PUBLIC MANAGEMENT REVIEW
2023, VOL. 25, NO. 4, 734–761
https://doi.org/10.1080/14719037.2021.2012377

Does inter-municipal collaboration improve public service resilience? Evidence from local authorities in England

Thomas Elston [a] and Germà Bel [b]

[a]University of Oxford, Oxford, UK; [b]Universitat de Barcelona, Barcelona, Spain

ABSTRACT

Resilient organizations maintain functioning during times of unexpected adversity. Collaboration may enhance resilience by enabling scarce information, resources and capabilities to be leveraged across organizations, although it may also impede rapid and flexible decision-making. We explore this dilemma using the case of 'inter-municipal' collaboration in England, analysing how the first COVID-19 lockdown in 2020 affected the provision of Housing Benefit – a locally administered social-security entitlement. Using OLS, probit, random-effects GLS and Hausman-Taylor estimations on time-series data from 187 lower-tier councils, we find that collaboration partly limited the decline in service accuracy but gave no protection to service speed.

KEYWORDS Collaboration; inter-municipal cooperation; organizational performance; resilience; shared services

Introduction

Organizations increasingly employ highly complex technologies in order to achieve demanding objectives accurately and efficiently (Perrow 1984; Wildavsky 1988). In addition, organizations are 'open systems', exposed to and affected by the surrounding social, economic and natural environment (Katz and Kahn 1978). This combination of internal complexity and external dependency means that firms, charities and government agencies continually face multiple low-probability risks of sudden, acute failure. Unexplained technical or coordination failures, as well as natural disasters, economic recessions or political turmoil, are powerful internal and external events that might 'jolt' established routines and resource flows, putting organizational objectives, and perhaps even survival, in jeopardy (Meyer 1982; Weick and Sutcliffe 2015).

Resilient organizations maintain or even improve functioning during such unexpected adversity (Kahn et al. 2018; DesJardine, Bansal, and Yang 2019). But what leads some organizations to better withstand shocks than others? Many scholars are intrigued by these 'antecedents' of resilience, although research remains largely conceptual and case-study dominated (for reviews, see de Bruijne, Boin, and van Eeten 2010; Duit 2016; Linnenluecke 2017; Williams et al. 2017; Barasa, Mbau, and Gilson 2018; Hillmann and Guenther 2021).

CONTACT Thomas Elston thomas.elston@bsg.ox.ac.uk
Supplemental data for this article can be accessed at https://doi.org/10.1080/14719037.2021.2012377

One mechanism commonly suggested to foster resilience is inter-organizational collaboration, which may increase access to scarce information, resources and capabilities during a crisis, lessening the adverse impact on organizational performance (Schoorman, Bazerman, and Atkin 1981; Oliver 1990; Goldstein 2012; Scholten and Schilder 2015; Barasa, Mbau, and Gilson 2018). On the other hand, inter-organizational relations sometimes reduce speed and flexibility in decision-making (Aiken and Hage 1968; Elston, MacCarthaigh, and Verhoest 2018; Voorn, van Genugten, and van Thiel 2019), potentially delaying and restricting the adaptations that can be made in response to adversity, thereby damaging resilience. Again, there is little quantitative research using observations on large numbers of organizations or disruptions to adjudicate these competing explanations (see reviews by Nohrstedt 2016; Parker et al. 2020). Furthermore, most studies focus on the informational advantages of inter-organizational relations (Andrew and Carr 2012; Ryu and Johansen 2017; Kim, Andrew, and Jung 2020). Even though operational size is known to act as a 'shock absorber' for large organizations individually (Markman and Venzin 2014), it remains unclear whether collaboration between smaller entities in order to 'up-scale' their operations achieves similar benefits. Finally, throughout the literature on organizational resilience, there is a tendency to adopt a narrow, private-sector approach to conceptualizing performance during crises, based on organizational survival or firm profitability, rather than analysing how adversity manifests diversely in organizations with multiple, vague and/or conflicting goals.

To begin to address these issues, this study asks whether size-enhancing 'inter-municipal' collaboration generates resilience in the provision of multi-objective public services. Specifically, we test whether collaboration between local authorities in England helped to preserve both prompt and accurate provision of Housing Benefit, a locally administered social security entitlement, during the first, unprecedented national lockdown of the COVID-19 pandemic in 2020. Using OLS, probit, random-effects GLS and Hausman-Taylor estimations on monthly and quarterly administrative data from 187 lower-tier councils, we find that collaboration did somewhat lessen the decline in service accuracy objectives compared to councils that worked autonomously, but showed no significant effect on the maintenance of case processing speeds during the emergency. These results suggest that increasing operational scale through collaboration may provide some protection against service disruption. They also demonstrate the advantage of adopting a multi-dimensional approach to measuring organizational performance during disruptive events.

Below, the first section defines resilience, and the second develops our hypothesis. The third introduces the empirical setting, the fourth describes data and methods, and the fifth presents the results. The sixth section identifies the study limitations, and discusses implications for research and practice.

Organizational adversity, resilience and multi-dimensional performance

Following Sutcliffe and Vogus (2003), Kahn et al. (2018, 509) define organizational resilience as 'an organization's ability to absorb strain and preserve or improve functioning, despite the presence of adversity.' Since organizations benefit from predictability, 'adversity' occurs when functional routines are suddenly rendered inadequate, and/or ordinary resource flows are suddenly interrupted. Of course, organizations frequently experience minor-to-moderate disruptions to routines and

resources, and must be manged accordingly (Lynn 2005). As Thompson (1967, 159) explains: 'Uncertainty appears as the fundamental problem for complex organizations, and coping with uncertainty, as the essence of the administrative process'. (The crisis management literature similarly conceptualizes these 'knowable' disruptions as 'routine emergencies' (Nohrstedt 2016; Parker et al. 2020).) But when disruptions 'fall outside of the set of disturbances the system is designed to handle' (Woods and Hollnagel 2006, 3), the organization experiences adversity. Then, as Wildavsky (1988, 77) argues, the challenge shifts from 'anticipation', meaning to 'predict and prevent potential dangers', to 'resilience', which is 'the capacity to cope with unanticipated dangers after they have become manifest, learning to bounce back'.

Since Wildavsky, research has proliferated, but scholars have struggled to agree on a more precise definition of resilience, in part because of the diverse disciplines – from ecology to computer science – concerned with how systems withstand adversity (de Bruijne, Boin, and van Eeten 2010). Even within disciplines, reviews indicate that the meaning (Linnenluecke 2017) and measurement (Hillmann and Guenther 2021) of resilience varies considerably.

In management studies, one key dispute is whether resilience is an outcome, observed during and after a period of adversity, or a latent capacity that inheres within the organization regardless of whether it is ever tested in crisis conditions. The latter approach recognizes that some organizations are inherently better equipped to withstand a variety of potential unforeseen shocks. Resilience is understood as 'a unique blend of cognitive, behavioural, and contextual properties that increase a firm's ability to understand its current situation and to develop customized responses that reflect that understanding' (Lengnick-Hall and Beck cited in Williams et al. 2017, 741). Yet, this 'latent capacity' approach is problematic from an empirical standpoint, since, without ever being tested in an actual crisis, judgements about what attributes foster or inhibit resilience remain speculative. Consequently, we adopt the alternative 'resilience-as-outcome' approach in which the impact of a specific shock on multiple organizations is measured, compared and explained (Meyer 1982). In this view, 'Resilient organizations are able to preserve their core functions and recover from adversity, *which helps them survive general environmental disturbances better than their less resilient peers*' (DesJardine, Bansal, and Yang 2019, 1436, emphasis added). This brings greater confidence about the presence or absence of resilience, although such judgements remain context-specific to the actual shock experienced (Hillmann and Guenther 2021, 8).

Scholars further distinguish between 'adaptative' and 'absorptive' types of resilience (Limnios et al. 2014; Barasa, Mbau, and Gilson 2018). Adaptive resilience occurs as an organization recovers from manifest failure. As Barasa, Mbau, and Gilson (2018, 497) explain, 'adaptive resilience emerges during the post-disaster period as new capacities are developed by organizations responding to emergent situations'. Absorptive resilience, conversely, occurs when an organization undergoes a shock that causes internal disruption, but staff and managers are able to minimize or entirely eliminate any external effects (Kahn et al. 2018). This 'no failure' resilience is analogous to a suspension bridge taking additional but unnoticed strain from an abnormally heavy load. Absorptive resilience thus maintains the status quo (Williams et al. 2017), and is vital in contexts where business continuity and avoidance of downtimes is critical (de Bruijne, Boin, and van Eeten 2010, 29) – as with the payment of welfare benefits to vulnerable claimants (our empirical case). However, absorptive resilience

also poses a number of challenges, conceptually and empirically. First, the lack of a noticeable impact upon performance may not actually indicate resilience if the type of shock experienced is simply 'within', rather than 'beyond', the organization's planned-for disturbances. (This would be anticipation, not resilience, in Wildavsky's terms.) Second, absorptive resilience may involve a so-called 'invisible' outcome (Linnenluecke 2017, 19): since overt failure is avoided, resilience is only inferred comparatively against other organizations' less-favourable responses to the same adversity (Gittell et al. 2005; Pal, Torstensson, and Mattila 2014; DesJardine, Bansal, and Yang 2019).

Finally, the management literature on resilience tends to adopt a narrow approach to conceptualizing performance during a crisis, focused on organizational survival, firm profitability or similar one-dimensional metrics. Pal, Torstensson, and Mattila (2014), for instance, measure incidence of bankruptcy among textile firms after the 2007–09 global financial crisis, while Gittell et al. (2005) focus on recovery in stock value of airlines following 9/11. In practice, however, complex organizations typically operate with multiple and somewhat vague and conflicting goals – which, even in ordinary circumstances, renders the evaluation of organizational performance more complicated than it first appears (Perrow 1961). This 'goal ambiguity' is especially characteristic of public sector organizations, given the contestability of 'public value', the tendency for diverse policy requirements to be 'layered' on top of one another following pressure from multiple interested stakeholders, and the intrinsic complexities surrounding non-market service provision (Wilson 1989; Hargrove and Glidewell 1990; Rainey 1993; Resh and Pitts 2013). Even individual tasks within organizations may need to satisfy multiple, inconsistent criteria (Wenger, O'Toole, and Meier 2008). Consequently, organizational performance, especially but not uniquely in the public sector, typically assumes a multi-dimensional character (Boyne 2002; Andersen, Boesen, and Pedersen 2016), in which managers face a series of legitimate but somewhat incomensurate demands on their attention and resources.

