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**THE EFFECT OF INTER-MUNICIPAL COOPERATION
ON SOCIAL ASSISTANCE PROGRAMS:
EVIDENCE FROM HOUSING ALLOWANCES IN
ENGLAND**

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The Effect of Inter-Municipal Cooperation on Social Assistance Programs: Evidence from Housing Allowances in England

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Abstract (max 200 words)

Decentralized administration of nationally designed and/or funded social assistance programs requires significant organizational capacity among sub-national governments, especially when welfare entitlements are subject to frequent rule change, intricate means testing, or coordination across multiple schemes. In some circumstances, inter-municipal cooperation can enhance local policy implementation; but, to-date, impact evaluations have focused on public services that are more capital-intensive and less co-produced than social assistance (like utilities or refuse collection), and on the effect of cooperation on service costs rather than quality (attributes that may trade-off against one another). Whether inter-municipal cooperation is economically efficient, therefore, and whether it can enhance the performance of locally administered social assistance programs, remains uncertain. To investigate, we analyze panel data describing the cost and quality of housing allowance administration by 300 local authorities in England during 2009-19, a period in which 66 adopted inter-municipal arrangements. Using stacked difference-in-differences estimators, we find no evidence for short-term administrative savings after cooperation, and weak indication ($p < 0.1$) of long-term reductions. Conversely, we find a sustained decline in service speed ($p < 0.01$), but limited indication of reduced accuracy. Further, for councils already close to the best-in-class frontier, cooperation appears to have caused trade-offs among quality dimensions.

Keywords

Housing allowances, inter-municipal cooperation, means testing, local government, service quality, shared services.

Acknowledgements

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1. INTRODUCTION

Means-tested social assistance programs, like income support, food stamps or housing vouchers, are complex public policies to administer. Much attention has rightly focused on the effect of this complexity on welfare recipients (or potential recipients), in terms of the learning, compliance and psychological costs borne whilst accessing welfare (Heinrich & Brill, 2015; Herd & Moynihan, 2018; Fox et al., forthcoming). Impenetrable rules, intrusive questioning and extensive requirements for documentation at the very least cause delay and frustration; and at worst reduce benefit take-up and subvert policy intent. Yet, as Besley (1990, p.119) writes, “means testing is costly to both the government and the claimant,” since determining eligibility and entitlements requires significant organizational capacity too. This is especially so when benefits depend on multiple criteria, need frequent recertification, or require coordination across different agencies; or when the rules governing social assistance are themselves frequently revised. Hence, while it has become commonplace to advocate “shifting” (Herd et al., 2013) administrative burdens from the citizen to the state – as if costs were distributed zero-sum – in practice any burdening of citizens will necessarily burden some part of the state too. More complex eligibility tests, for instance, require more training for welfare officers, more explaining of rules to clients, and more elaborate information technology; while more frequent re-certification requires more staff to undertake more assessments (Spicker, 2011; Devereux et al., 2017; Torry, 2018).

Decentralizing the administration of social assistance to subnational government may allow welfare to be tailored to local conditions and priorities, depending on both the discretions afforded by national policymakers (Andreotti et al., 2012; Daigneault et al., 2021) and local fiscal capacity (Meers, 2019; Hick, 2022). It may also bring administrators “closer” to those

they serve, perhaps reducing misconceptions about the lives and needs of welfare claimants (Keiser, 2010). In other respects, however, the challenges of administering rapid, accurate and accessible social assistance remain, and probably increase, with decentralization. Implementing policy that cannot be easily modified following operational experience (because of its national origins); which is subject to extensive external oversight (again, because of national design and/or funding); and where those deciding scheme rules are shielded from the *organizational* (not just claimant) costs of administrative burdens, brings much additional difficulty. Moreover, the smaller scale of operations (in local governments particularly), balanced budget requirements, and reduced inter-governmental grants since the global financial crisis may restrict subnational capacity for meeting these challenges (Peck, 2012; Standing & Davies, 2020). Indeed, a recent cross-national review of benefit take-up found that “Many of the programs with the lowest take-up rates are traditional locally-administered programs” (Ko & Moffitt, 2022, p.8). In the UK, Spicker (2011, p.93) found that decentralizing social assistance “rapidly overwhelmed” local authorities, which were “unable to cope with the administrative load.” And in the USA, Negoita et al. (2023, p.216) argue that limited capacity makes burden shifting from citizens to “hollowed-out” state governments “more problematic than many proponents are ready to admit.”

Inter-municipal cooperation is widely adopted to enhance decentralized public service delivery (Hulst & van Montfort, 2012; Teles & Swianiewicz, 2018). It involves two or more local governments implementing one or more policy jointly across their jurisdictions, pooling investments and sharing staff and technologies to generate “critical mass” and scale economies. Impact evaluations typically affirm the advantages of cooperation for small municipalities (for reviews, see Bel & Warner, 2015; Silvestre et al., 2018; Bel & Sebó, 2021), albeit on a fairly narrow range of local services (principally, utilities and refuse

collection) and regarding just one outcome measure (service costs). Evidence relating to less capital-intensive and more co-produced services, like social assistance, is lacking, as are evaluations of non-financial performance (recent exceptions are Arntsen et al., 2021; Blåka et al., forthcoming). Indeed, since cost and quality may be in equilibrium, the present focus of evaluators on service expenditure brings uncertainty about the overall efficiency of inter-municipal cooperation. Are cost savings simply produced by reducing service quality?

Consequently, this paper seeks to enrich the literature on inter-municipal cooperation with respect to: its impact on service quality, its overall economic efficiency, and its suitability for social assistance programs. We test the effect of cooperation on five distinct dimensions of performance for an £18bn/year housing allowance program administered by 300 local authorities in England, 66 of which adopted inter-municipal arrangements between 2009 and 2019. Intended to reduce housing insecurity among renters on low incomes, this policy is complex and highly targeted, and demands considerable administrative capacity from local authorities, who employ large teams of case workers to determine claimant eligibility and entitlement levels. Using stacked difference-in-differences estimators, we find no evidence for short-term administrative savings after cooperation begins, and only weak indication of long-term reductions. Conversely, we find a sustained decline in service speed, but limited indication of reduced accuracy. Furthermore, for councils already close to the best-in-class frontier, cooperation appears to have caused trade-offs among quality dimensions.

Hereafter, section two describes the issue of housing insecurity, and the British rent assistance scheme that forms our empirical case; and section three lays out our hypotheses. Section four explains the data sources and empirical strategy, and section five presents the results and robustness checks. Section six and seven then discuss and conclude the study.

2. HOUSING ALLOWANCES

2.1 Housing Insecurity

Housing is a necessity, and ensuring the provision of safe and affordable housing is an important policy objective for many states (Clapham et al., 1990; Malpass, 2005).¹ Housing costs are typically the largest item of expenditure in household budgets, especially for renters, the young, those in metropolitan areas, and those on low incomes (OECD, 2021). Up to 18 per cent of households in the USA experience difficulty in meeting housing costs (Cox et al., 2019). In Europe, 10 per cent of households spend more than 40 per cent of disposable income on housing; but this rises to 37 per cent of the poorest households (Pittini, 2012). And across North America (Moore & Skaburskis, 2004; McClure, 2019), Europe (Waldron, 2023), and Australia (Pawson et al., 2019), housing affordability has been in long-term decline, accelerated by the 2008 global financial crisis. Wetzstein (2017, p.3159) even speaks of “global crisis of urban housing affordability.”

Expensive housing forces households to make what Cox, et al. (2019, p.95) refer to as “behavioral trade-offs,” seeking accommodation that is either of poor quality or unsuited to family needs (e.g., overcrowded or far from employment or education), or foregoing expenditure on other necessities. Housing is “one of the key social determinants of health” (Shaw, 2004, p.403). Unsafe housing increases respiratory disease, cold exposure, contact with toxins, and domestic injury (World Health Organization, 2018; Alidoust & Huang, 2023); and outright homelessness reduces life expectancy very markedly (Baggett et al., 2013; Romaszko et al., 2017). Those living in overcrowded accommodation are more likely

¹ Adequate housing is recognized by the United Nations as a human right, and is enshrined in the Universal Declaration of Human Rights as well as in the international Covenant on Economic, Social and Cultural Rights.

to experience poor mental health (Ruiz-Tagle & Urria, 2022) and domestic violence (Makinde et al., 2016), and children from overcrowded homes are more likely to repeat a grade at school (Goux & Maurin, 2005). Involuntary residential mobility leads to insecure employment (Desmond & Gershenson, 2016) and may delay child development, reduce educational attainment and increase risk behaviors (though much of this research is correlational, see Garboden et al., 2017). Insecure tenancies also contribute to housing insecurity more generally, defined by DeLuca and Rosen (2022, p.346) as “the state of having difficulty acquiring housing, having minimal control over one’s housing, being at risk of losing housing, being uncertain about tenure, or living in housing that does not meet basic household needs.” The stress of housing insecurity has numerous pernicious impacts on family life (Clair, 2019), and often forces under-spending on other essentials, like food, clothing, transport or healthcare (Bratt, 2002).

Supply-side interventions to reduce housing insecurity include rent controls and capital subsidies to construction firms (McClure, 2019). Principally on the demand side are housing allowances, which Kemp (2007a, p.1) defines as “income-related subsidies tied to housing that are paid to consumers (or directly to landlords on their behalf).” These are common among high-income countries, and sometimes affect a significant proportion of households. US federal programs assist 5 million families annually (Fenelon et al., 2017); and about one fifth of all households in the UK, France, Denmark and Finland receive a housing allowance (Fahey & Norris, 2010). These policies are not cheap. A rough (and dated) estimate is that one third of all rent paid in England in the 2003-04 financial year was covered by the British “Housing Benefit” scheme (Kemp, 2007b, p.117). And since demand fluctuates inversely with macroeconomic performance, there are years when this policy costs more than 1 per cent of GDP (Gibbons & Manning, 2006).

