Start Grant system in place in Scotland. This would cover the weekly cost of providing the recommended daily portion of fruit/vegetables (five portions) and milk (½ pint) for a child per day.<sup>192</sup> In future, the value of the voucher should be index linked.
- Extends eligibility to pregnant woman and households with children under four from a household where the parent or guardian is in receipt of Universal Credit (or equivalent benefits). This would mean one million babies and young children would be eligible.
- Accelerates the switch from paper vouchers to a digital card, to help to improve uptake and ease of use and reduce stigma.
- Promotes the scheme with communications aimed at parents and retailers.

Under this recommendation, an additional 290,000 pregnant women and children under the age of 4 will benefit, taking the total number of beneficiaries to 540,000. This is estimated to cost an additional £110 million a year, plus the cost of a £5 million communications campaign.

#### Recommendation 4

##### **Extend the work of the Food and Other Essential Supplies to the Vulnerable Ministerial Task Force for a further the 12 months up until July 2021.**

The purpose of the Task Force should be to ensure that vulnerable people have access to food, as the impacts of COVID-19 play out across the economy and on individuals' economic circumstances.

Specifically, it should be responsible for collecting data and monitoring levels of food insecurity in England, as well as agreeing cross-departmental actions, where necessary, to support those who cannot access or afford food.

At the start of the COVID-19 crisis, the Government responded swiftly and effectively to alleviate the challenging circumstances that some people found themselves in as a result of health conditions or a

dramatic change in economic circumstance. It did so with the establishment of the Food and Other Essential Supplies to the Vulnerable Ministerial Task Force, chaired by Minister Victoria Prentis of Defra, and with the participation of five government Departments, the Food Standards Agency and the devolved administrations.

As a result, a proven, cross-governmental Ministerial decision-making structure, supported by a senior officials group, currently exists. It has enabled more joined-up work within government and yielded concrete results. By maintaining this governance structure, and the associated investment in data and monitoring, the Government will be well-placed to respond to the changing situation of the coming months and to act in a coordinated and timely way.

#### Recommendation 5

**The Government should only agree to cut tariffs in new trade deals on products which meet our core standards.<sup>††</sup> Verification programmes – along the lines of those currently operated by the US Department of Agriculture to enable American farmers to sell non-hormone-treated beef to the EU – should be established, so that producers wishing to sell into the UK market can, and must, prove they meet these minimum standards.**

**These certification schemes should not only cover animal welfare but also environmental and climate protections where the impact of a particular product is severe (for example, we should not cut tariffs on beef reared on land recently cleared of rainforest). The full set of core standards should be defined by the newly formed Trade and Agriculture Commission.**

As it negotiates trade deals, the Government should define a set of standards that we as a country believe should be applied in the production of the food we eat. Some environmental standards may only be required for particular reasons in specific regions. Others, however – including standards of food safety, public health, animal welfare, and the prevention of severe environmental impacts (for example, the clearing of rainforest for beef grazing) – should be applied universally.

The UK should apply these standards through a verification process similar to that currently operated by the US Department of Agriculture. This would allow for a much nimbler approach to trade negotiations, with bespoke agreements between countries.

## Recommendation 6

**The Government should give itself a statutory duty to commission an independent report on all proposed trade agreements, assessing their impact on: economic productivity; food safety and public health; the environment and climate change; society and labour; human rights; and animal welfare. This report would be presented alongside a Government response when any final trade treaty is laid before Parliament. Sufficient time must be guaranteed for the discussion of these documents in the House of Commons, the House of Lords, and by the relevant select committees.**

**The Government should decide whether this impact assessment function requires the establishment of a new body – similar to those which exist in many mature trading nations including Australia, Canada and the USA – or whether it could be performed by an existing body or by independent consultants (as is the case in the EU).**

Any impact report should have five key attributes:

1. It should adopt a **holistic** view. It would assess not only the economic impacts of a deal (particularly where it is likely to impact certain groups of citizens disproportionately), but also the environment and climate change, labour practises and human rights (both here and abroad), food safety, public health and animal welfare.
2. It should be **independent**. The purpose of these impact assessments is to help Parliament scrutinise the agreement, and to build public confidence that the deals the Government has negotiated genuinely serve the national interest. Some countries, including the United States, have independent, non-partisan bodies responsible for their trade impact assessments,<sup>†††</sup> while others make use of independent consultants whose report is published without prior scrutiny by the executive.
3. The impact assessment should be performed by **experts**. Those conducting and overseeing the assessment should be selected as recognised experts in their field, and not (like the Trade and Agriculture Commission) a combination of experts and representative groups. There is often a fine line between the two, but recognising the principle is an important first step.

4. The impact assessment function would be **permanent**. The UK will be negotiating trade agreements for several years to come, and each of these will need to be assessed individually. While the Trade and Agriculture Commission will undoubtedly produce a useful report, its six-month term means it will not be able to assess the impact of any agreements concluded after that point. (Which will be most if not all of them.)
5. The impact assessment – and subsequent parliamentary scrutiny – should have a **statutory** basis. There should be a legal obligation for the government to ensure that the impact assessment is published well before the ratification of any trade agreement, to allow appropriate parliamentary scrutiny.

## Recommendation 7

**The Government should adopt a statutory duty to give Parliament the time and opportunity to properly scrutinise any new trade deal. It must allow time for relevant select committees to produce reports on any final deal, and allow a debate in the House of Commons and in the House of Lords.**

Making both these things a matter of statutory duty, would, in my view, have no downsides and would considerably improve the quality of the debate.

However – again, like all other nations – any vote in a debate should be restricted to a straight forward yes or no. Allowing Parliament to amend treaties would undermine the vital principle of ministerial responsibility and make trade negotiations impossible. No other country would agree to a trade deal if they knew it could be altered piecemeal. It is the job of the executive to negotiate treaties, and the job of the legislature to scrutinise them.

<sup>†</sup> According to England Local Authority uptake data, dated June 2020. Source: <https://www.healthystart.nhs.uk/healthy-start-uptake-data/>

<sup>††</sup> While this would not amount to an outright ban – which could be challenged in the WTO – the UK's tariffs on imports of animal products without a free trade agreement are sufficiently high that very little non-compliant product would be imported.

<sup>†††</sup> For example, the United States International Trade Commission or the Australian Productivity Commission.

# Food-based Guidelines for Free School Meal Parcel Schemes

These guidelines have been drawn up by Naomi Duncan, of Chefs in Schools[1] and reviewed by Susan Jebb, Professor of Diet and Population Health, University of Oxford.

# How to deliver free school meals when schools are closed

Maintaining access to food that is consistent with the school food standards will help your pupils stay healthy.

Here's a simple guide on what to include in a weekly free school meal box for children when they're not in school.



## Starchy foods

Loaf of wholemeal bread + pasta OR potatoes OR rice.

## Protein

Baked beans + one tin of fish + one tin of lentils OR pulses.



## Dairy

250g Cheese + 2 litre milk OR 4 x yogurt pots.



## Vegetables

Provide at least three of the following:  
Broccoli, carrots, red pepper,  
1 cucumber, 4 tomatoes.

## Fruit

Provide at least two of the following:  
3 apples, 3 clementines, 3 bananas.



## DO

Include recipe ideas and inspiration.  
Supply freshly cooked meals when possible.



## DON'T

Include crisps, chocolate or confectionary.  
Skimp on protein, dairy or veg, please add in extra if possible.



# Terms of Reference

## Purpose

No part of our economy matters more than food. Food is vital to life and, for one in seven of us, it is the source of our livelihood. And no decisions have such a direct impact on our lives and well-being as the choices we make about what we eat.

Food shapes our sense of ourselves, too. Cooking and eating together is perhaps the defining communal act. The character of the English landscape and the culture of many rural communities are defined by the way farmers use the land. And although the vast majority of us now live in cities, growing food, seeing how it is grown, knowing that we can feed ourselves – these are all important to our sense of national belonging.

The free market performs a million daily miracles to present us with an abundant choice of safe and reasonably-priced food, creating millions of jobs and providing us with an ease of consumption unimaginable to our grandparents' generation.

But the way we produce, distribute, market and consume food raises a series of difficult policy questions which Government cannot shirk. The state already regulates in minute detail how food is grown, and livestock reared, in order to safeguard both human health and our natural environment. We subsidise food producers to an extent no other industry enjoys. We regulate the sale and marketing of food for health and other reasons. From the national curriculum to hospital meals, the availability of migrant labour to the public health impacts of obesity, Government is responsible for a myriad of actions which shape the nation's relationship with food.

And the need for Government to review and rethink its influence and role is only increasing. It's not just the case that we need to reconsider how food and drink, as our biggest manufacturing industry, fits into the Government's broader Industrial Strategy; there are other urgent and inescapable policy questions with which Government must grapple.

Globally, we are the first generation more likely to die as a result of lifestyle choices than infectious disease. Diabetes, cardiac disease and other obesity-related conditions are costing the NHS billions and drastically harming the lives of millions. Obesity is a particular issue for poorer communities and young people. Children from the most deprived areas are three times as likely to be obese as those from the least deprived.

Intensive farming, of the kind that has increased production so much since the Second World War, also generates environmental problems. The impact on soil health, air quality, river freshness, biodiversity and climate change has raised urgent questions about how we can make food production genuinely sustainable.

And we cannot afford to ignore new challenges to food security. With the world's population growing, a mass migration to cities, resource competition intensifying between nations, huge stress on water supplies, climate change altering what the land is capable of supplying, trade barriers re-emerging and new public health dangers growing, from anti-microbial resistance to viral mutations, it is critical to review how we secure the food of the future.

To address these growing problems, to ensure the security of our food supply and to maximise the benefits of the coming revolution in agricultural technology, the government proposes to develop a new integrated National Food Strategy.

The purpose of the National Food Strategy is to build on the work underway in the Agriculture Bill, the Environment Bill, the Fisheries Bill, the Industrial Strategy and the Childhood Obesity Plan to create an overarching strategy for government, designed to ensure our food system:

- Delivers safe, healthy, affordable food; regardless of where they live or how much they earn;
- Is robust in the face of future shocks;
- Restores and enhances the natural environment for the next generation in this country;
- Is built upon a resilient, sustainable and humane agriculture sector; and
- Is a thriving contributor to our urban and rural economies, delivering well paid jobs and supporting innovative producers and manufacturers across the country;
- Does all of this in an efficient and cost-effective way.

We have a moral, as well as practical, responsibility to consider the role and impact of the food system. The purpose of the National Food Strategy is to set out a vision for the kind of food system we should be building for the future, and a plan for how to achieve that vision.

## Scope

The scope will be England, but the strategy will consider our relationship with the devolved administrations, the European Union and our other trading partners.

The strategy will cover the entire food chain, from field to fork: the production, marketing, processing, sale and purchase of food (for consumption in the home and out of it), and the consumer practices, resources and institutions involved in these processes.

The strategy will consider the role of the central government departments, arms-length-bodies, local councils and city authorities. In doing so it will also consider the roles that individuals, the private sector, and social enterprises should play.

## Reporting, activities, and timing

The purpose of the review is to consider how the UK's food sector operates currently, and to set out options (underpinned by detailed evidence, including in respect of the associated pros, cons, and trade-offs) for adjusting Government policies to better achieve the objectives for the Strategy set out above. Subsequently, the Government will develop a National Food Strategy White paper informed, among other things, by this independent review. This is planned six months after the publication of the review.

The review will be led by Henry Dimbleby, co-founder of Leon restaurants, the lead non-executive director at Defra and co-author of The School Food Plan.

Henry will be supported by Defra officials. Henry will also consult stakeholders across the country and from all relevant government departments. An advisory group selected from across the food system will support him. The recently formed Food and Drink Sector Council will also be a source of close advice and counsel.

Henry will report to ministers on content which concerns their departments, as the review progresses.

# What We Have Read

This is a selection of the hundreds of reports, papers and books we have read in our work so far on the National Food Strategy. It illustrates the range of previous policy thinking that we are drawing on. It does not include sources already cited in the report or research we have used in analysis that we are yet to publish.