Such goal ambiguity may have significant implications for performance during a crisis, although, so far, these remain largely unexplored in the resilience literature. Adversity may, for example, affect different dimensions of organizational performance unequally. Either the crisis itself might be more disruptive to particular activities or priorities, depending on which routines and resource flows are most affected and how 'tightly' or 'loosely' coupled the various organizational elements are to one another (Orton and Weick 1990). Or the actions taken by managers and staff in response to the crisis may (consciously or inadvertently) de-prioritize some objectives in favour of preserving others. This is especially likely for goals that were already in partial conflict with one another and thus somewhat unstable, such as speed and accuracy in decision-making. Barring major innovations, more accurate decisions are typically more time-consuming (Hood 1976; Dunsire 1978), meaning that improving performance on both dimensions simultaneously is challenging (although see Wenger, O'Toole, and Meier 2008). When routines that hitherto produced an acceptable balance between competing priorities are suddenly rendered inadequate by an unanticipated shock, and the information, resources and capabilities needed to devise new equilibria are scarce, new and untested 'work-around' procedures may cause the re-ordering of objectives, privileging some over others. Qualitative research already indicates that resource scarcity contributes to organizations trading-off speed against accuracy in 'normal' circumstances (Wenger, O'Toole, and Meier 2008). Sudden adversity may enhance this effect.

To summarize, organizational resilience for our purposes is about preservation of functioning during times when routines and resource flows are disrupted beyond ordinary, planned-for fluctuations. More resilient organizations will absorb shocks and display less external signs of decline than less resilient organizations experiencing the same adverse event. Further, because organizations may intentionally or otherwise re-prioritize objectives during a crisis, performance must be evaluated multi-dimensionally.

Collaboration and resilience

Inter-organizational relations and uncertainty-reduction

The formation of relationships between independent organizations has long been recognized as a possible route to resilience. In her seminar article, *Determinants of Interorganizational Relationships*, Oliver (1990) lists 'stability' as one of six key rationales for partnership formation. Dependencies between organizations typically increase in number, novelty and intensity during environmental turbulence (Gray 1989, 27), and the uncertainties produced by this increased and unfamiliar connectivity, as well as by the crisis in general, can be mitigated by enhanced information sharing between dependents. Therefore, 'Inter-organizational relations serve as coping strategies to forestall, forecast, or absorb uncertainty in order to achieve an orderly, reliable pattern of resource flows and exchanges' (Oliver 1990, 246).

Management of uncertainty through the sharing of unevenly distributed information is also a key antecedent for 'collaborative public management' (McGuire 2006). Furthermore, in existing studies of the impact of public sector collaboration on resilience and crisis management, uncertainty reduction and information sharing are the principal mechanisms under investigation (Nohrstedt 2016; Parker et al. 2020). Ryu and Johansen (2017, 208), for instance, suggest that 'managers may participate in collaborative networks in order to . . . reduce uncertainty and moderate the negative impact of the shock on their individual organization'. They find empirical support for this when examining the impact of Hurricane Rita on schools in Texas; and similar mechanisms are validated for other cases by Andrew and Carr (2012) and Kim, Andrew, and Jung (2020). Nonetheless, managing uncertainty is not the only rationale for collaborative public management, and nor is it the only mechanism by which collaboration may foster public service resilience, particularly if the concern is with service maintenance during extraordinary times (absorptive resilience).

Inter-municipal collaboration and 'up-scaling' for resilience

Inter-municipal collaboration is not typically triggered by the complex, multi-faceted policy problems faced by local government units, but instead by the belief that pooling resources across jurisdictions will deliver performance advantages owing to the increased size of the service operation (Elston, MacCarthaigh, and Verhoest 2018). Principally, these are financial benefits derived from economies of scale and scope, for which empirical evidence has amassed in a wide range of contexts (see Bel and Sebő 2021 for a meta-regression on cooperation and costs; see also; Silvestre, Marques, and Gomes 2018). Overall, economies tend to arise when smaller municipalities participate in the cooperation, when the cost function for the 'shared' service

benefits from up-scaling (e.g. when capital intensive), and when the governance arrangements minimize principal-agent problems. Beyond cost saving, inter-municipal cooperation has also been associated with enhanced service universality and equity (Zeemering 2015; Warner, Aldag, and Kim 2020). However, multivariate studies assessing the effects of inter-municipal arrangements on service quality are scarce (Holum and Jakobsen 2016; Blåka 2017; Klok et al. 2018; Arntsen, Torjesen, and Karlsen 2021; Muraoka and Avellaneda 2021), and there is no evidence so far on the effect of inter-municipal collaboration on performance during unexpected adverse conditions.

So why might inter-municipal collaboration generate absorptive resilience? Three main mechanisms are suggested below, although our empirical work will test the general proposition rather than each mechanism individually.

The first relates to operating *size*. Many studies suggest that larger organizations withstand disruptions better than smaller entities (Linnenluecke 2017, 25). As Markman and Venzin (2014, 1101) observe, size appears to be 'a shock-absorber'. Larger organizations have more resources for rehearsing for disruptions (Sullivan-Taylor and Branicki 2011). They may also possess more financial 'slack' – that is, 'resources that exceed the minimum amount needed to generate organizational outputs' (Moulick and Taylor 2017, 990) – and so are better primed for rapid responses (Williams et al. 2017; Hillmann and Guenther 2021). And larger organizations typically formalize work processes and specialize personnel more extensively, both of which may improve resilience against certain kinds of adversity (Mintzberg 1979).

All of these advantages of size may be accrued, in full or in part, by inter-municipal collaboration, the purpose of which is to 'up-scale' local government operations by pooling public service provision across several small jurisdictions. Indeed, recent research confirms the acute challenges that small local governments face in responding to adverse events. Dzigbede, Gehl, and Willoughby (2020) find that small governments in the USA have fewer resources and are less able to manage COVID-19 disruption. And Ahrens and Ferry (2020) highlight the need for financial reserves for local governments to weather the pandemic in the UK. Still, there is a counterargument that the nimbleness and agility of decision-making in small groups rather than large bureaucracies may help to swiftly reposition smaller organizations for the changed environment (Sullivan-Taylor and Branicki 2011). We return to questions of speed and flexibility below.

The second mechanism relates to the *balancing* of adversities that are unevenly felt by different members of the inter-municipal partnership. In a recent article, *The Geography of Strain*, Kahn et al. (2018) argued that, within large, multi-department organizations, the same adversity may not be felt equally across the different parts, meaning that lesser-affected departments can share the strain by redeploying resources to 'hot spots'. The same argument applies to an even greater extent for inter-organizational collaborations, since variation in the degree of adversity experienced and the capacity for mitigation will be even greater *between* than *within* organizations (especially for councils that are geographically separated). Indeed, 'shared services' are often believed to help to balance localized peaks and troughs in operations across organizations, achieving a more optimal match of demand and supply (Ulbrich 2006). And again, recent research confirms that the effects of the COVID crisis are unequally felt among municipalities, so that different pressures are imposed on different local governments (Deslatte, Hatch, and Stokan 2020).

The third mechanism relates to *commitment* effects – the kind of 'lock-in' (Law 2018) that arises when organizations adopt quasi-contractual agreements. Fearful of shirking or defection by others (Feiock 2013), inter-municipal partners establish governance arrangements that seek to overcome commitment problems, reducing the potential for councils to 'poach' and redeploy resources for other purposes. Such manufactured 'inertia' is valuable when the organization seeks absorptive resilience, maintaining business continuity (Limnios et al. 2014). Conversely, it may be counter-productive for adaptive resilience, when significant change is required (DesJardine, Bansal, and Yang 2019).

On the basis of the above three mechanisms, we hypothesize the following:

- Council services delivered through inter-municipal collaboration will exhibit less decline in performance during adverse events than those delivered through autonomous provision (Hypothesis 1).

The limits of collaboration

Collaboration is sometimes regarded as a 'holy grail' (Peters 1998) or 'philosopher's stone' (Seidman 1998) of contemporary governance – a highly desirable 'fix-all' of which there can never be too much. And yet inter-organizational relations have potential costs as well as benefits, some of which may adversely affect resilience.

Firstly, as noted at the outset, organizations face multiple risks derived from both the complexity of their technologies (Perrow 1984; Wildavsky 1988) and their environmental dependencies (Katz and Kahn 1978). Delegating functions inter-municipally may increase both technological complexity and environmental exposure for a council, generating new types of risk. Production processes spread across organizations create more interdependencies; and councils now become more vulnerable to the behaviour, failings and opportunism of others in the partnership (Elston, MacCarthaigh, and Verhoest 2018). Lax cybersecurity in one partner, for example, may contaminate others – but only because of the connections forged through the collaboration.

Secondly, partnership working brings additional 'veto players' in decision-making. As Hood (1976, 89) argues, such 'multi-organizationality [will] inevitably slow down … speed of response to a situation because of the time required for inter-agency bargaining'. The multiple principal-agent problems created by collaboration have been emphasized by Voorn, van Genugten, and van Thiel (2019), while Nohrstedt (2016, 135, 142) observes that, in crisis management, large numbers of partners risk 'stagnation and deadlocks in problem-solving'.

Thirdly, the consolidation of service capabilities that occurs with inter-municipal collaboration depletes the number of separate providers in a service delivery system, reducing the level of 'redundancy'. As Lerner (1986, 335) explains, 'Without duplication, the breakdown of one organizational channel leaves no other duplicate channel available for backup' (see also Landau 1969). Indeed, scholars often identify a trade-off between efficiency and resilience; as Limnios et al. (2014, 106) argue, 'management for resilience diverges from optimization' because duplication is inefficient but insures against failure.

Overall, therefore, despite the potential advantages of inter-municipal collaboration in terms of size, balancing and lock-in, there are also several mechanisms by which these arrangements may impede performance during unexpected adversity.

Empirical context

Local government in England

We test our hypothesis on data relating to local government in England.

There are 339 principal local authorities in England, consisting of about 20,000 elected councillors and more than one million staff (FTE). These provide, directly or through contracted parties, a range of public-facing services, regulatory functions and infrastructure costing some £125bn annually (revenue and capital spending) (Local Government Information Unit 2020). Funding comes from local residential property and business taxes, service charges, and formula-based grants from central government.

There are two main systems of local government in England. So-called 'all-purpose' councils that provide a comprehensive range of services for a locale; and a 'two-tier' system of 25 county and 188 district councils with shared jurisdiction. Counties have far larger responsibilities and resources, but districts collect taxes and pay Housing Benefit, alongside other services like waste collection.

Inter-municipal collaboration is relatively new in England, yet has quickly become widespread (Dixon and Elston 2020; Elston and Dixon 2020). 'Shared Revenues and Benefits Departments', where two or more councils unite their tax and social security teams, are particularly common, albeit almost exclusively among district councils (Dixon and Elston 2019). Hence, county councils (which have no tax and benefit powers) and all-purpose councils (which rarely perform these tasks collaboratively) are excluded from the analysis.

