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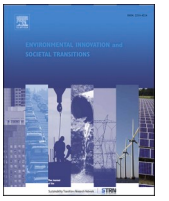

Delivering micro-missions in public food transitions: Harnessing tensions for creative outcomes

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ABSTRACT

Micro-missions represent small-scale, place-based strategies for societal innovation, distinct from grand missions that target national-level transformations. They offer potential for collaborative engagement among local stakeholders in the public sector, businesses, and civil society that aims to address local needs and promote wider innovation, particularly for social and ecological progress. Despite the potential for place-based micro-missions to provide a more focused approach to tackling societal challenges, the practicalities of delivering such a strategy remain uncertain. Through an exploration of a Welsh (UK) public food micro-mission, we identify the evolving tensions and conflicts and their impact on such micro-missions and their outcomes. Our findings underscore the potential significance of tensions throughout the micro-mission process. They highlight the crucial role of regional actors in generating creative responses to tensions through proactive governance, distributed leadership, and place-based experimentation.

1. Introduction

Mission-oriented innovation (a missions approach) for tackling social and ecological grand challenges has emerged as a compelling avenue for research and innovation policy (Foray, 2018); Larrue (2021); (Mazzucato, 2018b). This recognition forms part of growing calls for innovation policy to adopt a greater transformative focus (Schot and Steinmueller, 2018), with missions highlighted as policy mechanisms capable of addressing the long-term, uncertain and complex nature of grand challenges. This promising agenda for research and practice requires the state to play a greater role in addressing challenges (Kattel and Mazzucato, 2018) and casts light on the resources, leadership and wider partnerships required to address mission objectives (Kuhlmann and Rip, 2018; Uyarra et al., 2023).

Despite the growing literature on missions, the *national* level has dominated debate and policy action (Foray et al., 2012; Mazzucato, 2018a). There is, however, increasing recognition of the potential for regional responses to societal and ecological challenges (Loorbach and Wijsman, 2013; Raj et al., 2022; Tödtling et al., 2021). Such an approach offers the possibility of a more problem-focused regional development policy in which mission decisions can be made at the local or regional level where problems are most acute (Flanagan et al., 2022; Wanzenböck and Frenken, 2020). In this vein, researchers have begun to explore more localised approaches to missions and their potential for smaller-scale, self-organised actions to coalesce at the regional level, with attendant opportunities for small wins (Bours et al., 2021). In contrast to the traditional focus on technology-based firms and national governments in grand missions, micro-missions highlight the potential for actors in the public sector, firms, and civil society to come together to address place-based needs and harness more capacious forms of innovation aimed at social and ecological outcomes

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(Coenen and Morgan, 2020; Morgan and Martinelli, 2019).

While micro-missions may offer the possibility of tapping into local knowledge and resources, a range of challenges have been recognised, including institutional capacities, resources, governance capacity, and scaling linkages. Tensions are increasingly discussed in mission studies, where they are linked to contested values, interests, and problem framings (Torrens et al., 2019; Wanzenböck et al., 2020; Wiarda et al., 2023). They have also been noted in studies of wider innovation policies, where concepts such as the policy mix have highlighted their potential presence as different policy rationales and implementation approaches are negotiated (Flanagan et al., 2011; Magro and Wilson, 2013). There are reasons to anticipate additional tensions since the introduction of micro-missions may call for participation and collaboration across a more heterogeneous set of actors than has been the case in traditional technologically centred grand missions. A micro-missions approach with a more capacious innovation focus involving actors from the public, private and third sectors (and potentially the wider public) opens up the spaces for contest and potential conflict, and produces attendant challenges to achieving micro-mission objectives (Henderson et al., 2024).

In this study, we examine the tensions and contestation associated with establishing micro-missions and the expression of these tensions in conflicting discourse and action. In doing so, we draw on mission-oriented innovation (Mazzucato, 2021) and regional innovation and societal transition literatures (Hekkert et al., 2020; Uyarra et al., 2023; Wanzenböck and Frenken, 2020), along with mainstream policy studies research on policy contestation (Cairney, 2022; Stone, 2012). We argue that micro-missions take place in multiscalar contexts, comprising different actors, roles and responsibilities, and view tensions and contestation as integral features of micro-missions. But rather than being solvable by top-down, hierarchical processes, they are likely to require ongoing negotiation among micro-mission actors to seek creative responses to tensions.

We illustrate our ideas through a short case study of a micro-mission addressing an important societal challenge: the provision of healthy school meals in Wales. Such an initiative forms part of the wider societal challenge of promoting healthy diets and wellbeing (World Health Organization, 2021, 2024) and the reduction of greenhouse gases associated with diets (Lee et al., 2023). Drawing on evidence from Wales, we focus on the provision of food by municipalities—this has been the focus for one of the fastest-growing social movements in the Global North, where it has been associated with the challenge of how to feed cities in a just, sustainable, and culturally appropriate manner in the face of looming climate change, widening inequality, and burgeoning hunger (Morgan and Santo, 2018). Free school meals policy is particularly significant because it has the potential to address pressing societal challenges associated with health, nutrition and well-being by promoting healthy habits towards food at a young age (World Food Programme, 2023).

Our findings confirm the significance of tensions at different stages of the delivery of a micro-mission and highlight the temporal and scalar dimensions of contestation. These tensions may extend beyond the micro-missions process itself and stem from pre-existing (political) contestation found within policy settings. Our findings reveal a dynamic interplay that highlights the multiscalar and intricate nature of micro-missions which introduces additional tensions throughout their lifecycle stages: design, implementation and evaluation. In response to these tensions, we highlight three mechanisms - proactive governance, distributed leadership and place-based experimentation as enabling actors to manage tensions and negotiate micro-mission processes. Although these endeavours may contribute to the achievement of micro-mission objectives, our findings acknowledge potential limitations in the capacity of local actors to effectively manage tensions over time.