Access to Nutrition Initiative. (2019). Global Index 2018. Access to Nutrition. Utrecht: Access to Nutrition Initiative. [Online] Available at: <http://accessstonutrition.org/index/global-index-2018/>

Agricultural Productivity Working Group, (2020). Report to the Food & Drink Sector Council February 2020. London: Agricultural Productivity Working Group, Food and Drink Sector Council. [Online] Available at: [www.fdf.org.uk/publicgeneral/APWG-report-feb20.pdf](http://www.fdf.org.uk/publicgeneral/APWG-report-feb20.pdf)

Agriculture and Agri-Food Canada. (2019). Food Policy for Canada. Canada: Agriculture and Agri-Food Canada. [Online] Available at: <https://www.canada.ca/content/dam/aafc-aac/documents/20190614-en.pdf>

Ansell, C. and Vogel, D. (eds). (2006). What's the Beef? The Contested Governance of European Food Safety. Cambridge, Mass.: MIT Press.

Barilla Center for Food and Nutrition Foundation. (2018). An Index on Food and Sustainability. New York: The Economist. [Online] Available from: <http://foodsustainability.eiu.com/>

Behavioural Insights Team. (2020). A Menu for Change: Using Behavioural Science to Promote Sustainable Diets Around the World. London: Behavioural Insights Team. [Online] Available at: <https://www.bi.team/publications/a-menu-for-change/>

Benton, TG., Froggatt, A., Wright, G., Thompson, C. and King, R. (2019). Food Politics and Policies in Post-Brexit Britain. London: Chatham House. [Online] Available at: <https://www.chathamhouse.org/publication/food-politics-and-policies-post-brexit-britain>

British Medical Association. (2016). Obesity and Diet Related Illness in the UK. London: British Medical Association.

Cabinet Office. (2008). Food Matters: Towards a Strategy for the 21st Century. London: HMG. [Online] Available at: [https://webarchive.nationalarchives.gov.uk/+http://www.cabinetoffice.gov.uk/media/cabinetoffice/strategy/assets/food/food\\_matters\\_es.pdf](https://webarchive.nationalarchives.gov.uk/+http://www.cabinetoffice.gov.uk/media/cabinetoffice/strategy/assets/food/food_matters_es.pdf)

Cabinet Office, Department of Health and Social Care, HMT Treasury and Prime Ministers' Office, 10 Downing Street. (2016). Childhood Obesity: A Plan for Action. London: HMG. [Online] Available at: <https://www.gov.uk/government/publications/childhood-obesity-a-plan-for-action>

Access to Nutrition Initiative. (2019). Global Index 2018. Access to Nutrition. Utrecht: Access to Nutrition Initiative. [Online] Available at: <http://accessstonutrition.org/index/global-index-2018/>

Agricultural Productivity Working Group, (2020). Report to the Food & Drink Sector Council February 2020. London: Agricultural Productivity Working Group, Food and Drink Sector Council. [Online] Available at: [www.fdf.org.uk/publicgeneral/APWG-report-feb20.pdf](http://www.fdf.org.uk/publicgeneral/APWG-report-feb20.pdf)

Agriculture and Agri-Food Canada. (2019). Food Policy for Canada. Canada: Agriculture and Agri-Food Canada. [Online] Available at: <https://www.canada.ca/content/dam/aafc-aac/documents/20190614-en.pdf>

Ansell, C. and Vogel, D. (eds). (2006). What's the Beef? The Contested Governance of European Food Safety. Cambridge, Mass.: MIT Press.

Barilla Center for Food and Nutrition Foundation. (2018). An Index on Food and Sustainability. New York: The Economist. [Online] Available from: <http://foodsustainability.eiu.com/>

Behavioural Insights Team. (2020). A Menu for Change: Using Behavioural Science to Promote Sustainable Diets Around the World. London: Behavioural Insights Team. [Online] Available at: <https://www.bi.team/publications/a-menu-for-change/>

Benton, TG., Froggatt, A., Wright, G., Thompson, C. and King, R. (2019). Food Politics and Policies in Post-Brexit Britain. London: Chatham House. [Online] Available at: <https://www.chathamhouse.org/publication/food-politics-and-policies-post-brexit-britain>

British Medical Association. (2016). Obesity and Diet Related Illness in the UK. London: British Medical Association.

Cabinet Office. (2008). Food Matters: Towards a Strategy for the 21st Century. London: HMG. [Online] Available at: [https://webarchive.nationalarchives.gov.uk/+http://www.cabinetoffice.gov.uk/media/cabinetoffice/strategy/assets/food/food\\_matters\\_es.pdf](https://webarchive.nationalarchives.gov.uk/+http://www.cabinetoffice.gov.uk/media/cabinetoffice/strategy/assets/food/food_matters_es.pdf)

Cabinet Office, Department of Health and Social Care, HMT Treasury and Prime Ministers' Office, 10 Downing Street. (2016). Childhood Obesity: A Plan for Action. London: HMG. [Online] Available at: <https://www.gov.uk/government/publications/childhood-obesity-a-plan-for-action>

Charnovitz, S. (2002). The Law of Environmental "PPMs" in the WTO: Debunking the Myth of Illegality. *Yale Journal of International Law*. 27, pp59–110.

Clapp, J. (2017). Food Self-sufficiency: Making Sense of it, and When it Makes Sense. *Food Policy*. 66, pp88–96.

Committee on Climate Change. (2018). Land Use: Reducing Emissions and Preparing for Climate Change. London: Committee on Climate Change. [Online] Available at: <https://www.theccc.org.uk/wp-content/uploads/2018/11/Land-use-Reducing-emissions-and-preparing-for-climate-change-CCC-2018.pdf>

- Committee on Climate Change. (2019). Net Zero Technical Report Committee on Climate Change. London: Committee on Climate Change. [Online] Available at: <https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-Technical-report-CCC.pdf>.
- Committee on Climate Change. (2020). Reducing UK Emissions: 2020 Progress Report to Parliament. London: Committee on Climate Change. [Online] Available at: <https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/>
- Cook, S. (2018). The Spice of Life: The Fundamental Role of Diversity on the Farm and on the Plate. London and The Hague: IIED and Hivos. [Online] Available at: <https://pubs.iied.org/pdfs/G04305.pdf>
- The Constitutional Reform and Governance Act 2010. London: The Stationery Office. Available at: <https://www.legislation.gov.uk/ukpga/2010/25/contents>
- Davies, S. (2019). Time to Solve Childhood Obesity: An Independent Report. London: HMG. [online]. Available at: <https://www.gov.uk/government/publications/time-to-solve-childhood-obesity-cmo-special-report>
- Department for Business, Industry, Energy and Skills. (2017). Industrial Strategy: Building a Britain Fit for the Future. London: HMG. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/730048/industrial-strategy-white-paper-web-ready-a4-version.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/730048/industrial-strategy-white-paper-web-ready-a4-version.pdf)
- Department for Environment, Food and Rural Affairs. (2002). The Strategy for Sustainable Farming and Food: Facing the Future. London: HMG.
- Department for Environment, Food and Rural Affairs. (2009). UK Food Security Assessment: Our Approach. London: HMG. [Online] Available at: <https://webarchive.nationalarchives.gov.uk/20130402191240/http://archive.defra.gov.uk/foodfarm/food/pdf/food-assess-approach-0908.pdf>
- Department for Environment, Food and Rural Affairs. (2010). Food 2030 Strategy. National Archives. London: HMG. [Online] Available at: <https://webarchive.nationalarchives.gov.uk/20100512152459/http://www.defra.gov.uk/foodfarm/food/sstrategy/index.htm>
- Department for Environment, Food and Rural Affairs. (2012). The Conclusions of the Green Food Project. London: HMG. [online] Available at: <https://www.gov.uk/government/publications/green-food-project-conclusions>
- Department for Environment, Food and Rural Affairs. (2018). Health and Harmony: the Future for Food, Farming and the Environment in a Green Brexit. London: HMG. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/684003/future-farming-environment-consult-document.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684003/future-farming-environment-consult-document.pdf)
- Department for Health and Social Care. (2010). Public Health Responsibility Deal. National Archives. London: HMG. [Online] Available at: <https://webarchive.nationalarchives.gov.uk/20130104155639/http://responsibilitydeal.dh.gov.uk/>
- Department for Health and Social Care. (2018). Childhood Obesity: A Plan for Action, Chapter 2. London: HMG. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/718903/childhood-obesity-a-plan-for-action-chapter-2.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718903/childhood-obesity-a-plan-for-action-chapter-2.pdf)
- Department of Health and Social Care. (2019). Advancing our health: prevention in the 2020s – consultation document. [online] Available at: <https://www.gov.uk/government/consultations/advancing-our-health-prevention-in-the-2020s>
- Department for International Trade. (2020). UK-US Free Trade Agreement. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/869592/UK\\_US\\_FTA\\_negotiations.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/869592/UK_US_FTA_negotiations.pdf).
- Department for International Trade (2020) UK-Australia Free Trade Agreement: The UK's Strategic Approach. London: HMG. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/901886/uk-strategy-australia-free-trade-agreement.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/901886/uk-strategy-australia-free-trade-agreement.pdf).
- Department for International Trade (2020) UK-New Zealand Free Trade Agreement: The UK's Strategic Approach. London: HMG. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/901870/uk-strategy-uk-nz-free-trade-agreement.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/901870/uk-strategy-uk-nz-free-trade-agreement.pdf).
- European Commission. (2020). Draft text of the Agreement on the New Partnership with the United Kingdom. UKTF (2020) 14. Brussels: European Commission. [Online] Available at: [https://ec.europa.eu/info/publications/draft-text-agreement-new-partnership-united-kingdom\\_en](https://ec.europa.eu/info/publications/draft-text-agreement-new-partnership-united-kingdom_en).
- Fitzpatrick, I. and Young, R. (2017). The Hidden Cost of UK Food. Bristol: The Sustainable Food Trust. [Online] Available at: <https://sustainablefoodtrust.org/articles/hidden-cost-uk-food/>
- Food and Drink Sector Council. (2020). Covid-19 Recovery Plan. London: Food and Drink Sector Council. [Online] Available at: <http://fdsc.org.uk/publicgeneral/fdsc-covid19-recovery-report.pdf>
- Food and Land Use Coalition. (2019). Growing Better: Ten Critical Transitions to Transform Food and Land Use. London: Food and Land Use Coalition. [Online] Available at: <https://www.foodandlandusecoalition.org/wp-content/uploads/2019/09/FOLU-GrowingBetter-GlobalReport.pdf>
- Global Burden of Disease collaborators. (2019). Health Effects of Dietary Risks in 195 Countries, 1990-2017: A Systematic Analysis for the Global Burden of Disease Study 2017. The Lancet. [Online] Available at: [https://www.thelancet.com/article/S0140-6736\(19\)30041-8/fulltext#%20](https://www.thelancet.com/article/S0140-6736(19)30041-8/fulltext#%20)
- Food Foundation. (2019). Children's Future Food Inquiry. London: Food Foundation. [Online] Available at: <https://foodfoundation.org.uk/wp-content/uploads/2019/04/Childrens-Future-Food-Inquiry-report.pdf>
- Food Standards Agency. (2018). Regulating Our Future. London: FSA. [Online] Available at: <https://www.food.gov.uk/sites/default/files/media/document/changing-food-regulation-what-weve-done-where-we-go-next.pdf>
- Food Standards Scotland. (2016) Shaping Scotland's Food Future Our Strategy to 2021 Aberdeen: Food Standards Scotland. [Online] Available at: [https://www.foodstandards.gov.scot/downloads/FSS\\_Strategy\\_Doc\\_Final\\_2.pdf](https://www.foodstandards.gov.scot/downloads/FSS_Strategy_Doc_Final_2.pdf)
- Food, Farming and Countryside Commission. (2019). Our Future in the Land. London: FFCC. [Online] Available at: <https://www.thersa.org/globalassets/reports/rsa-ffcc-our-future-in-the-land.pdf>
- Friel, S. et al. (2013). Monitoring the impacts of trade agreements on food environments. Obesity Reviews. 14, pp120–134.
- Global Food Security Programme. (2019). Transformative Innovation across Supply Chains to Improve Decision-making. Swindon: Global Food Security Programme. [Online] Available at: <https://www.foodsecurity.ac.uk/publications/>
- Government Office for Science. (2011). Future of Food and Farming. London: HMG. [Online] Available at: <https://www.gov.uk/government/publications/future-of-food-and-farming>

