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If it ain't broke, don't fix it: When collaborative public management becomes collaborative excess

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Abstract

Collaboration is a commonly prescribed method of public service improvement. If collaboration fails, blame is typically ascribed to transaction costs, organizational inertia, or premature evaluation. However, drawing on a notable case of collaborative failure in England, we show that misdiagnosing public service problems as being of a type likely to be cured by joint working can also generate poor results, and belongs conceptually prior to many "go-to" explanations of failure. Using stacked difference-in-difference estimators on 11 years of performance data relating to subnational tax administration, we show that inter-municipal cooperation produced no cost or quality improvements in the administration of this public service, contrary to reformer expectations. Supplementary testing attributes this failure less to governance problems, inertia, or precipitate evaluation than to a basic lack of interdependence—the specific "problem" to which collaboration is the "solution"—between partnering councils. Having already exhausted scale economies internally, partners experienced *no mutual reliance* warranting their attempt to further economize through collaborative tax administration.

Evidence for practice

- Inter-organizational collaboration can improve public service performance *only* in situations of material interdependence, in which unilateral action by single organizations is unable to deliver desired goals.
- When external interdependence is present but weak, the costs of establishing and operating inter-organizational collaborations may still outweigh the benefits.
- In the case of inter-municipal cooperation (also known as "shared services"), interdependence can be estimated from the relation between municipal size and service costs. When doubling municipal size is associated with less than doubling of service costs, economies of scale are present. The further a municipality is from the revealed optimal size, the greater its dependence on others to achieve efficiency gains through collaborative up-scaling.
- Where interdependence is non-existent or immaterial, organizations should resist pressures from stakeholders to adopt inappropriate collaborative solutions for their image-enhancing or "feel-good" effects.

[Often] there is a stress on interdependence where in fact none exists. … Agency personnel meet with each other and attempt to coordinate their activities when … there is not sufficient interdependence to warrant it.

–Litwak and Rothman (1970), Towards the Theory and Practice of Coordination between Formal Organizations

INTRODUCTION

Increasing the quantity and quality of joint working among agencies responsible for delivering public services must be among the most oft-repeated of recommendations directed at governments, the world over (Molenveld et al., 2020; Peters, 2015; Trein et al., 2019). Few of us would struggle to name instances of ineffective "join up" based on our own first-hand experience of government services. And it is hard to imagine how many of the biggest public and social policy challenges facing societies today—inequality, care for the elderly, crime reduction, and offender rehabilitation—could be tackled without integrated effort from a whole panoply of actors. So it is that collaborative public management has become "the smart thing to do and the right thing to do" (Stout & Keast, 2021, p. 17), and has assumed pole position as "the predominant approach to solving complex public problems" (Silvia, 2018, p. 472).

Nonetheless, poor integration of disparate organizational or sectoral efforts is but one of many categories of public management challenges. Even when flawlessly executed, therefore, collaboration provides no universal fix-all for public service problems (Huxham & Vangen, 2005; O'Flynn, 2008). Rather, policy interventions need to be closely "fitted" to particular problems, although this is easier said than done. Means-ends uncertainty pervades organizations (March & Olsen, 1976), and analytic capacity is often scarce. Compelling "solutions" may present themselves even *before* problems are identified or understood (Cohen et al., 1972). And pressures for isomorphic adoption of popular (if unproven) management practices, or for symbolic policymaking in pursuit of legitimacy, can be considerable (Ashworth et al., 2009; Campbell, 2021).

In the specific case of collaborative public management, therefore, while much research has rightly sought to explain situations of *under*-collaboration, or "collaboration gaps" (Hamilton et al., 2021), in which social cost arises from a *lack* of coordination between interdependent parties, the converse situation of *over*-collaboration—or collaborative *excess*—cannot be dismissed as a mere logical possibility. Rather, imperfections in decision-making about public management reforms mean that multi-agency collaboration instigated as a wrongful solution, *without there being* meaningful interdependence between partners, is a wholly realistic prospect (as Litwak and Rothman noted long ago)—and one deserving of far greater research attention.

Accordingly, in this article, we enumerate some conditions that might facilitate collaborative excess, and then demonstrate the value of being attuned to this possibility by showing how the demonstrable absence of interdependence helps explain collaborative failure when other, more orthodox explanations prove insufficient. Using stacked difference-in-difference estimators on 11 years of performance data relating to subnational tax collection in England, we show that inter-municipal cooperation produced no cost or quality improvements over independent service delivery, contrary to the expectations of reformers. Supplementary testing attributes this failure less to complex governance, organizational inertia, or precipitate evaluation (all prominent themes in existing literature) than to a basic lack of interdependence—the specific problem to which collaboration is the solution—between England's already super-sized local councils. Having exhausted economies of scale internally, partners experienced *no mutual reliance* on one another warranting their attempt to further economize through collaboration. In short, collaboration failed to "fix" services that were not "broken" in the first place, yet imposed significant disruption along the way.

THE ALLURE OF COLLABORATION

At least four conditions may give rise to collaborative excess.