The remainder of this paper is organised as follows. We begin by considering the literature on the missions approach, current understanding of the practicalities of delivering such an approach and specifically its treatment of tensions and contestation throughout processes of delivery. We then move on to examine the treatment of tensions and contestation in mainstream policy studies. This is followed by an introduction to the research case and our methodological approach. The results of our case study are then presented, illustrating how tensions unfold in micro-mission processes, followed by discussion of our findings in the context of the literature. We conclude by considering the contribution of the research and potential implications for future research.

2. Literature review

2.1. Missions, tensions and contestation and their scalar dynamics

The missions approach has become an important focus for public policy makers seeking to respond to grand challenges (Kattel and Mazzucato, 2018). In contrast to earlier missions focused on accelerating technological innovation, grand challenges are characterized by their `wicked' nature. They involve complex, interdependent dynamics and considerable uncertainty regarding solutions. Consequently, addressing these challenges requires a broader diversity of funding, expertise, and actors (Foray et al., 2012; Wanzenböck et al., 2020). The urgency in addressing such challenges has seen growing calls for innovation policy to adopt a more transformative focus, with greater attention paid to its normative direction and its focus on wider socio-technical system objectives (Janssen et al., 2023; Schot and Steinmueller, 2018; Wittmann et al., 2021). This represents a new rationale for innovation policy, going beyond a pure technological and economic justification for missions, and providing greater attention to the societal and ecological needs of communities and places (Wanzenböck et al., 2020).

Although national- and international-level leadership of 'grand missions' and their focus on global challenges have taken centre stage in the discussion of practices, attention has been drawn to the hierarchical nature of public policy, with state actors and agencies often operating alongside those at local, regional, national and supranational levels (Fisher et al., 2018). This includes vertical linkages and relationships between public actors, as well as horizontal linkages between policy departments and policy responsibilities (Uyarra et al., 2023). In this context, researchers are exploring the potential of sub-national approaches to missions, arguing that smaller-scale missions could effectively address place-based objectives (Brown, 2021; Bugge et al., 2021; Morrison and Pattinson, 2023). Such approaches, referred to as `micro-missions' by Henderson et al. (2024), focus on specific place-based challenges at the subnational

level. They suggest these missions are well-suited to meet the local areas' social, environmental, and economic needs. In contrast to grand national and international missions, micro-missions emphasise developing modest solutions that can be scaled up based on the `small wins' principle (Bours et al., 2021). However, despite their potential, micro-missions face challenges in mobilising and scaling solutions. This might necessitate multiscalar linkages to secure the necessary funding and expertise, aligning with wider policies and market selection forces to empower such innovations (Seyfang and Longhurst, 2013; Smith and Raven, 2012).

While the importance of actors from various government levels engaging in mission policies has been recognised (Ghosh et al., 2021; Janssen et al., 2021), the distribution of leadership roles has also been identified (Aranguren et al., 2019). A place-based, focus to micro-missions highlights differences in governance arrangements for grand missions, where national and state leadership has tended to dominate (Henderson et al., 2024). Instead, micro-missions are more likely to see regional and local leadership playing an elevated role in such governance arrangements. Here, the micro-mission concept echoes calls for applying the principle of subsidiarity in missions, emphasising decision-making closer to the citizens affected (Wanzenböck and Frenken, 2020). It aligns with Brown's (2021) call for innovation policy to be tailored to context, and Fastenrath et al.'s (2023) concept of mission districts. This underscores the critical role of *context* in missions and the role of local knowledge in addressing small-scale challenges and solutions (Henderson et al., 2024; Wanzenböck and Frenken, 2020), in contrast to grand missions which tend to harness national and international knowledge sources and expertise (Mazzucato, 2017). In short, the literature suggests that micro-missions may be viewed as smaller, less ambitious exercises, relative to their grand counterparts, but with the potential for local and regional actors to address challenges at the local level through placed-based action. Table 1 contrasts the key dimensions of micro- and grand-mission approaches.

These distinctions should not be viewed as fixed binaries. Instead, there may be potential for missions to emerge at multiple scales. For example, missions created in local areas could be developed by hierarchical actors to address global problems (Uyarra et al., 2023, p. 15). While these perspectives suggest that micro-mission activities may be smaller in scale and ambition than grand technological missions, the multiscalar, interactive nature of many policy settings may lead to challenges in their delivery. Indeed, a number of potential obstacles to the delivery of micro-missions have been identified. These include the lack of capabilities and resources for micro-missions (Henderson et al., 2024), as well as the possibility of misalignment between micro-missions and regional demand conditions (Brown, 2021). Nonetheless, despite these challenges, the practicalities of delivering sub-national missions are increasingly attracting researchers' interest.

Tensions and contestation have been noted in the innovation and societal transitions literature (Janssen et al., 2023; Wiarda et al., 2023). This has highlighted the potential for actors to have divergent viewpoints in the policy process (Janssen et al., 2023; Torrens et al., 2019). Public participation and the engagement of heterogeneous groups have been identified as ways to co-create more inclusive missions, thereby reducing the potential for contestation (Wiarda et al., 2023). Flanagan et al. (2011) view tensions as being 'rooted in the differing 'expectations or demands of other actors or the constraints of institutions', and their reflection in the need for trade-offs to be sought by actors (Flanagan et al., 2011, p. 709). While such tensions can lead to misalignment or deadlock in mission arenas (Nylén et al., 2023), contestation might also facilitate learning outcomes that can 'find a middle ground…that works for everyone' (Janssen et al., 2023, p. 405).