- Guy's and St Thomas' Charity. (2018). Bite Size: Breaking Down the Challenge of Inner-City Childhood Obesity. London: Guy's and St Thomas' Charity. [Online] Available at: <https://www.gsttcharity.org.uk/what-we-do/bitesize>
- Hawkes, C. and Parsons, K. (2019). Brief 1. Tackling Food Systems Challenges: The Role of Food Policy. Rethinking Food Policy: A Fresh Approach to Policy and Practice. London: Centre for Food Policy.
- Helm, D. (2019). Green and Prosperous Land: A Blueprint for Rescuing the British Countryside. London: William Collins.
- HM Government. (2013). A UK Strategy for Agricultural Technologies. London: HMG. [Online] Available at: <https://www.gov.uk/government/publications/uk-agricultural-technologies-strategy>
- HM Government. (2018). A Green Future: Our 25 Year Plan to Improve the Environment. London: HMG. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/693158/25-year-environment-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf)
- HM Government (2020) The Future Relationship with the EU: The UK's Approach to Negotiations. Published 27 February 2020. London: HMG. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/868874/The\\_Future\\_Relationship\\_with\\_the\\_EU.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/868874/The_Future_Relationship_with_the_EU.pdf).
- Ilott, O., Rutter, J., and Stelk, I. (2017). Taking Back Control of Trade Policy. Institute for Government. London: Institute for Government. [Online] Available at: [https://www.instituteforgovernment.org.uk/sites/default/files/publications/IFGJ5448\\_Brexit\\_report\\_160517\\_WEB\\_v2.pdf](https://www.instituteforgovernment.org.uk/sites/default/files/publications/IFGJ5448_Brexit_report_160517_WEB_v2.pdf)
- Institute for Grocery Distribution. (2018). Shoppers of the Future. Watford: Institute for Grocery Distribution. [Online] Available at: <https://www.igd.com/research/igd-futures/shoppers-of-the-future>
- Intergovernmental Panel on Climate Change. (2016). Summary for Policymakers: Special Report on Climate Change and Land. Switzerland: IPCC. [Online] Available at: <https://www.ipcc.ch/srcccl/chapter/summary-for-policymakers/>
- IPES Food. (2019). Towards a Common Food Policy for the European Union. Brussels: IPES Food. [Online] Available at: [http://www.ipes-food.org/\\_img/upload/files/CFP\\_FullReport.pdf](http://www.ipes-food.org/_img/upload/files/CFP_FullReport.pdf)
- Jitendra, A., Thorogood, E. and Hadfield-Spoor, M. (2017). Early Warnings: Universal Credit and Food Banks. Salisbury: Trussell Trust. [Online] Available at: <https://www.trusselltrust.org/wp-content/uploads/sites/2/2017/04/Early-Warnings-Universal-Credit-and-Foodbanks.pdf>
- Landon, J. and Mwatsama, M. (2018). Fresh start: A Framework for Health and Sustainable Diets in the UK – Recommendations for Action. London: UK Health Forum. [Online] Available at: <https://www.fcrn.org.uk/research-library/fresh-start-framework-healthy-and-sustainable-diets>
- Lang, T. (2020). Feeding Britain: Our Food Problems and How to Fix them. London: Pelican.
- Lloyd's of London. (2019). Evolving Risks in Global Food Supply. London: Lloyd's of London. [Online] Available at: <https://www.lloyds.com/news-and-risk-insight/risk-reports/library/understanding-risk/evolving-risks-in-global-food-supply>
- London Food Board. (2018). The London Food Strategy. London: Greater London Authority. [Online] Available at: [https://www.london.gov.uk/sites/default/files/final\\_london\\_food\\_strategy.pdf](https://www.london.gov.uk/sites/default/files/final_london_food_strategy.pdf)
- National Centre for Universities and Business. (2015). Leading Food 4.0/Growing University-Business collaboration for the UK's food economy. London: NCUB. [Online] Available at [https://www.ncub.co.uk/index.php?option=com\\_docman&view=download&alias=214-leading-food-4-0&category\\_slug=reports&Itemid=2728](https://www.ncub.co.uk/index.php?option=com_docman&view=download&alias=214-leading-food-4-0&category_slug=reports&Itemid=2728)
- National Farmers Union. (2019). Achieving NET ZERO. [Online] Available at: <https://www.nfuonline.com/nfu-online/business/regulation/achieving-net-zero-farmings-2040-goal/>
- National Farmers Union. (2019). The Future of Food 2040. Stoneleigh, Warwickshire: National Farmers Union. [Online] Available at: <https://www.nfuonline.com/nfu-online/news/the-future-of-food-2040/>
- Northern Ireland Government, Department of Agriculture, Environment and Rural Affairs, (2017) Going for Growth: A Strategic Action Plan in Support of the NI Agri-food Industry. Belfast: Northern Ireland Government. [Online] Available at: <https://www.daera-ni.gov.uk/publications/going-growth-strategic-action-plan-support-ni-agri-food-industry>
- Northern Ireland Government, Department of Health. (2019). A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland (2012-22). Belfast: Northern Ireland Government. [Online] Available at: <https://www.health-ni.gov.uk/publications/obesity-prevention-framework-and-reports>
- Office of the United States Trade Representative. (2014). 2014 Report on Sanitary and Phytosanitary Measures. USA: Office of the United States Trade Representative. [Online] Available at: <https://ustr.gov/sites/default/files/FINAL-2014-SPS-Report-Compiled.pdf>.
- Office of the United States Trade Representative. (2019). United States-United Kingdom Negotiations: Summary of Specific Negotiating Objectives. USA: Office of the United States Trade Representative. [Online] Available at: [https://ustr.gov/sites/default/files/Summary\\_of\\_U.S.-UK\\_Negotiating\\_Objectives.pdf](https://ustr.gov/sites/default/files/Summary_of_U.S.-UK_Negotiating_Objectives.pdf).
- Parsons, K. and Hawkes, C. (2018). Connecting Food Systems for Co-benefits: How can Food Systems Combine Diet-related Health with Environmental and Economic Policy Goals?. Denmark: World Health Organisation. [Online] Available at: [https://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0007/387070/policy-brief-31-austria-eng.pdf](https://www.euro.who.int/__data/assets/pdf_file/0007/387070/policy-brief-31-austria-eng.pdf)
- Parsons, K. (2020). Rethinking Food Governance 1: Who makes Food Policy in England?. London: Food Research Collaboration. [Online] Available at: <https://foodresearch.org.uk/publications/who-makes-food-policy-in-england-and-food-policy-coordination-under-covid19/>
- People's Food Policy. (2017). A People's Food Policy. London: People's Food Policy. [Online] Available at: <https://www.peoplesfoodpolicy.org/>
- Poux, X. and Aubert, PM. (2018). An Agroecological Europe in 2050: Multifunctional Agriculture for Healthy Eating. Findings from the Ten Years for Agroecology (TYFA) modelling exercise. Iddri-AScA, Study N°09/18. Paris, France. [Online] Available at: <https://www.soilassociation.org/media/18074/iddri-study-tyfa.pdf>
- Public Health England. (2015). Sugar Reduction and Wider Reformulation. London: HMG. [Online] Available at: <https://www.gov.uk/government/collections/sugar-reduction>
- Public Health England. (2016). The Eatwell Guide. 4th [PDF]. London: HMG. [Online] Available at: <https://www.gov.uk/government/publications/the-eatwell-guide>
- Public Health England. (2017). Encouraging Healthier 'Out of Home' Food Provision. London: HMG. [Online] Available at: <https://www.gov.uk/government/publications/encouraging-healthier-out-of-home-food-provision>

- Public Health England. (2019). Whole Systems Approach to Obesity. London: HMG. [Online] Available at: <https://www.gov.uk/government/publications/whole-systems-approach-to-obesity>
- Public Health England. (2019). Healthy Weight Environments: Using the Planning System. London: HMG. [Online] Available at: <https://www.gov.uk/government/publications/healthy-weight-environments-using-the-planning-system>
- Public Health England. (2019). Health Matters: Addressing the food environment as part of a local whole systems approach to obesity (Blog). London: HMG. [Online] Available at: <https://publichealthmatters.blog.gov.uk/2019/08/08/health-matters-addressing-the-food-environment-as-part-of-a-local-whole-systems-approach-to-obesity/>
- Scotland Food and Drink. (2018). Ambition 2030: Industry Strategy for Growth. Edinburgh: Scotland Food and Drink. [Online] Available at: <https://foodanddrink.scot/resources/publications/ambition-2030-industry-strategy-for-growth/>
- Scottish Food Coalition. (2016). Plenty: Food, Farming and Health in a New Scotland. Edinburgh: Scottish Food Coalition. [Online] Available at: [http://www.foodcoalition.scot/uploads/6/2/6/8/62689573/plenty\\_complete.pdf](http://www.foodcoalition.scot/uploads/6/2/6/8/62689573/plenty_complete.pdf)
- Scottish Government. (2014). Recipe for Success: Scotland's National Food and Drink Policy, Becoming a Good Food Nation. Edinburgh: Scottish Government. [Online] Available at: <https://www.gov.scot/publications/recipe-success-scotlands-national-food-drink-policy-becoming-good-food/>
- Scottish Government. (2018). Scotland's Public Health Priorities. Edinburgh: Scottish Government. [Online] Available at: <https://www.gov.scot/publications/scotlands-public-health-priorities/>
- Select Committee on Food, Poverty, Health and the Environment. (2020). Hungry for Change: Fixing the Failures in Food. London: HMG. [Online] Available at: <https://publications.parliament.uk/pa/ld5801/ldselect/ldfphe/85/85.pdf>
- Sosenk, F, Littlewood, M, Bramley, G, Fitzpatrick, S, Blenkinsopp, J, and Wood, J. (2019). State of Hunger A study of poverty and food insecurity in the UK. Salisbury: The Trussell Trust. [Online] Available at: <https://www.stateofhunger.org/wp-content/uploads/2019/11/State-of-Hunger-Report-November2019-Digital.pdf>
- Shukla, PR., Skea, J., Slade, R., van Diemen, R., Haughey, E., Malley, J., Pathak, M., Portugal Pereira, J. (eds.). (2019). Technical Summary. Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems. Switzerland: IPCC. [Online] Available at: [https://www.ipcc.ch/site/assets/uploads/sites/4/2019/11/03\\_Technical-Summary-TS.pdf](https://www.ipcc.ch/site/assets/uploads/sites/4/2019/11/03_Technical-Summary-TS.pdf)
- Stacey, G. (2018). Farm Inspection and Regulation Review. London: HMG. [Online]. Available at: <https://www.gov.uk/government/publications/farm-inspection-and-regulation-review>
- Steiner A., Aguilar G., Bomba K, Bonilla JP, Campbell A, Echeverria R, Gandhi R, Hedegaard C, Holdorf D, Ishii N, Quinn K, Ruter B, Sunga I, Sukhdev P, Verghese S, Voegelé J, Winters P, Campbell B, Dinesh D, Huyer S, Jarvis A, Loboguerrero Rodriguez AM, Millan A, Thornton P, Wollenberg L, Zebiak S. (2020). Actions to Transform Food Systems under Climate Change. Wageningen, The Netherlands: CCAFS. [Online] Available at: <https://cgspace.cgiar.org/bitstream/handle/10568/108489/Actions%20to%20Transform%20Food%20Systems%20Under%20Climate%20Change.pdf>
- The High Level Panel of Experts on Food Security and Nutrition. (2017). Nutrition and Food Systems. Rome: Committee on World Food Security. [Online] Available at: <http://www.fao.org/3/a-i7846e.pdf>
- Van den Bossche, P. (2005). The Law and Policy of the World Trade Organization: Text, Cases and Materials. Cambridge: Cambridge University Press.
- Vogel, D. (2012). The Politics of Precaution: Regulating Health, Safety, and Environmental Risks in Europe and the United States. Princeton, N.J.: Princeton University Press.
- Welsh Assembly Government. (2010). Food for Wales, Food from Wales 2010-2020: Food Strategy for Wales. Cardiff: Welsh Assembly Government. [Online] Available at: <https://gov.wales/sites/default/files/publications/2018-05/food-strategy-for-wales-2010-to-2020.pdf>
- Welsh Assembly Government. (2020). Healthy Weight: Healthy Wales Delivery plan 2020 to 2022. Cardiff: Welsh Assembly Government. [Online] Available at: <https://gov.wales/healthy-weight/healthy-wales-delivery-plan-2020-2022>
- Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Murray, C.J.L. (2019). Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems. The Lancet. 393(10170), 447–492. London: The Lancet. [Online] Available at: [https://doi.org/10.1016/S0140-6736\(18\)31788-4](https://doi.org/10.1016/S0140-6736(18)31788-4): p.448.
- World Economic Forum. (2020). Incentivizing Food Systems Transformation. Geneva: World Economic Forum. [Online] Available at: [http://www3.weforum.org/docs/WEF\\_Incentivizing\\_Food\\_Systems\\_Transformation.pdf](http://www3.weforum.org/docs/WEF_Incentivizing_Food_Systems_Transformation.pdf)