First is that interdependence between two or more organizations, whereby attaining mutually-desired outcomes or avoiding mutually-damaging externalities is contingent on each other's behavior, is extremely common in the public sector (Bingham & O'Leary, 2008; Peters, 2015). Moreover, interdependence is likely to be increasing due to globalization, changing societal expectations, and the growing specialization of work and organizations (Eriksson et al., 2020; O'Toole, 1997). Agranoff and McGuire (2003, pp. 2, vii) thus speak of "the ubiquity of interdependence," and of "the era of the manager's cross-boundary interdependency challenge." In such a context, instigating more collaboration may be regarded as a "safe bet" for securing public service improvements—without the need for more thorough analysis of the true root causes of performance problems.

Second is the ease with which instances of defective policy integration can be recalled by service users, managers, and commentators alike, and the effect this has on judgments and generalizations about public service improvement. From poor data sharing across bureaucratic silos, to incoherent responses to "wicked issues" like poverty and recidivism, examples of government action manifoldly in need of greater join up are told and retold without hesitation (Peters, 2015). However, ease of

recollection does not predict the likelihood or impact of a performance problem. Indeed, behavioral scientists warn of the dangers of both "availability bias," when probability is misjudged from how easily or vividly an example can be recalled, and "confirmation bias," where evidence contrary to prior expectations is down-weighted (Battaglio et al., 2019; James et al., 2020). Salient (if atypical) examples of coordination failure, or the *a priori* expectation that government is typically poor at policy integration, could thus lead to over-estimation of the prevalence or significance of interdependence, prompting unjustified collaborations. Furthermore, if societies (citizens, politicians, the media) consistently demand "more collaboration" from their governments, public managers may overcompensate by engaging in too many inter-organizational relations, or doing so in domains chosen not for their suitability to collaborative remedy but for their external visibility and potential for "virtue signalling."

A third cause of collaborative excess could be the difficulty of calculating with any precision the actual *degree* of interdependence between agencies (O'Flynn, 2008, p. 191). Collaborators often "discover" their synergies gradually, rather than proceeding with objectives and benefits firmly established from the outset (Ansell & Gash, 2008; Innes & Booher, 2018; Koppenjan, 2008). Quantifying this emergent mutual reliance also presents many additional hurdles. Strictly, the strength of a multiparty dependence inheres in "the opportunity costs of severing the relation" (Baldwin, 1980, p. 501); though, in practice, this is a formidable calculation to undertake. Many partnerships may thus be instigated in response to interdependencies that are poorly understood and where partnership costs and benefits are estimated only very approximately. Moreover, Tjosvold (1986) suggests that interdependence is socially constructed, so that one group may overlook or dispute inter-organizational connections that another regards as obvious or highly consequential (see also Hedlund et al., 2023).

Finally, relaxing the rational-instrumental logic implied so far provides several additional routes to collaborative excess. Behavioral experiments show that managers respond more favorably to positively-framed collaborative opportunities, even if projected success is mathematically identical to those that are framed negatively (Walter & Thurmaier, 2021). Garbage can models also suggest that decision-making is chaotic, and that solutions can appear before problems emerge, rather than after and in response (Cohen et al., 1972). And neo-institutionalists argue that managers seek not only technically-superior production, but legitimacy among the external stakeholders that influence resourcing and organizational autonomy (Ashworth et al., 2009; Campbell, 2021). Thus, rhetoric and framing effects, solutions in search of problems, and symbolic, image-enhancing motivations (Dickinson & Sullivan, 2014; Dixon & Elston, 2020; Jacobsen, 2015), could all produce collaborative excess.

Overall, therefore, wrongful collaboration is not as unlikely as might be presumed; and recognizing this brings both practical and theoretical benefits. Because inter-organizational relations may be highly resource consuming (Huxham & Vangen, 2005), and because they expose partners to new risks (Walter & Thurmaier, 2021) and new interdependencies (Elston et al., 2018; forthcoming), unjustified collaboration incurs opportunity costs. Moreover, if collaborative capacity is finite, forging unpromising inter-organizational relations may prevent and displace more productive ones (Lubell et al., 2010; Scott & Thomas, 2017), meaning that excess in one domain causes collaboration gaps in another. And misdiagnosing public service problems as likely to be resolved by collaboration will delay more appropriate remedies from being sought. As for theoretical implications, collaborative excess implies a new cause of partnership failure, complementing the existing focus on collaborative "drags" or "frictions" (like transaction costs). Specifically, collaborative excess questions the appropriateness of problem diagnosis and reform prescription *in the first place*, rather than the effectiveness (or not) with which that prescription is implemented.

COLLABORATIVE EXCESS: TEST CASE AND HYPOTHESES

Many of the factors that facilitate collaborative excess also impede its empirical investigation. If interdependence is difficult to quantify, how can its absence be registered and its effect on outcomes be tested? Here, our solution is to focus on the particular case of inter-municipal cooperation —an unusually research-*able* instance of public-to-public collaboration, for which, as each subsection below explains, (1) performance can be robustly gauged, (2) degree of interdependence can be calculated, and (3) alternative explanations of failure can be compared.

