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Restoring Food System Resilience in a Turbulent World: Supply Chain Actors' Shared Responsibility

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ABSTRACT

Ecological and economic crises increasingly affect the long-term resilience of the food supply chain. This qualitative study draws on semistructured interviews and public evidence to analyse the perspectives of British supply chain actors. Asking which pathways towards food system resilience arise and which forms of social and environmental governance they require, the aim is to elucidate power relations in the fresh produce supply chain and clarify governance requirements and responsibilities to transform food systems towards resilience and sustainability. The stakeholders addressed responsibilities for a sustainable and resilient food system, including effective policies and appropriate pricing, to ensure both high social and environmental standards in the supply chain and widespread affordability of healthy and sustainable foods. Findings emphasise the importance of policy to resolve conflicts of interest over low or high prices and the adoption of hybrid governance and shared responsibility, while also accounting for actors' different spheres of influence.

1 | Introduction

The aim of this research is to understand holistically how to change the practices of suppliers, retailers and consumers to make the food supply in the United Kingdom more resilient to disturbances. We sought the views and perspectives of experts working in fresh produce supply chains, such as farmers, manufacturers, buyers in retail, and trade and civic associations in production and consumption. We also draw on public oral and written evidence requested by the UK Parliamentary Select Committee that expresses the perspectives of big British retailers in relation to fairness in the supply chain. In this paper, we examine the results of the interviews conducted with these experts complemented by our analysis of the public evidence. We address different perceptions of, and suggestions about, resilience and sustainability through different stakeholders viewing the problems from their own silos which, viewed together, enable a more holistic examination. Although some define resilience as 'the ability of a firm' to adapt to changes and disruptions (Ali et al. 2021, 95), our scope is wider, acknowledging that, faced with the climate, biodiversity, biosafety and economic crises, governments are urged to address 'long-term food resilience and environmental issues' (House of Commons 2023, 7) of the economic and food system as a whole (Brock 2023; Tendall et al. 2015; Zurek et al. 2022). The urgency of systemic transformations links resilience to questions of power, governance and civil resilience—a 'whole of society approach' (Lang, Neumann, and So 2025, 10).

Specifically, we address the issue of market power, taking our lead from many of the expert participants who frequently cited the role of big retailers; most of them seeing supermarkets as the main financial drivers of a system that allows them to squeeze margins at the cost of both farmers and the environment. Before exploring these debates and themes, the highly concentrated market power in food retail needs to be acknowledged: The top six multiple retailers account for 78% of the UK market (IBIS World 2024). The market share held by multiple food retailers increased from 23% in 1950 to 57% in 1990 (Burt and Sparks 1994) and to 93% in 2015 (Defra. 2017).

Traditional independent high street grocers have long since ceased to play a significant role in food provision, and the alternative food networks (such as farm shops and farmers' markets; Enthoven and Van den Broeck 2021; Gori and Castellini 2023) remain niche. E-commerce outlets, in theory, a challenge to the dominance of supermarkets, can easily be subsumed by leading supermarkets themselves, as they enjoy high brand awareness, large marketing budgets and positive reputations among consumers (Erdmann and Ponzoa 2021). Given their dominance, it is not surprising that the government has often found it easy to look to supermarkets to provide leadership and actions in areas that might be seen by some as more suited to governmental intervention. This was clear in the way in which food provisioning was handled during the COVID-19 pandemic (Winter et al. 2024). However, this is not a new phenomenon and was highlighted more than 20 years ago by Flynn, Harrison, and Marsden (1999) who noted a shift in political and economic power along the supply chain from farmers to food retailers. As Doherty, Ensor, et al. (2023, 8) put it, 'food retailers now occupy a position at the apex of the food system where they are able to use their near monopsony position to control and coordinate the entire supply chain'. This economic power is mirrored by regulatory power as the state cedes responsibility to private rule-making and enforcement operated by the retailers through their contracts with manufacturers and producers and relations with consumers (Flynn, Harrison, and Marsden 1999). These industry-led agricultural sustainability initiatives represent what Rueda, Garrett, and Lambin (2017) call new 'hybrid' or 'multipartner' forms of social and environmental governance. However, despite the label multipartner, government is typically absent from these arrangements, and thus, they are not hybrid in the sense of articulating the responsibilities of all actors in the system.

Research in this journal attests to a relatively early adoption of accountability systems for sustainability in retail and food industry in the United Kingdom (Iles 2007). Pressure has since been put on retailers to provide higher standards and has resulted in private governance standards, which, as Doherty, Ensor, et al. (2023; drawing on Rueda, Garrett, and Lambin 2017) argue, have been criticised for rather minimal social and environmental performance and appropriative premium pricing structures that do not reflect the costs of production and environmental protection. In the Australian context, Devin and Richards (2018, 199) find that large retailers' market power allows them to 'claim CSR kudos for reducing food waste at the expense of other supply chain actors who bear both the economic cost and the moral burden of waste'. Thus, a 'hybrid' style of governance is unlikely to involve the kind of *shared* responsibility that it implies if, in practice, it results in industry-led governance without any significant role of legislative regulation.

The necessity to create resilience and sustainability in the supply chain, however, entails questions of responsibility for change. Previous research about food waste has addressed retailer–consumer communication and found significant positive effects on customer food waste reduction (Young et al. 2018). This is built on social influence research that shows that the most effective methods for proenvironmental change are opinion leaders and social networks (enthusiasm from someone you trust), modelling (shown by someone you trust) and public commitments from someone you trust (Abrahamse and Steg 2013). In addition, consistent availability of more sustainable food options rather than short-term promotions or interventions can help consumers change their purchasing behaviours (Vermeir and Verbeke 2006).

The responsibilities of households, on the one hand, and the supply chain, on the other, are less frequently perceived as separate realms, and narratives of hybrid, shared responsibility have become more common (Aschemann-Witzel, Randers, and Pedersen 2023). Considering the complexity of the food system, we endorse the idea of distributing responsibility between supply chain actors. However, there is a risk that hybrid models are misconstrued as *replacing* intervention and regulation. A strong focus on consumers and producers to share responsibility may confine governance to self-regulation of the market. Providing regulative frameworks, however, is simply the government's share of the responsibility. Bush et al.'s (2015, 13) notion of 'governing sustainability *through* chains' is conceptually helpful as it 'involves a set of normative and regulatory practices' and is 'neither understood as firm-level CSR systems, nor as inter-firm coordination' but as 'a broader level of governance that captures the interaction between the chain and its firm actors with a wider set of networked actors and activities that collectively steer sustainable production and consumption practices'. By mapping the political economic dynamics of provision, including the intersections of cultural norms, power dynamics and market influences, Figure 1a illustrates the wider network of actors and relations relevant to a sense of shared responsibility.

Thus, this paper draws on interviews and evidence-based stakeholder positions to discuss responsibilities for a sustainable and resilient food system, including topics such as effective policies and appropriate pricing to ensure both high social and environmental standards in the supply chain and widespread affordability of healthy and sustainable foods. We ask which pathways towards food system resilience arise from stakeholder perspectives and which forms of social and environmental governance they require. The aim is to elucidate power relations in the supply chain and clarify governance requirements and responsibilities to transform food systems towards resilience and sustainability.