2.2 Housing Benefit in Great Britain

Housing Benefit is a nationally designed and funded means-tested rent subsidy administered by nearly 370 local governments (known as “local authorities” or “councils”) across Great Britain. (Northern Ireland runs a separate scheme. Our empirical analysis is confined to England’s 300 councils only.) Housing Benefit aims to “ensure that people on low incomes can afford to live in reasonable accommodation that meets the basic needs of their household” (Audit Commission, 2001, p.12). Accommodation can be rented at below-market rates either from local authorities (known as “council housing”) or non-profit housing associations; or can be obtained, at unsubsidized prices, from the private rental market. Thus, local authorities either provide Housing Benefit as a “rent rebate” to their own tenants, or as a “rent allowance” to those in housing association or privately rented homes. The benefit pays up to 100 per cent of (already subsidized) rent for “social sector” tenants; but for private tenants support is capped at the 30th centile (previously the median, until 2011) of local market rents for different sized properties (Clair, 2022).²

As of March 2020 (the end of the 2019-20 financial year, and final month of our 2009-19 panel), there were 3.18 million recipients of Housing Benefit (2.71 million in England only). This is down from a peak of 5.08 million in March 2013, partly due to macroeconomic recovery, partly because of the gradual transfer of most working-age claimants onto a new “Universal Credit” welfare scheme, which combines six previously-separate benefits into one nationally-administered entitlement (Timmins, 2016). Expenditure on Housing Benefit was £18.2bn in 2019-20, representing 9.5 per cent of the total social security budget (Department

² As of March 2020, 30 per cent of Housing Benefit claimants rent direct from councils, 45 per cent from housing associations, and 25 per cent from the private sector, collecting average weekly payments of £89.43, £102.66, and £124.37 respectively.

for Work and Pensions (DWP), 2020). In 2014-15, take-up was estimated at 79 per cent of potential claimants and 86 per cent of potential entitlements, with both figures lower for the working-age population (DWP, 2016).

Housing Benefit epitomizes the four sources of complexity mentioned in the introduction:

- Firstly, assessments depend on the combination of means, needs and rental costs. Eligibility is determined by the applicant's (and their partner's) income and assets, with qualifying ceilings attached to other means-tested benefits, like Jobseeker's allowance. Then, levels of entitlement depend on income and assets, household composition and needs (e.g., medical conditions), and eligible rent – which excludes fuel or property taxes and is capped for private tenants as described above. Finally, deductions are made for, for instance, non-dependent cohabitants (e.g., children over 18) who are presumed capable of contributing to rent; and, since 2013, for those occupying social housing larger than their current needs (formally an “under-occupation” deduction, but dubbed by critics a “bedroom tax”).
- Secondly, eligibility and entitlements are highly dynamic. Though compulsory re-certification after 60 weeks and monthly adjustments of the private rental cap were both dropped in the 2000s, claims are still “immediately reassessed if income, rent, household composition or other relevant circumstances change” (Kemp, 2007b, p.114). Most claimants need to submit multiple “change of circumstance” notifications per year, without which they risk either under-payment (with only limited backdating permissible) or over-payment (resulting in debt). Those submitting infrequent updates may also be investigated for possible fraud.

- Thirdly, Housing Benefit interacts with the wider social security system as administered by other agencies. Two thirds of Housing Benefit claimants receive other welfare cheques (National Audit Office, 2014), requiring agencies to coordinate their application and verification processes whilst also satisfying each scheme’s different regulations. Data sharing is used to compensate for non-updating of case details by claimants. For instance, the tax authorities share 20 million electronic notifications a year (National Audit Office, 2012), imposing a “crippling” workload on “overwhelmed” councils (Robertson, 2012). And, since 2013, a “benefit cap” has limited total social assistance available to households from the public purse (Fenton-Glynn, 2015), meaning that Housing Benefit paid by councils is reduced if support provided by *other* agencies exceeds a threshold.
- Finally, the laws, statutory regulations and administrative guidance relating to Housing Benefit are frequently revised, creating additional workload and training needs for council staff, increased risk of wrongful case determinations, and general “complexity creep” (Kemp, 2007b). Between 1988 and 2022, annually-refreshed guidance on Housing Benefit law lengthened almost tenfold, to 1,982 pages. Central government issues up to 50 separate instructions per year (Audit Commission, 2002). During our period of study, the principal changes included the aforementioned over-occupancy deduction, benefit cap, and ceiling reduction from the median to the 30th centile of local private rents; as well as greater restrictions on youth and migrant eligibility, capping the number of eligible children in housing needs tests, limiting the

length of permissible claim backdating, and increasing the value of non-dependent deductions.³

In the 1990s, the local government inspectorate found that, because of this huge policy complexity and limits to local implementation capacity, “perhaps only a third of authorities largely administered benefits properly” (Audit Commission, 1997, p.7). Case determinations took up to 100 days (against a statutory target of 14), increasing rent arrears, damaging cash flow in housing associations, and deterring private landlords from letting to benefit recipients (Marchington et al., 2003). Sampling also revealed that 1 in 5 benefit calculations was incorrect (Audit Commission, 1997, p.11). Processing speeds improved markedly in the late 2000s (Murphy et al., 2011); but auditors still qualify more than three quarters of councils’ financial submissions to central government due to local errors (Audit Commission, 2014). And the policy is expensive to administer, with some councils spending two or three times the administrative grant provided by central government (Audit Commission, 2014).

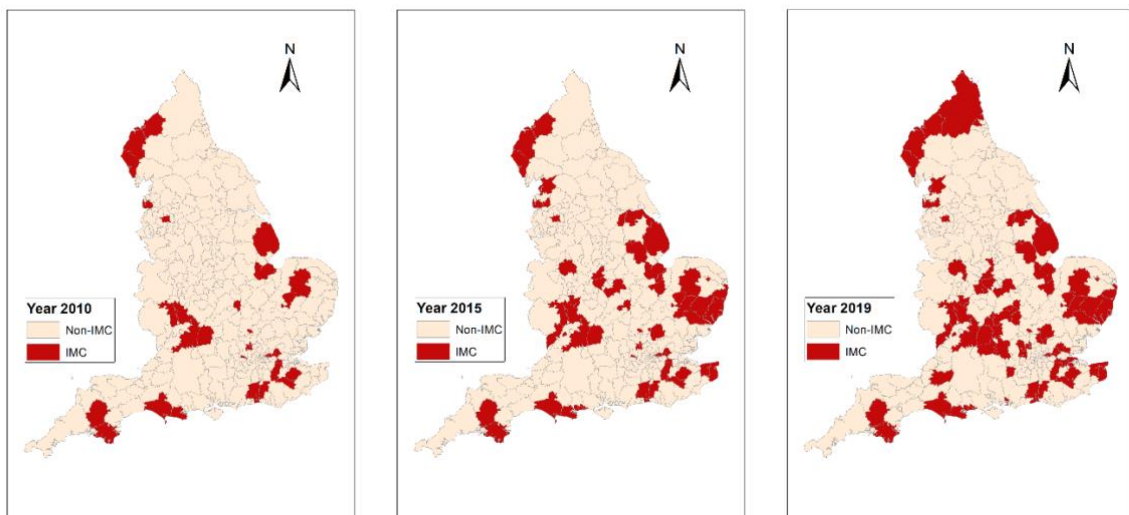
Over time, improvement was sought through partial simplification of scheme rules, some centralization to the national level (e.g., fraud investigation), and by encouraging councils to re-organize service delivery. The Audit Commission suggested that “where councils lack capacity – in terms of IT, staffing or resources – they need to explore how ... to develop ... through partnerships with the private sector, and with other authorities” (2002, p.11).

Initially, 30 local authorities chose outsourcing, though many subsequently reversed this reform (Marchington, et al., 2003). Inter-municipal cooperation developed more slowly, but ultimately proved more popular (see Figure 1). Indeed, most cooperations formed in 2010-

³ The government estimates that, between 2010-2020, these reforms reduced Housing Benefit expenditure by £5bn annually (Wilson & Hobson, 2021). Independent evaluations of the reforms, including their fiscal and behavioral consequences, are found in Beatty et al. (2014) and Clair (2022), and Fetzer et al. (2020).

2011, when rising demand for social assistance after the global financial crisis met with severe cuts in funding for local government (see Gray & Barford, 2018) as well as a moratorium on council amalgamations – central government’s conventional approach to “upscaling” local service provision (John, 2010). By 2019, 28 per cent of local authorities were administering Housing Benefit inter-municipally, including 77 (or 38 per cent) of the smallest “district” councils.

Figure 1: Rollout of inter-municipal cooperation across time and space



Notes: Maps plot the rollout timing of inter-municipal cooperation (IMC) for Housing Benefit administration across space during the period 2009-2019. Red shaded areas indicate local authorities where the IMC has been implemented.

3. INTER-MUNICIPAL COOPERATION

The three aforementioned methods of local service reform – privatization, amalgamation, cooperation – are familiar to many systems of local government around the world.

Outsourcing became widespread during the 1980s and 1990s, though lost some momentum after performance gains were more modest than expected (Hodge, 2000; Bel et al., 2010; Petersen et al., 2018). Merger of local government units to form larger jurisdictions and

higher-capacity bureaucracies remains commonplace; though, again, growing empirical evidence questions the financial benefits and/or points to undesirable side-effects (Andrews, 2015; Blom-Hansen et al., 2016; Galizzi et al., 2023). Cooperation between municipalities is something of a response to, and combination of, both the privatization and amalgamation reform experiences, though its academic lineage dates back at least to Vincent Ostrom et al.'s (1961) work on metropolitan governance. Specifically, inter-municipal cooperation involves public-to-public, rather than public-private, relations, in which high-powered market incentives are traded for reduced transaction costs (Brown, 2008; Levin & Tadelis, 2010). Similarly, rather than wholesale amalgamation of local authorities and their many and diverse tasks (each with distinct cost functions; see Blom-Hansen, et al. (2016)), cooperation involves only partial and selective merging of services most likely to benefit from up-scaling.