Micro-missions encompass place-based *goals and direction* in addressing challenges such as climate change, renewable energy supply and global security which have a place-based nature and engage with communities closest to such problems (Henderson et al., 2024; Wanzenböck and Frenken, 2020). The inclusion of multiple goals within such micro-missions may be desirable as part of a portfolio approach, and help to increase the scope of outcomes achieved (Bours et al., 2021). Multiple goals, however, may present challenges to micro-mission delivery and effectiveness, particularly when they may be viewed differently or as conflicting by participants, for example in terms of achieving societal versus economic goals (Henderson et al., 2024). This complexity and its potential to create tension can also be seen in the technological goals of the micro-mission, with choices between multiple forms of innovation as well as between the types of innovation adopted to achieve the goals (Wanzenböck et al., 2020). The inclusion of multiple forms of innovation goals within micro-missions may also produce challenges for less developed places lacking local knowledge sources; this may limit the possible sources of input into micro-missions, although external inputs may be sought (Henderson et al., 2024; Uyarra et al., 2023).

In relation to *governance,* micro-missions may require place-based and multiscalar leadership to the fore (Henderson et al., 2024). Such arrangements have the potential to create governance interactions, as highlighted in the innovation policy mix literature, with both horizontal and vertical policy interactions (e.g. in design, implementation and evaluation) (Kivimaa and Rogge, 2022; Magro et al., 2014; Magro and Wilson, 2013). As Uyarra et al. (2023) note 'Mission-oriented policy crosses traditional public policy boundaries, addressing problems in areas that are normally situated in policy domains such as health, mobility, energy, or food and at multiple levels of governance' (p. 4). Moreover, while state-led technology-led missions may be amenable to single-agency approaches, the absence of hierarchy and clearer authority patterns in regional activities may require more fluid and distributed leadership arrangements that link multiple policy (Aranguren et al., 2019). Indeed, such arrangements may also require a broader range of

Table 1
Micro- and grand-missions.

	Micro-missions	Grand-missions
Mission goals	Place-based challenges	Global challenges
Governance	Regional and local leadership	National state and international leadership
Knowledge	Local knowledge	National and international knowledge
Scale	Smaller, less ambitious	Larger, more ambitious

actors from the state, industry and civil society, based on more equal relationships, than common in state-led activities (Baldwin et al., 2018).

Although coordination has been identified as a potential solution to such tensions (Cunningham et al., 2013), the multiscalar dimensions of missions and the appropriate scalar levels at which to undertake and coordinate missions are rarely studied (Magro et al., 2014; Wanzenböck and Frenken, 2020). Managing such governance processes at the local level is therefore likely to be challenging and suggests that micro-missions may need to be negotiated and constructed through greater inclusivity of actors than typical in grand missions. The complexity of these leadership arrangements is likely to vary, reflecting the industry, institutional context and place characteristics, including the level of devolution. Leadership within such place-based processes may, at times, be enabled or constrained by other actors in the policy context, particularly in multiscalar settings (Sotarauta and Beer, 2017).

2.2. Tensions and contestation in policy studies

Tensions and contestation in the policy literature are highlighted as inevitable and pervasive in most policy settings (Campbell, 2002). Unlike clearly understood and bounded problems, tensions do not necessarily have clear causes, boundaries and a common understanding of potential solutions; and may require dialogue and negotiation among actors in order to surface the underlying reasons for tensions (Cairney and Kippin, 2023). Such tensions often represent contradictions and competing norms between policy options and concepts, and may be acknowledged, negotiated between multiscalar policy actors, or simply accepted (Cairney, 2022). In other cases, they may emerge reactively as unforeseen outcomes during policy implementation processes (e.g. when the effects of trade-offs between objectives become clear). Policies can also be defined in contradictory ways, with the 'same actor…juggl[ing] many criteria to decide that a policy outcome was a success and a failure' (Stone, 2012, p. 3). Contradictions can also be referred to as paradoxes, defined as 'interlocking oppositions that cannot be willed away' (Berti et al., 2021, p. 10). However, tensions do not necessarily represent paradoxes or contradictions, and may represent contested dilemmas between activities or choices (Berti et al., 2021). They can also produce conflicts, as illustrated in Gualini's (2003) study of the discursive conflict between regions brought about by the implementation of the reformed EU Structural Funds in Italy.

While contestation may lead to certain policy choices being prioritised over others, it may also lead to stasis or dissolution when participants are unable to agree (Song, 2020) or marginalisation of dissenting voices (Valkenburg, 2020). This largely negative framing of tension effects can be found in the regional innovation policy mix literature, where they are viewed in contrast to 'complementarities' in such interactions (Cunningham et al., 2013). The potential to produce creative responses has, however, have been found in studies of teamwork (Yong et al., 2014), and suggest that while conflict and tension in micro-missions can produce negative effects (e.g. limiting micro-mission activities), they may also produce novel responses to micro-mission contestation in goals and processes.

The emerging literature on the design and implementation of place-based missions reviewed above raises the question of how actors with asymmetrically endowed resources and potentially differing priorities and motivations can come together to deliver micro-mission activities. Moreover, the potential for tension in such missions and the ability of place-based actors to manage tension remains unclear. We argue that tensions and contestation have temporal dimensions meaning that they are likely to be present across all stages of the micro-mission process (rationale, goals, implementation and evaluation) and beyond. As complex, messy and contested activities such missions may produce contests and creative responses. This may contribute to the ultimate success of a mission, highlighting the importance of a better understanding of tensions and contestation in micro-missions. Therefore, our study aims to inductively explore the nature of micro-mission tensions and contestation by asking the following questions: How do tensions and contestation shape and influence the development of micro-missions? What mechanisms can be employed to manage these tensions?

3. Research case

The context for the case study was Wales' aim to deliver healthy eating outcomes and general wellbeing through the provision of free school meals. This recognises that schools represent important places in which children can receive healthy, balanced meals, and that this may benefit good eating habits into adulthood (Nesta, 2021; Welsh Government, 2020). It has been identified as a long-standing issue for the health and wellbeing of children in Wales and beyond, including issues of obesity and health inequalities (Nesta, 2023; Welsh Government, 2014b), however, it has also proven difficult to find solutions. The scale of the problem, though, is significant with obesity rates among schoolchildren in Wales persisting over time.[1] Wales is not alone in facing such challenges; food provision in schools has been identified as an important issue for young people's obesity and health, according to the World Health Organization (2021), with innovative responses being developed by countries such as Sweden (Velasco and Witte, 2022), and various municipalities (Morgan and Sonnino, 2008). Challenges like obesity are "wicked problems" (Parkinson et al., 2017), characterised by the prevalence of unhealthy food and marketing, which have been linked to health problems in many countries.