The following section provides details and reflections about the applied methods. The main results are structured in four subsections addressing power in the supply chain (Section 3.1), consumers and responsibility (Section 3.2), the lack of governance in the government (Section 3.3) retailer perspectives on fairness in the supply chain and (Section 3.4). In the discussion, we use stakeholder perspectives to demarcate a resilient system

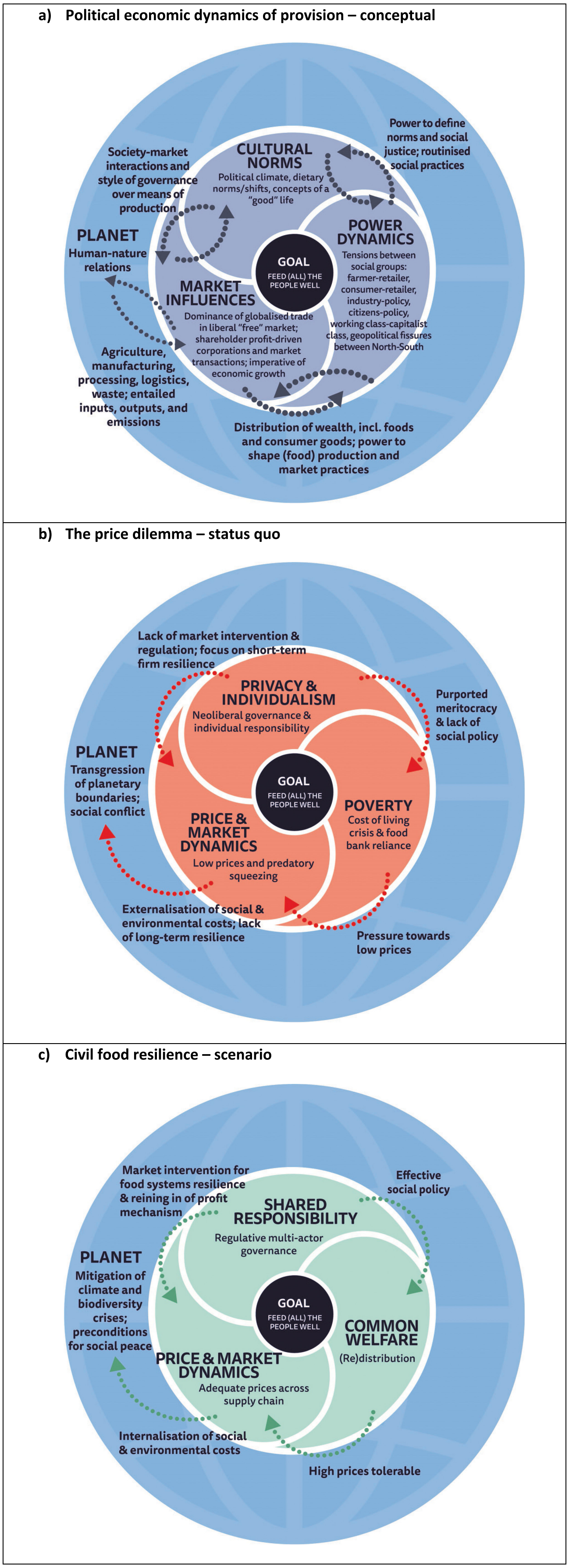

FIGURE 1 | Illustration of political economic dynamics of provision (a), the short-term resilient but unsustainable status quo (b) and a scenario of civil long-term food resilience (c).

based on red lines and boundaries with respect to the planet, prices, privacy and poverty. We conclude that effective governance must address the dilemma between conflicting needs for high and low prices and that a hybrid model must account for both shared responsibilities and unequal spheres and degrees of influence.

2 | Method

The qualitative research approach applied in this study involved semistructured interviews aided by public oral and written evidence. The focus was on the interviews with a variety of stakeholders of the supply chain and the aim to gain an in-depth understanding of their perspectives on resilience.

Qualitative interviews are a common and effective method to understand views and narratives of supply chain actors (e.g., in this journal; Adams, Donovan, and Topple 2023; Aschemann-Witzel, Randers, and Pedersen 2023). Semistructured interviews have a set of prepared questions but also allow the interviewee to shape the conversation direction (Arsel 2017). In this case, data collection was aided by an interview guideline (informed by a systematic literature review; manuscript in review) with nine main questions as well as a list of themes that could be probed after the structural part of the interview if not mentioned before then (see Supporting Information A). The first author conducted 22 interviews with four to six stakeholders from each of the following four categories: farmers and growers, manufacturers and wholesalers, retailers and buyers in retail, agri-food–related associations and experts. Table 1 provides details on the individual interviewees and assigns an identification number to reference the quotes in the results section. The interview duration was on average approximately 1 h. All interviews were conducted remotely via video call. The audio recordings were transcribed by a professional transcription service.

The analysis was conducted by the first and second authors and aided by a discussion of the results by the wider project team. The interview transcripts were fed into the reference management software Zotero that was used to code the data (Auerbach and Silverstein 2003) by marking relevant text passages with a colour code (see the Supporting Information); a test round in which both researchers coded the same two studies ensured intercoder agreement to enhance the reliability of the results. The colours helped to order the material by interview question. A second step was to export the marked material into an Excel file and order it thematically, firstly, by assigning subthemes to the marked text passages and, secondly, by summarising their content. We identified 11 subthemes that helped ordering and interpreting the material across the colour code matching the research questions: (1) market power, (2) regenerative agriculture, (3) diversity, (4) shorter supply chains, (5) policy, (6) responsibility for change, (7) system versus firm resilience, (8) adaptation, (9) global trade, (10) nutrients/micronutrients and

TABLE 1 | List of interviewees, their professional positions and interview identification numbers.

Farmers & growers	Manufacturers & wholesalers	Retailers & buyers	Associations & experts
Dairy farmer (organic): Farmer01	Rapeseed oil grower and manufacturer: Manuf01	University caterer, head of retail and buyer: Retail01	Farming adviser at association for organic farming: Assoc01
Mixed farmer and grower (regenerative), background as medical doctor: Farmer02	Multinational dairy co-operative: Manuf02	Retailer for local produce in Cornwall: Retail02	Association for tomato growing, former employee in tomato growing company: Assoc02
Potato growers (conventional), two interviewees: Farmer03	Sausage manufacturer and exporter: Manuf03	Institution in the global retail and grocery sector: Retail03	Agricultural journalist specialising in technical issues and agricultural public relations: Assoc03
Dairy farmer (conventional): Farmer04	Former employee in food industry (Mars and Nestle), now non-executive director at Defra: Manuf04	Sustainability manager at big British retailer/supermarket: Retail04	Association for meat suppliers and processors: Assoc04
Fruit grower (conventional): Farmer05	Former employee of oat milling company, now consultant to a British pulse company: Manuf05		Academic agri-food system expert and former organic farmer: Assoc05
Representative of fresh produce growers in Britain: Farmer06	Sustainability advisor for wholesaling company: Manuf06		Head of consumer rights and food policy at consumer protection organisation: Assoc06

(11) poverty/low-income households. As we addressed shorter supply chains and (bio)diversity in the preceding literature review (manuscript in review), and regenerative agriculture and nutrients warrant separate treatment, this article focuses on the results at the nexus of market power and global trade, responsibilities for change towards food system resilience and the role of policy, including to address poverty and the lack of access to fresh produce.