Evaluating inter-municipal cooperations

Inter-municipal cooperation (hereafter IMC) is a subtype of collaborative public management (Chen & Thurmaier, 2008; Li et al., 2021) in which two or more neighboring or non-neighboring local governments provide one or more public services jointly across their jurisdictions (Aldag et al., 2020; Allers & De Greef, 2018; Ferraresi et al., 2018; Teles & Swianiewicz, 2018). It is often regarded as a substitute for complete municipal amalgamations or for service outsourcing, evaluations of which tend to report disappointing (Blom-Hansen et al., 2016; Blesse & Roesel, 2019; Galizzi et al., 2023) or inconsistent (Petersen et al., 2018) results, respectively. In particular, IMC is adopted in the hope of securing cost savings or quality improvements in local public services through the

generation of economies of scale (Bel & Warner, 2015, 2016), and/or for improved regional coordination and management of common-pool resources and externalities (Klok et al., 2018; Tavares & Feiock, 2018). Both cost and quality were the drivers of reform in our empirical case, and are our focus hereafter.

Providing the same service over a larger area can dilute fixed costs of management or indivisible equipment; lead to volume-enabled specialization of workforce and processes, enhancing productivity; and enable pooled investments in new technologies that exceed the purchasing power of any individual partner (for a meta-regression of studies testing these expectations empirically, see Bel & Sebő, 2021). Many IMCs also purport to improve service quality, although this has received less empirical testing to date (exceptions are Holum and Jakobsen (2016) and Arntsen et al. (2021), using subjective measures of service quality; and Blåka (2017b), Blåka et al. (2023), Elston and Bel (2022) and Elston et al. (2023), with objective measures). Again, it is the increase in scale that is expected to improve service quality; for instance, by enabling more specialist handling of complex cases that occur only infrequently in small municipalities; or by providing better employment prospects to aid staff retention and development.

IMC is an ideal test case for studying collaborative excess, firstly, because outcomes are more easily studied than is possible for many other types of collaborative public management. Vague or emergent objectives, lack of quantified performance metrics, and infrequent or idiosyncratic cases without counterfactuals often impede impact evaluations of collaborative projects (Guarneros-Meza et al., 2018; Hardy et al., 2003; Koppenjan, 2008; Provan & Sydow, 2008; Stout & Keast, 2021). But improvements in service cost and quality metrics are clear, pre-specified, and more-or-less measurable objectives for IMCs. Adoption of such collaborative arrangements also typically involves a change in *mode* of delivery rather than the instigation of new services, providing a pre-reform comparator. And IMCs are usually implemented among only a *proportion* of local government units, again providing evaluative leverage. Thus, IMCs can be evaluated using multivariate econometric techniques (for reviews, see Bel & Sebő, 2021; Bel & Warner, 2015).

Consequently, our baseline hypothesis is that:

> **Hypothesis 1.** *Inter-municipal cooperation reduces the costs and improves the quality of public service delivery.*

Degree of interdependence

Interdependence arises whenever "one actor does not entirely control all of the conditions necessary for the achievement of an action, or for obtaining the outcomes desired from the action" (Pfeffer & Salancik, 1978, p. 40). Interdependence can arise *within* organizations (among teams or departments; see Thompson, 1967), and *between* separate organizations, which creates the need for collaboration (Alexander, 1995; Chisholm, 1989; Gray, 1989). Moreover, interdependencies come in different varieties (Mintzberg, 1979), two of which are especially relevant to public services.

"Task" interdependencies (Elston et al., 2018) occur when the achievement of a complex policy objective (for instance, reducing the rate of reoffending by ex-prisoners) depends upon the mutually-reinforcing actions of multiple service providers (in this case, justice, healthcare, education, housing, etc.). Each agency contributes to an overarching policy objective that none could achieve alone (Agranoff & McGuire, 2003; Bingham & O'Leary, 2014; Innes & Booher, 2018; Peters, 2015). Conversely, when collaboration is intended simply as a means of cost reduction and/or quality improvement, as with the IMCs examined below, task interdependence is a poor descriptor of the underlying motivation. It is not that municipalities lack the jurisdictional competency to solve complex problems that exceed their remit; rather, working jointly is simply intended to lower the cost or increase the quality of production compared with working singly. This is known as "scale" interdependence (Elston et al., 2018; Mintzberg, 1979; Zeemering, 2019). It arises between two or more parties for whom the average unit costs of *joint* production are less than those of independent production. Essentially, the "outcome" that can be achieved collaboratively but not autonomously is a closer approximation of technical efficiency. And, crucially, the further a single municipality is from the optimal scale at which technical efficiency is reached, the more dependent it is on finding a partner—because the "opportunity cost" of not cooperating is higher.

With the meaning and relevant types of interdependence established, we can now turn to the twin problems of under- and over-collaboration. If collaboration gaps are "instances characterized by the absence of collaboration between actors who are interdependent" (Hamilton et al., 2021, p. 461), collaborative excess is the converse situation in which inter-organizational relations arise *without* sufficient interdependence to warrant them. This is conceptually neat but empirically problematic, since measurement of interdependence has traditionally proven challenging, in both organization studies and adjacent disciplines (in international relations, for instance, see Tetreault, 1980). One option is to use survey questions to gauge actors' *perceived* dependence on others (Price, 1997). Another is to count the number of inter-personal interactions between organizations, and infer from this their mutual reliance. Both approaches are problematic since they assume perfect correspondence between the objective condition of interdependence and actors' measured response to it. A third approach is simply to determine interdependence from

