Employing behavioural insights to reduce the UK's meat consumption

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The present threat

The agricultural industry produces some 30 percent of all greenhouse gas emissions, and it is the industry most vulnerable to climate change.[1] Our current resource use is 70 percent greater than its rate of replenishment, meaning the world uses up our annual ecological budget by August each year.[2]

Global demand for meat has increased fivefold in the last 50 years.[3] If consumption trends continue as predicted, the world would need to increase food production by more than 50 percent to feed nearly 10 billion people in 2050, according to the World Resource Institute (WRI).[4] There will be a significant strain on food production overall if changes are not made.

While this is a complex problem that can be approached through a number of policy initiatives, this paper aims to focus on the demand side of the equation using behavioural insights rooted in nudge theory. The underlying idea is to normalise plant-based food options in supermarkets and restaurants, to nudge consumers towards these options increasingly. With chaos theory in mind, nudging even a small group of people to start including these options into their diets would begin to normalise it; having a much broader effect over time.

In their 2008 book, Richard Thaler and Cass Sunstein pioneered the idea of 'nudging' in public policy. In their own words, it includes 'any aspect of the choice of architecture that predictably alters people's behaviour without forbidding any options.'[5] The choice architect being policymakers, can alter people's behaviour by changing the environment in which individuals make choices. They can make the best option the easiest to select.

Background

Chaos theory suggests that changing something minimal can have a disproportionate influence on the world, which nudge is conceptually grounded in.[6] This paper aims to utilise nudge theory to promote the reduction of meat consumption in the United Kingdom (UK). This is done through low-cost initiatives that make sustainable choices more accessible for consumers, and therefore normalise the consumption of plant-based foods.

Behavioural insights focus on the social aspects of our behaviour, aiming to combine it with economics. In observing the way social groups function, it is common to have an 'us and them' mentality, and we see this with vegetarians and vegans versus meat-eaters. There have been hostile interactions between the groups. However, if we attempt to remove the barriers between the categories, it could be possible to see individuals opting for healthier options; this is our social choice architecture.

	Demand	Supply
Stage 1	A small group of early-adopters are nudged towards opting for certain plant-based products and meals.	Suppliers are nudged towards catering to the demand from this group. There is an incentive to gear production and marketing towards this. The global alternative meat market makes $14 billion currently.[8]
Stage 2	The small group of early-adopters create a ripple effect by normalising a shift in diet. This could nudge more individuals who begin to believe it is normal to opt for such products as well.	This ripple effect creates a further surge in demand for plant-based food products and meals. As it grows, suppliers will need to shift production towards making sustainable products instead; reducing the meat supply.

The Behavioural Insights Team (BIT) discovered that worldwide adoption of a less meat-heavy diet would generate over a quarter of the emission reductions needed across all sectors by 2050.[7] Based on the theory, the table below is a possible scenario, although the duration of the stages in general. It is a prediction of what we expect to happen over time if we execute the outlined policy recommendations.

It boils down to a very simple concept; if there is demand, there is supply. If the global demand for meat products is reduced and shifted towards plant-based products, the supply side will make this shift too.

Policy Recommendations

BIT uses an 'ISM' model, which identi-

The Beyond Burger, a simulated beef product.
By BYMTDigital (CC BY-SA 4.0)

fies the dominant factors that shape our diets on three levels (individual, social and material). It is using this model that we identify our policy recommendations.

Recommendation 1: The UK Government should invest in making plant-based food more socially desirable.
A formal campaign would defeat the purpose of using nudge. Instead, information advertisements would be placed in public areas and public transport. These could be brief statements that debunk myths about meat being a necessity for diets, for instance, or about the impact of meat consumption on the environment. This could help raise awareness and fill gaps in knowledge about sustainable diets, sparking curiosity in individuals.

The UK government could employ health professionals, as well as prominent chefs and personal trainers to also inform the public by exposing such myths. These professionals could show recipes and tips focused on plant-based meals and its benefits, instead of explicitly using the message of 'stop eating meat'. This normalises such consumption and again could nudge consumers into using products when replicating such meals.

BIT found that the average adult spends five hours a week looking at food-related content on social media and more than an hour and a half doing the same with television.[10] Informational advertising could be a way to get people to shift their diet slowly and naturally without feeling that they were guilted or forced into making the decision.

Recommendation 2: The UK government should impose a point system on all labels of food products sold at supermarkets.
The traffic light system used on food products is currently practiced in the UK. Some labels on the front of the pack, use colour-coded nutritional information which tells the consumer at glance if the food is high, medium, or low amounts of fat, saturated fats, sugars, and salt. The colours used are red, amber, and green to highlight the various categories.[11] Research on the traffic light system in Canada through the Canadian Community Health Survey (CCHS) found that under a traffic light scenario, the calorie intake of respondents reduced by 5 percent.[12]

The aim of the traffic light system is to nudge consumers to opting for healthier food options that are in the 'green zone' because the colour red is equated with negative connotations regarding their health. The reduction in calorie intake discovered in CCHS indicates there is some effectiveness in the method.