A challenge we faced was to recruit interviewees from supermarkets (among the retail category, only Retail04 represents one of the large retailers; Table 1). To mitigate the resulting limitation of the data, we complemented the interview data by analysing public oral and written evidence[1] that expresses the interests and perspectives of big British retailers in response to a Call for Evidence entitled 'Fairness in the food supply chain' by a Select Committee of the UK Parliament.[2] It asked academic experts and practitioners for views on the structure of the supply chain, market power and regulation, food prices and affordability of healthy food. The data analysed included the oral evidence transcript from 30 April 2024, with senior executives from Tesco, Asda, Sainsbury's, Lidl and Waitrose. The written evidence, submitted between September and November 2023, were three submissions from the British Retail Consortium (BRC), the trade body representing UK retailers, and from two large supermarkets, Sainsbury's and Asda. The analysis, conducted by the second author, identified statements that matched the themes emerging from the interviews and set out a precis of the key points in each submission.

This study comes with the limitation that interviews were conducted with supply chain actors only, excluding consumers. Difficulties faced in recruiting interviewees from big retailers led us to draw on a different, but not incompatible, type of data in the form of the public written and oral evidence given by retailers. Although it is a limitation that Select Committee members did not explicitly address resilience at the oral evidence hearing, the debate was centred on making supply chains sustainable, fair and dealing with disruptions. Together with the written evidence that expresses the retailers' focus, this source largely mitigated the scarcity of big retailers among the interviewees. Despite some limitations of validity (see Yin 2009, 116, and Supporting Information B), the public evidence nevertheless helps contextualise the interview insights and did not confound or contradict the interview evidence, helping to provide a more rounded picture of the systemic challenges.

3 | Empirical Results

3.1 | Power in the Supply Chain

The supply chain is constituted by a variety of actors with differing positions, intentions and means, and this entails inequal power relations. Both logically and morally speaking, the main function of a food system is to provide people with food, and resilience implies continuity in the face of supply disturbances. However, several interviewees make a vital point that, currently, food provision is not the only function of the system, and from some perspectives, not even the primary one. Retailer1 points to the 'capital economy' and particularly 'big industries' as being focused on 'how can we make sure that the shareholders benefit'. The interviewee then asks, 'Will that embed long-term sustainability, resilience?', and concludes that 'It [resilience] probably comes three or four down the thought process rather than number one, because it can cost large amounts of money to change how operations behave.'

Recognising profit generation for shareholders as a driving function of food provision through large retail and manufacturing corporations is vital to an understanding of dynamics and inertia in the food system. Farmer4 explains that '96% of all the produce in the country has only got six outlets'. In its most characteristic form, the current food system is thus an oligarchy of large supermarkets acting in the financial interest of their shareholders. In the context of climate change, Retailer1 does not believe that people in the Global North 'realise how big the risk is and what may be coming our way', and in defence of resilience, he warns that 'unfortunately [...], everything comes back to how much money you can make, money is king, up until the point that it isn't and by the point it's probably too late'. The point that money is not 'king' anymore would be when the natural mechanics under which this system is able to produce food become dysfunctional, for example, due to frequent extreme weather events, so that it fails to meet the needs of a critical number of people. The interviewee is concerned that this is bound to happen when—subordinated under private financial profit—food provision is compromised to a point beyond resilience when it is 'too late'.

Another participant (Association5) explains that finance capital's role in the food system originates in the history of the British Empire, more specifically, in 1846:

> repeal of the Corn Laws where the trade barriers, tariffs, taxes on borders, were removed so that cheaper food could come in. And it was a triumph for industrial capitalism over agricultural and land capitalism, and the support of finance capital backing it.

Even with the reintroduction of trade barriers through the European Union's Common Agriculture Policy, this interviewee argued that 'nearly 200 years on, [...] we're actually still in the deep culture of that'. So-called 'free', global trade is tied into the British food system that has heavily relied on imports.

Regardless, retailers depict themselves as 'resilient' for the continued provision of food at a cheap price in the face of disturbances such as the pandemic or war (see Section 3.4). This holds true from a *short-term* perspective on 'resilience'. However, because of the systemic need to pay dividends to shareholders, the bulk of foods provided must externalise social and environmental costs and thus remain unsustainable (e.g., reliant on fossil fuels, high land and resource footprint and linked to past or contemporary deforestation). One interviewee juxtaposes profit-driven industrial-scale production and the struggle to make a living of small, value-driven:

> farmers and growers [...] trying to do sustainable regenerative farming and just about scraping a

> living [...], probably five pounds an hour and still not making money, and that even when you do the right thing, [...] produce the best food and do the best for the environment, you can't make a living. It's only the industrial growers who can just about make a living by having big machines, by reducing labour force, by producing volume rather than quality.
>
> (Association2)

The fact that the latter characterises most food production renders any trust in the *long-term* resilience of this system obsolete.

Unequal power also manifests in the direct relations between retailers and their suppliers. Association2, who worked for APS Produce, the United Kingdom's biggest tomato grower, explains that the overall reduction of tomato prices over the last two decades was enabled by growers becoming more efficient. However, growers have now reached the biophysical ceiling of efficiency and struggle with cost increases of inputs such as fertiliser or energy to heat greenhouses. Although some growers go out of business,[3] supermarkets and energy companies continue to make profits. APS Produce went out of business in 2023 and was bought by energy supply group P3P Partners.[4] 'Last year', Association2 explains, 'Tesco increased their profits to £2 billion in the year, which was like, "Well how can that be?", because growers are losing money producing to supply these people who are increasing their profits?'. The situation is such that 'the [suppliers'] return from supermarket retailers is not adequate, it's not even meeting costs, [...] but the supermarkets still seem to be squeezing suppliers on price and they are having this race to the bottom with Lidl and Aldi, matched prices' (Association2).

The squeezing of prices to get higher margins and maximise profits can be illustrated with a dairy farmer's experience of price negotiations with a supermarket. Farmer4's price demand had been 60% higher than the supermarket's initial willingness to pay. It was only after a social media campaign initiated by the farmer to seek public support for fair milk prices that the supermarket gave in to his price demand. Although, in this case, the farmer prevailed, it illustrates both the supermarkets' general tendency to minimise prices paid to suppliers (if they get away with it) and the leeway they have in pricing (here, 60%).

The example of price matches based on the competition between retailers suggests that they are systemically forced to act in the same way. In that context, Retailer2, suggests that

> what would make a difference is if one of the major multiples started saying 'no, we're not going to do this' and said 'enough, we're putting our prices up'. [...] That would be a good move if one of the major multiples did do that.

That is to say, this would be a good move towards prices that match the social and environmental costs of production. However, Retailer2 reflected that the opposite is happening observing that Waitrose, which is generally 'not a supermarket that people go to for cheap prices', have been struggling and 'have now taken the view that they need to be more competitive with their pricing'.

In sum, big retailers are in a relatively powerful position within the supply chain ('they've got such huge buying power'; Farmer4). However, because of the competition between them, as well as financial profits driving their decisions, each of them is not in a position to *change* the unsustainable situation, one in which prices are seen to be too low for the whole supply chain to be resilient. As a result, many farmers are unable to invest to improve environmental outcomes, and some go out of business (see Table 2 for the key issues raised from various perspectives).