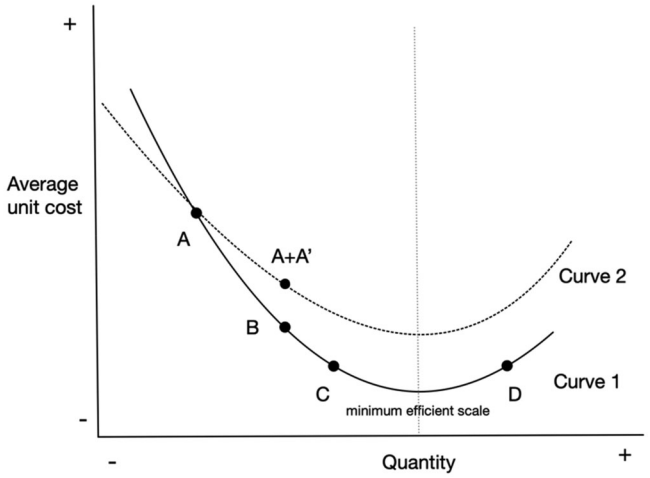

FIGURE 1 Differing interdependence among municipalities of different sizes undertaking the same service delivery, excluding (Curve 1) and including (Curve 2) transaction costs.

the presence of some shared characteristic between parties; for instance, in a study of environmental governance, Hamilton et al. (2021, p. 461) infer interdependence geographically on the basis of jurisdictional overlap. But this too is unsuitable for present purposes, since it reveals little about the *degree* of mutual reliance and the opportunity costs of *in*dependence.

Again, the choice of IMCs as our test case helps overcome this impasse. Because of the clarity of both the objectives that IMCs pursue (cost and quality improvements over the *status quo ante*) and the "theory of change" by which those objectives are achieved (accrual of scale economies until the optimal size is reached), interdependence can be calculated by first observing the cost function of the service(s) performed by the IMC, and then comparing municipal size against the revealed optimal. This is illustrated with the hypothetical cost function labeled Curve 1 in Figure 1, where the U-shaped curve depicts decreasing average unit costs, albeit at a declining rate, up to a tipping point. In this illustration, after this "minimum efficient scale" is reached, costs begin to rise with any further increase in quantity (known as *dis*economies of scale). Thus, Partner A, with the lowest autonomous volume of work, operates furthest from minimum efficient scale, meaning that failure to increase production through collaboration with another municipality carries significant opportunity costs. The same is true for Partner B, although, being larger than A, its opportunity cost of foregoing collaboration is lower. Conversely, the proximity of Partner C to the tipping point is such that collaboration is likely to produce only small gains (which may be eclipsed by transaction costs; see below). As for Partner D, since this already operates above the minimum efficient scale, it holds no external interdependence, at least with respect to obtaining technical efficiency. Any up-scaling will likely *reduce* performance, barring some significant change in the cost function (for instance, through major technological change).

From this analysis of cost functions, collaborative excess is diagnosed as cases of partnership formation in which municipalities are either too close to minimum efficient scale to justify the disruption and transaction costs of participating; or, worse, are already of a scale that matches or exceeds this optimal. And while IMC does involve a level of clarity in terms of objectives, theory of change, and outcomes that is perhaps unusual among other forms of collaborative public management, the selection of this as a test case for understanding collaborative excess follows Eisenhardt's (1989, p. 573) methodological recommendation of selecting cases in which "the process of interest"—in our case, degree of interdependence—"is transparently observable" (see also Hardy & Phillips, 1998).

As for the effect of over-collaborative on reform failure, there are two distinct mechanisms by which low or absent interdependence might undermine performance. First, as already implied, is that the routes to improvement (e.g., sharing indivisibilities, enhanced specialization) have already been exhausted internally. Second is that, if staff recognize the limited probable gain from collaboration, their personal investment and commitment may weaken, or possibly be replaced by resentment at the poor use of their time and efforts. As Ansell and Gash (2008, p. 563) argue, "Interdependence fosters a desire to participate and a commitment to meaningful collaboration … By contrast, where interdependence is weaker, … stakeholders will engage in collaboration with one eye on alternative (noncollaborative) strategies."

Therefore, we specify our second hypothesis thus:

> **Hypothesis 2.** *Inter-municipal cooperation improves performance where there is material interdependence between municipalities.*

Transaction costs, inertia, and delay

The concept of collaborative excess joins an already-crowded literature. It thus seems appropriate to test the concept's explanatory power against three more seasoned accounts of collaborative failure: transaction costs, organizational inertia, and precipitate evaluation.

The cost of making and enforcing contracts and inter-organizational agreements is perhaps the preeminent existing explanation for collaborative failure in current literature (Blåka, 2017a; Scott & Bardach, 2019; Warner, 2015). Transaction costs arise when each party to an exchange seeks to protect itself against bounded rationality (in respect of future contingencies or the abilities and hidden motivations of others, for example) and the risk of opportunistic behavior (Brown & Potoski, 2005; Walter & Thurmaier, 2021). These protections may include undertaking "due diligence" on possible partners, writing

detailed contracts in which provision is made for many possible future scenarios, and undertaking regular monitoring of performance and contract compliance. Because all of these protections expend resources, rational decision-making means minimizing the *sum* of production costs and transaction costs (Williamson, 1985, p. 22). A cooperation that achieves big increases in scale economies, but which is extremely complex to set up, monitor and enforce, may not realize its projected or potential efficiencies, or may even cost more than autonomous service provision (Blåka, 2017a). In other words, the presence of transaction costs means that it is not possible for cooperations to completely replicate the scale conditions enjoyed by larger municipalities, since there are unique costs to joint working. Therefore, and returning to Figure 1, even though the partnership A + A′ on Curve 2, and the autonomous municipality B on Curve 1, deliver the same *quantity* of services, average unit costs are still higher for the partnership.

