Appendices to *Hunger and the welfare state*

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Appendix A: The YouGov panel

About the panel

The YouGov panel represents a diverse group of people recruited from a variety of sources, at the current time numbering 400,000 (UK) active users – about 0.7% of the total UK population. To generate approximately representative samples from this non-probability panel, YouGov offer incentives to a sub-sample of the panel to take part, who are designed to be representative of the national adult population (which they term 'active sampling'). Non-response weights are also calculated to ensure that the final sample match these known population totals.[1] YouGov provides more general descriptions of its panels [here](#) and [via the YouGov ESOMAR statement](#) [accessed 11/8/2020].

It is not possible to provide a conventional response rate (as a proportion of the YouGov panel members invited to participate), because participants are allocated to surveys at the point they log in to the YouGov site, rather than at the point that they are invited to participate – something that has been noted by other political scientists using YouGov data (e.g. Kootstra, 2016). For the same reason, however, this non-response is likely to be unrelated to interest in the benefits system – participants will not be aware of the topic of the survey in question, which avoids a major contributor to non-response bias (Groves et al., 2006). Across different surveys, about 1 in 5 of those invited to participate will ultimately do so, on average 19 hours after receiving the invitation email.

Note that there are two limitations to the representativeness of our weighted YouGov surveys:

- While being broadly representative of the population, the YouGov panel inevitably under-represents those with weaker written English language skills (and therefore under-represents first-generation migrants) and who struggle to access the internet via a computer/smartphone.

- Weighting ensures representative results where the weighting variables fully capture those factors that influence both participation in the survey and the phenomenon under investigation. To the extent that they fail to do this, biases can result.

Opt-in panel surveys failed to accurately predict the results of the UK 2015 General Election, and a post-mortem of this failure suggested that non-response was partly to blame (Sturgis et al., 2016:67). Nevertheless, it is worth noting that even 'gold standard' social research surveys – those using random samples of the population, with high response rates – must contend with threats to representativeness, as non-respondents may differ respondents. Moreover, YouGov has performed well in predicting election results since. Overall, our judgement is that for most purposes, weighted YouGov data can be treated as broadly representative of the population – but there are particular issues in capturing some groups of claimants (including some of the most disadvantage), as mentioned in the main text.

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[1] Normal YouGov weights are based on age, gender, social class, region and level of education. For political work they also weight by how respondents voted at the previous election, how respondents voted at the EU referendum and their level of political interest. The known totals are taken from large random surveys (the Labour Force Survey, the National Readership Survey and the British Election Study) and administrative data (the Census, official ONS population estimates, electoral results).

Coverage of benefits claims in the claimant survey

The claimant survey covers people claiming UC, JSA, ESA, and Tax Credits. This includes most (but not all) income-related benefits in the UK – the main exclusions being Carer's Allowance and Income Support. As the table below shows, the claimant survey therefore covers 92.8% of the income/work-related benefits caseload.

Table 1: Numbers claiming income/work-related benefits at time of fieldwork

Benefit	Sources	Notes	Count
UC	Stat-Xplore (UC Starts)	May 2021	5,938,914
ESA	Stat-Xplore	Feb/21 was latest figures at the time of writing (Sep/21)	1,845,584
JSA	Stat-Xplore	Feb/21 was latest figures at the time of writing (Sep/21)	264,297
Tax Credits	DWP	Provisional statistics for April 2021; uses Table 2-1, multiplying couples by 2 to get number of adults	2,781,700
Carer's Allowance exc UC	Stat-Xplore	Feb/21 was latest figures at the time of writing (Sep/21)	705,107
Income Support exc. CA	Stat-Xplore	Feb/21 was latest figures at the time of writing (Sep/21)	138,081
Share covered			**92.8%**

Correcting for non-response bias from the longitudinal follow-up

The main text notes that *"the original May-June 2020 [claimant] survey was based on screening conducted April-July 2020 (n=170,000). We then followed-up with respondents in May/June 2021; 60% of original respondents participated (most drop-out between waves was due to participants leaving the YouGov panel). We correct for any bias using attrition weights."*

'Attrition' refers to people who responded to the 2020 survey, but who dropped-out by the 2021 survey. Attrition is usually non-random: some types of people are more likely to leave the survey than others, which will make the resulting 2021 survey non-representative of claimants in general unless steps are taken to address it. We therefore create weights to account for attrition bias (there are inverse probability weights based on a response model using the rich set of covariates available in the 2020 survey).