3.2 | Consumers and Responsibility

The capacity of consumers to enact changes towards sustainability recurs in public debates and has been a source of academic controversy, for example, along the lines of individual behaviour versus social practice change approaches (Vermeir and Verbeke 2006; Warde 2005). This subsection outlines stakeholder perspectives on whether the role of consumers in achieving progress should be an active or passive one.

Many interviewees comment in ways that suggest consumer choice is neither a responsive lever nor fast enough for the urgent change needed. For example, consumers are 'creatures of habit' (Manufacturer2) and 'loyal to their products' (Retailer3). Moreover, interviewees state a gap between behaviour and values or intentions as 'consumers say something, and do something different' (Retailer3) and

> you can stand outside a supermarket and talk to consumers as they're going in, and they say, 'Oh yes, I always look for British [...] and I always want to pay a fair price [...]' and then if you glance in their trollies as they're coming out of the supermarket, it tells a completely different story, because people are very much looking for price.
>
> (Farmer1)

Similarly, Association3 decries a lack of concern for collective needs as consumers can be 'incredibly selfish; I want meat, I will eat meat' (Assoc03), and Farmer3 regards them as far removed from the complexities of food provision. A further example is that time-poor consumers often abandon fresh food box schemes after a while for convenience, as Retailer2 claims (box schemes had seen a rise during health concerns as some households had more time to cook for themselves during the pandemic; Babbitt, Babbitt, and Oehman 2021; Bulgari et al. 2021; Sanderson Bellamy et al. 2021). However, moral appeals for individuals to change their behaviour fail; Retailer3 states 'on TV every single Saturday, it seems to be an endless supply of cooking shows telling you to buy healthy and buy fresh and it doesn't seem to be working'. In sum, these statements reflect the stakeholders' disbelief that consumers will enact change for the system to become sustainable and resilient.

TABLE 2 | The impacts of low margins throughout the whole supply chain (evidence from expert interviews for UK grocery as a whole).

Sector affected	Quote	Summary
Growers	'... the likes of Tesco and others had bags of sprouts for fifteen pence, and ... carrots fifteen pence as if that was a good thing, as if that did not educate customers to think, [...] "why is it 15p now and it's normally a pound?", ... and I think that ongoing education by retailers that food is cheap and it [...] does not cost anything to produce particularly, I think that's harming the resilience of the sector, certainly in a financial context. [...] As a producer or somebody who's worked for a producer and now works for the industry I think that was just jaw-dropping ....' (Assoc02) 'over Christmas then, farmers were really struggling to get potatoes and carrots and parsnips out of the ground because it was so wet, and then you went into a supermarket and they were doing loss leading on those products at 15p a kilogram, and that message goes out to the consumer that vegetables are just cheap.' (Manuf01)	Shoppers being 'educated' by retailers that food is cheap, thus undermining the ability of growers to charge the true cost and therefore compromising the resilience of the sector.
Farmers	'many suppliers would say that the return from supermarket retailers is not adequate, it's not even meeting costs, particularly after the shocks of the energy price rise for instance, you know, and following on from that you have price rises of all inputs, fertilisers if you are a regular farmer and other inputs, but the supermarkets still seem to be squeezing suppliers on price and they are having this race to the bottom with Lidl and Aldi, matched prices.' (Assoc02)	Intrasectoral price competition among supermarket retailers leading to squeezing suppliers on price
Growers	'Riverford did a survey and it was a scary amount of fruit and veg growers who thought they were going to go out of business this year, unless something was done to get supermarkets to give them a fairer deal. So, I think that's a big part of it.' (Assoc01)	Low margins pushing growers out of business
Growers	'So, for three months of the year the grower has no money coming in and he has to pay salaries, he has to pay for energy, pay for the inputs, pay for the plants, and at the end of the day because there aren't any formal contracts retailers do not have to take your crop. So, in terms of risk and where the power is, the power is, I think, skewed significantly towards retailers, which makes the whole system, which makes it vulnerable to shocks and it propagates that lack of resilience in the whole supply chain.' (Assoc02)	Risks impact growers more than retailers but the whole system is vulnerable to shocks as a result.

(Continues)

TABLE 2 | (Continued)

Sector affected	Quote	Summary
Producers	'The egg producers cannot produce the eggs for the price the supermarkets are willing to pay, so they just stop producing the eggs. There's then a shortage of eggs and the supermarkets simply buy eggs from other countries that have questionable welfare standards and the communication in the supermarket stores to the consumer was that it's "because of bird flu on British farms". And it's quite, well, I should not say surprising, but what the supermarkets communicate to the shoppers and the reality is often vastly different.' (Farmer04)	Producers ceasing supply due to low margins; supermarkets re-framing consumer communications to explain the resulting shortages
Farming	'There are shortages of product, because in the most part when it comes to—we rely on our suppliers to have made contingencies, either plans or have contingency volumes.' (Retail04)	Contingencies are necessary in farming because of unpredictability but low margins are a barrier to them.
Farming	'I do not think any farmer wants to be destroying the environment, at all, it's just they feel like they have got no choice, because they are working on such a tight margin, they cannot really plan long-term on their farm for it to be resilient' (Assoc01) 'all this biodiversity is all, yes great, but if they [farmers/growers] do not have, if they cannot make any money at it, they will not grow it, which people tend to forget in this conversation.' (Retail04)	Long-term resilience building in farming is limited by low margins; this undermines environmental objectives.
Producers	'They have a contract to supply a supermarket with say tuna fish in sunflower oil. They cannot get hold of the sunflower oil so they switch it to another oil, but they keep the same labelling on there in the hope that nobody opens it, or the person that opens it is at home and would not know the difference. So, that's a good example of adaption at the moment, but it's also got a sort of "criminal undertone" to it.' (Assoc04)	Labelling honestly is undermined by contract terms.
Producers	'if our guys run out of product, but they need to continue to supply that product because they are in a supermarket contract, they [the producers] will need to source from elsewhere. If they had to source something different, a substitute, that will affect the packaging, the labelling and possibly affect the allergen profile and the nutritional profile, and they'll have to go down the route of recalculating. So, it's probably better to hold a larger stock of your ingredients, i.e. Just-in-Case.' (Assoc04)	To meet supermarket contracts, producers are under pressure to substitute or have larger stocks of ingredients, adding to their costs.
Retailers	'consumer priorities are about price, but then the government back tracking on marketing restrictions and things, saying, "well it's the wrong time to control food marketing to children or promotions, when people are struggling to afford food", when in effect, they [retailers] are saying "we'll just market a load of junk food and encourage people to buy more of that".' (Assoc06)	Planning for improved health outcomes has not been followed through by the government for fear of being seen to increase prices.

By contrast, there are also several comments that are in favour of consumer choice. Out of disbelief 'that government [will solve issues], because it always has another agenda', Manufacturer3 takes the position that individuals should make their own decisions around foods and argues that we all need to make 'small changes' to 'reverse the current trends'. However, the participant seems to contradict himself when saying that consumers are not ready for sustainability as a reason for choice. Consumers, he says

> will think that it's very important that they have an avocado because they have a dinner party coming up, not because they are in season or anything like that. So, again, traditionally, we say that food choice is about range, availability and price. I don't know whether the public is quite ready yet for another choice, [one that considers] sustainability.