The extent of bounded rationality and risks of opportunism will differ according to the good or service being exchanged. Those posing greater difficulty in specification or measurement, or those requiring asset-specific investments, will typically induce greater caution and more costly governance protections. But even if service is held constant (as in our empirical test, below), the extent and type of governance regime that partners establish—whether it is complex and convoluted, or more straightforward and streamlined—will still vary according to their appetite for risk and willingness to cede autonomy (Elston et al., Forthcoming), relevant political institutions and traditions (Hulst et al., 2009; Tavares & Feiock, 2018), and, in larger IMCs, whether partners are willing and able to "free ride" on the monitoring undertaken by other partners (Voorn et al., 2019). Hence:

> **Hypothesis 3a.** *Inter-municipal cooperation improves performance where transaction costs are limited by the adoption of streamlined governance arrangements*.

Inability or unwillingness to adapt organizational goals, policies, and routines to meet the requirements of partnership working is also a much-cited source of failure. Such inertia may be a product of what Fleishman (2009, p. 41) calls "general 'inconvenience factors'" of collaboration; or it may reflect a desire to protect autonomy or a difficulty in reconciling the co-occurrence of the individual and joint identities that collaboration entails (Thomson & Perry, 2006). Inertia can lead to collaborations that are superficial or self-contradictory, rather than "genuine," or "true" or "authentic" (Hardy & Phillips, 1998; Innes & Booher, 2018, ch. 3; O'Flynn, 2008; Stout & Keast, 2021). In addition, in shared services specifically, policy and process standardization across the various jurisdictions is essential, since co-location of dissimilar, locally "customized" services offers little opportunity for securing scale economies (Knol et al., 2014). Thus:

> **Hypothesis 3b.** *Inter-municipal cooperation improves performance where organizational inertia is low*.

Finally, there is wide agreement that collaboration offers no "quick fix," and that benefits are only realized over time (Imperial, 2005; Leach et al., 2002; Ovseiko et al., 2014). As Koppenjan (2008, p. 708) argues, "Interactions can hardly be expected to take the right shape and produce results immediately. Collaborating parties have to undergo a learning curve, which takes time" (see also Li & Huang, 2023; Scott & Thomas, 2017). Short-term reform-related disruption is likely to adversely affect productivity. Re-structuring work and workers whilst merging previously separate service operations may involve turnover of both management and personnel, leading to potential "brain drain" and problems with staff morale and anxiety (Andrews & Boyne, 2012; Wynen et al., 2019). And harmonization of procedures and ICT will mean abandoning familiar routines and forging new ones, 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 expect differing short- and long-term effects:

> **Hypothesis 3c.** *Inter-municipal cooperation damages performance in the short term but reduces costs and improves quality in the long term*.

EMPIRICAL CONTEXT

We test our hypotheses on data relating to inter-municipal cooperation in England.

Local government in England consists of five types of council in two vertical arrangements: a two-tier system of "district" and "county" councils in predominantly rural parts of the country, where several districts sit within each county boundary and share policy responsibilities with them; and then single-tier London boroughs, metropolitan districts, and unitary authorities elsewhere, which are "all-purpose" councils that undertake the combined functions of districts and counties. Because English councils serve far larger populations than those in most of Europe or the US, IMC was rare until about 15 years ago, when fiscal tightening and a desire to try alternative reforms to municipal amalgamations prompted an extensive network of cooperations to form (Dixon & Elston, 2020). We exploit this series of voluntary and incomplete reforms to evaluate the effect of collaboration on the cost and quality of public service delivery, concentrating on subnational tax collection, which is among the most frequently "shared" of local services, and one for which long-running, multi-dimensional and nationally-standardized performance data is available.

Councils collect two nationally-legislated taxes on property, of which we focus on the domestic "council tax"

(the other being business rates). This is a charge on dwellings paid by every household (whether owner-occupier or tenant) to the local authority in which the property resides. (In rural areas, district counties are the "billing authority," so county councils are out of the scope of our analysis). Council tax is typically paid in 10 or 12 installments, raises about £31.5bn annually (covering about one-third of local government expenditure), and is distributed by the billing authority to other "precepting" bodies, such as police and fire authorities. The tax is based on the saleable value of the house or flat (categorized into one of eight tax bands), assessed by the UK's national tax authority. Individual councils then determine what charge to levy for a mid-value "Band D" property, with other bands calculated as ratios of this. Some nationally- or locally-specified discounts or additional levies may then be applied for or imposed when specific criteria are met.