The model includes the following variables that were predictive of non-response: age group, benefit claimed, children, housing type, and reported hunger in the past two weeks. (It also includes variables that were not predictive of non-response but were included for consistency with the initial YouGov weights, namely gender, region, and education).

Appendix B: Full question wording

This section includes full wording of the question used in the report.

General population survey

Food insecurity scale
Food insecurity SHORT battery part 1 [FoodA]

These next questions are about the food eaten **in your household** (that is, you, your partner and your children), in the last 30 days, and whether you were able to afford the food you need.

Were each of the following often, sometimes, or never true for you **in the last 30 days**?
[FoodA2]: The food that I/we bought just didn't last, and I/we didn't have money to get more.
[FoodA3]: I/ we couldn't afford to eat balanced meals.

> <1> Often true
> <2> Sometimes true
> <3> Never true
> <4> Don't know
> <5> Prefer not to say

Food insecurity SHORT battery part 2 [FoodB]

Still thinking about **your whole household** in the last 30 days…
[FoodB1]: Did you or anyone ever cut the size of their meals or skip meals because there wasn't enough money for food?
[FoodB2]: Did you or anyone ever eat less than they felt they should because there wasn't enough money for food?
[FoodB3]: Were you or anyone else ever hungry but didn't eat because there wasn't enough money for food?

> <1> Yes
> <2> No
> <3> Don't know
> <4> Prefer not to say

Food insecurity SHORT battery part 3 [FoodC]
You said that in the last 30 days, you or someone else in your household has cut the size of their meals or skipped meals because there wasn't enough money for food.

Within the **last 30 days**, on how many days did this happen?

<1> [FoodQ3_open] {open-realrange 0 30 prompt="Days:"}
<2>Don't know exactly, but I think 2 or fewer days
<3>Don't know exactly, but I think 3 or more days
<4> Can't even guess
<5> Prefer not to say

Benefits questions

The other variable used in the general public survey is whether people were claiming benefits. This came from the question:

Which, if any, of the following benefits or tax credits are you/ your partner **currently receiving**?

{multiple}
<1> Universal Credit (UC)
<2> Employment and Support Allowance (ESA)
<3> Jobseeker's Allowance (JSA)
<6> Working Tax Credit and/or Child Tax Credits
<4> Income Support
<5> Carer's Allowance
<7> Housing Benefit
<18 xor> Not applicable - I/ my partner are not currently receiving any of these
<16 xor> Don't know
<17 xor> Prefer not to say

However, comparing the prevalence of benefit claimants in the survey vs. administrative data, the general population survey only captures about $^2/_3$ of the true number of UC and Tax Credit claimants, as shown in the table below:

Table 2: Benefit claims in general public survey vs. administrative data

Benefit	YouGov genpop survey	Administrative data
UC	8.6%	14.5%
ESA	4.1%	4.5%
JSA	1.0%	0.5%
TCs	4.6%	6.8%

The survey does a better job of capturing ESA and JSA claimants (indeed, it over-represents both slightly, possibly reflecting some confusion between people as to whether they were claiming UC vs. ESA/JSA). The most plausible explanation for this pattern is that the general public survey question started by talking about 'benefits'. It may be that in-work claimants were more likely to

have skim-read the question and not reported their claim, leading to a biasing of the general population survey towards more disadvantaged claimants.

If so, the general public survey will slightly overestimate the *risk* of food insecurity among claimants, but slight underestimate the *concentration* of food insecurity among claimants.