Housing benefit administration

Access to safe and affordable housing is an important component of the welfare state, pursued through a combination of supply-side measures (rent controls, subsidies to house builders) and demand-side policy interventions, like means-tested housing allowances paid either to claimants personally or direct to their landlords (Kemp 2007a). The UK's main housing allowance is Housing Benefit, which is funded by central government but administered by local authorities. There were 2.7 million claimants for Housing Benefit in England as of March 2020, with average weekly payments of £104.30. In 2019–20, the scheme cost some £18.2bn (excluding administration costs), representing about 9.5% of the total social security budget (Department for Work and Pensions 2020a).

As Murphy, Greenhalgh, and Jones (2011, 583) explain, entitlement criteria for Housing Benefit 'are established nationally, and the objectives of the service are essentially the same in every [local] authority. These are to process all claims quickly, accurately, efficiently and economically; to ensure prompt payment; and to provide a responsive service that minimizes fraud and pays all entitlements to all those qualifying'. The service thus affects a range of stakeholders (claimants, landlords, central government, taxpayers); is subject to multiple, inconsistent performance

criteria reflective of these diverse interests; and is acknowledged as 'difficult, time consuming and costly to administer' (Kemp 2007b, 122). Historically, delays and mistakes contributed to financial hardship among claimants and unstable tenancies. Timeliness improved markedly during the 2000s (Murphy, Greenhalgh, and Jones 2011, 2014), aided by a degree of policy simplification (Walker 2006). But accuracy remains challenging. In 2019–20, fraud and error produced overpayments estimated at 6% of total expenditure and underpayments of 1.7% (Department for Work and Pensions 2020a, 192). Moreover, the Local Government Ombudsman upholds more than three quarters of complaints received about Housing Benefit – significantly more than for other local government services (Local Government & Social Care Ombudsman 2020).

Central government is currently integrating Housing Benefit for working-age (i.e. pre-retirement) claimants into a new entitlement called 'Universal Credit'. This is administered by central government, reducing local authorities' workload significantly. All but the most complex working-age cases transferred to the new system by early 2019, leaving councils with just pension-age and complex working-age cases to administer.

Housing benefit resilience to the first COVID-19 lockdown

To test the effect of collaboration on adsorptive resilience, we compare council performance prior to and during the first national lockdown implemented in spring 2020 to control the COVID-19 pandemic. This sudden, unprecedented 'say-at-home' order lasted for three months and severely impacted council operations.

Prior to the pandemic, just 5% of council staff worked remotely, which instantly increased to more than 80% during lockdown (Socitm 2020). This necessitated a massive reconfiguration of work processes and coordination and control mechanisms, as well as the large-scale distribution of ICT equipment. For revenues and benefits departments, novel (regulation-compliant) data-sharing tools were needed, alongside substitutes for customer call centres and new methods of oversight and authorization. Council resources were similarly sent into disarray. Financial income from service charges, business rates and investments underwent a 'sudden and severe' drop (Public Accounts Committee 2021, 5); and, although emergency finance from central government was quickly distributed, the size and conditions of this support remained ambiguous, adding to the environmental uncertainty (Ogden and Phillips 2020; Gore et al. 2021). Staff were also put under great strain, with many re-deployed to work on unfamiliar and ill-defined projects with rapidly evolving objectives (Socitm 2020); and with illness, shielding, quarantine, home-schooling of children and caring for dependents all diminishing productivity. Simultaneously, demand on council resources peaked as new locally- and nationally-devised policies came into force – from business-support grants to accommodating the homeless, producing shielding lists of vulnerable people and delivering food packages.

Well before the pandemic, central government issued guidance to local authorities emphasizing the importance of resilient Housing Benefit provision during (unspecified) emergencies (Department for Work and Pensions, n.d., 6, 13). This advocated inter-municipal cooperation ('shared services') as one means of encouraging business continuity, citing the advantages of *size* ('larger teams can provide a more resilient

service and are less prone to fluctuations in processing times') and *balancing* ('resources [can be] re-allocated as required between [councils], based on demands at any one time').

In the event of the COVID-19 lockdown, increased operational size may also have enabled councils to pool their finances in order to make larger and more strategic investments in technology and temporary staff, especially given the decade of sharply declining budgets prior to the pandemic (Hastings et al. 2015). The design work and problem-solving required for the rapid 'channel shift' to remote working, and the legal advice to ensure compliance with the extensive Housing Benefit regulations, could also be 'done once' and shared widely. As for inter-local balancing, given the uneven intensity of both the pandemic (Robinson, Rowe, and Patias 2020) and prior budget cuts (Gray and Barford 2018) on district councils, different local pressures might be somewhat stabilized through collaboration. And, given the long distances over which inter-municipal collaborations operate in England, particularly for administrative services (Dixon and Elston 2020), collaboration partners would be more familiar with, and better equipped for, remote working, data sharing, and 'distanced' customer contact-handling procedures. Finally, contractual lock-in could limit the extent to which staff could be redeployed away from regular duties (Socitm 2020), though this may adversely affect overall council resilience.

The following graphs describe Housing benefit performance prior to and during lockdown. As the rolling averages in Figure 1 show, the trend in 2019 was for improving performance (decreasing processing times) for new applications (upper line). These performance gains stalled in early 2020, temporarily reversed during the April–June lockdown, and then improved again from July onwards. The pattern is less clear for 'change of circumstances' applications (lower line) due to significant seasonality in this data, indicated by the two big dips in Figure 2. Between January and March each year, landlords announce rent increases. Anticipating this, councils 'allocate extra resources to process these changes' (Department for Work and Pensions 2020b), meaning that average processing times are unusually prompt in quarter 4 each financial year. Finally, Figure 3 illustrates council performance using one metric related to service accuracy: recovery of benefit overpayments as a fraction of total debt outstanding. During 2019, debt recovery experiences a worsening trend (contrasting with the improvement in speed at this time). This decline accelerates markedly with the onset of COVID, and appears to be proportionally greater than the increase in new claims processing times over the same period.

Regarding the effect of collaboration on resilience during lockdown, Figures 2 and 3 indicate possible performance differences between stand-alone (orange, long-dashed line) and collaborative (grey, short-dashed line) provision. Pre-COVID, collaboration appears to be associated with both slower processing speeds and less debt recovery, although these differences almost disappear during and after lockdown. We now proceed to the empirical strategy allowing us to explore these tentative differences more robustly.

Empirical strategy: data, variables and methods

Our database contains information for 188 observation units, representing all district councils in England as of April 2020. Fifty-seven provide Housing Benefit inter-municipally in a 'shared revenue and benefits' service, while 131 work autonomously.

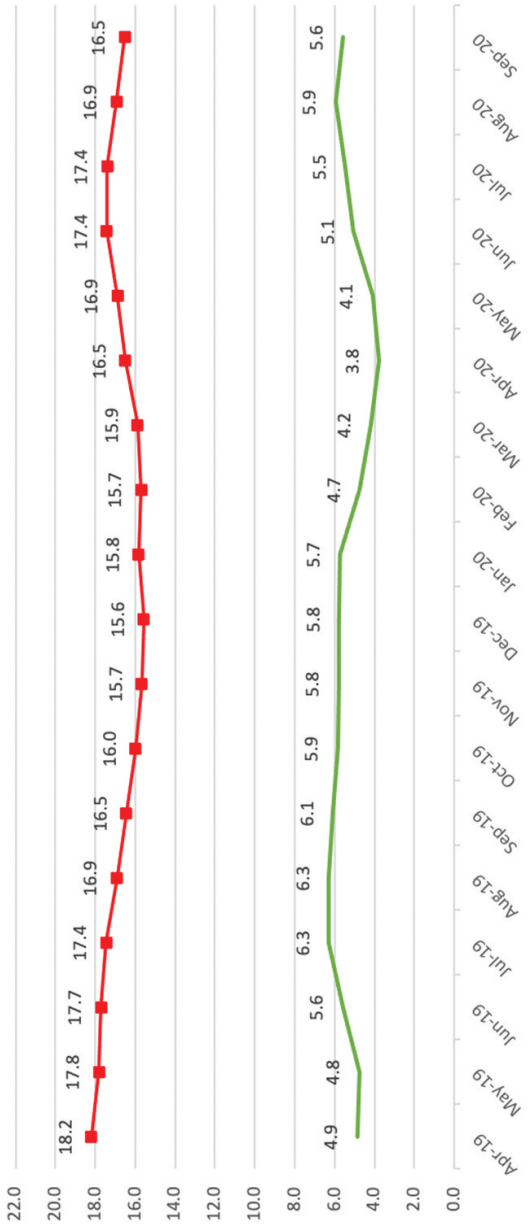

Figure 1. Rolling average number of days processing new claims (NC) and change of circumstance notifications (CC) for Housing Benefit, all district councils*, April 2019-September 2020. Note: Base-period for the rolling average is January 2019-March 2019. *Three councils established through mergers in April 2019 are excluded, as is North Warwickshire, which lacked data in the base period.

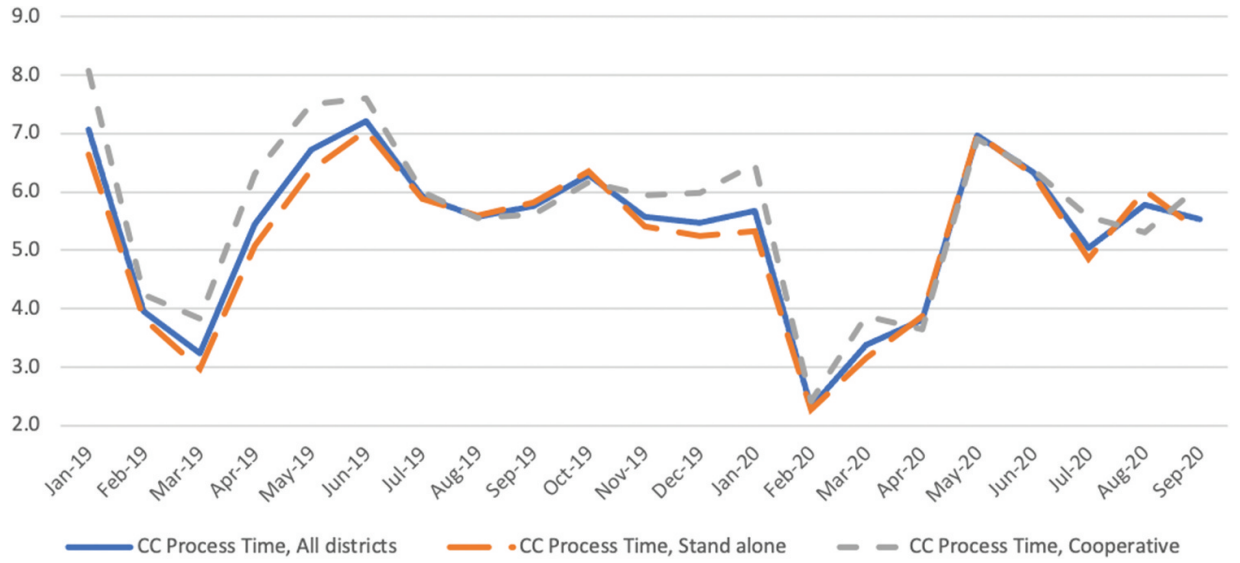

Figure 2. Average number of days processing change of circumstance notifications (CC) for Housing Benefit, comparing 'stand alone' and collaborative provision, January 2019-September 2020.