DATA AND EMPIRICAL STRATEGY

Variables and data sources

We construct a panel dataset consisting of council-level data on tax collection performance and costs, mode of service delivery (IMC or independent), and local socio-economic conditions. The period 2009–2019 is selected because this encompasses the majority of IMC adoption and provides a (rare) extended interval during which no municipal amalgamations affected the overall population for analysis.

Service quality is measured by the in-year tax collection rate, which is the proportion of monies owed to each billing authority that is received by March 31 each year. This includes prepayments made in the previous financial year but excludes those for subsequent years. It also excludes recoupment of arrears. *Cost* is measured by total expenditure on council tax collection, including employee and operating costs, but net of inter-council transfers (to avoid double counting). Both of these dependent variables are reported annually to and subsequently published by central government.

Mode of service delivery was determined through a trawl of individual council committee papers over the 11 years 2009–2019; and, where necessary, by freedom-of-information requests. Where collaboration occurred, date of commencement and/or dissolution, identities of partners, mode of governance (joint committee or lead authority), and the date of any governance changes were also recorded. Figure 2 visualizes the rollout of IMCs across England, with hashed areas joining IMCs before 2010, red-shaded areas joining progressively thereafter, and white polygons never joining IMCs.

Because local characteristics may affect tax collection operations, we employ several control variables. The *number of properties* liable for tax, and the *proportion subject to either discount or additional levy* (which involves considerable extra work for the billing authority in proving eligibility and calculating changes), are measured from data returns to national government. We also consider the complexity of local tax conditions by controlling the standard deviations of *tax band composition* and *discounted-or-levied* dwellings respectively. And to account for local macroeconomic variations, including those that might affect households' ability to pay promptly, we incorporate council-level data on *population* and *GDP per capita* from the national statistics bureau.

Our final panel includes nearly 300 council-level units from 2009 to 2019. Summary statistics are presented in Table 1. The average population served by district councils is 107,211, while for all-purpose councils it is 255,366. As indicated, tax collection rates are typically high (mean 97 per cent, SD 1.43), providing only limited opportunity to improve service quality (and much scope for deterioration). Nonetheless, by 2019, some 28% of billing authorities were party to an IMC (including 40% of lower-tier "district" councils). And more than half of the panel's IMC observations relate to the more participative (and complex) "joint committee" model of governance, about which we explain more below.

Empirical strategy

Given the staggered and partial rollout of IMCs, we adopt a stacked difference-in-differences research design (Baker et al., 2022; Cengiz et al., 2019). This considers each reform wave as a separate sub-experiment, around which we construct difference-in-differences using local authorities affected and unaffected in that year. We then stack all individual event-specific difference-in-differences to estimate effects on service quality and costs, tracking a panel of local authorities around each reform time (i.e., the IMC commencement year). As such, let $j = (2010, 2011, \ldots 2019)$ denote reform time and let k be years before or after the IMC adoption. Since k is centered around each reform wave, negative values are years leading up to the IMC reform event, and $k = 0$ denotes year of reform. The window covers $k = (-4, -3, \ldots 5)$. For local authority i, reform time j and k-th time around the reform, we estimate:

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

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 (cost or quality). 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 in both the treatment and control groups multiple times, we estimate the local authority fixed effect $\gamma_{i,k}$ separately for each reform time.

While controlling for many observables and fixed effects with this approach, some unobservable factors