The Universal Free School Meal (UFSM) programme was established within a devolved context, where the Welsh Government holds responsibility for education and food. To this end, the UFSM programme formed part of a broader array of activities, being developed over more than 10-years to harness the benefits of healthy school food provision. These activities represent an iteratively developed portfolio of actions by Welsh Government, designed to address the challenges associated with healthy school food. They included the introduction of a range of standards and regulations for healthy school meals (Welsh Government, 2014b), including provision of free

[1] https://phw.nhs.wales/news/child-measurement-programme-shows-increase-in-numbers-of-children-with-obesity/

school meals for those in greatest need, as well as initiatives such as the Welsh Government Free Breakfast Scheme (Welsh Government, 2014a) and the Food and Fun holiday programme (WLGA, 2024). While these initiatives lead to some improvements in nutrition (Tapper et al., 2007) ongoing concerns were raised about the unhealthy nature of school lunches,[2] as well as concerns that take-up of free school meals was insufficient, even when funding was made available (Bone and Hilliard, 2022).

Although universal free school meals provisioning had been introduced in various parts of the UK for infants (Department for Education, 2014), the extension of the scheme to all *primary* schools was a social innovation confined to Scotland, Wales and a minority of London boroughs. In the case of Wales—the focus of this case study—the UFSM policy was the product of a Cooperation Agreement between the Welsh Labour Government and Plaid Cymru,[3] the Welsh nationalist party. The Cooperation Agreement was accompanied by extensive negotiation about its governance arrangements, including arrangements for decision making and accountability for the UFSM programme (Welsh Government, 2021a) and was presented as part of a collective effort to fulfil the promise of a new politics that aimed to be 'radical in content and co-operative in approach' (p. 1). In total the three-year Agreement contained 46 policy commitments covering social, economic, cultural and constitutional goals. Top of the list, however, was the political commitment to:

> **'Free school meals**—Extend free school meals to all primary school pupils, over the lifetime of this agreement, as a further step to reaching our shared ambition that no child should go hungry. We agree that universal free school meals will be a transformational intervention in terms of child hunger and child poverty, which will support educational attainment and child nutrition and local food production and distribution, benefiting local economies' (Welsh Government, 2021a, p. 3).

The UFSM programme has the features of a micro-mission: it is of relative short duration (3-year agreement), focused on regional social innovation (Wales, school children), and involves a complex range of place-based actors (regional and local actors). It represents an instance of a wicked policy dilemma (Wanzenböck et al., 2020), characterised by contestation between ecological and neoliberal approaches in the programme's design and delivery. This dilemma is further compounded by the complexity in governance and enactment of the policy, as well as uncertainty over its effects.

4. Methodology

Our approach to the study of the UFSM programme was based on an inductive, single case-study research method. This method is well-established in the social sciences (George and Bennett, 2005; Yin, 2018) and provides the basis for research investigating the complex dynamics of policies and their multiscalar characteristics in other place-based mission studies (Henderson et al., 2024; Nylén et al., 2023). Our case-study draws on the experience of the second author in advising the Welsh Government on UFSM and social enterprises seeking to support the implementation process.[4] This process utilises a key informant approach, selecting interviewees who possess in-depth knowledge about a specific policy area. In this context, the second author's `insider' knowledge of the policy settings facilitated access to interviewees. An `insider' approach is particularly relevant for researching regional governance and policy processes, as noted by Larrea and Estensoro (2021). However, while the strengths of this approach are acknowledged, it also presents recognised risks of potential bias, particularly affecting the nature and scope of the data collected (Payne and Payne, 2004). To mitigate potential bias, we included informants from government agencies, those responsible for policy enactment, and individuals aiming to engage with practitioners and citizens addressing implementation challenges. Additionally, the second and third authors were responsible for analysing the interviews and all collected data.

The case-study comprises a series of interviews with school food stakeholders and practitioners across Wales, including 12 semi-structured, in-depth key informant interviews undertaken on a non-attributable basis by the second author in the first half of 2023 (Table 1). These were drawn from national and local government, as well as third sector and civil society groups engaged in working with parents and pupils in implementing the micro-mission. All interviewees were identified through a purposive sampling strategy to identify participants in the micro-mission topic. The enabled interviews at different stages of micro-mission design, implementation and governance. Such an approach is often employed in qualitative case-study research, where the emphasis is on in-depth research of a defined context (Creswell and Poth, 2016). All interviews followed a semi-structured format (refer to Supplementary Information), lasting between 45 min to 1.5 h. These interviews were carried out via telephone or video conferencing and were subsequently transcribed. The interviews were supplemented by an analysis of policy documents, implementation reports, and personal communication from stakeholders (undertaken by all authors). All data (interviews and secondary analysis) were analysed inductively, based on a series of codes which developed inductivity, reflecting the different form of tensions, their focus, and actions to address them. Further details of the interviews and interview schedule can be found in the Supplementary Information.

[2] https://www.walesonline.co.uk/news/wales-news/millions-needed-improve-school-meals-2481541

[3] The Cooperation Agreement sets out the terms of Welsh Government and Plaid Cymru's joint policy commitments based on multiple areas of 'common interests to implement progressive solutions – from ensuring no child goes hungry to ending homelessness [and exploring] the long-term future of social care to meeting our shared commitment of a million Welsh speakers by 2050' (Welsh Government, 2021; p. 2).