In practice, inter-municipal cooperation can involve two or more members, who may be geographically adjacent or not. And it can employ interlocal contracting, joint provision by participating municipalities, delegation to a supra-municipal government, or joint contracting of a private provider (see Bel & Belerdas-Castro, 2022; Blåka, et al., forthcoming). Reform justifications typically cite expected cost reductions, improved service quality or universality, and/or increase resilience (Zeemering, 2015; Warner et al., 2020; Elston & Bel, 2022), though cost saving is by far the most empirically tested of these objectives.

3.1 Cooperation and service expenditure

The primary argument motivating inter-municipal cooperation relates to scale economies (Elston et al., 2018). Larger output can dilute fixed costs of management or indivisible equipment, and attract “bulk-buy” discounts from suppliers. Up-scaling can also bring specialization of workers and processes, enhancing productivity. And cooperation can enable

pooled investments in new technologies that exceed the purchasing power of any individual partner. Still, returns to scale are likely to decline as output reaches high levels, redundant capacity is used up and specialization reaches a ceiling beyond which coordination becomes too difficult. Bureaucratic pathologies (like communication difficulties and inertia) may even cause diseconomies beyond a certain level of output.

Many studies have tested whether inter-municipal cooperation reduces expenditure per unit of service delivery. Most of the 30 included in Bel and Sebő's (2021) meta-regression reported savings after cooperation, particularly for smaller municipalities (i.e., those most likely to be suboptimally sized) and those that limited transaction costs and the "multiple principal" problem (see Voorn et al., 2019). However, causal identification is challenging in much of this research (Ferraresi et al.'s (2018) difference-in-differences study is a notable exception). Moreover, by far the most evaluated public service was refuse collection, which is characterized by relatively high fixed costs and low performance measurement problems compared with many other local services. The same is true of the studies in Silvestre et al.'s (2018) meta-review on utilities, which again associates cooperation with expenditure reductions. Less capital-intensive services and those with "non-contractable" elements of performance may not behave similarly, since fixed costs are lower while measurement and monitoring costs are higher. Indeed, emerging work on more labor-intensive activities, like tax collection or back-office administration, either questions the benefit of cooperation (Elston & Dixon, 2020) or emphasizes the cut-off size above which cooperation provides no benefit (Niaounakis & Blank, 2017). Multi-service studies indicate variable benefits from cooperation (Aldag et al., 2020; Silvestre et al., 2020).

Despite these doubts, national policymakers, the local government inspectorate, and the representative body for local authorities in England all advocated cooperation (locally known as “shared services”) to cope with Housing Benefit policy and/or manage rising demand for services amid declining local resources following the global financial crisis. In its report, *Services Shared, Costs Spared?*, the Local Government Association (2012, pp.10, 16) spoke of “immediate financial benefits,” and noted that “encouragingly, financial savings are not being achieved at the expense of service standards.” Moreover, many individual councils prepared extremely positive business cases for cooperation. One wrote: “Services in district councils could be run more efficiently and effectively if they could secure an economy of scale which individual districts simply cannot do alone.” There are “economies of scale inherent within any shared service,” said another. And an official told us in interview that, prior to cooperation, “each individual organization was overspending [on benefit administration]” (see Authors, 2023). Therefore, we hypothesize:

- H1: Inter-municipal cooperation will reduce expenditure on administering Housing Benefit, especially for (a) smaller local authorities and (b) larger cooperations.

3.2 Cooperation and service quality

Mechanisms responsible for scale economies might also improve service quality.

Introduction of new technology – like document scanners with automated data capture, more stable case management systems with fewer downtimes, and better “self-service” websites for claimants – could all speed-up case processing, though may be prohibitively expensive for (small) councils acting autonomously. Larger workforces may also have better employment prospects, aiding staff retention and development (both being concerns of the Audit Commission); and work specialization should enable more rapid and accurate case

determinations, including for rare and complex cases that arise only infrequently in individual councils. Indeed, one manager told us that cooperation provides access to “specialists that ... you couldn’t afford to pay for ... on your own” (Authors, 2023). In addition, compliance with national policy updates may also be easier when undertaken collectively. Regulatory burdens tend to fall hardest on smaller organizations (Crain, 2005), and interviewees spoke of how procedural changes could be “copy-pasted” across areas (Authors 2023). Finally, cooperation could balance peaks and troughs in demand between jurisdictions, reducing idle time in one area when workload is high elsewhere (Elston & Bel, 2022).

Nonetheless, there are counterarguments. Cooperation across multiple, diverse jurisdictions could increase the range of client needs having to be met by a single service, potentially reducing council performance (Andrews et al., 2005). Closure or centralization of welfare offices might reduce accessibility for clients, especially if travel times for interview or document verification increase significantly. Specialization can narrow jobs, reduce their intrinsic interest and de-motivate staff; and the loss of direct contact with claimants could produce bureaucratic “alienation” (Marchington, et al., 2003). And, regarding regulatory compliance, Stafford et al. (2000) found that dissemination of new benefit rules was more effective when local authorities used informal communications with staff (rather than written circulars), which is harder in larger or more dispersed teams.

Empirical research on the effect of inter-municipal cooperation on service quality is extremely rare. Two correlational studies measuring satisfaction of citizens (Holum & Jakobsen, 2016) and elected officials (Arntsen, et al., 2021) both report a positive association between cooperation and quality. But two using objective measures are equivocal, with Blåka (2017) reporting faster response times for fire and rescue services but only for smaller

cooperations, and Blåka, et al. (forthcoming) finding that both workforce and equipment quality declined after public healthcare became inter-municipal. Again, no quasi-experimental analysis using objective quality data has been published.

Overall, given these mixed expectations, we hypothesize:

- H2: Inter-municipal cooperation will increase the speed and accuracy of Housing Benefit administration, especially for (a) smaller local authorities, but less so for (b) non-neighboring and (c) more demographically diverse cooperations.

In addition, organizational disruption in the immediate aftermath of cooperation reforms could affect initial performance. As Koppenjan (2008, p.708) argues, “collaborating parties have to undergo a learning curve, which takes time” (see also Li & Huang, 2023). Merging previously separate service operations may involve turnover of both management and case workers, leading to “brain drain” and problems with morale (Andrews & Boyne, 2012; Wynen et al., 2019). Harmonization of procedures and ICT will mean abandoning familiar routines, for staff and service users alike – placing extra demands on the inchoate partnership to explain changes and correct both administrative and client errors. Thus, we hypothesize

- H3: The effect of inter-municipal cooperation on both cost and quality will be negative in the short run, but positive in the long run.

3.3 Trading-off cost and quality

Lastly, in any public management reform, cost and quality are not unrelated. Savings obtained through cooperation might enable or accelerate the investments in technology that

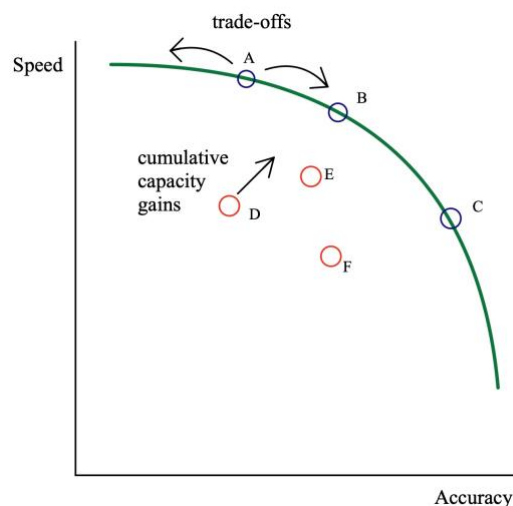
should improve service quality. But cost reductions could also come at the expense of quality, with reforms producing more frugal but lower “value-for-money” services. This trade-off is a particular concern with outsourcing, where undetectable or unpunishable quality reductions provide firms with a possible shortcut to profitability, avoiding the technical challenge of genuine service innovation that improves both cost and quality (Hart et al., 1997; Elkomy et al., 2019). Absent the profit motive, intermunicipal cooperation may be at lower risk of trade-offs (Levin & Tadelis, 2010); though the lack of empirical evaluations of quality means this remains speculative. Moreover, even if the *incentive* for deliberate “quality shading” (Elkomy, et al., 2019) is lower, any *technical impediments* to improving multiple performance dimensions simultaneously are likely to remain.

Various subfields of management theory address this question of whether and how performance gains in multiple dimensions can be achieved simultaneously. A popular strategy textbook argues: “To be good at one thing almost guarantees you not being good at something else. Attempting to be good at everything normally results in mediocrity” (Bromiley & Rau, 2018, p.208). Hood’s (1976, p.152) early work on the “limits” of public administration points to the frequency of “dilemmas” in public service delivery, where “it is impossible to move towards one goal without moving away from another.” In fact, this was a long-standing concern of the Audit Commission (1997, p.8), which identified “tensions between controlling administrative costs and improving accuracy, defenses against fraud and quality of service,” and argued that those councils that managed to contain costs did so “at the expense of adhering to some of the (admittedly complicated) regulations” (1993, p.2).

Research in operations management has made the most progress in understanding technical barriers to multi-dimensional performance gains (Lapré & Scudder, 2004; Swink et al.,

2006), typically by examining cost, quality, flexibility, and dependability in manufacturing. To test whether these attributes trade-off against one another, or, conversely, whether firms can build “cumulative capabilities,” data envelopment analysis (DEA) arrays organizations performing identical tasks on a (for simplicity) two-dimensional space that plots conflicting objectives. An efficiency frontier is constructed by drawing a convex curve that envelops all decision-making units (see Figure 2). Those sitting on the frontier represent the “state of the art,” being, as Swink, et al. (2006, pp.545-546) explain, “equally adept at converting inputs to outputs” (see Organizations A-C in Figure 2). Absent a fundamental technological breakthrough, reforming these units will simply substitute one dimension for another (Swink, et al., 2006). Conversely, organizations removed from the frontier because of inefficiencies (D-F in Figure 2) do not face the same technical constraints as the state-of-the-art cohort, and thus have greater potential for achieving cumulative gains on multiple dimensions by mimicking the behaviors of the best-in-class group.