Association2 puts more hope in consumers and suggests that 'resilience in supply chains in a financial sense is about educating consumers to make the right choices'. In defence of choice, Farmer1 argues that meat consumption rates should be a free choice but also aligns with the call for consumer education on buying local and food origins. Overall, the ambiguity in these statements perhaps reflects a *desire* for enacting change by choice rather than a strong and genuine conviction that consumer choice will lead to positive change.

Other comments express a clear mistrust in demand-led change and state that consumers need to be led through regulation. Retailer3 states 'I personally don't think we should be totally dictated by what consumers want'. Likewise, Association1 says 'I don't think consumers would like it, but I think we do need regulation [laughs]. I don't think people are going to do it on their own'. More specifically, Manufacturer4 claims that fiscal measures, as suggested in the National Food Strategy, are necessary to create change and safety.

Farmer1, despite having spoken out for choice, admits that 'it concerns me that supermarkets are not paying a fair price, and that the consumer demands quality, but then doesn't appear to want to pay for it'. Although the perception that prices are too low is a recurring theme among the stakeholders, they do not simply interpret that as greed when it comes to the consumer. Some acknowledge that people are 'really struggling at a household level, dealing with food prices and the impact that has on their ability to make healthier choices or to buy food that meets their needs' (Association6) and that 'the low-cost food model is prejudicial to the long-term, sustainable production of food' (Farmer5). It is poverty that coerces families to be confined to unhealthy foods:

> if you're going to buy a cauliflower for a pound or you are going to buy the kids a full set of meals of chicken nuggets for a pound, you're going to buy them the nuggets because you'll know they'll eat them all and it'll fill them up, whereas they might reject the cauliflower.
>
> (Retailer4)

Some interviewees suggest short-term solutions to food insecurity such as redistribution of food from retailers to food banks. With support of the industry, food that will otherwise be sent to landfill can be donated to low-income households or vulnerable people with special circumstances (e.g., ill-health). As such, food banks, claims Manufacturer4, are 'an important response to both problems [food waste and poverty], and I would say that's a form of resilience'. Others state clearly that food banks are insufficient[5] and poverty itself must be tackled:

> in World War Two, [...] a huge effort was put through the rationing scheme to ensure that very poor people got a decent amount [of food], nutritionally advised by the scientific advisory people of the day, and it worked. [...] that won the day for creating a National Health Service [...] You're not going to have a public resilience over food unless the inequalities in Britain are dealt with. At the moment, there is agreement that food banks are the answer. They don't work, they cannot work [...]. It's a catholic, literally a religious catholic answer to [food insecurity]—it's sort of a medieval residue but with punitive aspects to it in the United States of America, less punitive here. But now I'm delighted to say the networks of foodbanks, they want to see themselves abolished, and they're right, so it's, you know, the poverty issue has to be resolved by fiscal means, [it is] not about food, but food is an indicator of it [...] It has to be about rights.
>
> (Association5)

Overall, many interviewees acknowledge that a broad part of the population is affected by the cost-of-living crisis coercing them to give priority to price. Increasing poverty and the absence of a strategy to resolve it are therefore in the way of fair and healthy, let alone sustainable, consumption.

3.3 | Lack of Governance by Government

Most stakeholders suggest that the government plays an important role in changing the food system towards sustainability and resilience. Many comments also suggest and criticise that there is currently a lack of governance. Stakeholders typically argue for stronger regulation and perceive the current governance as insufficient.

Farmer6 demands that 'the government needs to [...], together with the other parts of the supply chain, work out whether we're just going to carry on letting that supply base erode, or whether we're going to do something about it'. That the supply base is eroding is as clear as the answer to the rhetorical question of whether something needs to be done about it. Farmer1, too, thinks that the responsibility for the food system is mainly with the government and retail and that it will have to be 'the government who clamp down on the retailers'. In terms of regulatory instruments, the interviewee says that 'we had the Grocery Code Adjudicator, but they didn't really have much bite, and so maybe we need more stringent guidelines for retailers to operate within'. Moreover, Farmer4 finds a lack of governmental support for efficient farm production technology, such as anaerobic digesters.

In the view of Association6, the government has not delivered on the anticipated move towards sustainable production, moving out of the EU's Common Agricultural Policy. By contrast, Association1 draws a more positive conclusion specifically from the Sustainable Farming Incentive (SFI): 'it's a good model, it started off a little bit disappointing, but Defra have really listened to ourselves [agro-ecological association], the farmers, to lots of other stakeholders, and it's been a moving thing'. Whether it is holistic enough to impact the supply chain as a whole and achieve food resilience, however, is a different question. Association5 decries that major policy instruments for resilience, such as the National Risk Register and the Civil Contingencies Act, disregard food. That is, they do not name food as a relevant area in which to achieve resilience, whereas other risks such as cyber-attacks are regarded as a threat to society. Thus, the interviewee demands a whole-of-society approach to resilience in which the goal of 'civil food resilience' (Lang, Neumann, and So 2025) requires engagement with the needs of the public. And as quoted in the previous subsection, Association5 emphasises that public resilience is about rights and must tackle poverty. Currently, says Retailer2, the government disregards the link between the need for good quality food and child development. Generally, the interviewee claims that politicians do not address the issue that food is too cheap. Penalising intensive and incentivising extensive production would increase food prices to a degree that better meets the costs and externalities of production, but governments shy away from raising food prices (Retailer2). In sum, rudimentary policy instruments to improve agriculture may be in place but achieving food resilience requires a systemic account not just of the whole of the supply chain, but even *beyond*, including the risks, rights and needs of the public—that is, the integration of environmental, social and economic policy to ensure long-term civil food resilience.

Some stakeholders are sceptical that the government can or should effectively apply regulation. Manufacturer4 is not against regulation, but to be effective, he says, necessary fiscal measures such as the reduction of red meat must happen on a continental level (incl. EU policy), not just a national one. Manufacturer2 demands the recognition that top-down regulatory approaches risk overlooking the different contexts of individual farmers and their capability to find their own route towards sustainability and resilience. In a similar way, Manufacturer3 speaks out against regulation in general:

> I don't think that the government has any right to be like a dictatorship. It has to be compassionate and it has to care. It has to be supportive, it has to be empathetic. It has to be inventive, it has to be passionate [...] these types of things are also personal things that maybe companies in the future might decide that these values are important and look at actually saying, 'well, look, the culture, if you want to work for my company, is about the inclusivity, it's about diversity. It's about personal and professional advancing. And also, it's about being early adopters of technology' and things like this, and so it's too big a subject for the government to deal with, to be honest.

The concern that governance will dictate change without compassion for the 'personal things' and 'values' of private businesses thus leads the interviewee to the conclusion that local action is preferable over government regulation.

3.4 | Retailer Perspectives on Fairness in the Supply Chain

The perspectives of big British retailers in relation to sustainability and resilience, drawn from public oral and written evidence, show a range of themes that, similar to those of the stakeholders, cover adequate pricing, market power and regulation.