Similar to the traffic light system on labels used in the UK to nudge consumers into opting for healthier options, the government could introduce a point system. The point system could range from '1' indicating a healthier, greener and better sustainably produced product to '5,' which would indicate a product that does not follow these practices. This would be government-regulated and calculated by green metrics such as carbon emission and printed on the labels of food products. It could get consumers to start thinking about the sustainability of the products they purchase and nudge them into opting for products that score better. Hence also nudging suppliers to consider how to change production methods and products for the better to increase scores. We recommend executing trial tests to see how consumers

Individual	Social	Material
'Inner' psychological drivers of our behaviour such as ingrained habit, emotion, heuristics (mental shortcuts), and cognitive bias.	The influence of others on our behaviour including cultural norms and narratives, peer influence, and social identity.	The wider physical and economic context. Includes pricing, mass media and advertising, and technological factors that shape our food environment.

The 'ISM' Model (Source: Behavioural Insights Team)[9]

respond to such metrics first. This will also help normalise the practice of considering sustainability when purchasing food products which could have wider long-term implications on the food industry.

Recommendation 3: Companies should alter labels on food products at supermarkets to make sustainable options more appealing

Research by Better Buying Lab (BBL) found that the labels attached to food products and meals can influence the extent of appeal a customer has towards purchasing it.[13] For instance, BBL found that using 'meat-free' means 'less of what meat eaters like.' It quoted a study with Sainsburys supermarket in the UK which observed a 76 percent increase in the sales of two dishes by removing "meat-free" in the dishes' name and replacing it with a more appealing name. BBL said 'it is counterproductive to communicate that a food is 'free" of meat if the goal is to appeal to more meat-eaters.'[14]

The aim of altering labels is not to hide that a product is vegetarian or vegan. The idea is to rephrase the main labels used on products. This removes the immediate disregard meat-eaters may react with if words like 'vegetarian' or 'vegan' are used in a name because they hold pre-existing assumptions on what the product may taste like.

Instead, this paper aligns with BBL's recommendation to change the language used on the main labels. For instance, BBL suggests highlighting provenance as it can be evocative. It cited a market test where Panera Bread switched the name of its 'Low Fat Vegetarian Black Bean Soup' to 'Cuban Black Bean Soup,' which resulted in a 13 percent increase in sales in trial locations. 'Leveraging a food's provenance, meaning where the cuisine originates or even the earthly traits if plant-based, is as powerful a tactic to create positive associations with a product,' BBL stated in its report.[15]

The recommendation here is to change the way food products are named in their main label. Acknowledging that the product is vegetarian or vegan will have to be included in the label itself, but it does not have to be the name of the product. Instead, using a green symbol to indicate it is vegetarian or positioning it on the back of the product's description label could help increase the time spent by a customer to familiarise themselves with the product.

Behavioural insights aim to target the cognitive shortcuts individuals make when choosing between options. In this case, the labels help avoid customers who practice heavy-meat diets immediately disregard a product because its name supports the negative perceptions associated with meat-free food products. They may instead just pick the product up based on the appeal of its name. Alternatively, they may spend more time looking over the product, without allowing preconceived opinions to dominate their purchasing behaviour. By removing labels that automatically turn away meat-eating customers, customers may spend more time observing the product, and thereby potentially buy it, even if they eventually see it is meat-free. A difference in choice of name and description avoids negative stigma the consumer may subconsciously hold, and may otherwise turn them away at first glance.

Behavioural insights alone may not be sufficient

The benefits of adopting behavioural insights into policy-making are that they are low-cost, simple, and place no explicit infringement upon an individual's right to make a decision. With encouraging a shift to sustainable food options, this would be beneficial as it nudges someone towards the decision as opposed to a paternalistic approach that forces them to make that choice.

However, these steps alone are often not enough to address the problem at large. These steps are simple ways the UK government can help reduce consumption of meat such as lamb and beef by 20 percent.[16] It is nonetheless challenging to demonstrate the effectiveness and the total duration such steps could take to perceive success. In order to meet the 2050 target, the government would still have to employ other methods that may be more paternalistic in nature in order to achieve their goal.

For instance, employing sustainability-linked loans where borrowers get either rewarded or penalised on their performance using green metrics could be a harsher approach in addressing the supply side of the problem. An example of how this works is Smart AG. This technology helps producers find the right amount of seed fertiliser and chemicals working alongside ING Bank, which provides and adjusts green loans.[17]

Another option could be to implement a producer-facing carbon tax which could push for product reformulation and innovation. The potential success of this is seen with the sugar tax in the UK. These are more formidable approaches that may need to be adopted as well to address different areas of the current reforming of the food system. Such measures working alongside behavioural insight approaches can create noticeable change potentially at a quicker speed.

Conclusion

Our policy recommendations have outlined ways that the UK government, supermarkets, and restaurants can help make small changes to the choice architecture. We suggest that as such products and meals normalise within society, it could increase the number of consumers opting for a

change, creating a shift in the supply side as well.

This is an essential step, as a reconstruction of the food system is necessary to address both climate change and the growing global population at large. With ongoing research in the UK, we deemed it a good case study to look at with the extended goal of having other countries adopting similar measures (noting its success will depend on a case by case basis).

While using behavioural insights makes for easy resource allocation, nudging a shift in demand will not be enough to address and solve the intricacies of the food problem. Therefore, it is likely that this method would need to work in unison with more paternalistic approaches that directly target the production end of the chain. Together, these methods can help the UK achieve the 20 percent reduction in meat consumption (beef and lamb mainly) and carbon-free emissions by 2050.

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