Figure 2: Hypothesized effect of proximity to frontier on reform potential



Consequently, we hypothesize:

- H4: Inter-municipal cooperation will (a) improve *both* cost and quality when member councils are far from the efficiency frontier prior to reform; but will (b) improve *only* cost *or* quality when members were already close to the frontier.

4. DATA SOURCES AND EMPIRICAL STRATEGY

To test the effect of inter-municipal cooperation on the cost and quality of Housing Benefit administration, we construct a council-time panel dataset for the 2009-2019 financial years (ending March 2020), upon which we perform difference-in-differences and event studies analyses. The majority of cooperations (66 out of 90) were formed during this period, which also represents a (rare) period of relative stability in both the population of local governments (the aforementioned moratorium on amalgamations ended in April 2019) and the availability and consistency of our administrative data.

4.1 Dataset

Our key explanatory variable, inter-municipal cooperation, is a dummy recorded from council committee papers and financial statements, local news coverage, and information requests. Cooperation commencement is dated from the “go live” month (rather than date of reform announcement), and (rare) cases involving only shared management personnel are excluded. Councils that exit their cooperation (just three cases during 2009-19) are re-labeled from 1 to 0 at the time of separation. We also measure the number and identity of cooperation partners, the mode of governance, and whether any other local services (typically, property tax collection) were performed alongside Housing Benefit administration.

We adopt five outcome measures, several with multiple specifications:

The (1) cost of administering Housing Benefit is taken from accounting data published by central government from mandatory, standardized yearly financial returns from councils.

Administration costs relate to the operation of the service (principally, means-testing and case monitoring), and exclude the (much larger) program expenditure on actual benefits paid.

Both employee and running costs are included, net of inter-council transfers.⁴ To avoid our results being skewed by extreme values, we take the logarithm of costs.

Quality is measured with monthly and quarterly performance metrics published by central government, alongside data supplied by the Local Government and Social Care Ombudsman.

Speed of processing (2a) new benefit applications and (2b) change of circumstance updates is measured by the monthly average number of days (including weekends and public holidays) between application receipt and decision. Accuracy is measured retrospectively by the amount of (3a) debt owed to the council due to previous overpayments, (3b) debt successfully recovered from claimants, and (3c) debt written-off as unrecoverable, all per quarter.

Councils that identify more debt (indicating poor case determinations or slow case updating previously), that recover less debt each quarter, and that write-off more debt (i.e., fail to correct prior errors), are taken as administering benefits with lower accuracy. We normalize each figure by the total debt outstanding in each quarter. (Council-level data on under-payments, the other potential type of inaccuracy, is unavailable.) Lastly, we measure user satisfaction, and independent assurance about service quality, by gauging (4) the number of

⁴ Administrative expenditure after inter-council transferred is calculated as: employee costs + running costs – “other income,” this being the category in which central government accounting policy requires councils to indicate inter-council transfers. In rare cases where data inspection reveals that councils misclassified transfers as “income from sales, fees and charges,” we subtract this category instead.

complaints per quarter to the national Ombudsman, and (5) the proportion upheld after independent investigation. Only complaints already considered by the responsible council are eligible for investigation, which is focused on uncovering procedural injustices.

Because council performance is affected by local socio-economic conditions (Andrews, et al., 2005) and caseload complexity (Audit Commission, 2001), we include several control variables. Claims involving children, the unemployed, those on other benefits (IS, JSA and ESA),⁵ or privately-rented housing are recognized as more complex to administer, while pensioner claims (with more stable incomes) are easier. Central government provides monthly council-level data on each of these (via its Stat-Xplore social security dataset), which we weigh by the outstanding number of claimants in each month. We also include earnings per capita to control the macroeconomic condition at the local level.

Table 1 summarizes the data availability and descriptive statistics. We also map the variable averages in Figure A1 to A4 in the appendix.

⁵ Income Support, Jobseeker's Allowance, and Employment and Support Allowance are all out-of-work benefits.

Table 1: Summary statistics and data sources

Panel A: Outcome Variables	Freq.	Data availability	Mean	St. Dev	Obs.
Net admin cost (logged)	Yearly	2009-2019	6.827	0.693	9.526
# Days per case, new claims	Monthly	2009M1-2019M12	21.185	7.917	42330
# Days per case, change of circumstance	Monthly	2009M1-2019M12	8.915	5.798	41966
Debt identified (%)	Quarterly	2009Q1-2019Q4	0.159	0.079	14083
Debt recovered (%)	Quarterly	2009Q1-2019Q4	0.114	0.058	14096
Debt written-off (%)	Quarterly	2009Q1-2019Q4	0.015	0.017	13298
# Complaints to Ombudsman	Quarterly	2012Q1-2019Q4	0.295	0.748	10725
# Upheld complaints to Ombudsman	Quarterly	2012Q1-2019Q4	0.054	0.267	10725
Panel B: Variable of Interest					
IMC	Monthly	2009M1-2019M12	0/1	0.396	42900
Panel C: Control Variables					
Claimants with children (%)	Monthly	2009M1-2019M12	0.846	0.34	42276
Private rented claimants (%)	Monthly	2009M1-2019M12	0.326	0.107	42276
Unemployed claimants (%)	Monthly	2009M1-2019M12	0.188	0.042	42276
Pension-age claimants (%)	Monthly	2009M1-2019M12	0.306	0.068	42252
Claimants in IS, JSA and ESA (%)	Monthly	2009M1-2019M12	0.607	0.069	42276
Earning per capita (logged)	Yearly	2009-2019	10.222	0.216	3473

Principal administrative data sources: Quarterly issues of the Department for Work and Pensions’ “Housing Benefit Speed of Processing Official Statistics,” “Housing Benefit Debt Recoveries National Statistics,” and “Stat-Xplore” benefit statistics; unpublished quarterly case management data from the Local Government and Social Care Ombudsman; annual editions of the Department for Levelling Up, Housing and Communities’ “Local Authority Revenue Expenditure and Financing” statistics; and other controls from the Office for National Statistics.

4.2 Empirical strategy

Given the phased and partial implementation of inter-municipal cooperation across the population of English councils that administer Housing Benefit, we employ a stacked difference-in-differences method (Cengiz et al., 2019; Baker et al., 2022). This treats each cooperation as an individual sub-experiment, around which we compute difference-in-differences between councils affected or unaffected in that specific timing.⁶ We subsequently combine all individual cooperation-based difference-in-differences to estimate effects, monitoring a panel of local authorities at each reform occurrence. For example, let $j = [2009, 2010, \dots, 2019]$ signify the reform time, and let k represent the time before or after adopting

⁶ Since our panel is from 2009-10 to 2019-20, any councils that commenced inter-municipal cooperation prior to 2009 are excluded from our difference-in-differences estimations, to avoid potential bias when comparing the treated and control groups.

the IMC. In this manner, the range of k can encompass $[-4, -3, \dots, 5]$, with negative values indicating times leading up to cooperation event, and $k = 0$ representing the point of reform.

For local authority i , reform time j and k -th time around the reform, we estimate:

$$Y_{i,j,k} = \alpha + \beta \text{treat}_{i,j} \times \text{post}_{j,k} + \gamma_{i,k} + \delta_{j,k} + \epsilon_{i,j,k} \quad (1)$$

Where $\text{treat}_{i,j} = 1$ if local authority is reformed in the event time j , and 0 otherwise. The variable $Y_{i,j,k}$ is the outcome of interest. The indicator variable $\text{post}_{j,k}$ is defined as $\text{post}_{j,k} = 1[k \geq j]$, taking the value 1 post-reform, and 0 before. $\delta_{j,k}$ are reform-specific time fixed effects. Since local authorities can serve both in treatment and control groups multiple times, we estimate the local authority fixed effect $\gamma_{i,k}$ separately for each reform time. We control local caseload characteristics and economic condition. Standard errors are clustered at the local authority level.

While our stacked difference-in-differences control for numerous unobservables and fixed effects, some unmeasured factors may still be associated with reform timing and outcomes, potentially skewing the estimations. For instance, councils that reform earlier may be more compatible with, or more eager for, shared services. Thus, an evaluation of the identification assumption is needed, which involves a standard parallel trend assumption: without reform, changes in the outcomes of interest would be consistent across treated and control councils. We suggest an event study framework that displays trends in treatment effects before and after the reform timing. Specifically, we determine a series of treatment effects starting points in time before the reform event and extending for following points in time afterward. Our event study offers a more adaptable form of baseline regression, allowing the impact to change over time in relation to the reform. The specification is as follows:

$$Y_{i,j,k} = \sum_{l=-4}^5 \beta_l treat_{i,j} \times 1[k = l] + \gamma_{i,k} + \delta_{j,k} + \epsilon_{i,j,k} \quad (2)$$

The impacts beyond +5 and -4 points in time are combined into +5 and -4, respectively. We designate the time immediately before the reform as the omitted group, meaning all coefficients are relative to the difference in -1 point in time. If the parallel trend assumption holds prior to the reform, β_l would close to zero when $l < 0$.

5. ESTIMATION RESULTS

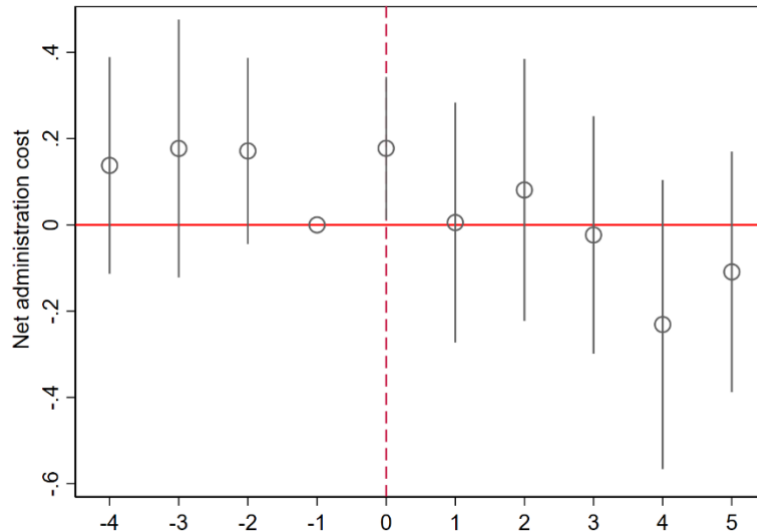
We test the four hypotheses in order, beginning with cost and quality, then turning to dynamic effects, and finally exploring cost-quality trade-offs.