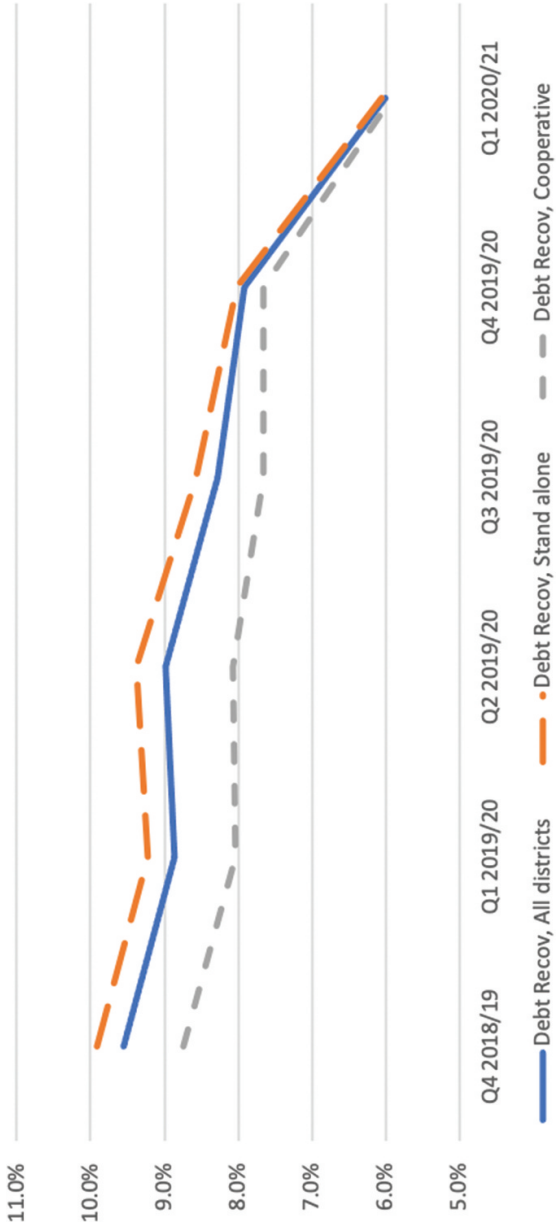

Figure 3. Average value of debt recovered from Housing Benefits claimants as percentage of total debt outstanding, comparing 'stand alone' and collaborative provision, Q4 2018–19 to Q1 2020–21.

The time period for the analysis is April 2019 to June 2020, covering the year prior to, and the three months of, the first COVID-19 lockdown. Given the interruption to the data series caused earlier by the rollout of Universal Credit, we begin in April 2019 to ensure data homogeneity.[1] Six district councils merged into three larger districts in April 2019, and these are included in the analysis; but four were abolished in April 2020 and these are excluded.

Data are complete for almost all districts. In one case (Somerset West and Taunton), there were no data available for any activity that we analysed, leaving 187 viable cases. Occasional missing data or obvious errors for other councils occur, but only once did this noticeably reduce the size of a principal analysis (Housing Benefit debt written-off, with seven districts excluded). Table A1 in the Supplementary material provides detailed information on missing data on the variables that entered our empirical modelling and estimations.

Dependent variables

Our objective is to analyse whether collaboration affected the preservation of Housing Benefit performance during the first COVID-19 lockdown. England entered nation-wide lockdown by late March 2020, and most lockdown restrictions were lifted by 4 July (Brown 2020). Thus, the stay-at-home order was in place in April–June 2020, fully comprising the first quarter of 2020–2021 financial year. This is the reference period for our analysis. To evaluate performance, we look at two different and potentially conflicting dimensions – processing speed and overall service accuracy – which are our two dependent variables:

Speed (S) is specified in two ways: average time taken to process new Housing Benefit claims (S_1 = ATNC), and average time taken to process (the much more numerous) change-of-circumstances applications for existing claimants (S_2 = ATCC). Both metrics are available on a monthly basis, and, as Murphy, Greenhalgh, and Jones (2011, 581) note, are widely agreed to be valid and valuable performance indicators by 'the vast majority of the community of delivery organizations, stakeholders and interested parties'.

Our second dependent variable (Accuracy = A) is available in quarterly data and is specified in three ways: debt from prior overpayments recovered during the quarter (A_1 = DR); new debt identified during the quarter (A_2 = DI); and debt written-off as unrecoverable during the quarter (A_3 = DW). Hence, our measures of accuracy refer not to the correctness of individual payments, but to the service's detection and correction of errors. Each accuracy variable is weighted by the amount of debt outstanding at the start of the quarter.

Independent variables

Cooperation (Coop): Our key independent variable is a dummy, taking the value 1 when Housing Benefit is provided inter-municipally, and 0 otherwise. We obtained this data, first, by merging that used in Dixon and Elston (2019) with the most recent (2019) version of the Local Government Association 'Shared Services Map' – a dataset produced from an annual survey of local authorities. Then we sourced council committee papers (or similar) for all district councils in order to confirm their current mode of provision.

In addition, we include the following explanatory variables:

Number of New Claims (NNC) and *Number of Changes of Circumstances* (NCC) for Housing Benefit each month, since level of demand will affect performance. Data is used on a monthly basis or aggregated into quarters.

Proportion of pension-age claimants (cpa): This controls for the fact that, since Universal Credit, any remaining working-age cases represent a more complex workload, thus adding to the challenge of prompt and accurate delivery of this means-tested benefit. The variable is monthly and is expressed a proportion of the total number of claimants.

Administration costs net of sales per capita (AdCostNetSalpc): Performance may also be influenced by expenditure on the administration of the Housing Benefit service in each district. We use administration costs net of sales, per capita.[2] Data is annual, and currently unavailable for the financial year 2020–2021, although administration costs tend to be sticky.

Emergency Covid funding (CovidFundpc): Central government provided four tranches of emergency funds to local authorities in 2020, totalling UK£4.61 billion (Gore et al. 2021). The period covering our research includes the first two tranches (late March and mid-April), each for UK£1.6bn. Since these cash injections might influence resilience, we specify a variable (*CovidFundpc*) as the sum of each council's allocation, expressed per capita.

Population density (PopDens): Prior research suggests that different outcomes in inter-municipal collaboration are partly explained by size of the cooperating units and density of population served (Bel and Sebő 2021). This annual variable is expressed as inhabitants per square mile in the district, and controls for the rural or urban characteristics of the district.

Local intensity of pandemic (CovidDeaths): While lockdown applied universally, the *intensity* of the pandemic was uneven between districts (Robinson, Rowe, and Patias 2020). Given the role of councils in controlling local COVID outbreaks and mitigating the socio-economic effects, demand on financial and human resources and management attention may differ between councils by the intensity of the local pandemic. We measure this by the incidence of COVID-related deaths in the district per 100,000 inhabitants. Data are available on a daily basis, which we aggregate into months.

Gross domestic product per capita (GDPpc): Wealthier areas may be less dependent on public services and have greater resources to confront the disruption caused by lockdown. We measure this by the Gross Domestic Product per capita (GDPpc). Data is annual and currently only available up to 2019.

Table 1 summarizes our variables and sources.[3]

Methodology

To test whether cooperative provision affected speed and accuracy during lockdown relative to pre-pandemic performance, we operationalize our dependent variables as the change in the affected quarter (Q1, 2020–2021) with respect to previous periods not affected by the COVID crisis. To accommodate seasonality in the data, we compare

Table 1. Variables: definition and sources.

Variables	Definition	Source
DepVars		
ATNC	Average time (days) processing new claims	DWP, Housing Benefit Speed of Processing Official Statistics
ATCC	Average time (days) processing change of circumstances	"
DR	Debt recovered (as % of debt outstanding)	DWP, Housing Benefit Debt Recoveries National Statistics
DI	Debt identified (as % of debt outstanding)	"
DW	Debt Written-off (as % of debt outstanding)	"
IndVars		
Coop	Dummy variable that takes value 1 when the service is cooperatively provided, and 0 otherwise.	Dixon and Elston (2019), Local Government Association "Shaped Services Map", authors' own documentary research
NNC	Number of new claims for housing benefits	DWP, Housing Benefit Speed of Processing Official Statistics
NCC	Number of changes of circumstances to housing benefits	"
CPA	Percentage of pension-age claimants	DWP, Stat-x-plore
AdCostNetSalpc	HB administration costs, net from sales to other districts.	MHCLG
CovidFundpc	Emergency funds (first plus second tranche) provided by the UK Government.	"
PopDens	Density of population	ONS
CovidDeaths	COVID-related deaths (per 100,000 inhabitants)	coronavirus.data.gov.uk
GDPpc	Gross Domestic Product per capita	ONS

DWP (Department for Work and Pensions); MHCLG (Ministry of Housing, Communities and Local Government); ONS (Office for National Statistics)

quarter 1 of 2020–2021 (April–June 2020) with quarter 1 of 2019–20 (April–June 2019). Our initial models include two for the speed-related dependent variables and three for accuracy:

$$ATNC_i/ATNC_{i-1} = \beta_0 + \beta_1 Coop_i + \beta_2 NNC_{i/}/NNC_{i-1} + \beta_3 CPA_{i/}/CPA_{i-1} + \beta_4 AdCostNetSalpc_i + \beta_5 CovidFundpc_i + \beta_6 PopDens_i + \beta_7 CovidDeaths_i + \beta_8 GDPpc_i + \varepsilon_i \quad (1)$$

$$ATCC_i/ATCC_{i-1} = \beta_0 + \beta_1 Coop_i + \beta_2 NCC_{i/}/NCC_{i-1} + \beta_3 CPA_{i/}/CPA_{i-1} + \beta_4 AdCostNetSalpc_i + \beta_5 CovidFundpc_i + \beta_6 PopDens_i + \beta_7 CovidDeaths_i + \beta_8 GDPpc_i + \varepsilon_i \quad (2)$$

$$DRt_i/DRt_{i-1} = \beta_0 + \beta_1 Coop_i + \beta_2 CPA_{i/}/CPA_{i-1} + \beta_3 AdCostNetSalpc_i + \beta_4 CovidFundpc_i + \beta_5 PopDens_i + \beta_6 CovidDeaths_i + \beta_7 GDPpc_i + \varepsilon_i \quad (3)$$

$$DIt_i/DIt_{i-1} = \beta_0 + \beta_1 Coop_i + \beta_2 CPA_{i/}/CPA_{i-1} + \beta_3 AdCostNetSalpc_i + \beta_4 CovidFundpc_i + \beta_5 PopDens_i + \beta_6 CovidDeaths_i + \beta_7 GDPpc_i + \varepsilon_i \quad (4)$$

$$DWt_i/DWt_{i-1} = \beta_0 + \beta_1 Coop_i + \beta_2 CPA_{i/}/CPA_{i-1} + \beta_3 AdCostNetSalpc_i + \beta_4 CovidFundpc_i + \beta_5 PopDens_i + \beta_6 CovidDeaths_i + \beta_7 GDPpc_i + \varepsilon_i \quad (5)$$

where subscript *i* represents quarter 1 2020–2021, and *i-1* represents quarter 1 2019–2020. All variables have been described above. Descriptive statistics are provided in Table 2, and ε is a heteroscedasticity-robust error term.