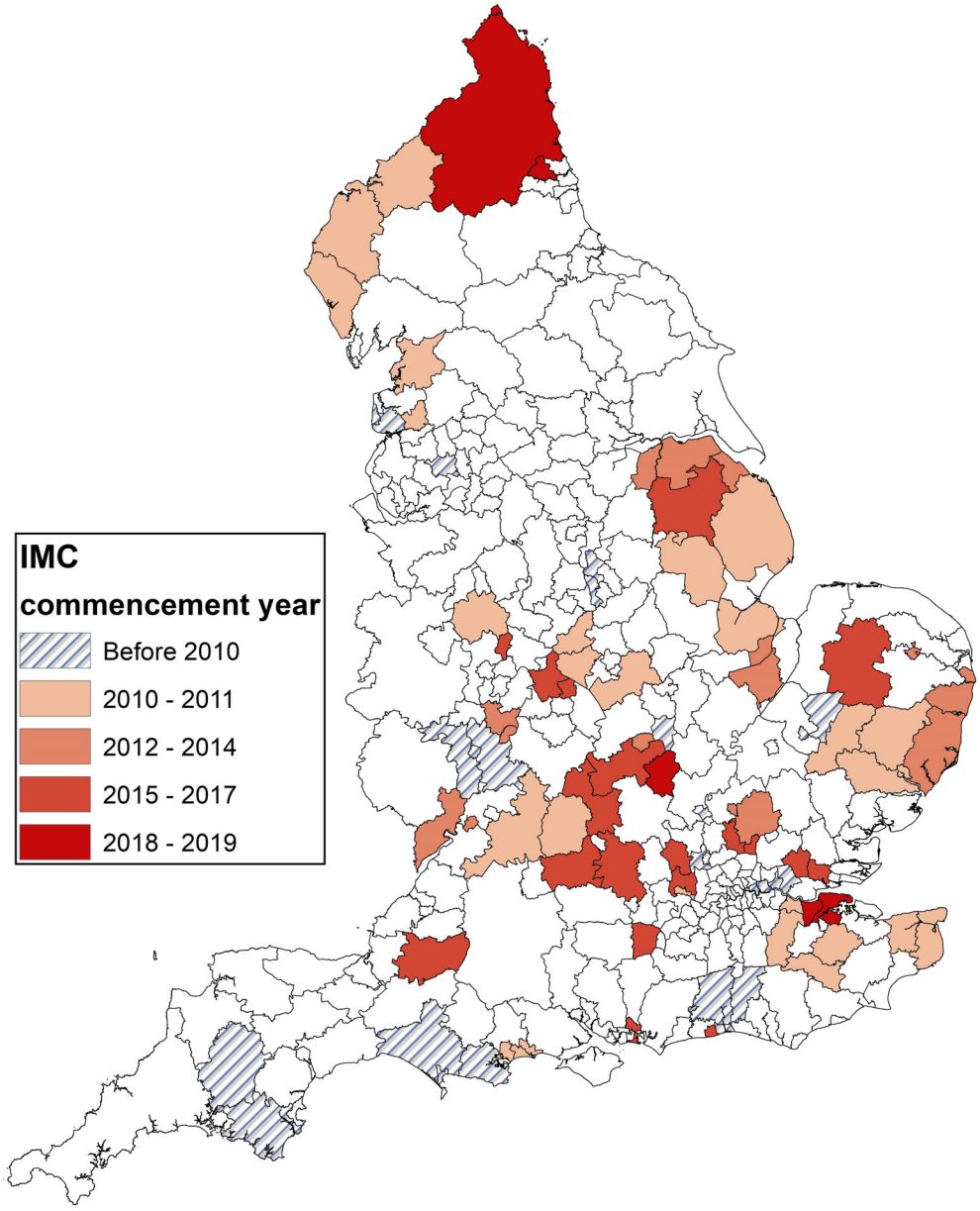

FIGURE 2 Rollout of IMC at the local authority in England from 2010 to 2019.

may still correlate with reform timing and outcomes, biasing the estimation. Councils that reform earlier in the period could be more suited to, or more enthusiastic about, collaboration, for example. Thus, a formal test of the identification assumption is required. As in any DID specification, this is a standard parallel trend assumption: in the absence of reform, growth in the outcomes of interest would be the same across any local authority within the country, conditional on all observables. We propose a flexible DID model indicating trends of the treatment effects before and after the reform year. Specifically, we estimate a set of yearly treatment effects beginning 4 years prior to the reform event and continuing for 3 years thereafter. This is a more flexible form of baseline regression to allow the effect to vary by year in relation to the reform. The specification is as follows:

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

The effects beyond $+5$ and -4 years are grouped into $+5$ and -4, respectively. We set the year just prior to the reform as the omitted group, so all the coefficients are relative to the gap in the -1 year. If the parallel trend assumption holds prior to the reform, $\beta_l = 0$ when $l < 0$.

RESULTS

We first test the effect of collaboration on service quality and costs (Hypothesis 1). Then we examine the pre-IMC cost function in order to test for interdependence or

TABLE 1 Summary statistics.

Variable	Obs	Mean	SD	Min	Max
Outcome variables					
Council tax in-year collection rate	3279	97.34	1.43	89.99	100.00
Expenditure on council tax collection	3277	3173.11	2873.88	112.00	24675.00
Change in Band D council tax (including parish precepts)	3270	1.87	1.75	0.00	28.30
Change in Band D council tax (excluding parish precepts)	3269	0.14	0.34	0.00	14.50
HHI of empty properties discount type (total level)	3032	0.69	0.23	0.13	1.00
HHI of empty properties discount type (band average level)	3032	0.70	0.23	0.34	1.00
Variable of interest					
IMC	3289	0.14	0.34	0.00	1.00
Lead authority model	3289	0.06	0.26	0.00	1.00
Joint committee model	3289	0.08	0.26	0.00	1.00
Control variables					
Population	3169	172736.40	117400.60	6031.00	1141816.00
GDP per capita	3169	57415.28	494371.00	12394.00	9285763.00
# Of chargeable dwellings	3279	71984.75	47328.60	5847.00	429511.00
# Of discount dwellings	3279	25853.49	18644.49	1860.00	166912.00
# Of chargeable dwellings (SD)	3279	9007.34	7746.88	707.88	58700.16
# Of discount dwellings (SD)	3279	4048.63	3926.61	218.25	28333.98

collaborative excess (Hypothesis 2). Finally, we explore the effects of mode of governance, inertia, and time as alternative explanations of failure (Hypotheses 3a–3c).

Impact of inter-municipal cooperation on quality and costs

Table 2 examines the effect of IMC adoption on in-year tax collection rates. For column 1, we include the dummy variable, IMC reform, as the only regressor while controlling for reform wave-by-local authority and reform wave-by-year fixed effects of implementing the stacked DID strategy. The estimation shows that, after a council begins sharing services, its *decrease* in the collection rate is 0.249% more than those that remain non-IMC councils. We include socio-economic variables (population and GDP per capita) and time-variant local tax characteristics (number and composition of chargeable and discounted-or-levied dwellings) in column 2, and obtain similar results. Together, considering its variation is 1.43, collaboration has led to the quality of council tax collection fluctuating downward by about 15 per cent.