# References

- <sup>1</sup> Afshin, A., Sur, P.J., Far, K.A., et al. (2019). Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, 393(10184), [online] Available at: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)30041-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)30041-8/fulltext)
- <sup>2</sup> Department for Transport. (2020). Reported road casualties for Great Britain, annual report: 2018. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/834585/reported-road-casualties-annual-report-2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/834585/reported-road-casualties-annual-report-2018.pdf)
- <sup>3</sup> Office of National Statistics. (2020). Adult smoking habits in the UK: 2019. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/adultsmokinghabitsingreatbritain/2019#:~:text=7.,Health%20consequences%20of%20cigarette%20smoking,smoking%20per%20year%20in%20England.>
- <sup>5</sup> Kellogg's. (2013). A Lost Education: The reality of hunger in the classroom. [online]. Available at: [https://www.kelloggs.co.uk/content/dam/europe/kelloggs\\_gb/pdf/R2\\_Kellogg\\_A\\_Lost\\_Education.pdf](https://www.kelloggs.co.uk/content/dam/europe/kelloggs_gb/pdf/R2_Kellogg_A_Lost_Education.pdf)
- <sup>6</sup> Simmonds, M., Burch, J., Llewellyn, A., et al. (2015). The use of measures of obesity in childhood for predicting obesity and the development of obesity-related diseases in adulthood: a systematic review and meta-analysis. *Health Technology Assessment*, 19(43). [online] Available from: <https://www.ncbi.nlm.nih.gov/books/NBK299575/> doi: 10.3310/hta19430
- <sup>7</sup> Goisis, A., Sacker, A. and Kelly, Y. (2015). Why are poorer children at higher risk of obesity and overweight? A UK cohort study. *The European Journal of Public Health*, [online] 26(1), pp.7–13. Available at: <https://academic.oup.com/eurpub/article/26/1/7/2467515>
- <sup>8</sup> Zagre, MN. and Quince, G. (2014). Child hunger and its long-term effects. UNICEF [online] Available at: <https://blogs.unicef.org/blog/child-hunger-and-its-long-term-effects/>
- <sup>9</sup> BidFood. (2020). Bidfood and Brakes join forces to support the vulnerable in isolation. [online] Available at: <https://www.bidfood.co.uk/2020/03/29/bidfood-and-brakes-join-forces-to-support-the-vulnerable-in-isolation/>
- <sup>10</sup> Nabim. (2020). COVID-19: Maintaining the supply of flour. [Online] Available at <http://www.nabim.org.uk/covid-19-maintaining-the-supply-of-flour>
- <sup>11</sup> Department for Environment, Food and Rural Affairs (Defra) statistics (unpublished).
- <sup>12</sup> Office of National Statistics. (2020). Trade in goods: country-by-commodity imports. [online] Available at: <https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/datasets/uktradecountrybycommodityimports>
- <sup>15</sup> Kantar. (2020). How Covid-19 affected Grocery Retail. Kantar.
- <sup>16</sup> Office for National Statistics. (2020). Business Industry and Trade Retail Figures March 2020. [Online] Available at <https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/march2020> 17 Office for National Statistics. (2020). Index of Services, UK: May 2020. ONS. [online]. Available at: <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/bulletins/indexofservices/may2020> 0 and Office for National Statistics. (2015). Retail Sales Index. ONS. [online]. Available at: <https://www.ons.gov.uk/businessindustryandtrade/retailindustry/datasets/retailsalesindexreferencetables/current>
- <sup>18</sup> Office for National Statistics. (2020). Business impact of coronavirus, analysis over time, UK: Waves 2 to 5 panel. ONS. [online]. Available at: <https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/articles/businessimpactofcoronavirusanalysisvertimeuk/waves2to5panel>
- <sup>19</sup> UK Parliament Post. (2020). Effects of COVID-19 on the food system. [Online] Available at <https://post.parliament.uk/analysis/food-security/effects-of-covid-19-on-the-food-supply-system/>
- <sup>20</sup> Kantar. (2020). Take Home Purchasing 6 January 1019 to 7 June 2020. Kantar.
- <sup>21</sup> FareShare. (2020). FareShare Food Service KPI May 2020. FareShare.
- <sup>22</sup> Kantar. (2020). Grocery Market Share. Kantar. [online]. Available at: <https://www.kantarworldpanel.com/en/grocery-market-share/great-britain/snapshot>
- <sup>23</sup> Ibid
- <sup>24</sup> Ibid and Office for National Statistics. (2020). Wealth and Assets Survey – financial resilience. ONS. [online]. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/datasets/wealthandassetssurveyfinancialresilience>
- <sup>25</sup> Office for National Statistics. (2020). Online price changes for high-demand products. ONS. [online]. Available at: <https://www.ons.gov.uk/economy/inflationandpriceindices/datasets/onlinepricechangesforhighdemandproducts>
- <sup>26</sup> Jaravel, X. and O'Connell, N. (2020). Inflation Spike and Falling Product Variety during the Great Lockdown. Institute for Fiscal Studies. [online]. Available at: <https://www.ifs.org.uk/uploads/WP202017-Inflation-spike-and-falling-product-variety-during-the-Great-Lockdown.pdf>
- <sup>27</sup> Agriculture and Horticulture Development Board. (2020). Market and Prices. ADHB. [online]. Available at: <https://ahdb.org.uk/markets-and-prices>

- <sup>28</sup> Food Standards Agency. (2020). COVID-19 Consumer Tracker. FSA. [online]. Available at: <https://www.food.gov.uk/research/research-projects/the-covid-19-consumer-tracker> and Fancourt, D., Bu, F., Mak, HW., and Steptoe, A. (2020). COVID-19 Social Study Results Release 14. University College London. [online]. Available at: [https://b6bdc03-332c-4ff9-8b9d-28f9c957493a.filesusr.com/ugd/3d9db5\\_d6f91f3ff2324a00a3273f466ceb699d.pdf](https://b6bdc03-332c-4ff9-8b9d-28f9c957493a.filesusr.com/ugd/3d9db5_d6f91f3ff2324a00a3273f466ceb699d.pdf)
- <sup>29</sup> Notley, C., Naughton, F., Minihane, A., et al. (2020). C-19 Wellbeing Tracker Study. OSFHOMe. [online]. Available at: <https://osf.io/dm853/> and Bite Back 2030. (2020). Hungry for change. [Online] Available at: <https://biteback2030.com/sites/default/files/2020-06/BB2030%20Covid-19%20Report%20V2%5B1%5D.pdf> 30 Williamson, E.J., Walker, A.J., Bhaskaran, K., et al. (2020). OpenSAFELY: factors associated with COVID-19 death in 17 million patients. *Nature*. [online] Available at: <https://rdcu.be/b5wCF>
- <sup>31</sup> Ibid
- <sup>32</sup> Hippisley-Cox, J., Young, D., Coupland, C. et al. (2020). COVID-19 Disease with ACE inhibitors and Angiotensin Receptor Blockers including 8.3 Million People. (peer reviewed but not yet published)
- <sup>33</sup> Barron, E., Bakhai, C., Kar, P., et al. (2020). Type 1 and Type 2 Diabetes and COVID-19 Related Mortality in England: A Whole Population Study. *SSRN Electronic Journal*. [online]. Available at: <https://www.england.nhs.uk/wp-content/uploads/2020/05/valabhji-COVID-19-and-Diabetes-Paper-1.pdf>
- <sup>34</sup> Williamson, E.J., Walker, A.J., Bhaskaran, K., et al. (2020). OpenSAFELY: factors associated with COVID-19 death in 17 million patients. *Nature*. [online] Available at: <https://rdcu.be/b5wCF>
- <sup>35</sup> Barron, E., Bakhai, C., Kar, P., et al. (2020). Type 1 and Type 2 Diabetes and COVID-19 Related Mortality in England: A Whole Population Study. *SSRN Electronic Journal*. [online]. Available at: <https://www.england.nhs.uk/wp-content/uploads/2020/05/valabhji-COVID-19-and-Diabetes-Paper-1.pdf>
- <sup>36</sup> Global Burden of Disease collaborators. (2019). Health effects of dietary risks in 195 countries, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*. [online] Available at: [https://www.thelancet.com/article/S0140-6736\(19\)30041-8/fulltext#%20](https://www.thelancet.com/article/S0140-6736(19)30041-8/fulltext#%20)
- <sup>37</sup> Diabetes.co.uk. (2019). Diabetes prevalence. [online] 15 January, Available at: <https://www.diabetes.co.uk/diabetes-prevalence.html>
- <sup>38</sup> Global Burden of Disease collaborators. (2019). Health effects of dietary risks in 195 countries, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*. [online] Available at: [https://www.thelancet.com/article/S0140-6736\(19\)30041-8/fulltext#%20](https://www.thelancet.com/article/S0140-6736(19)30041-8/fulltext#%20)
- <sup>39</sup> Davies, SD. (2019). Time to Solve Childhood Obesity: an independent report by the Chief Medical Officer. Department of Health and Social Care. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/837907/cmo-special-report-childhood-obesity-october-2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/837907/cmo-special-report-childhood-obesity-october-2019.pdf).
- <sup>40</sup> NHS Digital. (2019). Health Survey for England 2018 [NS] - NHS Digital. [online] Available at: <https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england/2018>
- <sup>41</sup> Goisis, A., Sacker, A. and Kelly, Y. (2015). Why are poorer children at higher risk of obesity and overweight? A UK cohort study. *The European Journal of Public Health*. [online] 26(1), pp.7-13. Available at: <https://academic.oup.com/eurpub/article/26/1/7/2467515>.
- <sup>42</sup> Davies, SD. (2019). Time to Solve Childhood Obesity: an independent report by the Chief Medical Officer. Department of Health and Social Care. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/837907/cmo-special-report-childhood-obesity-october-2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/837907/cmo-special-report-childhood-obesity-october-2019.pdf).
- <sup>43</sup> NHS Digital. (2019). Health Survey for England 2018 [NS] - NHS Digital. [online] Available at: <https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england/2018>
- <sup>44</sup> Ibid and NHS Digital. (2018). The National Child Measurement Programme. [online] Available at: <https://digital.nhs.uk/services/national-child-measurement-programme/>
- <sup>45</sup> Ibid and National Bureau of Economic Research. (2010). Team analysis
- <sup>46</sup> Ibid
- <sup>47</sup> Cornell, M. (2015). *Strange tales of ale*. Gloucestershire, England: Amberley.
- <sup>48</sup> NHS Digital. (2019). Health Survey for England 2018 [NS] - NHS Digital. [online] Available at: <https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england/2018>
- <sup>49</sup> Team analysis of NDNS survey data
- <sup>50</sup> (2018). Consumer Expenditure. Euromonitor. Received via Eurostat and OECD
- <sup>51</sup> OECD. (2020) Time Use Across the World. [online] Available at: [https://stats.oecd.org/Index.aspx?DataSetCode=TIME\\_USE](https://stats.oecd.org/Index.aspx?DataSetCode=TIME_USE)
- <sup>52</sup> Marketresearch.com. (2019). Euromonitor International Research Reports. [online] Available at: <https://www.marketresearch.com/Euromonitor-International-v746/>.
- <sup>53</sup> Public Health England and Food Standards Agency. (2019). Years 1-9 of the UK National Diet and Nutrient Survey Rolling Programme (2008/09-2016/17). HMG. Available at: <https://www.gov.uk/government/statistics/ndns-time-trend-and-income-analyses-for-years-1-to-9>
- <sup>54</sup> Monteiro, CA., Moubarac, J-C., Levy, R.B., et al. (2017). Household availability of ultra-processed foods and obesity in nineteen European countries. *Public Health Nutrition*. [online] 21(01), pp.18-26. Available at: <https://www.cambridge.org/core/journals/public-health-nutrition/article/household-availability-of-ultraprocessed-foods-and-obesity-in-nineteen-european-countries/D63EF7095E8EFE72BD825AFC2F331149/core-reader>; Martínez Steele, E., Baraldi, L.G., Louzada, M.L. da C. et al. (2016). Ultra-processed foods and added sugars in the US diet: evidence from a nationally representative cross-sectional study. *BMJ Open*. [online] 6(3), p.e009892. Available at: <https://bmjopen.bmj.com/content/6/3/e009892>; Koiwai, K., Takemi, Y., Hayashi, F., et al. (2019). Consumption of ultra-processed foods decreases the quality of the overall diet of middle-aged Japanese adults. *Public Health Nutrition*, 22(16), pp.2999-3008; Adjibade, M., Julia, C., Allès, B., et al. (2019). Prospective association between ultra-processed food consumption and incident depressive symptoms in the French NutriNet-Santé cohort. *BMC Medicine*, 17(1); Euromonitor. (2016). How We Eat: The Changing Face of Global Mealtimes. Euromonitor and OECD. (2020) Time Use Across the World. [online] Available at: [https://stats.oecd.org/Index.aspx?DataSetCode=TIME\\_USE](https://stats.oecd.org/Index.aspx?DataSetCode=TIME_USE)