Claimant survey

The main report uses a large number of questions from the claimant survey, including:

- *Measures relating to benefits*: whether respondents are currently claiming; the benefit claimed; the date of claim; the length of any delay before claiming; the amount received last month; whether they are currently within the assessment period for the first payment (i.e. the five-week wait); whether they are subject to the benefit cap, two-child limit or under-occupancy penalty; deductions from benefits; the elements of benefits they receive (e.g. for caring or disability); and whether rents are above/below the amount covered by benefits.

- *Other sociodemographics and details of income/spending*: household composition (partner, children); age; gender; ethnicity; region; housing tenure; own/partner working status; other income sources; whether claiming extra cost disability benefits (PIP/DLA); whether they have paid £100+ in the past three months for school-related costs or to repair/replace something; and debt repayments.

For readability, full question wording for the claimant survey can be found in a separate document containing the full questionnaire, which can be found here.

Appendix C: USDA scale – further details

In this section, we show the relationship between the summary USDA food insecurity scales and the individual measures of food insecurity.

Short (6-item) scale used in general public survey

Figure 1 below shows the relationship between 'any food insecurity'/'severe food insecurity' and the six items that make up the scale. It shows that:

- *Any food insecurity:* nearly everyone classified as food insecure reported the two indicators in the top section of the figure (food didn't last and didn't have money to get more / couldn't afford to eat balanced meals). Some people also reported signs that their food intake had reduced (between 29% and 67% reported the indicators in the bottom half of the figure), but less consistently.

- *Severe food insecurity:* over 90% of people who are severely food insecure say that they cut the size of/skipped meals, ate less than they felt they should, or went hungry, all because there was not enough money for food. Over two-thirds (66.8%) said that they had cut the size of/skipped meals on more than 3 days in the last 30 days.