The oral evidence given by senior executives of major retailers shows that retailers focus highly on consumer prices. The 'own label' ranges, including most fresh food produce, are directly within retailers' control for pricing, specifications, quality and packaging and are cheaper than branded items. As such, they are often used as examples of retailers meeting the needs of low-income customers and examples of price decreases being made on particular produce. Retailers also point out that customers switch more to cheaper, own-label products when they feel economic pressure. Retailers also have a high focus on balancing end prices with both margins and the suppliers' needs in the very short term—timescales here are quoted as days and weeks. However, the overall defence of their priorities and actions is to set out their role in ensuring the lowest possible prices and product availability for their customers, day to day. The MPs on the Select Committee did not challenge this in the context of externalities and true costs of production or the long-term consequences of a short-term focus.

Committee members pressed the retailers for details about their profit levels over the recent period of inflation. Retailers claim not to have made excessive profits; indeed, some claim that their profits had reduced over the recent past. Over the recent period of global shocks, retailers claim they have responded effectively to suppliers' input price increases:

> in the last 18 months, [we had] an unprecedented level of discussions around price. All of those discussions have been open and transparent, and we have responded quickly and appropriately to address them and pay a price that is fair to our supplier partners, when they have asked for it.

Large retail businesses are keen to be seen to act responsibly and balance the needs of customers, suppliers and their employees ('colleagues'). In sourcing fresh produce, they need to balance pricing, shelf availability and the cost of waste to their businesses. Retailers state that they agree with the regimes of the Grocery Code Adjudicator and the GSCOP for training buyers and follow the principles in their training.

The BRC lists the war in Ukraine, CO_2 shortages, avian flu and impacts of extreme weather due to climate change as factors that resulted in high inflation. Together with the reduction in incomes, this increased customers' focus on price and value. Availability of food has been maintained by retailers during this period, demonstrating the resilience of the supply chains and validated by the continued availability of choice for consumers and, they claim, lower food inflation in the United Kingdom than in most European countries. The main problem is said to be labour shortages arising from the loss of free movement due to Brexit. Government measures to increase labour availability are requested, as these could make food more affordable. Furthermore, margins have been reduced over this period, leading to lower profits and to reduction in labour, and in investment into innovation and development. Retailers, the BRC claims, have not passed on the full inflationary costs, and this was confirmed also in the CMA report (Competition and Market Authority, July 2023). The argument that retailers have a material degree of market power was countered by them setting out the competitiveness of the UK retail market such that consumers have ample and price-transparent choices between retailers, who are themselves competing with each other, and with other sources of produce.

In contrast to the BRC submission, Sainsbury's do set out a view on longer term structural improvements. Their submission calls for

- a government-led review of the whole supply chain to identify medium- and long-term risks and a 10-year strategy to deliver self-sufficiency in key specified food categories for UK food security and to reduce Scope 3 outcomes.[6] This would include building strategic capabilities, investment and a new regulatory framework;
- a plan to tackle labour and skills shortages in the food supply chain;
- speedier planning permissions for farmers and growers to be given for new water storage infrastructure, sheds and strategic greenhouse capacity suitable for year-round growing.

Regarding their responsibility towards customers, Sainsbury's cite affordability, inspiration and time and effort as the main customer barriers to eating well. Their own research also states a notable 'say-do' gap by customers about healthy eating. Sainsbury's also dispute retailers' disproportionate market power based on the high competition between them, citing the CMA report that 'retail competition is working well'. However, what is missing is any recognition that the retail grocery sector, as a whole, might be said to exercise market power over suppliers.

Asda makes an important point regarding market power and the role of the Groceries Code Adjudicator (GCA) that is also backed by evidence from our interviewee, Farmer4. Taking the role of a 'supermarket ombudsman', the GCA is an independent statutory office responsible for enforcing the Groceries Supply Code of Practice (GSCOP) arbitrating disputes between supermarkets with an annual turnover of £1bn or more and their *direct* suppliers. In their written evidence, Asda state that other retailers use agents and therefore their, then '*indirect*', suppliers and growers are not able to make claims to the GSCOP. Similarly, Farmer4 explains that the supermarkets 'know they're not allowed to treat their producers badly. So, what they do is they stick an intermediate in between. And then that gets them out of the legislation'. Prior to our interview, Farmer4, who supplies milk to the Co-op, forwarded us an email exchange they had with the agent, or price broker, who is between them and the supermarket: 'Enterprise Foods are a "local food" broker for the Co-op we deal with'. In the context of the increase of costs for inputs, Farmer4 had written explicitly to the agent that 'we weren't requesting a price increase, we were letting you know there was a price increase'. To illustrate the scale of price increases, he quoted Michael Oakes, the dairy board chair of the National Farmers Union, flagging that a lorry load of fertiliser had risen from £7000 to £28,000. He also pointed out to the broker that

> We supply two universities, Morrisons, and Select Convenience all of whom didn't ask us to justify our price increase; they all accepted it and were aware of the reported production increase cost nationally to produce dairy products.

However, the broker did not accept the price increase saying that

> we are fully aware of the cost pressures in the market at the moment, especially within the dairy sector. Unfortunately, we are unable to accept a price increase without following the customer's process. Please can you complete the form sent over to you previously so that we can submit the new pricing to the customer [Co-op].

In the interview, Farmer4 explains that the broker had

> sent a big long document saying, 'We need you to justify every single thing that's put your price up.' Now, that data is worth a lot. If I give them my food costs, my labour costs, I'm handing over [...] all the information that can then justify only paying you what they want to pay, just enough to keep you in business. It's all—it's going to get worse rather than getting better. And I think that's the biggest challenge, you know, if you start looking historically how many farmers there were, how many suppliers there were, everything is being pushed into ginormous food producers, which have a ginormous environmental impact in concentrated areas and has a ginormous food supply chain that is really easily upset by the smallest of weather, freak weather, heavy rain, snow. Yeah, it's kind of critical that something's done.

In addition, Farmer4 highlighted that the lack of protection for suppliers due to brokers not being covered by the GCA led MPs to debate whether to extend GCA powers.

4 | Discussion

This paper showed supply chain actors' perceptions of, and suggestions about, resilience and sustainability, including statements made in interviews and public evidence. Stakeholders understand various systemic issues and challenges that hinder resilience. To contextualise these results, it is worth looking at Zurek et al.'s (2022, 528) review of food system resilience in which they tie resilience enhancement to 'consistent priority setting and the definition of "red lines" that cannot be crossed'. Based on our results, Sections 4.1 and 4.2 outline the unsustainable status quo by setting out four red lines—privacy, poverty, price and planet—that describe the tensions in which the pricing dilemma is rooted. Current governance relies on low end prices but results in poor social and environmental resilience. Section 4.3 reverses the tensions to outline a scenario of civil food resilience. Figure 1b,c and Table 3 provide additional sketches of these dynamics.

4.1 | Privacy and Individual Responsibility

Although some are concerned that regulatory measures can lack empathy for individuals, many stakeholders regard regulation as necessary while observing a lack of legislative control over the supply chain, which is a risk for long-term resilience. This perception resonates with the lack of ambition that scholars (Doherty, Jackson, et al. 2023) note within the UK Government Food Strategy, which ignored the need for major dietary changes set out by the National Food Strategy that had been designed to inform the (Conservative) government. That governments have stepped back from a direct role in governance is linked to a wider ideological framework (over)emphasising privacy and individual responsibility.