- <sup>55</sup> OECD. (2020) Time Use Across the World. [online] Available at: [https://stats.oecd.org/Index.aspx?DataSetCode=TIME\\_USE](https://stats.oecd.org/Index.aspx?DataSetCode=TIME_USE)
- <sup>56</sup> Defra (2018). Family food dataset. [online] Available at: <https://www.gov.uk/government/statistical-data-sets/family-food-datasets>
- <sup>57</sup> The George Institute and Access to Nutrition Index. (2018). 2018 Global Access to Nutrition Index PRODUCT PROFILE METHODOLOGY. [online] Available at: [https://accessnutrition.org/app/uploads/2020/02/GI\\_Global-Index\\_TGI-product-profile\\_Methodology\\_2018.pdf](https://accessnutrition.org/app/uploads/2020/02/GI_Global-Index_TGI-product-profile_Methodology_2018.pdf)
- <sup>58</sup> Access to Nutrition Initiative. (2019). U.K Product Profile 2019. [online] Available at: <https://accessnutrition.org/countries/uk-product-profile-2019/>
- <sup>59</sup> Higginson, A.D., McNamara, J.M. and Houston, A.I. (2016). Fatness and fitness: exposing the logic of evolutionary explanations for obesity. *Proceedings of the Royal Society B: Biological Sciences*, 283(1822), p.20152443.
- <sup>60</sup> Access to Nutrition Initiative. (2019). U.K Product Profile 2019. [online] Available at: <https://accessnutrition.org/countries/uk-product-profile-2019/> and Euromonitor International. (2018). *Consumers in 2019*. Available at: <https://www.euromonitor.com/consumers-in-2019/report>
- <sup>61</sup> Office for National Statistics. (2019). Overview of the UK population – August 2019. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/overviewoftheukpopulation/august2019>
- <sup>62</sup> Gompertz, S. (2018). How did households budget in 1957? BBC News. [online] 18 Jan. Available at: <https://www.bbc.co.uk/news/business-42735294>. BBC from ONS data, Detailed household expenditure as a 124 percentage of total expenditure by equivalised disposable income decile group (OECD-modified) UK financial year ending 2017, ONS; Defra. (2016) *Food Statistics pocketbook*. [online] Available at: <https://www.gov.uk/government/statistics/food-statistics-pocketbook-2016>
- <sup>63</sup> Public Health England. (2015). Sugar Reduction: The evidence for action. Public Health England. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/470179/Sugar\\_reduction\\_The\\_evidence\\_for\\_action.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/470179/Sugar_reduction_The_evidence_for_action.pdf)
- <sup>64</sup> Institute for Fiscal Studies. (2020). Inflation spike and falling product variety during the Great Lockdown. [online]. Available at: <https://www.ifs.org.uk/uploads/WP202017-Inflation-spike-and-falling-product-variety-during-the-Great-Lockdown.pdf>
- <sup>65</sup> Breslin, PA. (2013). An evolutionary perspective on food and human taste. *Current biology*, 23(9), R409– R418. [online] Available at: <https://doi.org/10.1016/j.cub.2013.04.010>
- <sup>66</sup> Lieberman, D. (2012) Evolution's Sweet Tooth. *New York Times*. [online] Available at: <https://www.nytimes.com/2012/06/06/opinion/evolutions-sweet-tooth.html>
- <sup>67</sup> Di Feliceantonio, AG., Coppin, G., Rigoux, L., et al. (2018). Supra-Additive Effects of Combining Fat and Carbohydrate on Food Reward Cell Metabolism. [online], Available at: <https://doi.org/10.1016/j.cmet.2018.05.018> and (2017). *The Secrets of your Food*. BBC2 Television, 24 February.
- <sup>68</sup> Donnelly, L. (2016). Force supermarkets to cut the sugar content in our products, says Sainsbury chief. *The Telegraph*, 19 February. [online] Available at: <https://www.telegraph.co.uk/journalists/laura-donnelly/12165556/Force-us-to-cut-the-sugar-content-in-our-products-says-Sainsbury-chief.html>
- <sup>69</sup> Lewis, D. (2020) The UK's food strategy cannot be left to the market. *Financial Times*, 16 July. [online] <https://www.ft.com/content/acfd1251-24e9-478b-b8db-c6cc70d64b39>
- <sup>70</sup> (2020) The Advertising Association/WARC Expenditure Report. [online] Available at: <https://expenditurereport.warc.com/>
- <sup>71</sup> The Department of Culture, Media and Sport (DMCS) and the Department of Health and Social Care (DHSC). (2019). Introducing a 2100-0530 watershed on TV advertising of HFSS (food and drink that are High in Fat, Salt and Sugar) products and similar protection for children viewing adverts online: Impact Assessment. HMG. [online]. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/786554/advertising-consultation-impact-assessment.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/786554/advertising-consultation-impact-assessment.pdf)
- <sup>72</sup> Ibid
- <sup>73</sup> Itv.com. (2020). ITV results centre. [online] Available at: <https://www.itvplc.com/investors/results-centre>
- <sup>74</sup> Ofcom. (2010). HFSS Advertising Restrictions final review. Ofcom.org.uk [online]. Available at: [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0024/31857/hfss-review-final.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0024/31857/hfss-review-final.pdf)
- <sup>75</sup> (2019). Health and Social Care Committee Oral evidence: Childhood Obesity follow-up 2019, HC 130, House of Commons, p25. [online]. Available at: <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/health-and-social-care-committee/childhood-obesity-followup-2019/oral/106851.html>
- <sup>76</sup> Russell, S.J., Croker, H., Viner, R.M. (2018) The effect of screen advertising on children's dietary intake: A systematic review and meta-analysis. *Obesity Reviews*. [online] Available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/obr.12812>
- <sup>77</sup> The Department of Culture, Media and Sport (DMCS) and the Department of Health and Social Care (DHSC). (2019). Introducing a 2100-0530 watershed on TV advertising of HFSS (food and drink that are High in Fat, Salt and Sugar) products and similar protection for children viewing adverts online: Impact Assessment. HMG. [online]. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/786554/advertising-consultation-impact-assessment.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/786554/advertising-consultation-impact-assessment.pdf)
- <sup>78</sup> Department of Health and Social Care. (2011). Statement of the Calorie Reduction Expert Group. HMG. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/215561/dh\\_127554.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/215561/dh_127554.pdf)
- <sup>79</sup> Obesity Health Alliance. (2020). 74% of the Public Support Government Action on Obesity in the Wake of Emerging Links with COVID-19. [online] Available at: <http://obesityhealthalliance.org.uk/2020/06/03/74-of-the-public-support-government-action-on-obesity-in-the-wake-of-emerging-links-with-covid-19>
- <sup>80</sup> The Health Foundation. (2020). COVID-19 crisis leads to shift in public attitudes about the role of the state. 15 June. [online] Available at: <https://www.health.org.uk/news-and-comment/news/covid-19-crisis-shifts-public-attitudes-about-role-of-state>
- <sup>81</sup> Obesity Health Alliance. (2020). 74% of the Public Support Government Action on Obesity in the Wake of Emerging Links with COVID-19. [online] Available at: <http://obesityhealthalliance.org.uk/2020/06/03/74-of-the-public-support-government-action-on-obesity-in-the-wake-of-emerging-links-with-covid-19>
- <sup>82</sup> Department of Health and Social Care. (2019). *Advancing our health: prevention in the 2020s – consultation document*. [online] Available at: <https://www.gov.uk/government/consultations/advancing-our-health-prevention-in-the-2020s>