[4] https://cynnalcymru.com/lessons-from-scotland-on-free-school-meals-2

5. Provision of healthy school meals in Wales: a public food micro-mission

5.1. Traditional models and their limits

School meal provisioning in the UK has historically evolved through three very different models of service provision—the *welfare model* of collective provision; the *neoliberal model* of consumer choice; and the *ecological model* of sustainable provision, a political model that is embryonic and struggling to emerge in the context of a societal food system that is overwhelmingly geared to the production and consumption of ultra-processed food and drink products (Morgan, 2006).

These competing models of public food delivery represent political tensions associated with the wider socio-technical system. However, the neoliberal model has been incredibly durable, forming part of a broader socio-political and economic consensus with taken-for granted features (Harvey, 2007; Peck, 2013), it has been brought into question by efforts to develop an alternative, ecological approach to school meal provision taking place at the regional level in the UK (Moore et al., 2013; Townsend and Foster, 2013). While this alternative approach has yet to evolve into a fully fledged model it has given rise to political contestation with different models being developed in the UK's regions and nations, including Scotland and several London boroughs (Feed the Future, 2022; Scottish Government, 2022). Although these approaches challenge the norms of the neoliberal approach to school food provision and develop an evidence base for the ecological approach, they were undertaken in a context in which the effects of the neoliberal model continue to be evident. These include (a) the continued importance of the industrial food supply chain geared to the ultra-processed foods that are associated with obesity and other diet-related diseases and (b) the persisting need for the school food chain to cut its GhG emissions by reducing its dependence on meat and shifting to more plant-based meals.

5.2. The UFSM micro-mission

The UFSM micro-mission is part of a longstanding effort by the Welsh Government to enhance public health through school meals, as detailed in the Research Case. In this regard, it contributes to challenging some of the recognised weaknesses inherent in the neoliberal model. Yet while its objectives to provide free school meals was clear, this seemingly simple headline policy commitment to free school meals was, on closer inspection, a much more complex amalgam of policies that straddles multiple government departments and involve a large and heterogeneous cast of characters in and beyond government, all of whom must be enrolled into the process if it is to address the multiple aims of the micro-mission.

We might also note that there are no clearly defined metrics in any of the five policy domains covered by the micro-mission which would allow officials or citizens to determine whether the policy commitment was successful or not. This highlights a tension of this particular mission selection: without clearly defined aims and objectives, monitoring and evaluation of the micro-mission's success will be difficult. The UFSM micro-mission contains a mix of outputs and outcomes. The provision of free school meals is clearly an *output* that can be clearly monitored and evaluated. But the provision of free school meals is also a means to an end and the ends in this case are a mix of *outcomes* defined in terms of combating hunger and poverty, promoting educational attainment, delivering health dividends and fostering economic development.

While the aims of the micro-mission are more complex in reality than they may first appear, the constellation of actors involved in the design and delivery of the micro-mission is no more straightforward. The central actors are the authors of the policy commitment (the Welsh Government and main opposition party, Plaid Cymru) and the 22 local authorities in Wales that are responsible for delivering the policy on the ground. But a host of other actors is also involved 'behind the scenes' in serving the central actors from 'farm to fork', such as the food supply chain firms at the production end of the chain, the local authority procurement teams responsible for food purchasing and the school catering teams at the consumption end.

The UFSM programme requires local authorities to deliver the programme according to the Coalition's plans. This relationship, however, is characterised by a balance of power that is heavily weighted towards the Welsh Government because it controls the purse strings. On the other hand, the Welsh Government is politically and operationally dependent on the local authorities to deliver the new policy commitment, so municipalities are far from powerless in this micro-mission. The Local Authority Catering Managers Association Wales (LACA Wales) comprising local authority food practitioners has sought to respond to UFSM by working collaboratively to identify the practical implementation challenges and feed these back to Welsh Government in regular operational meetings. The local authority representative body—The Welsh Local Government Association has also engaged in such collaborative processes, working to facilitate good practices.

A number of further implementation tensions have emerged, reflecting the challenge of delivering in a relatively short period of time and to budget: As regards the timescale, on which there was very little consultation, the Welsh Government committed all the actors to roll out free school meals to all primary pupils by September 2024. Local authorities had complained that the timescale was too short to allow them sufficient time to tool up, so it was agreed to stagger the roll out, with the result that Reception classes would be served by September 2022; all Year 1 and Year 2 classes by April 2023; and the remaining classes by September 2024.

Given the problems that emerged in the implementation phase, many local authorities conceded that Welsh Government would have been better advised to roll out the new UFSM policy through a series of local pilots to identify the problems on a small scale before rolling out to all 22 authorities, where capacity was unevenly distributed and where the school estate varies enormously (e.g. Cardiff

has 103 primary schools while Bridgend has 43). Tensions have also emerged around the targeting of the UFSM policy with calls made by a former Children's Commissioner to focus it on those areas facing the greatest disadvantage (e.g. poverty).[5] Yet, despite these contestations, the Welsh Government Education Minister responsible for UFSM policy was politically committed to a fast and universal roll out, primarily because he believed that it was an imperative measure to mitigate the cost-of-living crisis, especially with respect to the unprecedented levels of food price inflation.

Another implementation tension involves the budget. The Welsh Government based its budget on the following planning assumptions: expanded numbers; 190 school days per year; £2.90 meal unit rate; and 86 % uptake of the UFSM offer. The most combustible of these assumptions is the £2.90 unit rate per meal that the Welsh Government is prepared to fund the local authorities for delivering the policy. Local authorities are united in claiming that this rate is too low, not least because it was set before the huge spikes in food prices. Although it looks as though the Welsh Government will have to relent on the unit rate, it is still too soon to tell if the uptake rate will prove correct, a key question because it can affect the economic viability of the programme as well as the level of food waste.