Results

We tested for homoscedasticity with the Breusch-Pagan/Cook–Weisberg test, which indicated OLS robust estimations in all cases except Debt Recovery in order to control for heteroskedasticity. We checked potential multicollinearity issues by computing the Variance Inflation Factor (VIF). Results for mean VIF range between 1.06 and 1.08, and all individual VIFs are well below 2. This is far below values that would suggest any multicollinearity issue being relevant. To take account of potential correlation across observations for districts within the same cooperative arrangement, we cluster our estimations by unit of service provision.[4]

Results are presented in Table 3. Our estimations are of poor quality, and no significant results are obtained for average time of processing new claims (1) and change of circumstances (2). Conversely, the analysis for debt recovery (3) shows a strongly significant positive effect with collaboration, suggesting better preservation of accuracy objectives comes with inter-municipal provision. We also find a positive and significant effect of collaboration on debt identified (4), but not for debt written-off (5).

While the estimations in Table 3 suggest that inter-municipal collaboration is somehow positively associated with accuracy under COVID disruption, it is not yet informative on the relative comparison of accuracy between cooperative and stand-alone provision. To learn more about this, we conducted several additional estimations for each debt variable (recovered, identified and written-off) and each quarter involved. Unlike the prior estimations, where dependent variables were specified as a ratio between the debt variable in two quarters, in these additional estimations the debt variables are expressed just as a percentage of debt outstanding at the beginning of the quarter; hence, we now use probit estimations.

Table 4 presents the results. In all cases, cooperation was negatively associated with accuracy *before* the COVID disruption [Quarter 1 2019–2020, (6), (8), and (10)], since the coefficient for cooperation is negative and significant in all three cases. However, this effect disappears when we conduct the estimations for the COVID period [quarter

Table 2. Descriptive statistics.

Variables	Observations	Mean (count)	Standard Deviation (percentage)	Minimum	Maximum
ATNC	186	1.076	0.422	0.241	3.769
ATCC	185	1.289	0.629	0.184	5.833
DR	186	0.696	0.178	0.196	1.249
DI	186	0.609	0.249	0.155	1.936
DW	181	1.527	4.323	0.000	48.336
Coop	187	(57)	(30.5%)	0	1
NNC	186	0.934	0.275	0.443	2.072
NCC	187	1.022	0.461	0.333	5.451
CPA	187	1.131	0.030	1.054	1.226
AdCostNetSalpc	187	8.06	17.33	−4.69	178.21
CovidFundpc	187	10.42	0.68	3.82	15.31
PopDens	187	791.102	945.593	25	4507
CovidDeaths	187	55.158	20.422	6.9	108.66
GDPpc	187	29,718.20	9989.78	14,505	75,317

Table 3. OLS estimations for speed and accuracy.

	Dependent Variables				
Independent Variables	(1) Average Time New Claims OLS Robust Cluster	(2) Average Time Change Cir. OLS Robust Cluster	(3) Debt Recovery OLS Cluster	(4) Debt Identified OLS Robust Cluster	(5) Debt Written-off OLS Robust Cluster
Coop	0.107	0.035	0.070**	0.113**	1.373
	(0.079)	(0.089)	(0.031)	(0.044)	(1.077)
NNC (Change)	−0.061				
	(0.116)				
NCC (Change)		0.062			
		(0.098)			
CPA (Change)	−1.684**	3.536**	0.678	−0.778	−9.636
	(0.854)	(1.514)	(0.508)	(0.544)	(7.628)
AdCostNetSalpc	$7.47e^{-04}$	0.011	$-6.45e^{-04}$	$-4.23e^{-04}$	−0.001
	(0.002)	(0.010)	($6.01e^{-04}$)	($4.40e^{-04}$)	(0.006)
CovidFundpc	0.041	−0.216*	−0.017	−0.009	−0.066
	(0.029)	(0.115)	(0.016)	(0.023)	(0.209)
PopDens	$-6.86e^{-06}$	$-1.10e^{-05}$	$8.72e^{-06}$	$1.66e^{-06}$	$3.48e^{-04}$
	($2.73e^{-05}$)	(4.15^{-05})	($1.37e^{-05}$)	($1.63e^{-05}$)	($4.05e^{-04}$)
CovidDeaths	$7.71e^{-05}$	0.003	$-8.94e^{-04}$	$-7.49e^{-04}$	−0.021
	(0.002)	(0.002)	($6.53e^{-04}$)	($8.26e^{-04}$)	(0.016)
GDPpc	$1.15e^{-05}$**	$-4.55e^{-06}$	$-6.82e^{-07}$	$-3.01e^{-06}$	$-4.79e^{-04}$
	($5.08e^{-06}$)	($4.35e^{-06}$)	($1.23e^{-06}$)	($1.88e^{-06}$)	($3.19e^{-04}$)
Constant	2.233**	−0.637	0.148	1.680***	14.959
	(0.948)	(1.951)	(0.542)	(0.604)	(9.585)
VIF	1.08	1.06	1.06	1.06	1.06
B-P/C-W Test p =	0.000	0.000	0.607	0.002	0.000
Observations	186	185	186	186	181
F-Test	1.41	1.79*	1.89*	1.68	0.57
R-Squared	0.095	0.188	0.068	0.070	0.048

Standard errors in parentheses; *** p < 0.01, ** p < 0.05, * p < 0.10

1 2020–2021, (7), (9), and (11)].[5] To check the consistency of these results across estimation techniques, we re-ran the tests using OLS estimations. The results are almost identical, as shown in Table A1 in the Supplementary Materials. The only relevant difference is that the significance of cooperation, while having the same sign is lower for Identified Debt in Q4 2019 [p = 0.104, as compared to p = 0.043 in the Probit estimation (8), above]. Recall that robustness tests for Probit estimations tend to be better than for OLS estimations.

Thus far, our results suggest that, before lockdown, service accuracy was better under stand-alone management than collaboration, as signs for cooperation in Q1 2019–2020 are negative and significant in all three cases. However, the advantage of stand-alone management disappears during lockdown, when we even find a significant positive sign for debt write-offs. This indicates that accuracy has been better preserved with collaborative provision during the disruption, albeit from a lower pre-pandemic baseline.

To further check whether collaboration has any effect on speed under disruption, we exploit the monthly granularity of our speed metrics (not just quarterly, as for debt) to form a panel of data, consisting firstly of the three months in Q1 2020–2021 and secondly of the six months of Q1 in both 2019–2020 (pre-pandemic) and 2020–2021 (during lockdown). We exclude controls for population density, administration costs,

Table 4. PROBIT estimations for accuracy before and during COVID disruption.

Indep. Variables	(6) Debt Rec Q1 2019 Probit	(7) Debt Rec Q1 2020 Probit	(8) Debt Ide Q1 2019 Probit	(9) Debt Ide Q1 2020 Probit	(10) Debt WOff Q1 2019 Probit	(11) Debt WOff Q1 2020 Probit
Coop	−0.067***	−0.008	−0.062**	0.033	−0.105*	0.193***
	(0.025)	(0.023)	(0.031)	(0.028)	(0.054)	(0.067)
CPA	0.275	−0.373*	−0.350	−0.678**	−0.195	−0.628
	(0.227)	(0.224)	(0.318)	(0.273)	(0.692)	(0.556)
AdCostNetSalpc	$-3.03e^{-04}$	$4.95e^{-05}$	$-1.81e^{-06}$	$-2.79e^{-04}$	−0.001	$4.20e^{-06}$
	(2.99^{-04})	($4.30e^{-04}$)	(4.12^{-04})	($2.42e^{-04}$)	(0.001)	($9.45e^{-04}$)
CovidFundpc		$5.41e^{-04}$		0.013		0.052***
		(0.19)		(0.020)		(0.017)
PopDens	$-1.41e^{-05}$	$-2.60e^{-05}$**	$-3.35e^{-05}$**	$3.80e^{-05}$**	$-4.74e^{-04}$	$-5.82e^{-06}$
	($1.68e^{-05}$)	($1.30e^{-05}$)	($1.53e^{-06}$)	($1.62e^{-05}$)	($3.40e^{-04}$)	($2.90e^{-05}$)
CovidDeaths		$-8.20e^{-04}$		$-4.63e^{-04}$		−0.002
		($5.71e^{-04}$)		($6.78e^{-04}$)		(0.001)
GDPpc	$3.08e^{-06}$**	$1.06e^{-06}$	$6.28e^{-06}$***	$2.69e^{-06}$*	$4.62e^{-06}$	$-3.07e^{-06}$
	($1.29e^{-06}$)	($1.02e^{-06}$)	($1.47e^{-06}$)	($1.38e^{-06}$)	($3.58e^{-06}$)	($2.85e^{-06}$)
Constant	−1.451***	−1.358***	−1.290***	−1.458***	−2.247***	−2.578***
	(0.103)	(0.249)	(0.150)	(0.279)	(0.328)	(0.372)
Observations	186	186	186	186	181	181
Wald-chi2	16.91***	7.43	29.83***	18.85***	9.67*	21.46***
Pseudo RSq	0.001	0.0004	0.003	0.001	0.003	0.008

Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 5. Random-effects GLS and Hausman-Taylor for speed during COVID crisis.