- <sup>83</sup> Dimpleby, H. and Vincent, J. (2013). The School Food Plan. HMG. [online]. Available at: <http://www.schoolfoodplan.com/plan/>
- <sup>84</sup> Office for National Statistics. (2020). GDP monthly estimate, UK: April 2020. Office for National Statistics [online] Available at: <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/april2020#gdp-fell-by-204-in-april-2020>.
- <sup>85</sup> Department for Work and Pensions. (2020). Universal Credit declarations (claims) and advances: management information. GOV.UK. [online] Available at: <https://www.gov.uk/government/publications/universal-credit-declarations-claims-and-advances-management-information>
- <sup>86</sup> HM Revenue & Customs. (2020). HMRC coronavirus (COVID-19) statistics. GOV.UK. [online] Available at: <https://www.gov.uk/government/collections/hmrc-coronavirus-covid-19-statistics>.
- <sup>87</sup> Billard, L. and Allen, D. (2020). Statistical bulletin Self-Employment Income Support Scheme (SEISS) Official Statistics Press Queries. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/891603/SEISS\\_Official\\_Statistics\\_June\\_2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891603/SEISS_Official_Statistics_June_2020.pdf).
- <sup>88</sup> Ibid
- <sup>89</sup> Atwater, P. (2020). The gap between the haves and the have-nots is widening sharply. The Financial Times, 10 June. [online] Available at: <https://www.ft.com/content/0ebfb7ca-a681-11ea-a27c-b8aa85e36b7e>
- <sup>90</sup> Office of National Statistics. (2020). Coronavirus (COVID-19) related deaths by occupation, England and Wales - Office for National Statistics. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/datasets/coronaviruscovid19relateddeathsbyoccupationenglandandwales> %
- <sup>91</sup> Ibid
- <sup>92</sup> Office for National Statistics. (2020). Coronavirus and the impact on output in the UK economy: April 2020. Office for National Statistics [online]. Available at: <https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/coronavirusandtheimpactonoutputinthekueconomy/april2020>
- <sup>93</sup> Ibid
- <sup>94</sup> McAllister, J. (2020). Hospitality shutdown responsible for a quarter of UK's GDP fall. Big Hospitality. [online] Available at: [https://www.bighospitality.co.uk/Article/2020/06/15/Hospitality-shutdown-responsible-for-a-quarter-of-UK-s-GDP-fall-Coronavirus%](https://www.bighospitality.co.uk/Article/2020/06/15/Hospitality-shutdown-responsible-for-a-quarter-of-UK-s-GDP-fall-Coronavirus%20)
- <sup>95</sup> McKinsey. (2020). COVID-19 in the UK: The impact on people and jobs at risk. McKinsey. [online] Available at: <https://www.mckinsey.com/industries/public-sector/our-insights/covid-19-in-the-united-kingdom-assessing-jobs-at-risk-and-the-impact-on-people-and-places> .
- <sup>96</sup> Ibid
- <sup>97</sup> Agriculture and Horticulture Development Board (AHDB). (2020). Weekly dairy market update (13– 16 April) AHDB. [online] Available at: <https://ahdb.org.uk/news/weekly-dairy-market-update-13-16-april>
- <sup>98</sup> Agriculture and Horticulture Development Board (AHDB). (2020). Domestic market update - 04 June 2020. AHDB. [online] Available at: <https://ahdb.org.uk/news/domestic-market-update-04-june-2020>
- <sup>99</sup> Agriculture and Horticulture Development Board (AHDB). (2020). The cost of higher mincing. AHDB. [online] Available at: <https://ahdb.org.uk/news/the-cost-of-higher-mincing>
- <sup>100</sup> Harvey, F. (2020). Farmers' union 'optimistic' UK workers will rescue the harvest. The Guardian 16 April. [online] Available at: <https://www.theguardian.com/environment/2020/apr/16/farmers-union-optimistic-uk-workers-will-rescue-the-harvest-covid-19>; Case, P. (2020). Coronavirus: Diversified farms to kickstart rural recovery. Farmers Weekly, 24 June. [online] Available at: <https://www.fwi.co.uk/business/diversification/coronavirus-diversified-farms-to-kickstart-rural-recovery> and Hoey, I. (2020). 80% of farmers expecting profit losses following Covid-19. Farm Business, 19 June. [online] Available at: <http://www.farmbusiness.co.uk/news/80-of-farmers-expecting-profit-losses-following-covid-19.html>
- <sup>101</sup> Loopstra, R., Reeves, A., McKee, M. and Stuckler, D. (2016). Food insecurity and social protection in Europe: Quasi-natural experiment of Europe's great recessions 2004–2012. Preventive Medicine, 89, pp.44–50.
- <sup>102</sup> Office for Budget Responsibility (OBR). (2020). Coronavirus analysis. OBR. [online] Available at: <https://obr.uk/coronavirus-analysis/>
- <sup>103</sup> Office for Budget Responsibility (OBR). (2020). Public Finances Databank. OBR. [online] Available at: <https://obr.uk/download/public-finances-databank/> Credit. [Press release] 23 November. Available at: [https://www.gov.uk/government/news/more-detail-on-15-](https://www.gov.uk/government/news/more-detail-on-15)
- <sup>104</sup> Department for Work and Pensions (2017). More detail on £1.5 billion package of support for Universal Credit. [Press release] 23 November. Available at: <https://www.gov.uk/government/news/more-detail-on-15-billion-package-of-support-for-universal-credit>
- <sup>105</sup> Joseph Rowntree Foundation. (2020). Written Evidence from Joseph Rowntree Foundation [UCW0076]. House of Commons. Available at: <https://committees.parliament.uk/writtenevidence/1908/html/>
- <sup>106</sup> Wainwright, D., Buckingham, A. and Wainwright, E. (2018). Why do people use food banks? A qualitative study of food bank users in an English city. Voluntary Sector Review, 9(3), pp.311–32
- <sup>108</sup> Select Committee on Financial Exclusion. (2017). Tackling financial exclusion: A country that works for everyone? - Select Committee on Financial Exclusion. House of Lords. [online] Available at: <https://publications.parliament.uk/pa/ld201617/ldselect/ldfinexcl/132/13206.htm> and Money Advice Service. (2016). Press release: Low savings levels put millions at financial risk - Money Advice Service, 29 September. Money Advice Service. [online] Available at: <https://www.moneyadvice.org.uk/en/corporate/press-release-low-savings-levels-put-millions-at-financial-risk.%>
- <sup>109</sup> McKinsey. (2020). COVID-19 in the UK: The impact on people and jobs at risk. McKinsey. [online] Available at: <https://www.mckinsey.com/industries/public-sector/our-insights/covid-19-in-the-united-kingdom-assessing-jobs-at-risk-and-the-impact-on-people-and-places>.
- <sup>110</sup> Office for National Statistics. (2019). Earnings and hours worked, industry by four-digit SIC: ASHE Table 16. Office for National Statistics. [online]. Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/industry4digitsic2007ashtable16>

- <sup>111</sup> Food Foundation. (2020). Vulnerability to food insecurity since the COVID-19 lockdown - Food Foundation. [online] Available at: <https://foodfoundation.org.uk/publication/vulnerability-to-food-insecurity-since-the-covid-19-lockdown/>
- <sup>112</sup> Food Foundation. (2020). Vulnerable Groups - Food Foundation. [online] Available at: <https://foodfoundation.org.uk/vulnerable-groups/>
- <sup>113</sup> Ibid
- <sup>114</sup> Unpublished data from Trussell Trust and Independent Food Aid Network
- <sup>115</sup> Unpublished data from the Food Standards Agency and The Trussell Trust. (2017). Financial insecurity, food insecurity, and disability: The profile of people receiving emergency food assistance from The Trussell Trust Foodbank Network in Britain. [online] Available at: [https://www.trusselltrust.org/wp-content/uploads/sites/2/2017/07/OU\\_Report\\_final\\_01\\_08\\_online2.pdf](https://www.trusselltrust.org/wp-content/uploads/sites/2/2017/07/OU_Report_final_01_08_online2.pdf)
- <sup>117</sup> Zagre, MN. and Quince, G. (2014). Child hunger and its long-term effects. UNICEF. [online] Available at: <https://blogs.unicef.org/blog/child-hunger-and-its-long-term-effects/#:~:text=Studies%20show%20it%20is%20linked>
- <sup>118</sup> Scientific Advisory Committee on Nutrition. (2011). The influence of maternal, fetal and child nutrition on the development of chronic disease later in life. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/339325/SACN\\_Early\\_Life\\_Nutrition\\_Report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/339325/SACN_Early_Life_Nutrition_Report.pdf)
- <sup>119</sup> NHS (2019). Complications - Vitamin B12 or folate deficiency anaemia. [online] Available at: <https://www.nhs.uk/conditions/vitamin-b12-or-folate-deficiency-anaemia/complications/>
- <sup>120</sup> Unicef. (2019). The state of the world's children 2019: Children, Food and Nutrition: Growing well in a changing world. [online]. Available at: <https://www.unicef.org/media/60806/file/SOWC-2019.pdf>
- <sup>121</sup> Kellogg's. (2013). A Lost Education: The reality of hunger in the classroom. [online]. Available at: [https://www.kelloggs.co.uk/content/dam/europe/kelloggs\\_gb/pdf/R2\\_Kellogg\\_A\\_Lost\\_Education.pdf](https://www.kelloggs.co.uk/content/dam/europe/kelloggs_gb/pdf/R2_Kellogg_A_Lost_Education.pdf)
- <sup>122</sup> Dimbleby, H. and Vincent, J. (2013). The School Food Plan. [online]. Available at: [http://www.schoolfoodplan.com/wp-content/uploads/2013/07/School\\_Food\\_Plan\\_2013.pdf](http://www.schoolfoodplan.com/wp-content/uploads/2013/07/School_Food_Plan_2013.pdf); Nelson M., Gibson K. and Nicholas J. (2015). School Lunch Take up and Attainment in Primary and Secondary Schools in England. *Frontiers in Public Health*, 3(230). [online] Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4600899/>; Defeyter M., Graham P. and Russo R. (2015). More than Just a Meal: Breakfast Club Attendance and Children's Social Relationships. *Frontiers in Public Health*, 3(183). [online] Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4519657/> and Hillier-Brown, F., Bamba, C., Cairns JM., et al. (2014). A systematic review of the effectiveness of individual, community and societal-level interventions at reducing socio-economic inequalities in obesity among adults. *International Journal of Obesity*, 38(12), pp1483–90. [online] Available at: <https://pubmed.ncbi.nlm.nih.gov/24813369/> 123 Aceves-Martins, M., Cruickshank, M., Fraser, C. and Brazzelli, M. (2018). Child Food Insecurity in the UK: a rapid review. *Public Health Research*, 6(13). Available at: <https://www.journalslibrary.nihr.ac.uk/phr/phr06130/#/s3>
- <sup>124</sup> HM Government. (2020). £63 million for local authorities to assist those struggling to afford food and other essentials. [online] 11 June. Available at: <https://www.gov.uk/government/news/63-million-for-local-authorities-to-assist-those-struggling-to-afford-food-and-other-essentials>
- <sup>125</sup> HM Government. (2020). £16 million for food charities to provide meals for those in need. [online] 11 June. Available at: <https://www.gov.uk/government/news/16-million-for-food-charities-to-provide-meals-for-those-in-need>
- <sup>126</sup> Royston, S., Rodrigues and L., Hounsell, D. (2012). Fair and Square: A Policy Report on the Future of Free School Meals. The Children's Society, p12. [online] Available at: [https://www.childrensociety.org.uk/sites/default/files/tcs/fair\\_and\\_square\\_policy\\_report\\_final.pdf](https://www.childrensociety.org.uk/sites/default/files/tcs/fair_and_square_policy_report_final.pdf)
- <sup>127</sup> Evans, CEL., Melia, KE., Rippin, HL., et al. (2020). A repeated cross-sectional survey assessing changes in diet and nutrient quality of English primary school children's packed lunches between 2006 and 2016. *BMJ Open*, 10(e029688). Available at: <https://bmjopen.bmj.com/content/10/1/e029688>
- <sup>128</sup> All-Party Parliamentary Group on Hunger. (2017). Hungry Holidays. APPPG on Hunger. [online]. Available at: <https://feedingbritain.files.wordpress.com/2015/02/hungry-holidays.pdf> pp.4
- <sup>129</sup> Ibid and The Trussell Trust, 2018. Families, Hunger and the Holidays. The Trussell Trust. [online]. Available at: <https://www.trusselltrust.org/wp-content/uploads/sites/2/2018/08/Families-hunger-and-the-holidays-policy-brief.pdf>
- <sup>130</sup> Public Health England. (2019). National Diet and Nutrition Survey: time trend and income analyses for Years 1 to 9. PHE. [online] Available at: <https://www.gov.uk/government/statistics/ndns-time-trend-and-income-analyses-for-years-1-to-9>
- <sup>131</sup> Ibid
- <sup>132</sup> Office for National Statistics. (2019). Detailed household expenditure by equivalised disposable income decile group: Table 3.1E. ONS. [online]. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/datasets/>
- <sup>133</sup> Morales, M.E. and Berkowitz, S.A. (2016). The Relationship Between Food Insecurity, Dietary Patterns, and Obesity. *Current Nutrition Reports*, 5(1), pp.54–60; Richardson, AS., Arsenault, JE., Cates, SC. and Muth, MK. (2015). Perceived stress, unhealthy eating behaviors, and severe obesity in low-income women. *Nutrition Journal*, 14(1); (2018). Food poverty in Camden and Islington, January 2018. [online] Available at: [https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewiloeaD\\_LjqAhXGYMAKHSrkBSQQFjAAeegQIBRAB&url=https%3A%2F%2Fopendata.camden.gov.uk%2Fdownload%2F6rj-bnun%2Fapplication%252Fpdf&usq=AOvVawOBIO\\_ABpTaDzBGxIMQ3OPZ](https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewiloeaD_LjqAhXGYMAKHSrkBSQQFjAAeegQIBRAB&url=https%3A%2F%2Fopendata.camden.gov.uk%2Fdownload%2F6rj-bnun%2Fapplication%252Fpdf&usq=AOvVawOBIO_ABpTaDzBGxIMQ3OPZ) and Caraher, M., Dixon, P., Lang, T., and Car-Hill, R. (1999). The state of cooking in England: The relationship of cooking skills to food. *British Food Journal*, 101(8):590–609 [online] Available at: [https://www.researchgate.net/publication/242337537\\_The\\_state\\_of\\_cooking\\_in\\_England\\_The\\_relationship\\_of\\_cooking\\_skills\\_to\\_food\\_choice](https://www.researchgate.net/publication/242337537_The_state_of_cooking_in_England_The_relationship_of_cooking_skills_to_food_choice)
- <sup>134</sup> Turn to Us. (2020). Living without: the scale and impact of appliance poverty. Turn to Us. [online] Available at: <https://www.turn2us.org.uk/T2UWebsite/media/Documents/Communications%20documents/Living-Without-Report-Final-Web.pdf>
- <sup>135</sup> Rayner, J. (2020). Diet, health, inequality: why Britain's food supply system doesn't work. *The Observer*, 22 March. [online] Available at: <https://www.theguardian.com/environment/2020/mar/22/tim-lang-interview-professor-of-food-policy-city-university-supply-chain-crisis>