The early phase of implementation has revealed additional challenges and tensions with which all local authorities are struggling—infrastructure, staffing and food sourcing. School infrastructure covers two main items—kitchens and dining halls—neither of which was designed to cater for so many pupils. While many schools have adequate kitchens that can be adapted for scaling up the number of meals, some smaller schools do not have kitchens at all, so have to be served by the larger schools, raising fears that the quality and temperature of the food will suffer in transit. Only time will tell whether the Welsh Government financial allocation to local authorities to enhance their catering infrastructure will be sufficient to cope with the extra numbers of children and increases in the necessary staff time/numbers.

Food sourcing has become a major challenge because of two very different kinds of problem: the requirement to purchase more 'local' food and the burgeoning problem of food price inflation. For the Welsh Government, an important part of the policy rationale for the introduction of universal primary free school meals was to support the procurement and promotion of 'local, sustainable and healthy food'. 'Local' was defined to mean within a local authority, with a region or within Wales—the general aim being that food is eaten as close to the point of production as possible. Under the terms and conditions of the programme, local authorities were obliged to ensure that they followed the Welsh Government's procurement guidance (e.g. 'Buying Local and Sustainable Food' procurement guidance) for all food contracts to ensure opportunities are maximised for Welsh food businesses and the Wellbeing of Future Generations Act (WFGA) 2015 is complied with so that positive socio-economic, environmental and cultural outcomes are achieved.

As the terms and conditions said: 'This guidance will ensure a move away from lowest cost approaches in food tenders, will ensure greater weighting on social/wellbeing objectives and that contract award criteria includes wider benefits such as jobs/training, fair work, ethical trading, reduced CO2 emissions, food produced within a certain radius, etc. and all are scored reflecting their high importance' Local authorities should ensure they maximise the amount of Welsh produced food served up on school plates, by working closely with Wales-based manufacturers/producers/wholesalers and collaborating with other Local Authorities where appropriate to aggregate demand' (Welsh Government, 2021b).

Procuring more local food for the public plate in schools is more challenging than might be imagined because of the systemic disconnect between what the agrifood sector produces in Wales (red meat and dairy) and what consumers, especially children, are advised to consume (more fruit and vegetables and plant-based diets) (Morgan, 2021). The weakest part of the local agrifood sector is horticulture, the subsector that most needs to be developed for and integrated with the school food system in Wales. Food price inflation has rendered this challenge all the more difficult.

Ensuring take-up of free school meals represents a further challenge, with evidence that those in most need do not always access free school meals.[6] Creative responses to this tension between the supply and demand for UFSMs did, however, emerge from the third sector. Nesta Cymru, a social innovation agency with a presence in Wales, for example, began to work with several local schools to undertake a rapid experiment in the Spring of 2023 to address these challenges.[7] This followed a design-led approach to working with parents, children and caterers in particular places to develop prototype information resources that could be used to support take-up, including a meal box kit to encourage healthy eating at home, a promotional take-up month and an SMS communication platform to encourage 'social nudges' towards healthy eating. Nesta Cymru concluded the initial stage of the experiment in the summer of 2023 and plan to experiment more widely across Wales. Cynnal Cymru, a social enterprise supporting training and learning around the sustainable development goals of Wales, have also sought to support the implementation of UFSM, hosting a series of roundtable discussions with sector practitioners and experts to apply lessons from the Scottish free school meal experience and address the challenges of implementing UFSM in Wales.[8] The activities of third-sector and civil society organisations, including LACA Wales, Nesta Cymru, and Cynnal Cymru, acknowledge the challenges of implementing UFSM. Nevertheless, they are dedicated to collaborating with local authorities, parents, and pupils to manage tensions. Their goal is not only to learn from potential good practices in other regions, such as in Scotland, but also to devise creative and practical responses that enhance the adoption of UFSM in schools.

In summation, as we can see from this brief overview of the school food micro-mission in Wales, tensions are an endemic feature of the micro-mission and its wider context, pervading policy rationale, goals, implementation, and evaluation of the new policy

[5] https://www.northwalespioneer.co.uk/news/national/24186731.universal-free-school-meals-targeted-poorer-areas—report/

[6] https://www.nesta.org.uk/project-updates/testing-new-ideas-to-increase-the-uptake-of-free-school-meals-in-wales/

[7] https://www.nesta.org.uk/project/healthy-school-meals/#:~:text=The%20Welsh%20Government%20has%20recently,children%20that%20are%20currently%20eligible)

[8] https://cynnalcymru.com/lessons-from-scotland-on-free-school-meals-2/

commitment. They also show that such tensions are influenced by pre-existing political tensions and dominant neoliberal system dynamics, not least in the tensions associated with the emergence of the ecological model. Such tensions provide not only the context for the UFSM programme, but also in its implementation as local authorities seek to balance the need for healthy food provision against budgetary constraints. This suggests that, despite its radical foundations, the UFSM is easier to proclaim than to deliver in practice. Both the central and more peripheral actors in the programme have already begun to develop new ways of working to implement the micro-mission based on governance and coordination through cross-government working parties so that the multiple policy goals - in education, health and local economic development, for example—can be integrated into a policy that was initially assumed to be a purely educational matter. For their part, local authorities are collaborating to a much greater extent than before to discuss common problems of infrastructure, staffing and local food sourcing. However, the results also highlight the potential value of third sector and civil society actors (e.g. Nesta Cyrmu, Cynnal Cymru and LACA Wales) working collaboratively to address tensions and support creative responses to the implementation of the micro-mission.

6. Discussion

This paper has presented a case-study of a public food micro-mission in Wales (UK) that seeks to develop a place-based solution to important societal and ecological challenges associated with healthy food, wellbeing and sustainable eating habits among school-children. In providing an early empirical examination of the tensions and practical issues in delivering micro-missions we identify a number of insights. Our findings provide novel insights into the complexity of these challenges at the granular level of a micro-mission, with tensions emerging within the micro-mission process, but also the role of wider, contextual contestation, such as political and system tensions, interacting with such processes. In highlighting tensions and contestation, we observe their presence in the framing, values, and interactions, as identified in previous mission studies (Wanzenböck et al., 2020; Wiarda et al., 2023). However, we extend these insights by illustrating how such tensions are integrated within micro-mission processes and how mechanisms may be harnessed by place-based actors to generate creative outcomes to these tensions. A summary of the findings and our case evidence are presented in Tables 2 (micro-mission tensions) and 3 (management of tensions) and discussed below.