	Average time new claims		Average time change circumstances			
Independent Variables	(12) Q12020 GLS Random Cluster	(13) Q12019-Q12020 GLS Random Cluster	(14) Q12020 GLS Random Cluster	(15) Q12019-Q12020 GLS Random Cluster	(14b) Q12020 Hausman - Taylor-	(15b) Q12019-Q12020 Hausman -Taylor
Coop	0.917	0.457	−0.086	0.423	0.017	0.450
	(1.090)	(1.079)	(0.568)	(0.513)	(2.581)	(0.773)
NNC	−0.040***	−0.028***				
	(0.013)	(0.010)				
NCC			$-2.18e^{-04}$**	$-3.21e^{-04}$*	$-1.76e^{-04}$	$-2.87e^{-04}$***
			($1.01e^{-04}$)	($1.71e^{-04}$)	($1.13e^{-04}$)	($9.44e^{-05}$)
CPA	−10.005	−7.988	−2.847	−2.020	88.466**	17.113*
	(8.585)	(7.630)	(3.301)	(3.0007)	(39.701)	(9.996)
CovidDeaths	0.014	0.006	−0.061***	−0.052***	−0.056***	−0.058***
	(0.016)	(0.013)	(0.012)	(0.008)	(0.012)	(0.008)
Constant	23.524***	22.478***	8.327***	7.682***	−32.710*	−0.771
	(4.184)	(3.569)	(1.600)	(1.419)	(17.961)	(4.451)
Hausman Test p =	0.485	0.237	0.001	0.001		
B-P L.M. Test p =	0.000	0.000	0.000	0.000		
Observations	558	1,116	555	1110	555	1110
Groups	186	186	185	185	185	185
Wald chi2	10.80**	8.08*	50.29***	62.56***	65.73***	91.39***

Standard errors in parentheses; *** p < 0.01, ** p < 0.05, * p < 0.10.

emergency COVID funds, and GDP per capita, since all are annual observations. Data for the number of new claims and the number of changes in circumstances are expressed in nominal terms.

In four estimations, the Breusch-Pagan Lagrange Multiplier test confirms that random-effects GLS is preferable to Pooled OLS. Table 5 presents the results. However, Hausman test results suggest that fixed-effects are more appropriate for the two estimations for changes of circumstance processing – although our key variable, cooperation, could not be included in such an analysis because of its invariant nature. To overcome this, we additionally include in columns 14b and 15b results from Hausman-Taylor estimations (Hausman and Taylor 1981).

While the estimations in Table 5 are now much more robust overall for the speed-related variables than those in Table 3, we still find no indication of effects from collaboration on the timeliness of benefit processing. But scale economies may be positively influencing speed, since the higher the number of new claims per inhabitant, the lower the average time taken to process those claims. The same tends to happen for the number of change of circumstances applications. These results are stable across estimations.

Discussion

Based on the advantages that should accrue from the up-scaling of operations, the inter-local balancing of peaks and troughs and the 'lock-in' of prior resource allocations, we hypothesized that council services delivered through inter-municipal

collaboration would display greater resilience during the sudden, unexpected disruption of the first COVID-19 lockdown in England during spring 2020. Our results partially substantiate this expectation. Although case processing times for Housing Benefit increased during lockdown, regardless of mode of provision, collaboration did, in multiple estimates, limit the decline in accuracy. The consistency of these results, evident both *within* each set of variables (two measures of speed, three of accuracy) and *across* the multiple estimation techniques (Table 3, Table 4 and Table 5), provides a high degree of confidence in the findings.

Given these results, several issues merit further discussion.

Firstly, analysing resilience as an outcome rather than a process (DesJardine, Bansal, and Yang 2019) means drawing inferences from the comparative performance of (parts of) different organizations experiencing the same shock. This runs the risk of misattributing variations in performance to organizational resilience when they might be explained by other factors, such as different levels of exposure to the event in question. For instance, there could be intrinsic but unmeasured differences between the work of benefit processing and debt recovery, or between the way these are undertaken in collaborating and autonomous councils, that may have led to differing vulnerability to lockdown in the first place. We have no *prima facie* evidence of such differences, however. Both case processing and case audit are low-discretion, bureaucratic, rule-based and computerized activities, suggesting equal exposure to lockdown disruption. The only possible difference is that benefit claimants may be eager to receive payments but reluctant or unable to return overpayments; but councils can recoup overpayments from deductions in future payments. Conversely, there is evidence indicating that organizational and management actions explain the differences indicated by our econometrics. Prior research already found that lack of resources strongly affects Housing Benefit accuracy in councils (Department for Work and Pensions 2018, 24). Sudden tightening of resources during the early phase of the pandemic would thus explain the general deterioration in service accuracy across councils, with the slight attenuation in collaborating councils owing to the resourcing advantages that come from partnership working. Secondly, central government's own account of the impact of lockdown on fraud and error is that 'local authorities made operational decisions to redeploy staff to frontline activities ... resulting in the majority of debt recovery staff not being in post for several months' (Department for Work and Pensions 2021). This implies that resilience in collaborating councils may have arisen because staff redeployment was either less necessary or less possible (due to 'lock-in'), and so raises the further question of whether *service*-level resilience for Housing Benefit came at the expense of reduced *council*-level resilience for other services provided in-house. This could be assessed in future by comparing council performance across multiple services.

Secondly, why is collaboration-induced resilience concentrated on accuracy, rather than speed? There are several possible interpretations which require further, qualitative investigation. Studies of goal conflict suggest that organizations can cope with tensions by prioritizing the objectives most valued by their largest or loudest constituency, or by addressing goals sequentially (Simon 1997; Wenger, O'Toole, and Meier 2008; Andersen, Boesen, and Pedersen 2016). Benefit claimants and their landlords favour speedy service, whereas councils (which incur financial penalties for inaccuracies) and central government (which funds Housing Benefit and is criticized by parliament for overpayments) advocate benefit accuracy. Yet these overseers may have pursued accuracy less forcefully during the pandemic, when many distractions

arose and when preservation of life and welfare – the overriding policy objective during the pandemic – was clearly better served by providing speedy financial support to the vulnerable than by auditing prior applications. This could explain why, even though collaboration made no difference to service speed, the decline in timeliness for all councils was proportionately less than the reduction in accuracy (see Figure 3), and why councils re-deployed debt collection staff specifically (as described above). Conversely, because the decision to forego debt collection and so incur financial penalties would likely provoke disagreement and bargaining among partner councils, collaborations may struggle at short notice to reallocate resources from accuracy and towards other priorities.

As for sequencing as a second means of overcoming goal ambiguity: whereas poor timeliness cannot be subsequently rectified (once a payment is late, it is late), poor accuracy can to an extent be corrected subsequently through greater attention to and resourcing of debt collection later in the year or in future years. The debt will still be owed, albeit the risk of debt write-off will be higher. In this light, differences between collaborating and non-collaborating councils may be partly explained by autonomous districts being better able to *choose* to defer debt collection work in favour of more immediate pandemic priorities. Future research will be able to test this 'catch-up' hypothesis once data on debt identification and recovery during subsequent quarters of the pandemic is released.

Thirdly, how can we explain the paradox that greater resilience was achieved among the group of councils that, prior to the pandemic, tended to perform worse? Though at first sight surprising, this result might reflect the frequent observation in the resilience literature that high-performing organizations can fall into 'success traps' or 'competency traps.' Given the low level of challenge facing such organizations during 'normal' times, they become ill-equipped to deal with unexpected adversity (Levinthal and March 1993; Weick and Sutcliffe 2015; Giustiniano et al. 2018). Conversely, less-successful organizations are more familiar with adversity and problem-solving, better rehearsed for managing crises, and so more resilient.

Finally, besides the results obtained on the effect of collaboration on resilience, the most robust estimations conducted for speed of processing (the panel models in Table 5) all indicate a positive association between service demand and timeliness. The greater the volume of claims received during the month (both new applications and changes), the less the time taken to process them. These results, which imply that scale economies could affect processing times, are consistent across different specifications of the dependent variable and estimation techniques (GLS and Hausman-Taylor, when the latter are more robust). Thus, while we find no statistically significant differences regarding the effect of collaboration on speed during the pandemic, districts using inter-municipal arrangements may still achieve faster case processing than they would if the service were provided at a smaller scale in-house.

Despite the consistency of our findings, there are a number of limitations to our study. Firstly, because of the interruption caused by the rollout of Universal Credit, we are unable to establish a data series prior to the first COVID-lockdown longer than one year (prior to 2019), which would have allowed fuller understanding of pre-pandemic trends. Secondly, while monthly data is available for speed-of-processing, accuracy data is only quarterly, giving us only one 'lockdown' data point. Moreover, several potentially important control variables are only available on an annual basis, preventing their use in some analyses. Thirdly, our indicators of accuracy refer to

council efforts to identify and recoup overpayments generally, rather than the accuracy with which individual cases are processed. It may be, for example, that there is a lag effect, whereby pressure to maintain speed of processing during lockdown leads to inaccuracies that are only detected in subsequent quarters. Lastly, as mentioned, Housing Benefit is a low-discretion public service in which complex rules are enforced through bureaucratic organization. This suggests that our findings are more likely to generalize to other rule-based public services, such as other kinds of social security administration or tax collection, rather than high-discretion, professionalized services.

Conclusion

This paper tested the received wisdom that inter-organizational collaboration fosters resilience against adversity. We built on the existing, largely qualitative literature by using statistical methods on performance data for a large population of similar organizations, and expanding the type of collaboration explored to inter-municipal collaboration, where the focus is on 'up-scaling' more than 'information-sharing'. Given that potential advantages of increased operating size, inter-local balancing and lock-in for public service resilience, we hypothesized that inter-municipal collaboration would help maintain service levels during the first COVID-19 lockdown; although we also reasoned that different dimensions of performance may be trade-off against one another. We tested our hypothesis on the provision of Housing Benefit by lower-tier local authorities in England, using five dependent variables, clustered around two dimensions of speed and accuracy, and applying multiple estimation techniques to confirm the results.

We detected no significant difference in the preservation of case processing speeds between the two modes of provision – collaborative and standalone. Performance on this dimension worsened during lockdown, regardless of mode of provision. But we did find that accuracy objectives relating to the identification and recovery of debt declined to a lesser extent for councils that participate in inter-municipal arrangements, albeit from a poorer position to begin with. Future research can seek to confirm these partial advantages of collaboration for resilience with other combinations of performance metrics and for professionalized as well as bureaucratic services, and then interrogate which collaborative mechanisms – size, balancing or lock-in – are responsible. Moreover, given the general lack of studies into the effect of inter-municipal collaboration on service quality (not just cost), work is needed to explain the differences in pre-pandemic performance between collaborating and autonomous councils identified tentatively in our data.

Notes

1. Transition to Universal Credit began in 2016, was timed differently in each district, and was completed for our sample by late 2018.
2. We checked both Gross Administration Costs and Net Expenditure as alternative specifications. Results were identical (not significant) across all three specifications, in all cases; but the overall estimations were more robust with our preferred specification of Administration Costs Net of Sales. Results available upon request.