- <sup>136</sup> Lang, T., Millstone, E., and Marsden, T. (2020). Letter to Boris Johnson, 20 March 2020. City University of London. [online]. Available at: [https://www.city.ac.uk/\\_data/assets/pdf\\_file/0009/523854/PM-Letter-TL-TJM-EPM-final-20-03-20.pdf](https://www.city.ac.uk/_data/assets/pdf_file/0009/523854/PM-Letter-TL-TJM-EPM-final-20-03-20.pdf)
- <sup>137</sup> BBC. (2020). Buy responsibly and think of others, shoppers told. BBC News, 21 March [online] Available at: <https://www.bbc.co.uk/news/uk-51989721>
- <sup>138</sup> Office for National Statistics. (2020). Coronavirus and the impact on output in the UK economy: April 2020. Office for National Statistics. [online] Available at: <https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/coronavirusandtheimpactonoutputinthetukeconomy/april2020>.
- <sup>139</sup> McKinsey. (2020). COVID-19 in the UK: The impact on people and jobs at risk. McKinsey. [online] Available at: <https://www.mckinsey.com/industries/public-sector/our-insights/covid-19-in-the-united-kingdom-assessing-jobs-at-risk-and-the-impact-on-people-and-places>
- <sup>140</sup> Intergovernmental Panel on Climate Change (IPCC). (2020). Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. IPCC. [online] Available at: <https://www.ipcc.ch/srccl/>
- <sup>141</sup> Hilton, B. (2013). *A mad, bad, and dangerous people? England, 1783-1846*. Oxford: Oxford University Press.
- <sup>142</sup> Kipling, R. (1930). *Big Steamers. A School History of England*, Oxford: Clarendon Press, 1911
- <sup>143</sup> Dig For Victory. (2020). The Home Front in WW2, Growing and Cooking Rationed Food. [online] Available at: <https://dig-for-victory.org.uk/>
- <sup>144</sup> The National Archives. (2020). Farming and the Agriculture Acts. The National Archives. [online] Available at: <https://www.nationalarchives.gov.uk/cabinetpapers/themes/farming-agriculture-acts.htm>
- <sup>145</sup> Food Chain Analysis Group, Department for Environment Food and Rural Affairs. (2006). *Food Security and the UK: An Evidence and Analysis Paper*. National Archives. [online] Available at: [https://webarchive.nationalarchives.gov.uk/20130404001020/http://archive.defra.gov.uk/evidence/economic\\_s/foodfarm/reports/documents/foodsecurity.pdf](https://webarchive.nationalarchives.gov.uk/20130404001020/http://archive.defra.gov.uk/evidence/economic_s/foodfarm/reports/documents/foodsecurity.pdf)
- <sup>146</sup> Garzon, I. (2006). *Reforming the Common Agricultural Policy*. London: Palgrave Macmillan, pp. 61-75.
- <sup>147</sup> Balls, K. (2020). The latest Tory party split? It's Waitrose Conservatives versus Lidl free marketeers. *The Guardian*, 12 June. [online] Available at: <https://www.theguardian.com/commentisfree/2020/jun/12/tory-party-waitrose-conservatives-lidl-us-trade-deal>
- <sup>148</sup> Bourguignon, F. and Morrisson, C. (2002). Inequality Among World Citizens: 1820-1992. *American Economic Review*. 92(4), pp.727-744.
- <sup>149</sup> Roser, M. (2018). Twice as long – life expectancy around the world. *Our World in Data*. [online] Available at: <https://ourworldindata.org/life-expectancy-globally>.
- <sup>150</sup> European Commission. (2018). Report from the commission to the European Parliament and the council on the application of the Directive 2007/43/EC and its influence on the welfare of chickens kept for meat production, as well as the development of welfare indicators. European Commission. [online] Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2018:181:FIN>
- <sup>151</sup> Defra. (2018). Code of practice for the welfare of meat chickens and meat breeding chickens. GOV.UK. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/694013/meat-chicken-code-march2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/694013/meat-chicken-code-march2018.pdf)
- <sup>152</sup> House of Commons. (2020). House of Commons Public Bill Committee Amendments: Agriculture Bill, As Amended pages 1-7. House of Commons. [online] Available at: [https://publications.parliament.uk/pa/bills/cbill/58-01/0106/amend/agriculture\\_day\\_rep\\_05121-7.html](https://publications.parliament.uk/pa/bills/cbill/58-01/0106/amend/agriculture_day_rep_05121-7.html)
- <sup>153</sup> For the fact that the EU and US are the largest UK trading partners: *Ons.gov.uk*. (2016). 09 Geographical breakdown of the current account, *The Pink Book - Office for National Statistics*. [online] Available at: <https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/datasets/9geographicalbreakdownofthecurrentaccountthepinkbook2016>. For their rejection of a deal on UK terms, see for example Lighthizer, R. (2020). Testimony to the US House of Representative Ways and Means Committee. [online] 17 June 2020 Available at: <https://waysandmeans.house.gov/legislation/hearings/2020-trade-policy-agenda.%>
- <sup>154</sup> European Commission. (2018). *Comprehensive and Economic Trade Agreement*. European Commission. [online] Available at: [https://ec.europa.eu/trade/policy/in-focus/ceta/ceta-chapter-by-chapter/index\\_en.htm](https://ec.europa.eu/trade/policy/in-focus/ceta/ceta-chapter-by-chapter/index_en.htm)
- <sup>155</sup> Levell, P., O'Connell, M., Smith, K. (2017). The exposure of households' food spending to tariff changes and exchange rate movements. *IFS Briefing Note BN213*. [online] Available at: <https://www.ifs.org.uk/publications/9563>
- <sup>156</sup> Wilkinson, R. (2018). Out of Africa: the facts about EU tariffs on African exports. *Full Fact*. [online] Available at: <https://fullfact.org/europe/out-africa-facts-about-eu-tariffs-african-exports/>
- <sup>157</sup> World Trade Organisation. (n.d.). ARTICLE XX GENERAL EXCEPTIONS. [online] WTO. Available at: [https://www.wto.org/english/res\\_e/booksp\\_e/gatt\\_ai\\_e/art20\\_e.pdf](https://www.wto.org/english/res_e/booksp_e/gatt_ai_e/art20_e.pdf).
- <sup>158</sup> US Department of Commerce and Labor. (1911). *Customs Tariff of the German Customs Union (Law of December 25, 1902, revised to June, 1911)*, Washington, Government Printing Office, p. 26; and see for this and other examples Charnovitz, S. (2002). The Law of Environmental 'PPMs' in the WTO: Debunking the Myth of Illegality. *Yale Journal of International Law*, vol. 27, p. 68.
- <sup>159</sup> World Trade Organisation. (2009). WTO | dispute settlement - the disputes - DS389. *Wto.org*. [online] Available at: [https://www.wto.org/english/tratop\\_e/dispu\\_e/cases\\_e/ds389\\_e.htm](https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds389_e.htm).
- <sup>160</sup> Agriculture and Horticulture Development Board. (2019). Opportunities for South American beef in a no deal. *AHDB*. [online] Available at: <http://beefandlamb.ahdb.org.uk/market-intelligence-news/opportunities-for-south-american-beef-in-a-no-deal/>
- <sup>161</sup> Department for International Trade. (2020). *UK-US Free Trade Agreement*. HMG, p33. 2 March [online] Available at: <https://www.gov.uk/government/publications/the-uks-approach-to-trade-negotiations-with-the-us>
- <sup>162</sup> Wikipedia. (2020). Animal rights by country or territory. [online] Available at: [https://en.wikipedia.org/wiki/Animal\\_rights\\_by\\_country\\_or\\_territory#:~:text=Notably%2C%20as%20of%20November%202019](https://en.wikipedia.org/wiki/Animal_rights_by_country_or_territory#:~:text=Notably%2C%20as%20of%20November%202019)
- <sup>163</sup> United States Mission to the European Union. (2012). *US-EU Organic Equivalency Arrangement*. [online] Available at: <https://www.usda-eu.org/trade-with-the-eu/trade-agreements/us-eu-organic-arrangement/>