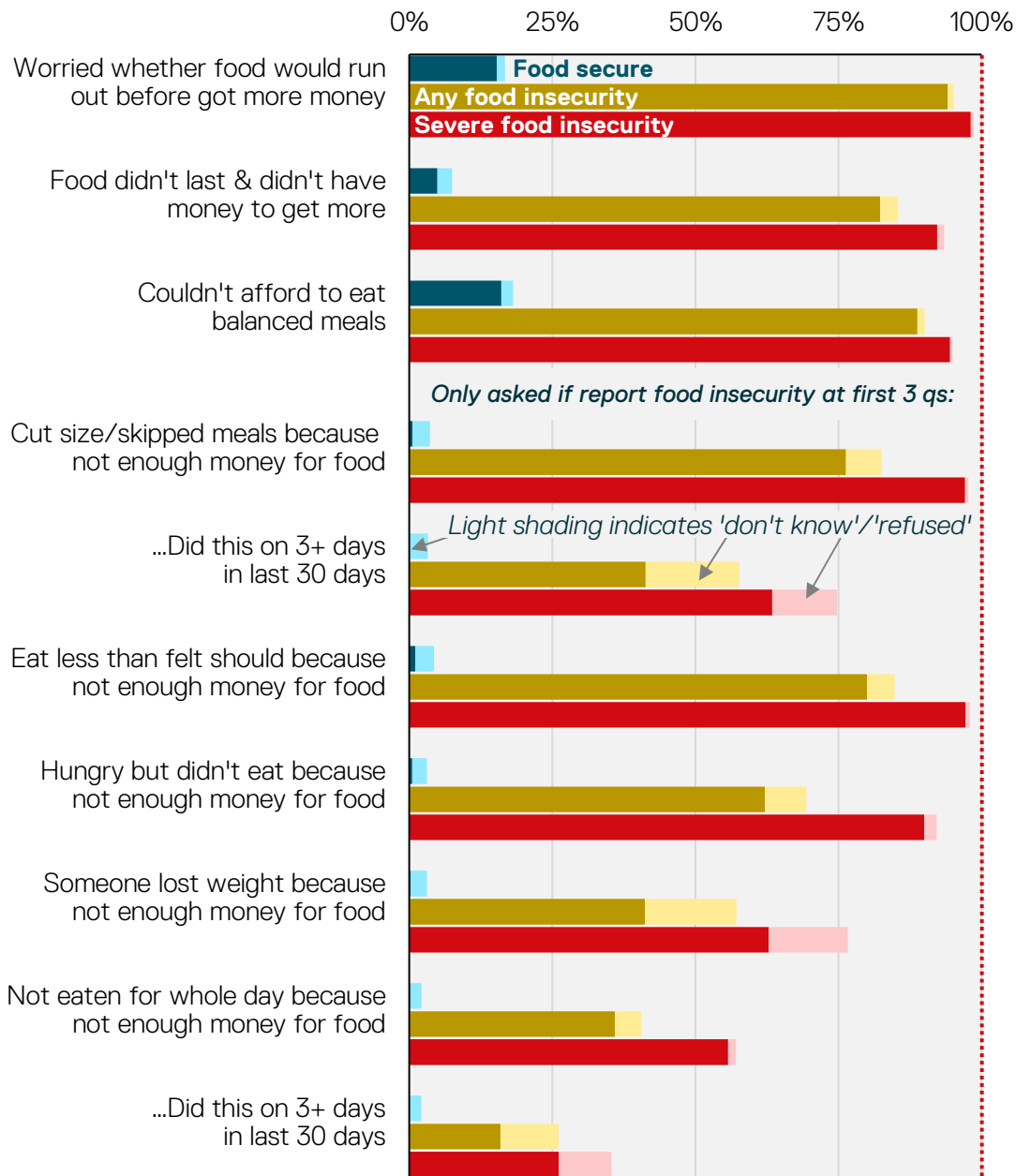**Figure 1:** How individual indicators of food insecurity relate to summary measures
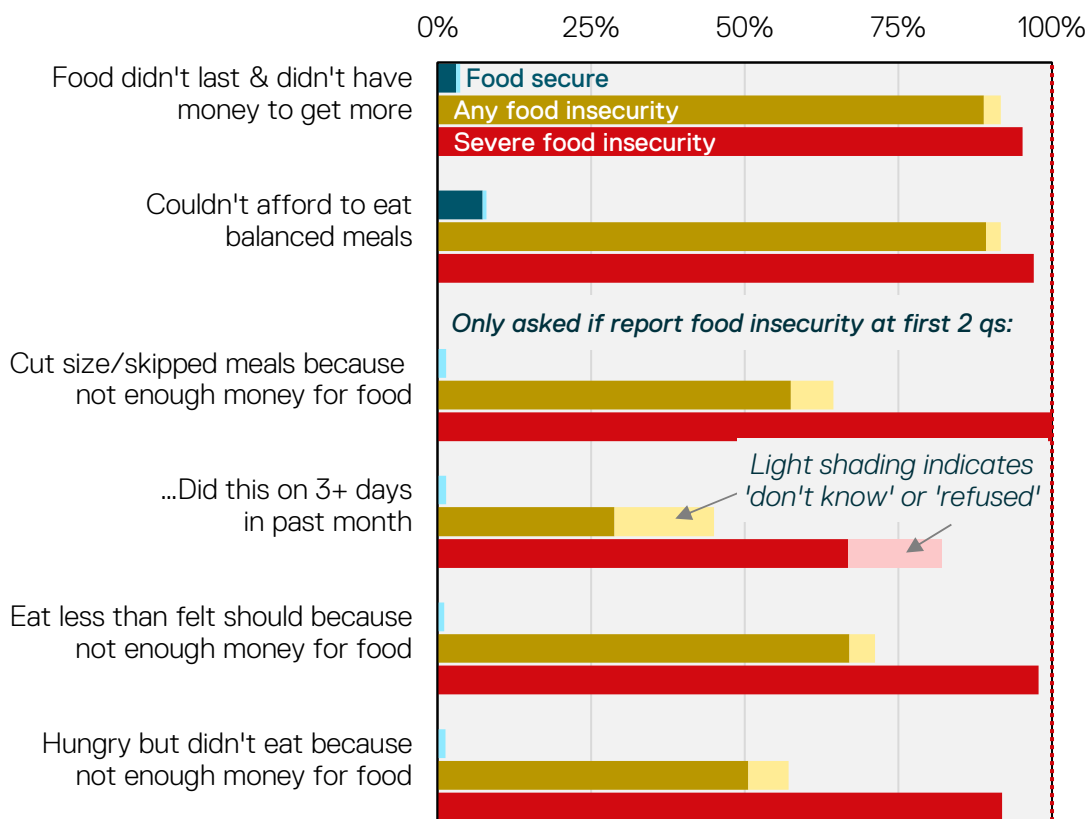
Note: bars for 'food didn't last & didn't have money to get more' and 'couldn't afford to eat balanced meals' refer to the answers 'always' and 'sometimes' (vs. 'never'); bars for other categories refer to 'yes' (vs. 'no'). Source: WASD/YouGov general public survey, June 2021, n=2,448 (or 2,396 for severe food insecurity).