3. We planned to use fiscal slack as an additional control, measured as financial reserves relative to revenue expenditure. Data are annual and contain ten missing observations (see in Supplementary Materials). The variable was always far from significant and, being in-year invariant, damaged overall robustness of the estimations. So we exclude it from our final models. Results available upon request.
4. We have 154 clusters: 130 stand-alone districts; two districts that cooperate with other 'all-purpose' local authorities that are outside scope of our analysis; 15 cooperations involving two districts; five involving three districts; and two involving five districts.
5. We tested for structural change in all three cases, against estimations pooling data for both quarters we consider. This suggested, in all cases, that separated estimations are preferable to pooled estimations.

Acknowledgments

We are grateful for advice received from Peter Kemp and Rose Doran, and for funding provided by the Spanish Ministry of Science and Innovation (PID2019-104319RB-I00).

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the Spanish Ministry of Science and Innovation [PID2019-104319RB-I00].

Notes on contributors

Thomas Elston is Associate Professor of Public Administration at the Blavatnik School of Government, University of Oxford

Germà Bel is Professor of Economics and Public Policy, and Director of Observatory of Public Policies Analysis & Evaluation (OAP-UB), at the Universitat de Barcelona

ORCID

Thomas Elston http://orcid.org/0000-0001-6659-7928
Germà Bel http://orcid.org/0000-0002-1330-8085

References

Ahrens, T., and L. Ferry. 2020. "Financial Resilience of English Local Government in the Aftermath of COVID-19." *Journal of Public Budgeting, Accounting & Financial Management* 32 (5): 813–823. doi:10.1108/JPBAFM-07-2020-0098.

Aiken, M., and J. Hage. 1968. "Organizational Interdependence and Intra-Organizational Structure." *American Sociological Review* 33 (6): 912–930. doi:10.2307/2092683.

Andersen, L. B., A. Boesen, and L. H. Pedersen. 2016. "Performance in Public Organizations: Clarifying the Conceptual Space." *Public Administration Review* 76 (6): 852–862. doi:10.1111/puar.12578.

Andrew, S. A., and J. B. Carr. 2012. "Mitigating Uncertainty and Risk in Planning for Regional Preparedness: The Role of Bonding and Bridging Relationships." *Urban Studies* 50 (4): 709–724. doi:10.1177/0042098012455718.

Arntsen, B., D. O. Torjesen, and T.-I. Karlsen. 2021. "Asymmetry in Inter-municipal Cooperation in Health Services – How Does It Affect Service Quality and Autonomy?" *Social Science & Medicine* 273: p. 113744. doi:10.1016/j.socscimed.2021.113744.

Barasa, E., R. Mbau, and L. Gilson. 2018. "What Is Resilience and How Can It Be Nurtured? A Systematic Review of Empirical Literature on Organizational Resilience." *International Journal of Health Policy and Management* 7 (6): 491–503. doi:10.15171/ijhpm.2018.06.

Bel, G., and M. Sebő. 2021. "Does Inter-Municipal Cooperation Really Reduce Delivery Costs? An Empirical Evaluation of the Role of Scale Economies, Transaction Costs, and Governance Arrangements." *Urban Affairs Review* 57 (1): 153–188. doi:10.1177/1078087419839492.

Blåka, S. 2017. "Does Cooperation Affect Service Delivery Costs? Evidence from Fire Services in Norway." *Public Administration* 95 (4): 1092–1106. doi:10.1111/padm.12356.

Boyne, G. A. 2002. "Theme: Local Government: Concepts and Indicators of Local Authority Performance: An Evaluation of the Statutory Frameworks in England and Wales." *Public Money & Management* 22 (2): 17–24. doi:10.1111/1467-9302.00303.

Brown, J. 2020. *Coronavirus: A History of English Lockdown Laws*. London: House of Commons Library.

de Bruijne, M., A. Boin, and M. van Eeten. 2010. "Resilience: Exploring the Concept and Its Meanings." In *Designing Resilience: Preparing for Extreme Events*, edited by L. K. Comfort, A. Boin, and C. C. Demchak, 13–32. Pittsburgh: University of Pittsburgh Press.

Department for Work and Pensions. 2018. *Findings from the Local Authority Insight Survey: Wave 34: Fraud and Error in Housing Benefit*. London: DWP.

Department for Work and Pensions. 2020a. "Annual Report and Accounts. (HC 401)." London: Stationery Office.

Department for Work and Pensions. 2020b. "Statistical Release: April to June 2020 (Quarter 1, 2020 to 2021)." Accessed 30 March 2021 https://www.gov.uk/government/statistics/housing-benefit-statistics-on-speed-of-processing-2020-to-2021/statistical-release-april-to-june-2020-quarter-1-2020-to-2021

Department for Work and Pensions. 2021. "Housing Benefit Debt Recovery Statistics: April 2020 to September 2020." Accessed 7 July 2021 https://www.gov.uk/government/statistics/housing-benefit-debt-recoveries-statistics-april-2020-to-september-2020

Department for Work and Pensions. n.d. *Housing Benefit Resilience: Guidance for Local Authorities*. London: DWP.

DesJardine, M., P. Bansal, and Y. Yang. 2019. "Bouncing Back: Building Resilience through Social and Environmental Practices in the Context of the 2008 Global Financial Crisis." *Journal of Management* 45 (4): 1434–1460. doi:10.1177/0149206317708854.

Deslatte, A., M. E. Hatch, and E. Stokan. 2020. "How Can Local Governments Address Pandemic Inequities?" *Public Administration Review* 80 (5): 827–831. doi:10.1111/puar.13257.

Dixon, R., and T. Elston. 2019. "Should Councils Collaborate? Evaluating Shared Administration and Tax Services in English Local Government." *Public Money & Management* 39 (1): 26–36. doi:10.1080/09540962.2019.1537704.

Dixon, R., and T. Elston. 2020. "Efficiency and Legitimacy in Collaborative Public Management: Mapping Inter-local Agreements in England Using Social Network Analysis." *Public Administration* 98 (3): 746–767. doi:10.1111/padm.12649.

Duit, A. 2016. "Resilience Thinking: Lessons for Public Administration." *Public Administration* 94 (2): 364–380. doi:10.1111/padm.12182.

Dunsire, A. 1978. *The Execution Process: II Control in a Bureaucracy*. Oxford: Martin Robertson.

Dzigbede, K. D., S. B. Gehl, and K. Willoughby. 2020. "Disaster Resiliency of U.S. Local Governments: Insights to Strengthen Local Response and Recovery from the COVID-19 Pandemic." *Public Administration Review* 80 (4): 634–643. doi:10.1111/puar.13249.

Elston, T., M. MacCarthaigh, and K. Verhoest. 2018. "Collaborative Cost-Cutting: Productive Efficiency as an Interdependency between Public Organizations." *Public Management Review* 20 (12): 1815–1835. doi:10.1080/14719037.2018.1438498.

Elston, T., and R. Dixon. 2020. "The Effect of Shared Service Centres on Administrative Intensity in English Local Government: A Longitudinal Evaluation." *Journal of Public Administration Research & Theory* 30 (1): 113–129. doi:10.1093/jopart/muz002.

Feiock, R. C. 2013. "The Institutional Collective Action Framework." *Policy Studies Journal* 41 (3): 397–425. doi:10.1111/psj.12023.

Gittell, J. H., K. Cameron, S. Lim, and V. Rivas. 2005. "Relationships, Layoffs, and Organizational Resilience: Airline Industry Responses to September 11." *Journal of Applied Behavioral Science* 43 (3): 300–329.

Giustiniano, L., S. R. Clegg, M. P. E. Cunha, and A. Rego. 2018. *Elgar Introduction to Theories of Organizational Resilience*. Cheltenham: Edward Elgar.

Goldstein, B. E., Ed. 2012. *Collaborative Resilience: Moving through Crisis to Opportunity*. Cambridge, MA: MIT Press.

Gore, T., E. Bimpson, J. Dobson, and S. Parkes. 2021. *Local Government Responses to the COVID-19 Pandemic in the UK: A Thematic Review*. Sheffield: Centre for Regional Economic and Social Research, Sheffield Hallam University.

Gray, B. 1989. *Collaborating: Finding Common Ground for Multiparty Problems*. San Francisco: Jossey-Bass Publishers.

Gray, M., and A. Barford. 2018. "The Depths of the Cuts: The Uneven Geography of Local Government Austerity." *Cambridge Journal of Regions, Economy and Society* 11 (3): 541–563. doi:10.1093/cjres/rsy019.

Hargrove, E. C., and J. C. Glidewell, Eds. 1990. *Impossible Jobs in Public Management*. Lawrence, Kansas: University of Kansas Press.

Hastings, A., N. Bailey, M. Gannon, K. Besemer, and G. Bramley. 2015. "Coping with the Cuts? The Management of the Worst Financial Settlement in Living Memory." *Local Government Studies* 41 (4): 601–621.

Hausman, J. A., and W. E. Taylor. 1981. "Panel Data and Unobservable Individual Effects." *Econometrica* 49 (6): 1377–1398. doi:10.2307/1911406.

Hillmann, J., and E. Guenther. 2021. "Organizational Resilience: A Valuable Construct for Management Research?" *International Journal of Management Reviews* 23 (1): 7–44. doi:10.1111/ijmr.12239.

Holum, M. L., and T. G. Jakobsen. 2016. "Inter-Municipal Cooperation and Satisfaction with Services: Evidence from the Norwegian Citizen Study." *International Journal of Public Administration* 39 (8): 597–609. doi:10.1080/01900692.2015.1029132.

Hood, C. 1976. *The Limits of Administration*. London: Wiley.

Kahn, W. A., M. A. Barton, C. M. Fisher, E. D. Heaphy, E. M. Reid, and E. D. Rouse. 2018. "The Geography of Strain: Organizational Resilience as a Function of Intergroup Relations." *Academy of Management Review* 43 (3): 509–529. doi:10.5465/amr.2016.0004.

Katz, D., and R. L. Kahn. 1978. *The Social Pscyhology of Organizations*. New York; Chichester: Wiley.

Kemp, P. A. 2007a. "Housing Allowances in Context." In *Housing Allowances in Comparative Perspective*, edited by P. A. Kemp. Bristol: Policy Press, pp. 1-16.

Kemp, P. A. 2007b. "Housing Benefit in Britain: A Troubled History and Uncertain Future." In *Housing Allowances in Comparative Perspective*, edited by P. A. Kemp. Bristol: Policy Press, pp.105-133.

Kim, K., S. a Andrew, and K. Jung. 2020. "Building Resilient Organizations: Organizational Resilience as a Network Outcome." *International Journal of Public Administration* 1–10. doi:10.1080/01900692.2020.1758720.