Our findings demonstrate how tensions can have broader political and system characteristics, for example in relation to the dominant political models of public food policy, societal conventions in food consumption and the established supply chains of food production. These provide for a multiscalar dimension to tensions (often emerging nationally and internationally) in the creation and development of micro-missions, but also highlight the potential durability of dominant models and for contestation to persist over time. This is likely to mean that micro-missions enter a pre-existing context characterised by political and systemic tensions and for these to contain dominant rationales and associated narratives, often emanating from beyond the immediate regional context. Moreover, in contrast to the implicit view that tensions are somehow fixed in the literature our findings imply that tensions persist and may wax and wane over time, interacting with and shaping micro-mission delivery. In this respect, the temporality and durability of tensions and contestation may be necessary to understanding the potential for micro-missions and their outcomes.

The UFSM case illustrates how new rationale and goals for micro-missions may emerge at the local and regional levels, and that these may provide a challenge to dominant political narratives and systems. While such creative responses to contestation have yet to be explored in detail in the regional innovation policy and transitions literatures our results suggest that they may coexist alongside more problematic tensions surrounding the challenges for the delivery of micro-missions, as illustrated by the inclusion of health, social equality, food quality and pricing rationale objectives within the UFSM. Although layering of policies over time has been recognised in the regional innovation literature (Flanagan and Uyarra, 2016) our findings suggest that tensions surrounding rationale and goals can also be layered, with tensions both within the micro-mission process and beyond adding further complexity to micro-missions and their delivery.

Policy implementation represents a further area in which tension is evident in micro-missions. Such tensions and contestation reflect the urgency of implementation in time-limited, complex settings such as the UFSM. This may also reflect the different responsibilities and interests of actors, from political/policy to local practitioners and social enterprise groups. While such tensions and contestation between actors and policies are highlighted in the policy mix literature (Flanagan et al., 2011), the granularity of our findings suggest that local and regional implementation tensions may also concern the practical resources needed to deliver micro-mission. This was reflected in UFSM, with tensions linked to local school infrastructure deficiencies (kitchens) and regional supply and demand (of horticulture and the requirement for healthy food) and the implementation challenges 'on the ground' (Table 3).

Table 2
Micro-mission tensions and contestation.

Tensions & contestation	Case evidence
Political / systemic	- UFSM's challenge to the dominant neoliberal food system and welfare model.
Rationale and goals	- Conflicting objectives of the UFSM—health, social equality, quality, price (e.g. Food quality and fixed budget versus food price inflation/cost of living crisis).
Implementation	- Infrastructure, staffing and food sourcing present challenges and tensions in delivering against the UFSM's objectives. - Limited integration of local horticulture into the food system and disconnection of supply and demand (e.g. what children are advised to eat).
Evaluation	- Lack of clearly defined metrics for monitoring, making evaluation of the UFSM's success difficult.

Table 3
Management mechanisms for micro-mission tensions and contestation.

Management of tensions & contestation	Case evidence
Proactive governance	Political and policy governance mechanisms established by the Coalition's Cooperation Agreement prior to implementation of the UFSM and other actions.
Distributed leadership	- Movement from regional policy-led governance in the design of UFSM to greater involvement of Civil society and practitioner groups (e.g. Cynnal Cymru and LACA Wales) in the implementation of the UFSM.
Place-based experimentation	- Nesta's rapid experimental support for identifying and disseminating evidence of place-based good practice in Wales.

The findings also illustrate tensions and contestation in monitoring and evaluation, with the limited availability of metrics to determine success (or failure) of the UFSM micro-mission. The lack of such evidence may limit the ability of actors to seek further funding to support the outcomes of the micro-mission, given the importance of such metrics and evidence in providing feedback to regional innovation policy makers (Morgan and Marques, 2019). Such tensions in evaluation of outcomes may also have particular implications for micro-missions, given the recognised need to scale successful 'good practice' to other regions and nations, a challenge recognised in recent studies of micro-missions as well as studies of local societal transitions projects (Henderson et al., 2024; Seyfang and Longhurst, 2013; Smith and Raven, 2012).

Several mechanisms by which place-based actors may be able to manage tensions to secure the governance and implementation of micro-missions are highlighted by the case. These elements constitute an integrated framework that enables place-based actors to harness tensions and produce creative outcomes in micro-missions.

First, proactive governance arrangements were established by the Cooperation Agreement (e.g. the Cooperation Agreement's Governance Committees) in advance of implementation, reflecting the political partner's recognition of the importance of coordinated action to ameliorate tensions. Such forms of policy coordination provide politicians and policy makers from multiple government departments with formal spaces in which to negotiate tensions and resolve challenges creatively in the delivery of micro-missions. Although the exploration of such mechanisms is present in the regional innovation literature (Henderson, 2023; Magro et al., 2014), viewing tensions as persistent over time implies that governance solutions should not merely be seen as a reaction to isolated problems. Instead our findings highlight the anticipatory nature of such mechanisms, with place-based actors proactively seeking to fashion formal governance mechanisms in advance of implementation. That is, an enduring perspective on tensions means that they can be addressed, by foreseeing them and taking steps taken to address them directly.