Full (10-item) scale used in claimant survey

Figure 2 below shows the relationship between 'any food insecurity'/'severe food insecurity' and the ten items that make up the full scale in the claimant survey. It shows that:

- *Any food insecurity:* nearly everyone classified as food insecure reported the three indicators in the top section of the figure (worried about food running out / food didn't last and didn't have money to get more / couldn't afford to eat balanced meals). Some people also reported signs that their food intake had reduced (between 36% and 80% reported the indicators in the bottom half of the figure, and 16-41% reported one of these on 3+ out of the last 30 days), but less consistently.

- *Severe food insecurity:* over 90% of people who are severely food insecure say that they cut the size of/skipped meals, ate less than they felt they should, or went hungry, all because there was not enough money for food. Even more severe indicators were not universally reported, but were common: for example, over half of severely food insecure people said they had lost weight (62.7%), and over half said they had not eaten for a whole day (55.7%), in both cases because there was not enough money for food.

Figure 2: How individual indicators of food insecurity relate to summary measures

Note: bars for 'worried whether food would run out', 'food didn't last & didn't have money to get more' and 'couldn't afford to eat balanced meals' refer to the answers 'always' and 'sometimes' (vs. 'never'); bars for other categories refer to 'yes' (vs. 'no'). Source: WASD/YouGov claimant survey, May/June 2021, n=5,999 (or 5,958 for severe food insecurity), including people who were not current claimants of benefits (who are not included in most of the analyses in the main paper).

Appendix D: Further results

Changes in food insecurity during COVID-19

Figure 2 in the main report shows trends in food insecurity among different benefit claimants between 2019-20 (using the published FRS results) and May/June 2021 (using the WASD/YouGov survey). The underlying results are shown below:

Table 3: Levels of food insecurity among benefits claimants over time

	Any food insecurity			*Severe* food insecurity		
	Apr-19 to Mar-20	May/Jun-21		Apr-19 to Mar-20	May/Jun-21	
Benefits made more generous during COVID-19						
UC claimants	43%	44%	[41.4-47.1%]	26%	26%	[23.4-28.5%]
Tax Credit claimants	21%	24%	[20.4-28.1%]	10%	13%	[9.7-15.8%]
Benefits NOT made more generous						
ESA claimants	31%	44%	[40.3-46.8%]	18%	28%	[24.9-31.0%]
JSA claimants	37%	44%	[35.8-52.1%]	22%	30%	[22.2-37.9%]

*Notes: **Apr-19 to Mar-20** uses published FRS figures taken from DWP (2021b:Table 9-7), which does not provide confidence intervals, n=895 UC, 923 ESA, 167 JSA and 1,478 Tax Credit claimants. **May/Jun-21** uses the WASD/YouGov May-June 2021 claimant survey, n=2,350 UC, 1,220 ESA, 266 JSA and 586 Tax Credit claimants.*