5.1 Cooperation and cost saving

To test whether cooperation reduces the cost of administering Housing Benefit, we begin with an event study, plotting the β -coefficients based on Equation 1 over relative time k , where $k=0$ represents the first period of active cooperation (see Figure 3). Circles represent point estimates, and vertical lines denote confidence intervals. If the confidence intervals intersect parallel lines with a value of 0, the estimates are not significant at the 5 per cent level. Otherwise, they are significant. The period -1 occurs before the commencement of cooperation and serves as a baseline. Consequently, the β -coefficients indicate the extent to which the treatment group experiences a loss (if $\beta > 0$) or gain (if $\beta < 0$) relative to $k=-1$. As Figure 3 demonstrates, cooperating and non-cooperating councils exhibit similar pre-reform trends ($-4 \leq k \leq -1$). However, at the point of collaboration ($k = 0$), administrative costs for treated councils significantly diverge from that of the control group (i.e., the confidence

interval does not intersect the red horizontal line). These losses are a one-time occurrence, with costs gradually decreasing in subsequent years, though not significantly.

Figure 3: Event study: Administrative costs in cooperating vs. non-cooperating councils



Turning to the regressions, columns 1 and 2 in Table 2 confirm our results when employing the stacked difference-in-differences model: cooperation *does not* have a substantial impact on administrative expenditure for the population of local authorities as a whole (contrary to Hypothesis 1). Yet it is possible that smaller councils might benefit from cooperation while larger councils do not. Using median population to distinguish large and small local authorities, column 3 in Table 2 compares the average treatment effect for these groups. Neither result is statistically significant (contrary to H1a). Nor does measuring size alternatively by the number of Housing Benefit claimants or type⁷ of local authority alter these null results (see Table A1 in the Appendix). Finally, column 4 in Table 2 tests whether partnership size (i.e., number of council members) affects financial performance. Again,

⁷ English local government consists of five council types: a two-tier system of district and county councils in predominantly rural parts of the country (with several districts within each county boundary); and then single-tier unitary authorities, metropolitan boroughs and London boroughs elsewhere. Housing Benefit is administered by four of these five types, excluding county councils. Districts councils are far smaller organizations (in policy responsibilities, personnel, and expenditure) than all the other types.

however, the reformist’s argument is refuted, with expenditure reductions actually being more pronounced in smaller partnerships (contrary to H1b), though the effect is insignificant ($p < 0.1$).

Table 2: Stacked DID: Effects of cooperation on administrative costs

VARIABLES	(1)	(2)	(3)	(4)
		Net administration cost		
IMC dummy	-0.0910 (0.103)	-0.150 (0.116)		
IMC × Small council			-0.0232 (0.117)	
IMC × Large council			-0.398 (0.246)	
IMC × Small cooperation				-0.201* (0.117)
IMC × Large cooperation				0.102 (0.380)
Reform wave*Local council FE	Y	Y	Y	Y
Reform wave*Year FE	Y	Y	Y	Y
Controls	N	Y	Y	Y
Observations	22,345	21,396	21,396	21,396
R-squared	0.790	0.791	0.791	0.791

Note: Robust standard errors are clustered at the local authority level.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

5.2 Cooperation and service quality

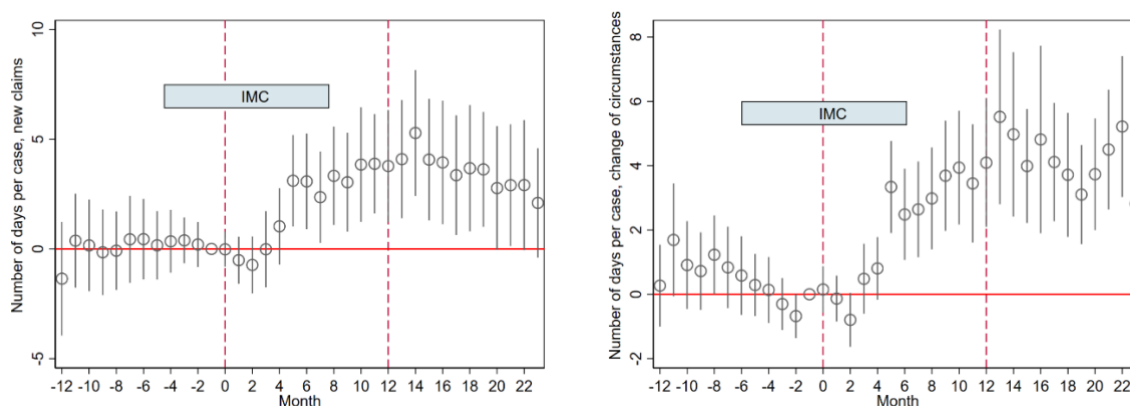
Turning to quality, column 1 in Table 3 analyzes the speed of processing benefit applications. Contrary to Hypothesis 2, processing times for cooperating councils *increase* by an average of 1.43 days compared to unreformed councils, and the result is highly significant ($p < 0.01$). (Note: positive coefficients indicate *more* days being taken, so a *decrease* in speed.) With a sample average time of 21.18 days, speed decreases by over 6 per cent following cooperation. Column 2 repeats the analysis for change-of-circumstance processing. Again, the point estimate reveals a 1.39-day delay after cooperation ($p < 0.01$), now implying an average slowing of 17.61 per cent in processing cases. The event studies in Figure 4 corroborate our findings.

Table 3: Stacked DID: Effects of cooperation on service quality

	(1)	(2)	(3)	(4)
	Speed of New Claims			
VARIABLES	Speed of New Claims	Speed of CoC	Debt Identified	Debt Recovered
IMC Dummy	1.426** (0.699)	1.393*** (0.409)	0.00905* (0.00488)	0.00448 (0.00621)
Observations	1,044,498	1,034,047	250,323	250,407
R-squared	0.428	0.509	0.544	0.544
	(5)	(6)	(7)	
	Debt Written Off	Complaints	Upheld Complaints	
VARIABLES	Debt Written Off	Complaints	Upheld Complaints	
IMC Dummy	-0.000603 (0.00132)	0.0218 (0.0368)	0.0260 (0.0162)	
Observations	237,404	150,820	252,410	
R-squared	0.204	0.398	0.192	
Reform wave × Council FE	Y	Y	Y	Y
Reform wave × Period FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y

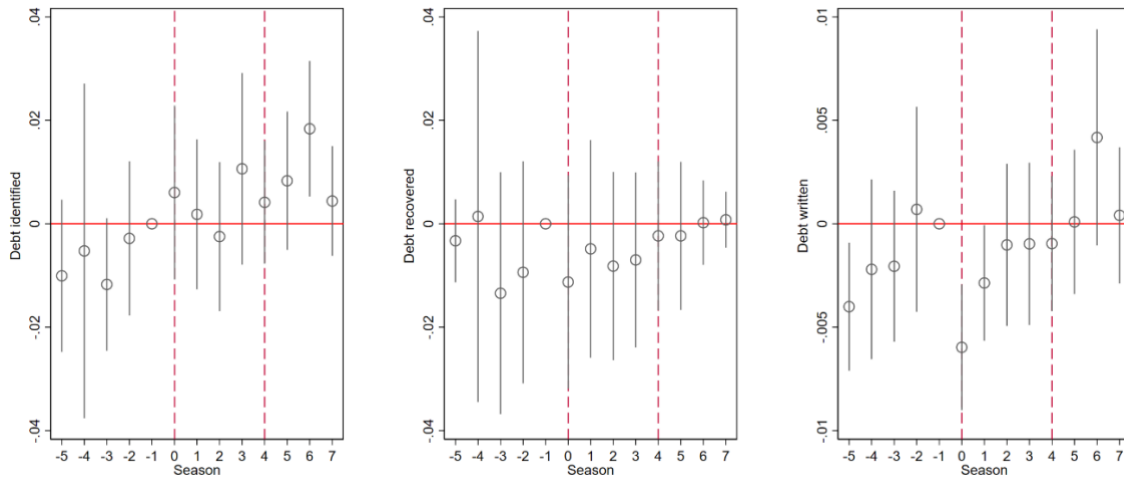
Note: Positive coefficients in columns 1 and 2 means *more* days taken, indicating a decrease in speed. Robust standard errors are clustered at the local authority level. *** p<0.01, ** p<0.05, * p<0.1

Figure 4: Event study: Processing speeds in cooperating vs non-cooperating councils



Columns 3 to 5 in Table 3 assess processing accuracy by examining debt identified, recovered, and written-off (as ratios of outstanding debt) resulting from overpayments. Cooperation is associated with a slight increase in the amount of debt identified (indicating worse accuracy, again contrary to H2), but this insignificant ($p < 0.1$). Neither of the estimates for debt recovered or debt written-off are significant.

Figure 5: Event study: Overpayment debts in cooperating vs non-cooperating councils



As for user complaints, columns 6 and 7 in Table 3 indicate that satisfaction levels and independent judgements on service quality remain stable and unaffected by cooperation.