- <sup>164</sup> Morales, A. (2020). Johnson Wants 80% of UK Trade Covered by Deals in 3 Years. Bloomberg. [online] Available at: <https://www.bloomberg.com/news/articles/2020-01-31/johnson-wants-80-of-u-k-trade-covered-by-deals-in-3-years#:~:text=Boris%20Johnson>
- <sup>165</sup> Department for International Trade. (2019). Processes for making free trade agreements after the United Kingdom has left the European Union. HMG. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/782176/command-paper-scrutiny-transparency-27012019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/782176/command-paper-scrutiny-transparency-27012019.pdf)
- <sup>166</sup> Department for Environment, Food & Rural Affairs, Department for International Trade, Truss, E., and Eustice, G. (2020). Trade and Agriculture Commission membership announced. HMG. [online] Available at: <https://www.gov.uk/government/news/trade-and-agriculture-commission-membership-announced>
- <sup>167</sup> Hatch, OG. (2015). Text - S.995 - 114th Congress (2015-2016): Bipartisan Congressional Trade Priorities and Accountability Act of 2015. US Congress. [online] Available at: <https://www.congress.gov/bill/114th-congress/senate-bill/995/text#:~:text=A%20BILL->
- <sup>168</sup> Ajena, F. (2017). Food Production in Europe: Time to Look Ahead. Green European Journal. [online] Available at: <https://www.greeneuropeanjournal.eu/food-production-in-europe-time-to-look-ahead/>
- <sup>169</sup> Intergovernmental Panel on Climate Change (IPCC). (2020). Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. IPCC. [online] Available at: <https://www.ipcc.ch/srccl/>
- <sup>170</sup> Ritchie, H. and Roser, M. (2020). Environmental impacts of food production. Our World in Data. [online] Available at: <https://ourworldindata.org/environmental-impacts-of-food>
- <sup>171</sup> Mann, CC. (2018). The wizard and the prophet: two remarkable scientists and their duelling visions to shape tomorrow's world. New York: Alfred A. Knopf.
- <sup>172</sup> Barabási, A-L. (2014). Linked How everything is connected to everything else and what it means for business, science, and everyday life. New York Basic Books Cop.
- <sup>174</sup> Defra Press Office. (2020). New details of the flagship Environmental Land Management scheme unveiled by Environment Secretary. Department for Environment Food and Rural Affairs. [online] Available at: <https://deframedia.blog.gov.uk/2020/02/25/new-details-of-the-flagship-environmental-land-management-scheme-unveiled-by-environment-secretary/>
- <sup>175</sup> Kellogg's. (2013). A Lost Education: The reality of hunger in the classroom. [online] Available at: [https://www.kelloggs.co.uk/content/dam/europe/kelloggs\\_gb/pdf/R2\\_Kellogg\\_A\\_Lost\\_Education.pdf](https://www.kelloggs.co.uk/content/dam/europe/kelloggs_gb/pdf/R2_Kellogg_A_Lost_Education.pdf)
- <sup>176</sup> Dimbleby, H. and Vincent, J. (2013). The School Food Plan. [online] Available at: [http://www.schoolfoodplan.com/wp-content/uploads/2013/07/School\\_Food\\_Plan\\_2013.pdf](http://www.schoolfoodplan.com/wp-content/uploads/2013/07/School_Food_Plan_2013.pdf)
- <sup>177</sup> Aceves-Martins, M., Cruickshank, M., Fraser, C. and Brazzelli, M. (2018). Child Food Insecurity in the UK: a rapid review. Public Health Research. 6(13). Available at: <https://www.journalslibrary.nhr.ac.uk/phr/phr06130/#/s3>
- <sup>178</sup> Evans, CEL., Melia, KE., Ripplin, HL., et al. (2020). A repeated cross-sectional survey assessing changes in diet and nutrient quality of English primary school children's packed lunches between 2006 and 2016. BMJ Open. 10(e029688). Available at: <https://bmjopen.bmj.com/content/10/1/e029688>
- <sup>179</sup> Royston, S., Rodrigues and L., Hounsell, D. (2012). Fair and Square: A Policy Report on the Future of Free School Meals. The Children's Society, p12. [online] Available at: [https://www.childrensociety.org.uk/sites/default/files/tcs/fair\\_and\\_square\\_policy\\_report\\_final.pdf](https://www.childrensociety.org.uk/sites/default/files/tcs/fair_and_square_policy_report_final.pdf)
- <sup>180</sup> Department for Education. Apply for Free School Meals. gov.uk. [online] Available at: <https://www.gov.uk/apply-free-school-meals>
- <sup>181</sup> All-Party Parliamentary Group on Hunger. (2017). Hungry Holidays. [online] Available at: <https://feedingbritain.files.wordpress.com/2015/02/hungry-holidays.pdf>
- <sup>182</sup> Ibid and The Trussell Trust, 2018. Families, Hunger and the Holidays. [online] Available at: <https://www.trusselltrust.org/wp-content/uploads/sites/2/2018/08/Families-hunger-and-the-holidays-policy-brief.pdf>
- <sup>183</sup> The Trussell Trust. (2020). UK food banks report busiest month ever, as coalition urgently calls for funding to get money into people's pockets quickly during pandemic. [online] Available at: <https://www.trusselltrust.org/2020/06/03/food-banks-busiest-month/>
- <sup>184</sup> The Sutton Trust. (2014). Extra-curricular Inequality Research Brief. [online] Available at: <https://dera.ioe.ac.uk//30273/> and Cullinane, C. and Montacute, R. (2017). Life Lessons: Improving essential life skills for young people. The Sutton Trust. [online] Available at: [https://www.suttontrust.com/wp-content/uploads/2017/10/Life-Lessons-Report\\_FINAL.pdf](https://www.suttontrust.com/wp-content/uploads/2017/10/Life-Lessons-Report_FINAL.pdf)
- <sup>185</sup> Kellogg's Foundation. (2015). Isolation and Hunger: the reality of the school holidays for struggling families. Kellogg's. [online]. Available at: [https://www.kelloggs.co.uk/content/m.%40\\*%m%A%,"11@\\_gb/pdf/HOLIDAY+HUNGER+REPORT.pdf](https://www.kelloggs.co.uk/content/m.%40*%m%A%,)
- <sup>186</sup> Ibid and Mann, S., Wade, M., Jones, M. et al. (2019). One-year surveillance of body mass index and cardiorespiratory fitness in UK primary school children in North West England and the impact of school deprivation level. Archives of Disease in Childhood. [online] Available at: <https://adc.bmj.com/content/early/2019/01/31/archdischild-2018-315567>
- <sup>187</sup> Lindley, L., Clemens, S., Knibbs, S. Stevens, J. and Bagge, L. (2019). Omnibus Survey of Pupils and their Parents or Carers: Wave 5. Department for Education. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/786040/survey\\_of\\_pupils\\_and\\_their\\_parents\\_or\\_carers-wave\\_5.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/786040/survey_of_pupils_and_their_parents_or_carers-wave_5.pdf); Gill and Sharma. (2004). Food poverty in the school holidays. Barnardo's and Evans, J. (2018). Holiday Activities and Food: Literature Review. Internal report to DfE, unpublished.
- <sup>188</sup> Defeyter, G., Stretesky, P., and Sattar, Z. (2018). Kitchen Social Research Report. [online] Available at: [https://www.mayorsfundforlondon.org.uk/wp-content/uploads/2018/12/Mayors-Fund-for-London\\_Kitchen-Social\\_Evaluation-Report-1\\_Nov18.pdf](https://www.mayorsfundforlondon.org.uk/wp-content/uploads/2018/12/Mayors-Fund-for-London_Kitchen-Social_Evaluation-Report-1_Nov18.pdf); Evans, J. (2018). Holiday Activities and Food: Literature Review. Internal report to DfE, unpublished and Francis, M., Dunne, S. and Fernandez, R. (2020). Impact Assessment of Holiday Provision in West Cheshire, 2019. Edsential CIC. Available at: <https://edsential.com/wp-content/uploads/2020/02/Holiday-Provision-Impact-Assessment-Final.pdf>
- <sup>189</sup> Evans, J. (2018). Holiday Activities and Food: Literature Review. Internal report to DfE, unpublished; Francis, M., Dunne, S. and Fernandez, R. (2020). Impact Assessment of Holiday Provision in West Cheshire, 2019. Edsential CIC. Available at: <https://edsential.com/wp-content/uploads/2020/02/Holiday-Provision-Impact-Assessment-Final.pdf>



- <sup>190</sup> Welsh Local Government Association. (2017). Food and Fun School Holiday Enrichment Programme 2016 Evaluation Report, p15. [online] Available at: [https://orca.cf.ac.uk/97619/1/Food%20and%20Fun%20School%20Holiday%20Enrichment%20Programme%202016%20Evaluation%20Report%20\(Final\).pdf](https://orca.cf.ac.uk/97619/1/Food%20and%20Fun%20School%20Holiday%20Enrichment%20Programme%202016%20Evaluation%20Report%20(Final).pdf)
- <sup>191</sup> Crawley, H., and Dodds, R. (2018). The UK Healthy Start scheme. What happened? What next? First Steps Nutrition, p56. [online] Available at: [https://static1.squarespace.com/static/59f75004f09ca48694070f3b/t/5b8e2d0e575d1f6f1e5d2dcd/15360443\\_07456/Healthy\\_Start\\_Report\\_for\\_web.pdf](https://static1.squarespace.com/static/59f75004f09ca48694070f3b/t/5b8e2d0e575d1f6f1e5d2dcd/15360443_07456/Healthy_Start_Report_for_web.pdf)
- <sup>192</sup> Crawley, H., and Dodds, R. (2018). The UK Healthy Start scheme. What happened? What next?. First Steps Nutrition, p59. [online] Available at: [https://static1.squarespace.com/static/59f75004f09ca48694070f3b/t/5b8e2d0e575d1f6f1e5d2dcd/15360443\\_07456/Healthy\\_Start\\_Report\\_for\\_web.pdf](https://static1.squarespace.com/static/59f75004f09ca48694070f3b/t/5b8e2d0e575d1f6f1e5d2dcd/15360443_07456/Healthy_Start_Report_for_web.pdf)
- <sup>193</sup> Scottish Government. (2018). Welfare Foods – a consultation on meeting the needs of children and families in Scotland. Scottish Government, p6. [online] Available at: [https://consult.gov.scot/health-protection/welfare-foods/user\\_uploads/sct0218087754-1\\_welfarefoods\\_p4.pdf](https://consult.gov.scot/health-protection/welfare-foods/user_uploads/sct0218087754-1_welfarefoods_p4.pdf)
- <sup>194</sup> Crawley, H., and Dodds, R. (2018). The UK Healthy Start scheme. What happened? What next?. First Steps Nutrition. [online] Available at: [https://static1.squarespace.com/static/59f75004f09ca48694070f3b/t/5b8e2d0e575d1f6f1e5d2dcd/15360443\\_07456/Healthy\\_Start\\_Report\\_for\\_web.pdf](https://static1.squarespace.com/static/59f75004f09ca48694070f3b/t/5b8e2d0e575d1f6f1e5d2dcd/15360443_07456/Healthy_Start_Report_for_web.pdf)

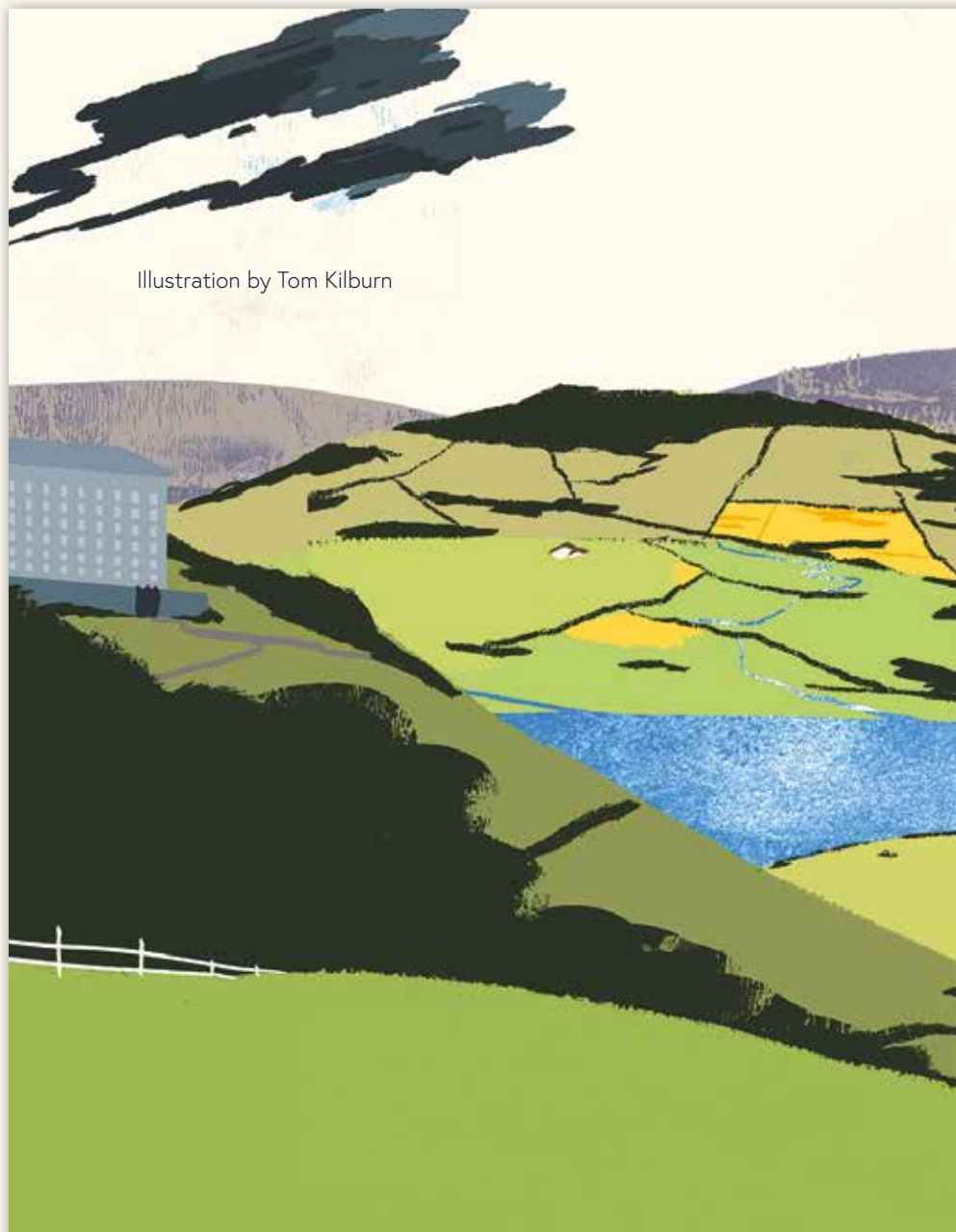
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