Unpacking the 'food insecurity' scale

The main text says, "*The USDA food insecurity scales are a helpful way of capturing multiple aspects of food insecurity in a single, robust measure. However, to make these estimates more transparent, it is helpful to show how many claimants report each individual measure within this scale, which is shown in Table 4 below.*"

It also adds, "*Appendix D has a larger version of this table that includes parallel figures for claimants of UC/ESA/JSA/Tax Credits combined*". This table is shown overleaf.

Table 4: Levels of food insecurity among UC and UC/ESA/JSA/Tax Credit claimants, May-June 2021

	UC, ESA, JSA and Tax Credits				Universal Credit only			
	Reports this estimate, 95% CI		Don't know/refused estimate, 95% CI		Reports this estimate, 95% CI		Don't know/refused estimate, 95% CI	
Initial questions								
Worried whether food would run out before got more money	45.3%	[43.5 to 47.2%]	6.2%	[5.3 to 7.3%]	50.8%	[48.1 to 53.6%]	7.3%	[5.9 to 9.1%]
Food didn't last & didn't have money to get more	34.2%	[32.5 to 36.1%]	7.4%	[6.4 to 8.5%]	37.1%	[34.4 to 39.8%]	8.9%	[7.3 to 10.8%]
Couldn't afford to eat balanced meals	43.8%	[42.0 to 45.7%]	6.7%	[5.7 to 7.8%]	46.1%	[43.4 to 48.9%]	7.8%	[6.3 to 9.6%]
Questions only asked to those indicating food insecurity								
Cut size/skipped meals because not enough money	29.7%	[28.0 to 31.4%]	9.6%	[8.4 to 10.8%]	32.0%	[29.5 to 34.6%]	10.9%	[9.2 to 12.9%]
…Did this on 3+ days in past month	16.2%	[14.8 to 17.6%]	13.4%	[12.1 to 14.9%]	17.0%	[15.0 to 19.2%]	14.7%	[12.7 to 16.9%]
Eat less than felt should because not enough money	31.6%	[29.8 to 33.4%]	9.3%	[8.2 to 10.5%]	35.3%	[32.6 to 38.0%]	10.1%	[8.5 to 12.0%]
Hungry but didn't eat because not enough money	24.4%	[22.8 to 26.1%]	9.9%	[8.7 to 11.2%]	25.9%	[23.5 to 28.4%]	11.4%	[9.6 to 13.5%]
Lost weight because not enough money	15.8%	[14.4 to 17.2%]	13.6%	[12.3 to 15.0%]	17.1%	[15.1 to 19.4%]	14.2%	[12.3 to 16.4%]
Not eaten for a whole day because not enough money	13.9%	[12.6 to 15.3%]	8.4%	[7.4 to 9.6%]	14.9%	[12.9 to 17.2%]	9.4%	[7.8 to 11.3%]
…Did this on 3+ days in past month	6.3%	[5.4 to 7.3%]	10.4%	[9.2 to 11.7%]	7.0%	[5.6 to 8.7%]	11.3%	[9.6 to 13.4%]

Source: WASD/YouGov survey of benefit claimants, May-June 2021.

Effects of control variables

In the notes underneath Tables 5 and 6, it lists a number of control variables included in the model whose results are not displayed in the report, referring the reader to Appendix D.

In the academic paper that we will write based on the report, we will include further tables showing these results – but in an effort to get this report complete on time, we have been unable to get these tables ready for this version. However, interested readers can find the full question text underlying each of these variables in the full questionnaire here.

References

Sturgis P, Baker N, Callegaro M, et al. (2016) Report of the Inquiry into the 2015 British general election opinion polls. London: NCRM, British Polling Council, & Market Research Society. http://eprints.ncrm.ac.uk/3789/1/Report_final_revised.pdf [accessed 13/8/2018]