Overall, our empirical findings indicate that service quality is either reduced or unaffected by inter-municipal cooperation, depending on the parameter. But do these aggregate results masque variation among councils of different sizes or partnerships of differing composition? Consistent with the prior supplementary tests for administrative expenditure (column 3 in Table 2, above), Table 4 compares the effect of council size on quality after cooperation. Columns 1 and 2 indicate that smaller authorities actually experience a more pronounced decline in speed following cooperation (contrary to H2a). They perform similarly on the suite of accuracy indicators (columns 3-5). But, on the positive side, smaller councils receive significantly less complaints after cooperation, in line with H2a.

Table 4: Heterogeneous Effects of IMC on Quality: Councils size

	(1)	(2)	(3)	(4)
VARIABLES	Speed of New Claims	Speed of CoC	Debt Identified	Debt Recovered
IMC × Small council	1.903* (1.058)	1.515*** (0.571)	0.0113 (0.00726)	0.00545 (0.0106)
IMC × Large council	0.820 (0.789)	1.234** (0.522)	0.00617 (0.00593)	0.00326 (0.00336)
Observations	1,044,498	1,034,047	250,323	250,407
R-squared	0.428	0.509	0.544	0.544
	(5)	(6)	(7)	
VARIABLES	Debt Written Off	Complaints	Upheld Complaints	
IMC × Small council	-0.00244 (0.00211)	-0.110*** (0.0283)	-0.0156 (0.00954)	
IMC × Large council	0.00172 (0.00114)	-0.0111 (0.0432)	0.0125 (0.0157)	
Observations	237,404	252,410	252,410	
R-squared	0.204	0.398	0.192	
Reform wave × Council FE	Y	Y	Y	Y
Reform wave × Period FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y

Note: A positive coefficient in columns 1 and 2 means an increase in the number of days, so a decrease in speed (and vice versa). Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

As for whether partnerships between neighboring councils fair better, Table 5 indicates that closer proximity actually worsens both measures of speed (p<0.01) and complaints upheld by the ombudsman (p<0.1, only), contrary to H2(b). Moreover, there is no significant divergence in debt recovery, debt written-off and overall complaints between neighboring and non-neighboring cooperation; but a possible slight difference in debt identification and upheld complaints (p<0.1, only).

Table 5: Heterogeneous Effects of IMC on Quality: Geographically Dispersed Cooperations

VARIABLES	(1) Speed of New Claims	(2) Speed of CoC	(3) Debt Identified	(4) Debt Recovered
IMC × Neighboring Cooperation	1.868** (0.945)	1.739*** (0.532)	0.00877 (0.00636)	0.00504 (0.00885)
IMC × Non-neighboring Cooperation	0.138 (0.847)	0.345 (0.534)	0.0121* (0.00715)	0.00220 (0.00563)
Observations	1,044,498	1,034,047	250,323	250,407
R-squared	0.428	0.509	0.544	0.544
VARIABLES	(5) Debt Written Off	(6) Complaints	(7) Upheld Complaints	
IMC × Neighboring Cooperation	-0.00112 (0.00115)	0.0284 (0.0456)	0.0358* (0.0211)	
IMC × Non-neighboring Cooperation	0.000152 (0.00333)	0.0107 (0.0616)	0.00943 (0.0243)	
Observations	237,404	150,820	252,410	
R-squared	0.204	0.398	0.192	
Reform wave × Council FE	Y	Y	Y	Y
Reform wave × Period FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y

Note: A positive coefficient in columns 1 and 2 means an increase in the number of days, so a decrease in speed (and vice versa). Robust standard errors are clustered at the local authority level. *** p<0.01, ** p<0.05, * p<0.1

Lastly, Table 6 investigates whether partnerships serving more varied local needs perform worse, measured by the dispersion (standard deviation) in the categories of claimants among partners. For cooperations where the dispersion value exceeds the median (i.e., high variety of needs), processing of changes of circumstance is slower (p<0.01), and overpayment debt worsens (p<0.05).

Table 6: Heterogeneous Effects of IMC on Quality: Demographically Dispersed Cooperations

VARIABLES	(1) Speed of New Claims	(2) Speed of CoC	(3) Debt Identified	(4) Debt Recovered
IMC × High Demographically Diverse Cooperation	1.387* (0.724)	1.684*** (0.646)	0.0126** (0.00627)	0.0165 (0.0148)
IMC × Low Demographically Diverse Cooperation	1.442* (0.818)	1.277*** (0.449)	0.00763 (0.00545)	-0.000434 (0.00415)
Observations	1,044,498	1,034,047	250,323	250,407
R-squared	0.428	0.509	0.544	0.544
VARIABLES	(5) Debt Written Off	(6) Complaints	(7) Upheld Complaints	
IMC × High Demographically Diverse Cooperation	-0.00112 (0.00203)	-0.0427 (0.0427)	-0.00410 (0.0152)	
IMC × Low Demographically Diverse Cooperation	-0.000380 (0.00122)	-0.0765*** (0.0266)	-0.00287 (0.00966)	
Observations	237,404	252,410	252,410	
R-squared	0.204	0.398	0.192	
Reform wave × Council FE	Y	Y	Y	Y
Reform wave × Period FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y

Note: A positive coefficient in columns 1 and 2 means an increase in the number of days, so a decrease in speed (and vice versa). Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

5.3 Cooperation and dynamic effects

Because the onset of collaboration is likely to be organizationally disruptive, we now compare short-term and long-term effects across our five outcome measures, using a two-year cutoff to distinguish these periods. The findings in Table 7 partially support Hypothesis 3. Firstly, whereas we previously found no financial benefit from cooperation when looking at the post-reform period in its entirety, now we find tentative signs of costs savings in the longer term (possibly by as much as 22 per cent), though the result is not statistically significant (p<0.1). Secondly, with regards to processing speed, we observe that the initial performance decline for new claims processing diminishes in the longer term, but it worsens for change-of-circumstance processing. The long-term partnership did not lead to distinct

changes in service accuracy. However, they did result in an increase in complaints, reflecting rising resident dissatisfaction.

Table 7: Short vs. long-term effects on cost and quality

	(1)	(2)	(3)	(4)
VARIABLES	Net Admin Cost	Speed of New Claims	Speed of CoC	Debt Identified
IMC × Short Run	-0.0808 (0.126)	2.064** (0.847)	1.257** (0.602)	0.00911* (0.00503)
IMC × Long Run	-0.248* (0.137)	1.389* (0.724)	1.401*** (0.418)	0.00598 (0.00608)
Observations	19,421	1,044,498	1,034,047	250,323
R-squared	0.798	0.428	0.509	0.544
	(5)	(6)	(7)	(8)
VARIABLES	Debt Recovered	Debt Written Off	Complaints	Upheld Complaints
IMC × Short Run	0.00122 (0.00397)	-0.000811 (0.00139)	-0.0194 (0.0349)	0.0264 (0.0169)
IMC × Long Run	0.00557 (0.00928)	-0.000520 (0.00168)	0.0756* (0.0420)	0.0209* (0.0122)
Observations	250,407	237,404	150,820	150,820
R-squared	0.544	0.204	0.398	0.192
Reform wave × Council FE	Y	Y	Y	Y
Reform wave × Period FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y

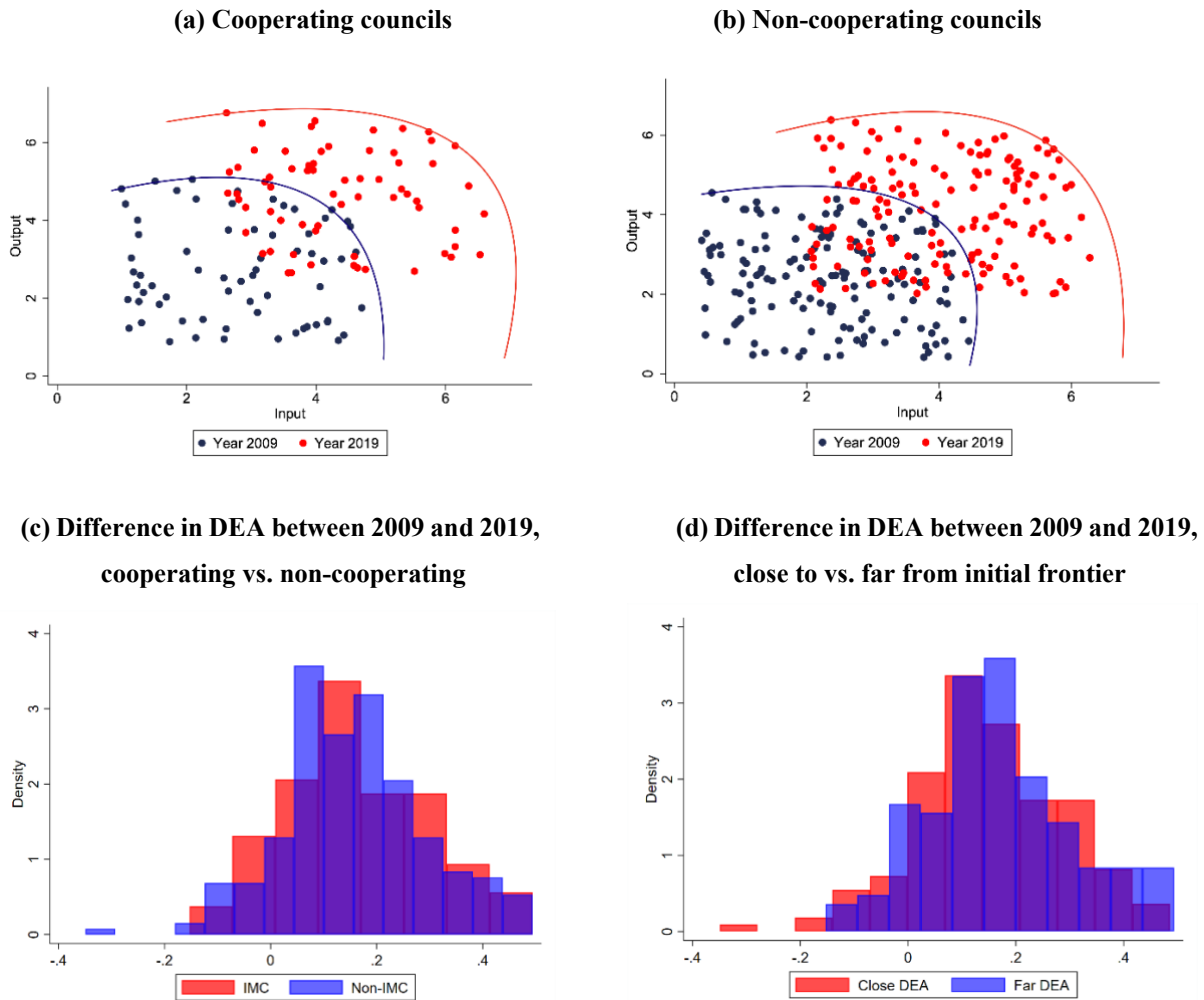
Note: A positive coefficient in columns 2 and 3 means an increase in the number of days, so a decrease in speed (and vice versa). Robust standard errors are clustered at the local authority level. Robust standard errors are clustered at the local authority level.