Klok, P.-J., B. Denters, M. Boogers, and M. Sanders. 2018. "Intermunicipal Cooperation in the Netherlands: The Costs and the Effectiveness of Polycentric Regional Governance." *Public Administration Review* 78 (4): 527–536. doi:10.1111/puar.12931.

Landau, M. 1969. "Redundancy, Rationality, and the Problem of Duplication and Overlap." *Public Administration Review* 29 (4): 346–358. doi:10.2307/973247.

Law, F. 2018. "Breaking the Outsourcing Path: Backsourcing Process and Outsourcing Lock-in." *European Management Journal* 36 (3): 341–352. doi:10.1016/j.emj.2017.05.004.

Lerner, A. W. 1986. "There Is More than One Way to Be Redundant: A Comparison of Alternatives for the Design and Use of Redundancy in Organizations." *Administration & Society* 18 (3): 334–359. doi:10.1177/009539978601800303.

Levinthal, D. A., and J. G. March. 1993. "The Myopia of Learning." *Strategic Management Journal* 14 (S2): 95–112. doi:10.1002/smj.4250141009.

Limnios, E. A. M., T. Mazzarol, A. Ghadouani, and S. G. M. Schilizzi. 2014. "The Resilience Architecture Framework: Four Organizational Archetypes." *European Management Journal* 32 (1): 104–116. doi:10.1016/j.emj.2012.11.007.

Linnenluecke, M. K. 2017. "Resilience in Business and Management Research: A Review of Influential Publications and A Research Agenda." *International Journal of Management Reviews* 19 (1): 4–30. doi:10.1111/ijmr.12076.

Local Government & Social Care Ombudsman. 2020. *Focus on Housing Benefit: Learning Lessons from Complaints*. London: Ombudsman.

Local Government Information Unit. 2020. "Local Government Facts and Figures." Accessed 22 March 2021 https://www.lgiu.org.uk/local-government-facts-and-figures/#how-much-do-councils-spend

Lynn, M. L. 2005. "Organizational Buffering: Managing Boundaries and Cores." *Organization Studies* 26 (1): 37–61. doi:10.1177/0170840605046348.

Markman, G. M., and M. Venzin. 2014. "Resilience: Lessons from Banks that Have Braved the Economic crisis—And from Those that Have Not." *International Business Review* 23 (6): 1096–1107. doi:10.1016/j.ibusrev.2014.06.013.

McGuire, M. 2006. "Collaborative Public Management: Assessing What We Know and How We Know It." *Public Administration Review* 66: 33–43. doi:10.1111/j.1540-6210.2006.00664.x.

Meyer, A. D. 1982. "Adapting to Environmental Jolts." *Administrative Science Quarterly* 27 (4): 515–537. doi:10.2307/2392528.

Mintzberg, H. (1979). The Structuring of Organizations. Englewood Cliffs, New Jersey: Prentice Hall.

Moulick, A. G., and L. L. Taylor. 2017. "Fiscal Slack, Budget Shocks, and Performance in Public Organizations: Evidence from Public Schools." *Public Management Review* 19 (7): 990–1005. doi:10.1080/14719037.2016.1243813.

Muraoka, T., and C. N. Avellaneda. 2021. "Do the Networks of Inter-municipal Cooperation Enhance Local Government Performance?" *Local Government Studies* 47 (4): 1–21.

Murphy, P., K. Greenhalgh, and M. Jones. 2011. "Comprehensive Performance Assessment and Public Services Improvement in England? A Case Study of the Benefits Administration Service in Local Government." *Local Government Studies* 37 (6): 579–599. doi:10.1080/03003930.2011.623160.

Murphy, P., K. Greenhalgh, and M. Jones. 2014. "Housing and Council Tax Benefits Administration in England: A Long-Term Perspective on the Performance of the Local Government Delivery System." *Local Government Studies* 40 (5): 729–744. doi:10.1080/03003930.2013.807806.

Nohrstedt, D. 2016. "Explaining Mobilization and Performance of Collaborations in Routine Emergency Management." *Administration & Society* 48 (2): 135–162. doi:10.1177/0095399712473983.

Ogden, K., and D. Phillips. 2020. *COVID-19 and English Council Funding: How are Budgets Being Hit in 2020-21*. London: Institute for Fiscal Studies.

Oliver, C. 1990. "Determinants of Interorganizational Relationships: Integration and Future Directions." *Academy of Management Review* 15 (2): 241–265. doi:10.5465/amr.1990.4308156.

Orton, J. D., and K. E. Weick. 1990. "Loosely Coupled Systems: A Reconceptualization." *Academy of Management Review* 15 (2): 203–223. doi:10.5465/amr.1990.4308154.

Pal, R., H. Torstensson, and H. Mattila. 2014. "Antecedents of Organizational Resilience in Economic Crises—an Empirical Study of Swedish Textile and Clothing SMEs." *International Journal of Production Economics* 147: 410–428. doi:10.1016/j.ijpe.2013.02.031.

Parker, C. F., D. Nohrstedt, J. Baird, H. Hermansson, O. Rubin, and E. Baekkeskov. 2020. "Collaborative Crisis Management: A Plausibility Probe of Core Assumptions." *Policy and Society* 39 (4): 510–529. doi:10.1080/14494035.2020.1767337.

Perrow, C. 1961. "The Analysis of Complex Goals in Organizations." *American Sociological Review* 26 (6): 854–866. doi:10.2307/2090570.

Perrow, C. 1984. *Normal Accidents: Living with High-Risk Technologies*. New York: Basic.

Peters, B. G. 1998. "Managing Horizontal Government: The Politics of Co-Ordination." *Public Administration* 76 (2): 295–311. doi:10.1111/1467-9299.00102.

Public Accounts Committee. 2021. *COVID-19: Local Government Finance. (HC 239, Session 2021-22)*. London: Stationery Office.

Rainey, H. G. 1993. "A Theory of Goal Ambiguity in Public Organizations." *Research in Public Administration* 2: 121–166.

Resh, W. G., and D. W. Pitts. 2013. "No Solutions, Only Trade-Offs? Evidence about Goal Conflict in Street-Level Bureaucracies." *Public Administration Review* 73 (1): 132–142. doi:10.1111/j.1540-6210.2012.02623.x.

Robinson, C., F. Rowe, and N. Patias. 2020. *The Geography of the COVID-19 Pandemic in England*. Liverpool: Heseltine Institute for Public Policy, Pracice and Place.

Ryu, S., and M. S. Johansen. 2017. "Collaborative Networking, Environmental Shocks, and Organizational Performance: Evidence from Hurricane Rita." *International Public Management Journal* 20 (2): 206–225. doi:10.1080/10967494.2015.1059915.

Scholten, K., and S. Schilder. 2015. "The Role of Collaboration in Supply Chain Resilience." *Supply Chain Management: An International Journal* 20 (4): 471–484. doi:10.1108/SCM-11-2014-0386.

Schoorman, F. D., M. H. Bazerman, and R. S. Atkin. 1981. "Interlocking Directorates: A Strategy for Reducing Environmental Uncertainty." *Academy of Management Review* 6 (2): 243–251. doi:10.5465/amr.1981.4287813.

Seidman, H. 1998. *Politics, Position and Power: The Dynamics of Federal Organization*. Fifth ed. New York: Oxford University Press.

Silvestre, H. C., R. C. Marques, and R. C. Gomes. 2018. "Joined-up Government of Utilities: A Meta-review on a Public–public Partnership and Inter-municipal Cooperation in the Water and Wastewater Industries." *Public Management Review* 20 (4): 607–631. doi:10.1080/14719037.2017.1363906.

Simon, H. A. 1997. *Administrative Behavior*. New York: Free Press.

Socitm. 2020. *COVID-19 Digital and ICT Impact Survey Report*. Northampton: Socitm.

Sullivan-Taylor, B., and L. Branicki. 2011. "Creating Resilient SMEs: Why One Size Might Not Fit All." *International Journal of Production Research* 49 (18): 5565–5579. doi:10.1080/00207543.2011.563837.

Sutcliffe, K. M., and T. J. Vogus. 2003. "Organizing for Resilience." In *Positive Organizational Scholarship*, edited by K. Cameron, J. E. Dutton, and R. E. Quinn, 94–110. San Francisco: Berrett-Koehler.

Thompson, J. D. 1967. *Organizations in Action: Social Science Bases of Administrative Theory*. New York: McGraw-Hill.

Ulbrich, F. 2006. "Improving Shared Service Implementation: Adopting Lessons from the BPR Movement." *Business Process Management Journal* 12 (2): 191–205. doi:10.1108/14637150610657530.

Voorn, B., M. van Genugten, and S. van Thiel. 2019. "Multiple Principals, Multiple Problems: Implications for Effective Governance and a Research Agenda for Joint Service Delivery." *Public Administration* 97 (3): 671–685. doi:10.1111/padm.12587.

Walker, B. 2006. *Local Housing Allowance Final Evaluation: Implementation and Delivery in the Nine Pathfinder Areas*. London: Department for Work and Pensions.

Warner, M. E., A. M. Aldag, and Y. Kim. 2020. "Privatization and Intermunicipal Cooperation in US Local Government Services: Balancing Fiscal Stress, Need and Political Interests." *Public Management Review* 1–18. doi:10.1080/14719037.2020.1751255.

Weick, K. E., and K. M. Sutcliffe. 2015. *Managing the Unexpected*. Hoboken, NJ: Wiley.

Wenger, J. B., L. J. O'Toole Jr., and K. J. Meier. 2008. "Trading Speed for Accuracy? Managing Goal Conflict and Accommodation in the U.S. Unemployment Insurance Program." *Policy Studies Journal* 36 (2): 175–198. doi:10.1111/j.1541-0072.2008.00261.x.

Wildavsky, A. 1988. *Searching for Safety*. New Brunswick: Transaction Books.

Williams, T. A., D. A. Gruber, K. M. Sutcliffe, D. A. Shepherd, and E. Y. Zhao. 2017. "Organizational Response to Adversity: Fusing Crisis Management and Resilience Research Streams." *Academy of Management Annals* 11 (2): 733–769. doi:10.5465/annals.2015.0134.

Wilson, J. Q. 1989. *Bureaucracy: What Government Agencies Do and Why They Do It*. New York: Basic Books.

Woods, D., and E. Hollnagel. 2006. "Prologue: Resilience Engineering Concepts." In *Resilience Engineering: Concepts and Precepts*, edited by E. Hollnagel, D. Woods, and N. Leveson, 1–6. Aldershot: Ashgate.

Zeemering, E. 2015. "Assessing Local Elected Officials' Concerns about Interlocal Agreements." *Urban Studies* 53 (11): 2347–2362. doi:10.1177/0042098015590768.