The boundary between private, individual choice and regulated, collective decision-making marks how consumer and corporate behaviour is interpreted. Defending free consumer choice against regulatory interventions, a few stakeholders apply the logic of traditional economic theory (Samuelson 1947), where individuals are expected to be rational decision-makers able to gather and process all the information necessary to make the right choices. The same stakeholders, however, observe and admit that consumers are not typically making sustainable choices, which is much more in line with Bounded Rationality Theory (Simon 1957), where rationality is limited by cognitive limitations, information availability and time constraints. Decisions are affected by mental shortcuts and biases, for example, towards the status quo, making people reluctant to change the brand they always buy (Kahneman, Knetsch, and Thaler 1991).

That many stakeholders characterise consumers as habitual and financially constrained, unable to make sustainable choices, mirrors the theoretical argument of social practice approaches that emphasise behavioural routines and question how retailers instrumentalise consumers' ostensible purchase power to make them responsible (e.g., Ehgartner 2018; Warde 2005). These stakeholders demand regulation antagonistic to the neoliberal mindset that has dominated the political climate for decades (Hall, Massey, and Rustin 2013), which refrains from intervening in markets, consumer choices and corporate affairs and treats businesses as individuals with 'rights' and 'culture', thereby promoting *individual* routes towards sustainability and resilience over regulation. Remarkably, it is not just scholars who plead for proper regulatory frameworks to guide companies' sustainability efforts (Adams, Donovan, and Topple 2023), but even retailers themselves do, for example, Sainsbury's vision for structural improvements and Asda flagging the misuse of GCA legislation.

4.2 | Poverty, Price and Market Dynamics and the Planet

Stakeholders acknowledge that low income constrains households' ability to access healthy, let alone sustainable, foods. Increased reliance on food banks often fails to provide fresh foods and leaves food security to a charitable service. Reducing poverty would not just do justice to the declared right to food (de Schutter 2014) but also improve nutrition and reduce public healthcare costs: Malnutrition costs the National Healthcare System £19.6 bn each year (NHS Confederation 2023); consumption of fruits and vegetables below recommendations accounted for £706 m in 2017 (Pinho-Gomes et al. 2021) and obesity £6.1 bn (National Audit Office 2020). Stakeholders suggest that consumers choose cheap foods because of poverty that would have to be tackled by fiscal means. The current lack in regulative governance and the cost-of-living crisis, however, lead to an increasing segment of the population struggling, creating systemic pressure towards reliance on charity, food surplus redistribution and keeping end prices cheap.

A lack of a long-term resilience perspective manifests in retailers' simplistic definition of being 'resilient' by maintaining product availability and lowest possible end prices in the face of system shocks. This is grounded in a downwards spiral of advertising and chasing low prices. Retailers condition consumers to focus on price through loss leaders (e.g., extremely low Christmas vegetable prices) that make farmers angry by undervaluing their work both morally and financially. Moreover, some stakeholders perceived retailers' profits to be growing continuously, whereas retailers claimed their profits decreased as they did not pass the full burden of inflation on to consumers. However, reduced profits are to be expected in a situation of global peril and that retailers continued to make profits and benefit their shareholders shows that (a) the economic mechanism remains and (b) an imbalance regarding the risk burden and sector resilience as, unlike farmers or growers, none of the large retailers went out of business. Claiming not to have made excessive profits over the inflationary period, retailers set out their role in ensuring the lowest possible prices and product availability for consumers. This, however, partly comes at the expense of producers. The insights on the GCA show that (1) some retailers use price brokers as middlemen to get out of GCA legislation in order to (2) prevent suppliers from raising their prices or (3) gain valuable knowledge over suppliers' costs (with ultimately the same intentions as in Point 2). This illustrates the wider structural barrier of an overall profit- rather than value-driven food system relying on cheap imports and dominated both historically and at present by industrial and financial capital. This includes an oligarchy of competing large supermarkets acting in the financial interest of shareholders as well as industrial producers outcompeting

TABLE 3 | Characteristics of the unsustainable status quo and civil food resilience.

The price dilemma (status quo)	Civil food resilience (scenario)
Privacy & individual responsibility • Neoliberal governments perceive regulation as intrusion into corporate and individual privacy • Consumer choice precept • Private businesses treated as 'persons'	Shared responsibility • Regulative multiactor governance • Governments conceive regulation as means to meet collective needs and tackle class antagonism against corporate interest • Consumer choice limited to achieve social and environmental targets • People have rights, not businesses
Poverty	Common welfare
• Price inflation led to cost-of-living crisis affecting broad parts of the population	• Price inflation absorbed by effective (re)distribution
• People reliant on food banks	• Charitable food aid (food banks) obsolete
• Low affordability of certified quality produce (e.g., organic and fair)	• High accessibility of certified quality produce (e.g., organic and fair)
Price & market dynamics: predatory • Low end prices • Import of cheap produce • Retailers propel consumer price orientation • Low price precept resulting in low margins leads retailers to squeeze farmers for profit • Mainly large-scale business profitable under low price precept (industrial farming/growing) • Own label self-regulation leading to substandard produce promoted as 'sustainable'	Price & market dynamics: adequate • High end prices • Certified produce to highest sustainability standards • Pricing adequate for farmer livelihoods and investment in sustainable practices • Domestic and local production viable • Shift towards plant-rich diets via price incentives
Planet in turbulence	Planet allowing for resilience
• Transgression of planetary boundaries	• Mitigation of climate and biodiversity crises
• Decay of ecological and social means of production	• Continued function of ecosystem services
• Social conflicts on the rise	• Preconditions for social peace given

agro-ecological approaches by mechanising, reducing labour costs and producing volume rather than quality.

However, the evidence confirmed retailers' and consumers' price orientation amidst increased precariousness due to inflation in an increasingly turbulent world, with impacts from violent conflicts, resource bottlenecks, biosecurity and environmental crises. There is general understanding that food prices would need to be higher to ensure appropriate environmental, social and quality standards. Stakeholders are well-aware that the supply chain base itself is eroding. In the big picture, the six of nine planetary boundaries that have already been crossed (Richardson et al. 2023) must be seen as a red line marking the existential threats to the natural preconditions for producing food, one which is also a factor fuelling civil unrest (Jones et al. 2023). The capacity of retailers and their suppliers to resist short-term shocks is an insufficient measure of 'resilience' as the food system needs mitigation of and adaptation to long-term stressors. That sets the vector to fundamental changes that will overhaul existing economic and societal models—both a challenge and great opportunity.

4.3 | Civil Food Resilience

In sum, stakeholders charge politicians with neither tackling excessively cheap food nor poverty—preconditions, though, to make healthy and sustainable foods affordable and mainstream and thus achieve what one interviewee referred to as civil food resilience (Lang, Neumann, and So 2025). The call for civil food resilience (see also Figure 1c and Table 3) suggests that resilience goes beyond a functional food supply chain and is linked up with social policy and justice. People, here, are not reduced to the figure of 'the consumer' (Ehgartner 2018; Schwarzkopf 2011) but are endowed with civil rights, for example, to healthy and sustainable food.