5.4 Trading-off service cost and quality of IMC effects

Finally, using data envelopment analysis (DEA), we test whether councils' proximity to the efficiency frontier at the outset of the reform period influences their path thereafter in terms of achieving comprehensive gains on multiple performance metrics, or trade-offs. For each local authority in 2009, we estimate a Debreu-Farrell index (Russell, 1985), constructing the output using speed and accuracy only (since complaint data is not available until 2012), and with the input being administrative expenditure. We use median DEA scores in 2009 to distinguish far and close proximity. The frontiers in both 2009 and 2019, and the individual data points representing each council, are drawn in Figures 6a and 6b for reforming and non-reforming organizations, respectively. (Note: the expenditure variable is reversed on the x axis, so that higher scores indicate lower input.) Figures 6c and 6d then graph the difference

between the 2009 and 2019 efficiency scores for reforming and non-reforming, as well as for frontier-close and -far councils.

Figure 6: Original and final frontier illustrated by DEA



Figures 6a and 6b indicate marked improvements in the efficiency frontier between 2009-10 and 2019-20 financial years, for *both* the reformed and unreformed groups of councils. This suggests an increase in value-for-money over time, irrespective of the move toward inter-municipal delivery. (This is consistent with the empirical results presented so far, which, with the exception of processing speeds, broadly found little or no performance *differential* between cooperating and non-cooperating groups.) In addition, the shape of the frontiers in

each time period and for each group is also basically unaltered, suggesting that, at an aggregate level, there has not been a marked re-prioritization of objectives over that time (despite the environment of severe local government austerity since 2010).

Figure 6c confirms that the majority of councils improved their efficiency scores between 2009-10 and 2019-20 (with the centre of the distribution well above zero); but, again, with little or no difference between cooperating (red) and non-cooperating (blue) local authorities. Moreover, Figure 6d compares long-term efficiency improvements between councils that were high or low performing in 2009 (that is, near to, or distant from, the original frontier). Here there is a slight indication that councils further from the frontier to begin with (in blue) gained more over the period, though the difference is marginal.

Turning to our statistical estimations in Table 8, we find no significant difference in performance between cooperators that were “close” to or “far” from the original frontier in terms of cost improvement. However, the previously reported deterioration in processing speeds is largely confined to councils that were initially high performers, especially for new claims and changes of circumstances. Interestingly, only this group achieves a statistically significant reduction in complaints. Consistent with Hypothesis 4, this implies that frontier-councils do experience trade-offs more acutely than others.

Table 8: Effects of IMC on Cost and Quality: Close DEA vs. Far DEA Effects

	(1)	(2)	(3)	(4)
VARIABLES	Net Admin Cost	Speed of New Claims	Speed of CoC	Debt Identified
IMC × Close DEA	-0.197 (0.130)	1.897** (0.752)	1.669*** (0.475)	0.00577 (0.00502)
IMC × Far DEA	-0.0862 (0.112)	0.742 (0.758)	0.992** (0.428)	0.0139*** (0.00531)
Observations	21,396	1,044,498	1,034,047	250,323
R-squared	0.791	0.428	0.509	0.544
	(5)	(6)	(7)	
VARIABLES	Debt Recovered	Debt Written Off	Complaints	Upheld Complaints
IMC × Close DEA	0.00561 (0.00426)	-0.000536 (0.00131)	-0.0728*** (0.0238)	-0.00994 (0.00852)
IMC × Far DEA	0.00285 (0.00960)	-0.000700 (0.00149)	-0.0578 (0.0357)	0.00642 (0.0127)
Observations	250,407	237,404	252,410	252,410
R-squared	0.544	0.204	0.398	0.192
Reform wave × Council FE	Y	Y	Y	Y
Reform wave × Period FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y

Note: A positive coefficient in columns 1 and 2 means an increase in the number of days, so a decrease in speed (and vice versa). Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

6. Discussion

A significant minority of local authorities now administer Housing Benefit through inter-municipal cooperation, in the hope that “up-scaling” should reduce costs and improve quality for this exceptionally complicated means-tested program. But our study, which is among the first to apply difference-in-differences to evaluate shared services in England, and is the first to do so anywhere using objective, multi-dimensional data on service quality, indicates that this faith in “bigger is better” was misplaced in almost every test of performance.

Despite being widely regarded as a cost-cutting reform, we found no significant effect of cooperation on administrative expenditure, either for the full sample or for what might be regarded as the most “prime candidates” for up-scaling – smaller councils or larger

partnerships. Even accounting for initial post-reform disruption by differentiating between short- and long-term expenditure, the financial advantages of cooperation from year three onwards were not significant at the 5 per cent level. Overall, this suggests that labor-intensive and/or highly-coproduced services like social assistance, which lack the high fixed costs of previous evaluation subjects, are unsuited to cooperation. But it is also noteworthy that, after serial amalgamations, English councils are the largest in the world (John, 2010), and so are less likely to operate below optimal scale than councils elsewhere. Consequently, this null finding might not generalize to other, more fragmented local government systems.

Regarding service quality, benefit processing speeds decreased after cooperation, especially for smaller councils and partnerships between neighbors. While the latter is particularly surprising given the likely advantages of partner proximity for communication and service accessibility to users, it is possible that councils opting for non-neighboring partners did so specifically to work with better-performing (if more distant) authorities, or those for whom their “fit” was better in terms of existing technologies or client base. As for performance dynamics, the adverse effect of cooperation on speed not only outlasted the initial post-reform period but also persisted into the longer term. As for service accuracy and complaints, broadly the debt metrics remained comparable across reformed and unreformed groups, and were largely unaltered when splitting the data by council or partnership size, although debt identification worsened for cooperations involving more varied claimants. Complaints to the Ombudsman, and complaints upheld, were also largely unaffected by cooperation, except for smaller councils, which benefited from reduced complaints after reform ($p < 0.01$). Altogether, then: most findings contradict the stated intention of reformers to enhance service quality. Still, it is conceivable that, *internally*, councils mainly regarded shared services as a cost-cutting measure (given national austerity since 2010), with “quality

shading” privately accepted as a likely and unavoidable side-effect. In the event, of course, cooperators achieved no additional savings, yet still appear to have paid the price of reduced quality.

Finally, concerning the overall economic efficiency of inter-municipal cooperation, we find mixed evidence. Long-term changes in efficiency were not influenced by whether councils cooperated or not, as shown in Figure 6c. However, upon considering both reform status and initial efficiency level, cooperators that began our period nearer to the efficiency frontier were more likely to display trade-offs (reduced speed exchanging for reduced complaints to the Ombudsman). And yet, despite lagging behind the “best-in-class” cohort, those further from the initial frontier show only a very slight tendency towards achieving greatest improvements (Figure 6d, above). There are several possible explanations for this. One is that organizations so far removed from the efficiency frontier are unlikely to benefit from fundamental reform unless and until they get “the basics” right. As Schmenner and Swink (1998, p.111) write, “the frontier is largely irrelevant to them. Instead, [organizations] in this condition would benefit more from a cumulative improvement approach aimed at improving infrastructure and operating efficiencies....” Alternatively, a weakness in DEA, perhaps because of its roots in manufacturing research, is that it assumes that non-frontier organizations are necessarily inefficient, rather than that they simply operate in more challenging circumstances. Yet public services research demonstrates the significant impact that variable local environments and task difficulty exert on council performance (Andrews, et al., 2005). Potentially, those councils that remained far behind the frontier did so because the fundamental character of their local service operation – the complexity of the cases they handle, claimants’ ability to co-produce with welfare officers, the nature of local rental markets – are all fixed in medium term, and unaltered by inter-municipal cooperation.

7. Conclusion

Burdening welfare claimants with complex eligibility requirements, document verifications and interview questions necessarily burdens administrators too. As Spicker (2011, p.127) argues, “claiming [benefits] makes considerable demands of claimants and staff alike.”

When welfare organizations handle those procedures poorly, the negative effects of policy complexity on claimants are magnified. Radical policy simplification is one solution to this problem – but for many policymakers, an unthinkable one, lest welfare budgets spiral out of control or the targeting of social spending on the most vulnerable populations be significantly loosened. The other option is to use management reform – in the case examined here, the up-scaling of service provision through inter-municipal cooperation – to improve the capacity for policy implementation, compensating for the lack of flexibility in policy design. Ostensibly, this organizational approach is deeply attractive. It asks for no concession from budget setters or those skeptical about income redistribution. It represents a prime case of what Pollitt (1993, pp.6-10) describes as “managerialism” – “the seldom-tested assumption that better management will prove an effective solvent for a wide range of economic and social ills.” Yet, once that assumption is tested, as it has been in this paper, the feasibility of adopting managerialist answers to problems of policy complexity may be doubted.

Over the 11 years of our analysis, the efficiency frontier for Housing Benefit administration did shift outwards, indicating better value for money in 2019 than in 2009. But we find no evidence that the main reform strategy intended to produce this result “shifted the needle” beyond what unreformed councils could achieve. Moreover, while financial advantage was not confirmed, prior performance gains achieved in the late 2000s in which processing delays

were significantly reduced were, after cooperation, partly reversed – something that the literature on administrative burdens would regard as *increasing* the burden on claimants, given the multiple deleterious effects of slow welfare programs.

