UK food system resilience tested by COVID-19

To the Editor — The UK food system is undoubtedly being stress-tested by COVID-19. Some commentators have suggested that the food system is somehow dysfunctional, non-resilient, or delocalized to a perilous extent¹. Others have extrapolated further, conflating current product scarcities with supply chain risks from globalization². However, these observations may well overlook the benefits of contemporary supply chains, and are usually vague about what alternatives might look like, or how the system might cope better with shocks.

What this COVID-19 crisis does show us is that the food system in the UK has remarkable adaptive capacity. At the time of writing, there is no demonstrable supply-side shock, apart from accessibility constraints for vulnerable groups, food banks and school meals, which are the sphere of coordinated social care. Production, processing, transport and retailing are all key elements in integrated supply chains; policy is, correctly, for these to remain operational. Similarly, relative to the last global food price spike in 2008, international food commodity trade has not been significantly disrupted by restrictive trade policies³.

Some effects of COVID-19 may become manifest if labour shortages, already exacerbated by Brexit, worsen as a result of stricter movement restrictions on some 70,000 seasonal workers, usually required annually on British farms and often coming from abroad. A longer-term supply shock is not inevitable provided we avoid any escalation of global trade restrictions, which may provoke market speculation, and given non-catastrophic rates of illness. If anything, supermarkets have responded to a demand spike by in some cases taking up excess labour from other mothballed sectors⁴.

On closer inspection, the initial challenges arose from a highly unpredictable demand-side shock, the frequency of which can be debated. Since supermarkets assure us that the supply side looks healthy, and indeed that they are rationalizing to offer fewer fast-moving product lines, a more mundane discussion might address fine-tuning the just-in-time logistics, apparently preventing retailers' ability to fill shelves fast enough.

An interesting conversation would also focus the rationality of consumer behaviour in the face of uncertainty. With seemingly

mixed messages from the UK government, and alarmed by insights from other countries, consumers initially prepared by purchasing for the worst-case scenario. More clarity about lockdown and continued messaging about supply sustainability has allowed consumers to plan more calmly, while supermarkets can gauge whether any rationing of some products will be necessary.

If demand for some products continues to exceed supply, consumers will likely adjust product choice, food preparation and diets. We are arguably in a transition phase, but one observation for the UK government and its behavioural insights advisors is that drip-feeding our way to the current restrictions did not help consumers comply with rational expectations.

So what else do we learn about the current resilience of the UK's food system? We already knew that the vexed question of retail concentration could cut both ways. While imperfect competition is often thought to be prejudicial to consumers and other supply chain actors, empirical evidence on the effects of market power is ambiguous, and points to a variety of market-specific factors that often limit the assumed profiteering and collusive behaviour of the dominant retailers^{5,6}.

In fact, the current episode reveals that supermarket power can be useful in buffering shocks. Access to infrastructure and logistics and, in some cases, healthy profit margins actually enable retailers to bear higher costs in order to maintain food supply in times of crisis. This has been observed before, for example in 2017 when lettuce was airfreighted to the UK from the US at comparatively high costs, thereby offsetting parts of the weather-induced European supply shortage.

Temporary cooperation between competitors can also enhance resilience at the expense of profits and is still subject to government regulation. Antitrust laws in the UK and in Germany are currently being relaxed so that supermarkets can stockpile and coordinate supply to consumers in a more effective way. To prevent excessive profiteering, the Competition and Markets Authority has officially warned UK retailers not to "exploit consumer fears" by overpricing products⁷.

When it comes to globalized supply chains we have to remember that the benefit of diverse product lines comes at the cost of potential vulnerability to regionally specific supply shocks, and that transnational

regulation of market power is often less transparent than that exercised in nation states. However, supermarkets can and do currently exercise choice over sourcing products whenever abuse is proven⁸.

Consumers can also exercise choice with information, which may become harder to source and verify if supply chains are decentralized. While localizing our food systems may be desirable to minimize some external costs, it is unclear whether shorter supply chains align realistically with consumer preferences, and whether they truly mitigate vulnerability or potentially bring non-resilience and abuse of market power closer to home.

We may not like some of the attributes of our current dominant food system, and there is scope for developing national food policies aligning nutrition with other social and environmental goals. However, in the case of these ancillary objectives, it is important to clearly delineate the social responsibilities of retailers, governments and consumers. Alongside the importance of clear messaging, the current crisis is revealing significant adaptive capacity — at least in the UK. □

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References

1. Lang, T. Coronavirus: rationing based on health, equity and decency now needed — food system expert. *The Conversation* <https://go.nature.com/2VKz5ex> (23 March 2020).
2. Spinney, L. It takes a whole world to create a new virus, not just China. *The Guardian* <https://go.nature.com/3eGLite> (25 March 2020).
3. Laborde, D. *Export Restrictions Tracker* (CGIAR, accessed 15 April 2020); <https://go.nature.com/3bw3tjz>
4. Supermarkets Tesco, Asda, Aldi and Lidl go on hiring spree. *BBC News* <https://go.nature.com/2Vrs0Ri> (21 March 2020).
5. Lloyd, T. J. *Agricultural Econ.* **68**, 3–21 (2017).
6. Sexton, R. J. & Xia, T. *Annu. Rev. Res. Econ.* **10**, 229–251 (2018).
7. Coronavirus: Retailers warned not to 'exploit' consumers' fears. *BBC News* <https://go.nature.com/2wWwKEZ> (5 March 2020).
8. How does your supermarket check out on human rights? <https://go.nature.com/3ar2DTK> (Oxfam, 2019).

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Competing interests

The authors declare no competing interests.