Secondly, while the inclusion of political and policy actors in the governance of micro-missions may be necessary (e.g. especially by funders with legislative responsibilities, such as the Welsh Government) in setting the rules of the game (Aranguren et al., 2022) our findings follow the work of Sabel and Zeitlin (2012) in highlighting the potential disconnect between design and implementation of polies for micro-missions and for tensions to emerge (e.g. in adapting the UFSM programme to school kitchen infrastructure). They show how a distributed actor constellation can come together from practitioner and wider civil society groups to support the implementation process, and in doing so collaboratively to identify creative responses to tensions. For instance, the efforts of social enterprises like Cynnal Cymru and the LACA Wales exemplify these dynamics. While the top-down and bottom-up networks of agents that contribute towards societal missions are recognised (Ghosh et al., 2021; Janssen et al., 2021), our findings highlight the distributed nature of leadership in these processes, with the design of micro-missions characterised by regional state actors, before moving on to a more distributed cast of actors supporting the implementation. That is, the role of actors in supporting micro-missions is likely to not only mediate tensions between these mission processes, but also leverage the diverse expertise, perspectives, and capabilities of various stakeholders to address tensions creatively. Indeed, by harnessing different perspectives and inputs from local partners, distributed leadership may prove to be particularly relevant for addressing tensions in micro-missions, given their often shorter duration and the potential requirement for swifter mobilisation (compared to the longer duration of grand missions). Additionally, this approach could help to ensure that actions both encompass and cater to the needs of the communities and groups entrusted with implementation, thereby securing micro-mission goals.

Thirdly, place-based experimentation can be employed to address tensions in the implementation process of micro-missions. In contrast to the top-down conception of experimentation, which regards sub-national experimentalism as inferior (Morgan, 2018; Morgan and Sabel, 2019), place-based experimentation engages actors from civil society in time-limited, focused learning activities in a particular locality. These activities support micro-missions by analysing the nature and implications of tensions and exploring potential paths forward. For example, Nesta's rapid experimentations serve as a practical illustration of this approach. Such place-based experimentation has been identified as a decentralised, challenge-led form of innovation (Fastenrath et al., 2023; Robinson and Mazzucato, 2019) and could provide the basis for addressing different facets of micro-mission implementation challenges. We contribute to this by highlighting its focus not only on learning about solutions to challenges but also on identifying and iterating creative responses, which may help build an inclusive understanding of tensions and devise strategies to mitigate them. Nevertheless, achieving the ultimate success of these experiments is likely to necessitate further efforts to disseminate the findings derived from the place-based experiments discussed in this paper.

Together these mechanisms rest on bringing tensions out of the shadows in the course of micro-missions delivery and debating appropriate responses that best meet the needs of particular places. Here, the findings suggest the importance of processes of negotiation among multiple actors in order to address tensions and to enable creative responses. Such processes are likely to be of particular importance considering the short-term, focused nature of micro-missions. Yet, this is not to say that tensions can be resolved or

eliminated through such mechanisms, nor that the 'middle ground' can always be achieved (Janssen et al., 2023). Instead, the evidence presented here indicates that tensions can be generative, driving creative responses and outcomes in micro-missions. This includes not only learning about the meaning of missions but also the enactment of creative responses to tensions and the development of new practices. In this manner, such mechanisms can facilitate the improvement and adaptation of micro-mission practices. Yet, in recognising tensions as enduring some tensions are likely, still, to remain.

7. Conclusions

In this paper, we provide evidence on how tensions and contestation might shape the delivery of micro-missions and contribute to recent theoretical advancements on the importance of the multiscalarity and spatiality of such missions (Bours et al., 2021; Henderson et al., 2024; Uyarra et al., 2023; Wanzenböck and Frenken, 2020). We respond to calls in the literature to shed greater light on mission policy instruments and tensions in their practical implementation (Uyarra et al., 2023). Our findings contribute to the regional innovation policy and transitions literature by highlighting the presence of tensions in micro-mission delivery, including rationale/goals, implementation, and evaluation, as well as the presence of durable political and systemic tensions. While tensions and contestation are likely to be important to grand missions, our findings suggest that their nature and potential means of resolution are likely to be different in micro-missions, with greater recourse to multi-actor negotiation and collaboration.

Based on a granular case study of tensions in the design and delivery of the UFSM programme in Wales, our findings reveal the complexities of implementing micro-missions and argue that rather than being problems to be solved, they may be generative, supporting the development of responses by place-based actors. We find that tensions and contestation are likely to require mechanisms to support the processes and outcomes of micro-missions. Three such interconnected mechanisms are highlighted to support not only the management of tensions but also the development of creative responses—proactive governance, distributed collaboration, and place-based experimentation. These mechanisms represent complementary approaches to managing tensions in that they can help to address different stages of the micro-mission process (e.g., policy rationale, goals, implementation, and evaluation), and rely on core policymakers, as well as practitioners and the wider civil society. Moreover, although these mechanisms do not eliminate tensions, they can facilitate processes of negotiation, learning, and the development of creative responses to enable micro-missions to proceed, and outcomes to be achieved.

Several research implications can be discerned from our work. First, the tensions and contestations identified in this study are based on a single case of a micro-mission in complex policy setting. While they suggest that creative approaches to managing tensions are possible in micro-missions, other settings might provide different perspectives. For example, research could examine how tensions and management mechanisms play out in grand missions. The question of whether grand missions could develop creative responses to tensions is currently unclear. However, could hierarchy and clearer patterns of authority enable grand missions to better manage tensions and generate creative responses, or might deadlock limit such actions? Second, regional policy studies have long focused on examples of success and could benefit from a greater focus on cases of failure, for example, how tensions may both enable and constrain creative action. the mechanisms identified in this case-study include both proactive (e.g. formal governance mechanisms), as well as more reactive mechanisms (such as collaborative experimentation). Third, while micro-missions aimed at societal and ecological transformation are likely to be complex, they can take multiple forms. The UFSM case is a single instrument that is wide reaching in its (universal) focus, other micro-missions may be part of a broader portfolio of such mission-led activities and may present different approaches to tension management, such as the coordination of multiple instruments.

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Dylan Henderson: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization. **Kevin Morgan:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Conceptualization. **Rick Delbridge:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

Supplementary materials

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