Admittedly, this observational test of the benefits of cooperation has not been entirely fair. Scheme rules were further tightened during our period of evaluation, rather than being held constant. It remains uncertain whether cooperation would have fared better in a more benign policy environment, if such a condition were to exist. But, for now, it seems difficult to dispute the Audit Commission's (2001, p.35) earlier conclusion that, "The [Housing Benefit] scheme itself may be too complex to deliver to consistently high standards." Either accepting the status quo of expensive and only incrementally improving implementation, or engaging in radical – and politically fraught – policy simplification, seem to be called for more than a somewhat futile search for drastically "better" management.

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Appendix

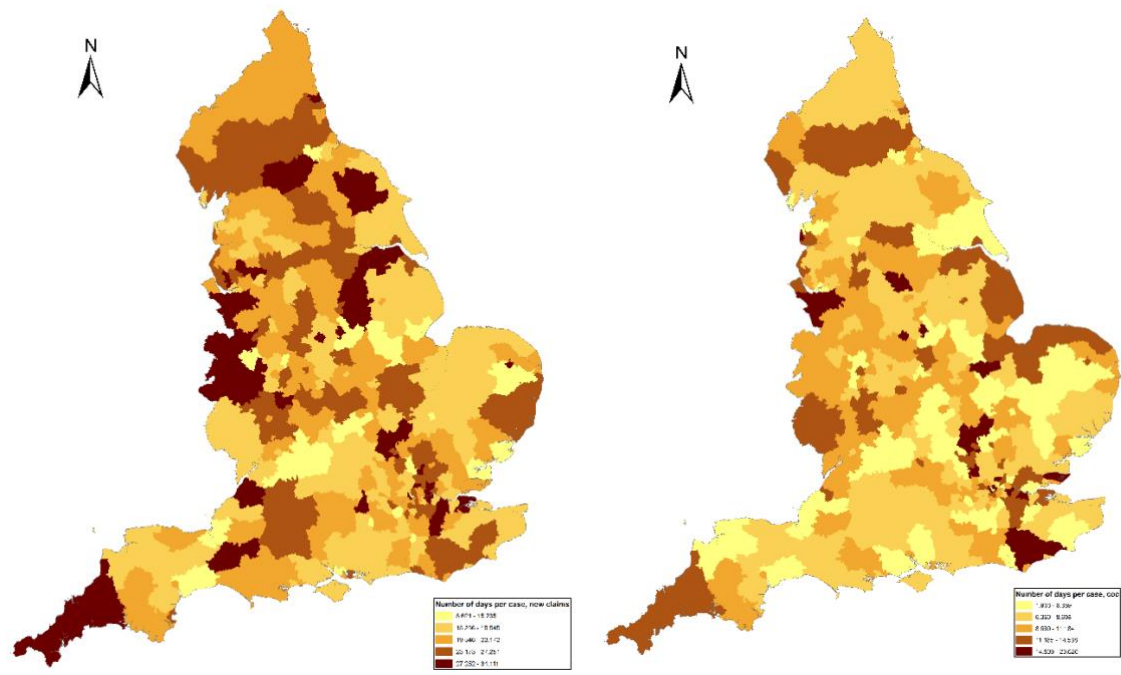


Figure A1: Processing speed on average across year-month and councils

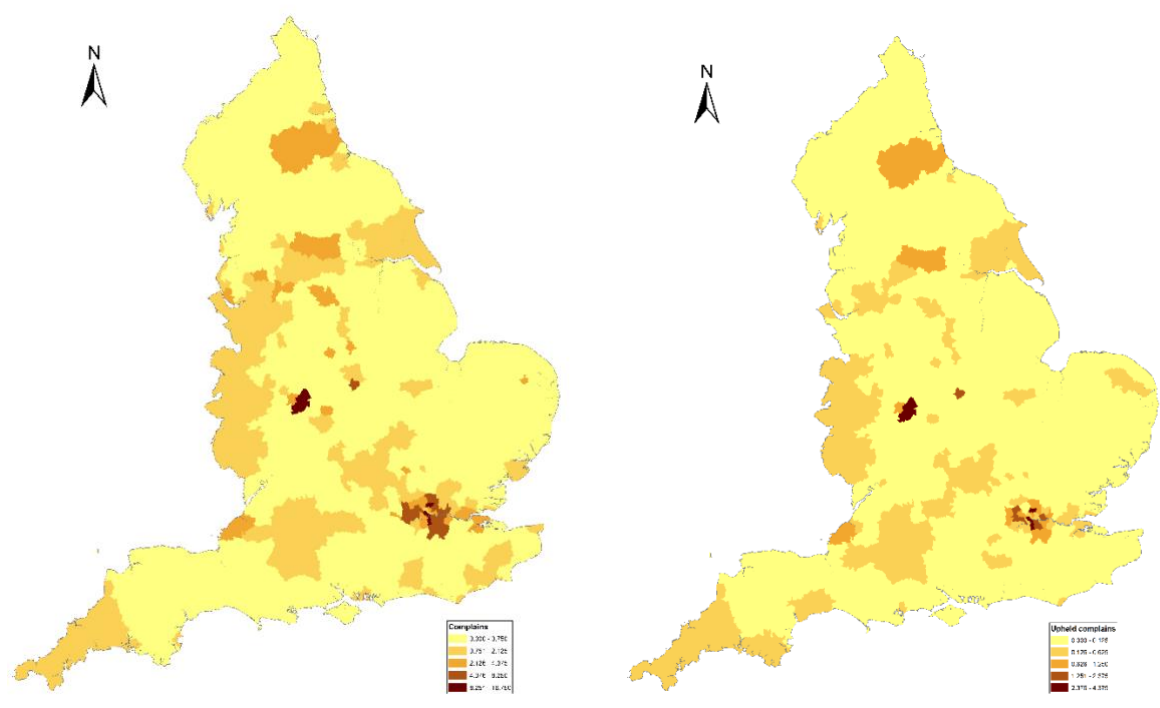


Figure A2: Complaints on average across year-season and councils

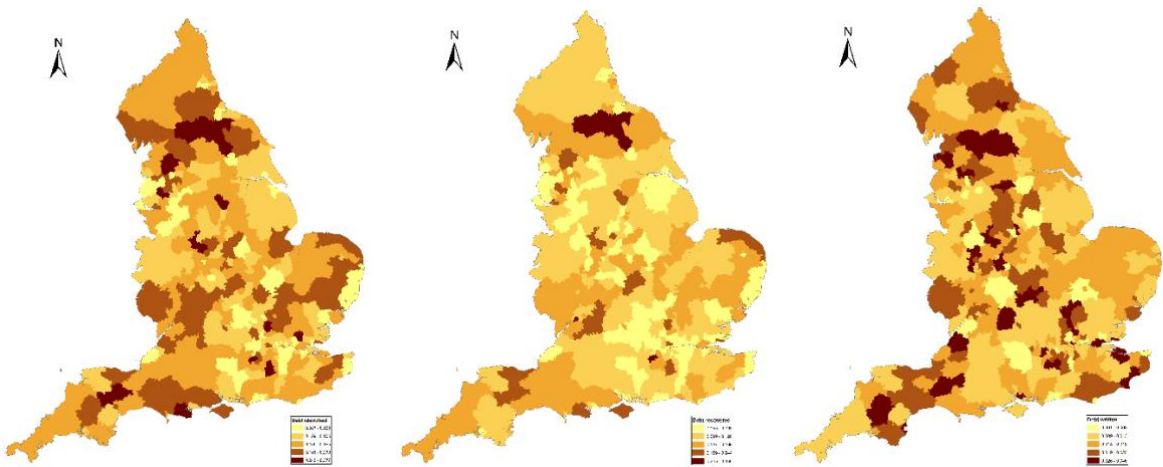


Figure A3: Debt collections on average across year-season and councils

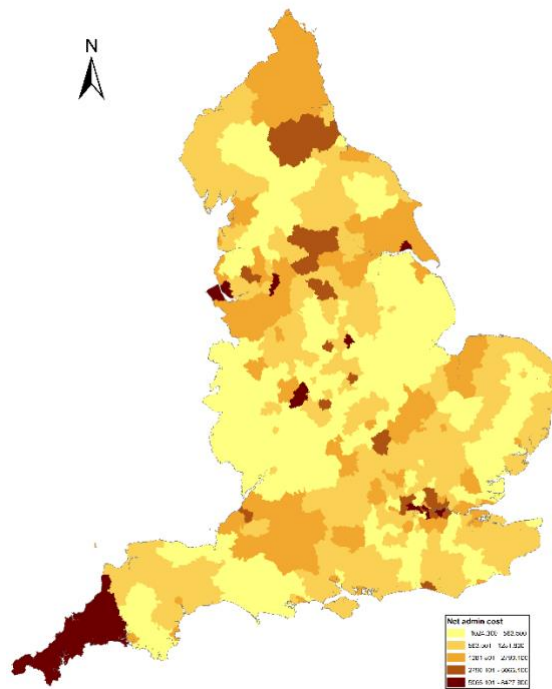


Figure A4: Net administration cost on average across year and councils

Table A1: Robustness check: Effects of cooperation on administrative costs

VARIABLES	(1)	(2)
	Net administration cost	
IMC × Small claimants council	-0.105 (0.129)	
IMC × Large claimants council	-0.245 (0.170)	
IMC × District council		-0.160 (0.129)
IMC × All-purpose council		-0.0678 (0.0787)
Reform wave*Local council FE	Y	Y
Reform wave*Year FE	Y	Y
Controls	Y	Y
Observations	21,396	21,396
R-squared	0.791	0.791

Robust standard errors are clustered at the local authority level.

*** p<0.01, ** p<0.05, * p<0.1