The need for a systemic and 'whole of society' approach (Lang, Neumann, and So 2025, 10) can be linked to models of hybrid governance and shared responsibility. A coherent strategy for business and policy needs to account for different actors' specific spheres of influence. Hybrid governance acknowledges the different powers and responsibilities and calls for effective communication and collaboration to ensure resilience. Iris Marion Young's (2006) approach tackles structural injustices not by a backward-looking focus on liability (for past harm, pollution or similar negatives) but forward-looking responsibility for changing an unsustainable status quo. Acknowledging that all actors are responsible for change, yet with differing spheres of influence, prevents blaming individual consumers, businesses or institutions and ensures a focus on the systemic changes needed to ensure long-term civil food resilience.

In policy and practice, models confined to retailer self-regulation and unconstrained consumer choice have failed (Barnett et al. 2011; Evans, Welch, and Swaffield 2017; Schwarzkopf 2011), and sustainability standards chosen by brands and retailers are limited without stringent overall sustainability strategies of companies (Tallontire 2024). As our findings show, retailers need, some even want, boundaries. Competition between retailers can result in a downward spiral of end prices that squeezes farmers, hinders sustainable production and needs to be reined in. Politicians must set legal barriers and enablers that enact a swift, just and radical transformation of provisioning systems (Kreinin et al. 2024). Thus, out of inaction that has historically grown in decades of neoliberal austerity, shared responsibility particularly requires the reactivation of governance by the government. Farmers, in turn, have to expect changes in how and what they produce, and consumers similarly, in their dietary patterns. Britain's predominant land use is grazing and arable fodder for meat and dairy (Independent Review 2020)—a shift towards plant and fibre-rich wholesome diets will have to be mirrored by how and what is produced.

A contentious theme, however, is the question of consumer responsibility. Even among the few participants that defended consumer choice against regulatory interventions, there is scepticism that consumers are capable of making sustainable purchase decisions. Indeed, many participants exhibited disbelief that habitual and price-oriented consumers could enact positive change, and some comments clearly call for regulation, such as the fiscal measures suggested in the National Food Strategy (Independent Review 2020). Distrust against change by consumers must be seen in the context of an arguably historically unprecedented inaction of government. Only the reactivation of governance by the government would seriously put consumers in the position to have a choice. Attempts at multistakeholder collaboration or regulation exist, for example, on the level of city regions (Blay-Palmer et al. 2021), public procurement of plant-based, low-emissions meals to schools (Batlle-Bayer et al. 2021; see also Ehgartner, Kluczkovski, and Doherty 2025 calling for localised public procurement in the United Kingdom) and biodiversity governance as part of REDD + policy (Steenwerth et al. 2014); these are laudable initiatives towards resilience but too exceptional to make a dent in the global polycrisis.

However, in the context of shared responsibility that assumes hands-on governments, we do not want to throw out the baby with the bathwater. Despite the contextually understandable scepticism of the stakeholders against change led by consumers, consumers can respond well to proenvironmental behaviour change initiatives from retailers, but for these to be successful long-term and not just short-term projects, stringent cross-sector agreements and regulation are required (Young et al. 2018). Considering the promising research findings showing that environmental messages positively affect consumers' purchasing intentions, behavioural interventions such as nudging and awareness campaigns (Bretter et al. 2023; Candeal et al. 2023; Thaler and Sunstein 2008) may help consumers to contribute positively to the shared responsibility approach. As shown by Candeal et al. (2023), behaviour change interventions—here to reduce household food waste—can work, but a systemic approach involving relevant food system stakeholders is needed. Problems linked to unequal power relations arise only where behaviouristic approaches are (mis)used to position consumers as the only ones responsible (e.g., Barnett et al. 2011) and, thereby, obscure the governmental and corporate share of responsibility, along with the systemic mechanisms that make unsustainable practices profitable. Future research could promote hybrid—in the sense of regulative multiactor—governance by elucidating the spheres of influence and resulting responsibilities of stakeholders, including consumers and policymakers, in more detail.

5 | Conclusion

Although sharing the responsibility to enact systemic changes towards long-term civil food resilience, suppliers, retailers, politicians and consumers have differing spheres of influence. The status quo of the UK food supply chain is characterised by a price dilemma. Prices are generally too low to account for the true costs of production, in particular the social and environmental costs. Even if disruptive events can cause, and have recently caused, price inflation, farmers generally want food prices to be higher to have (1) appropriate incomes, including financial buffers against shocks and planning safety, and (2) the means to invest in and adopt sustainable production practices.

The other side of the dilemma, however, is increased poverty through the cost-of-living crisis resulting in people being more price-conscious, mirroring and reinforcing how retailers condition consumers to be. Stakeholders acknowledge that low-income households' access to healthy and sustainably produced foods is severely constrained. This crisis reinforces retailers in framing 'resilience' as maintained product availability at the lowest possible price. This exacerbates the orientation of retailers and consumers towards low end prices and away from foods with higher nutritional, environmental and social quality standards, which would be necessary for long-term resilience. The reduction of poverty to mainstream healthy and sustainable foods would improve public health, planetary health and social peace, reducing associated societal costs. The UK governments, however, dominated since the 1980s by a neoliberal mindset, have largely refrained from regulatory intervention, favour corporate self-regulation and in their reliance on food banks leave unaddressed the root cause of food insecurity—poverty. Vested private interests manifested in the industrial, profit-driven supply system, including an oligarchy of competing large supermarkets acting in the financial interest of shareholders, get in the way of high social and environmental production standards. Legislation meant to protect suppliers of large supermarkets can be bypassed by the supermarkets. Yet, some of the retailers even flag that or suggest being reined in by new regulatory frameworks.

A pathway towards a sustainable and resilient food system is to overcome the price dilemma, that is, by establishing the true, including environmental, costs of production, by reflecting that in prices paid across the supply chain and by enacting social policy that makes healthy and sustainable fresh produce affordable (and accessible, e.g., through public procurement; Ehgartner, Kluczkovski, and Doherty 2025). This represents and requires a systemic approach in which the food system is transformed in a concerted effort at various intervention points, a model of responsibility that is shared and hybrid, on the one hand, but accounts for unequal spheres and degrees of influence, on the other.

Author Contributions

Steffen Hirth; Elizabeth Morgan: conceptualisation (equals); data curation (leads); formal analysis (leads); investigation (leads); methodology (equals); validation (leads); visualisation (leads); writing – original draft (leads); writing – review and editing (equals). **Gülbanu Kaptan; Romain Crastes dit Sourd; Anne Tallontire:** conceptualisation (equals); funding acquisition (leads); methodology (equals); project administration (equals); writing – review & editing (equals). **William Young**: conceptualisation (equal); funding acquisition (lead); methodology (equal); project administration (lead); supervision (lead); writing – review & editing (equal). **Michael Winter**: investigation (equal); writing – review & editing (equal).

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Endnotes

[1] https://committees.parliament.uk/work/7682/fairness-in-the-food-supply-chain/publications/.

[2] https://committees.parliament.uk/call-for-evidence/3130/.

[3] In particular, fresh vegetables grown in the Lea Valley where nearly 10% of producers have closed down (Hirth et al. 2023).

[4] https://p3ppartners.com/p3p-acquires-uks-largest-tomato-grower-aps-group.

[5] Reviews have also shown that food banks typically lack fresh food (Bazerghi, McKay, and Dunn 2016; Oldroyd et al. 2022).

[6] Scope 3 emissions are indirect greenhouse gas emissions that are a result of an organization's activities but are outside of its direct control.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.