As noted, parts of rural England have a two-tier system of local government, with several district councils (each acting as billing authority) sitting beneath each county

TABLE 2 IMC and the effectiveness of council tax collection.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Council tax in-year collection rate					
	All		With gov. type		Across gov. type	
IMC	−0.249*** (0.0775)	−0.216*** (0.0758)	−0.240*** (0.0601)	−0.317 (0.433)	−0.122* (0.0647)	−0.613 (0.483)
Reform wave * Local council FE	Y	Y	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y	Y	Y
Controls	N	Y	Y	Y	Y	Y
IMC sample	All	All	District	All-purpose	District	All-purpose
Observations	23,663	23,185	11,102	6017	10,094	6647
R^2	0.903	0.911	0.857	0.890	0.894	0.855

Note: Robust standard errors are clustered at local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

council. Elsewhere, single-tier (or "all-purpose"/"unitary") councils predominate. To test whether this institutional variation affects our results, we divide the sample into two subgroups and test both within- and across-type effects. The stark difference in significance levels in columns 3 and 4 in Table 2 confirms that the baseline result is mainly driven by the divergence between non-IMC and IMC *district* councils. In contrast, the effect of across types has primarily been weakened. Being far larger and more multi-purpose than small district authorities, unitaries seem better able to withstand the deleterious effects of unpropitious collaboration.[1]

Our difference-in-difference approach requires that, while IMC adoption may not be random, it is uncorrelated with pre-existing differences in performance trends across local authorities after controlling for time-invariant council characteristics, common annual shocks, and other time-varying factors. There is no clear relationship between the amount of under-collected taxes and the determinants of the early-reforming councils. Therefore, even if differentiated trends between treated and control councils exist, the only plausible direction is a downward bias that reinforces our findings.

A further assumption is that treatment and control councils would have evolved along common trends in the absence of the reform. While not directly testable, we can investigate the presence of pre-trends. Figure 3 provides visual evidence for the effects of reform on the effectiveness of tax collection of Equation (2)—a flexible version of Table 2, where β is allowed to vary by each year. The plotted coefficients together with the 95% confidence intervals help to check the pre-treatment balance between treated and control councils. If the annual changes in the coefficients had been on a significant downward trend before the reform, our causal evidence might not be valid.

Finally, Figure 3 shows that the decline in in-year collection rates does not occur prior to collaboration. The coefficients for the years preceding IMC reform are not significantly different from 0. The treatment effect appears immediately in the reform year. The huge jump in the estimated coefficient before and after IMC adoption increases confidence in the validity of our identification strategy, as it would be difficult to explain such a discontinuous increase in the year immediately following IMC adoption as resulting from unobservable trends. We also show the coefficient of the year-by-year effect before and after the IMC reform in Table A5, which further confirms our estimations in Figure 3.

Turning to our second dependent variable, service costs, column 1 and 2 in Table 3 show that the IMC effect on administrative cost savings is negative (i.e., costs increase) at the aggregated level (confirmed by Figure 4). However, by specifying it within and across council types, we find this effect is fully led by the aforementioned difference between IMC district councils and non-IMC unitary councils (columns 5). Although none of the remaining intra- and inter-group comparisons is significant, the direction of the coefficients suggests that IMCs do not reduce service costs (see robustness checks in Figures A1-A4 and Tables A1-A4 in the Appendix.).[2]

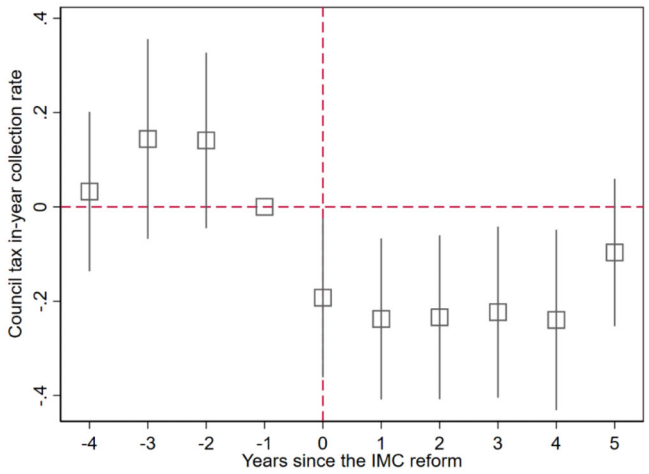

FIGURE 3 IMC and the effectiveness of council tax collection across the years.

TABLE 3 IMC and cost of council tax collection.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Expenditure on council tax collection					
	All		With gov. type		Across gov. type	
IMC	0.0804*** (0.0284)	0.0739** (0.0313)	0.0633** (0.0322)	0.0599 (0.0871)	0.0917*** (0.0353)	0.0504 (0.0944)
Reform wave * Local council FE	Y	Y	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y	Y	Y
Controls	N	Y	Y	Y	Y	Y
IMC sample	All	All	District	All-purpose	District	All-purpose
Observations	23,654	23,176	11,102	6012	10,086	6647
R^2	0.946	0.946	0.869	0.905	0.915	0.876

Note: Robust standard errors are clustered at local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

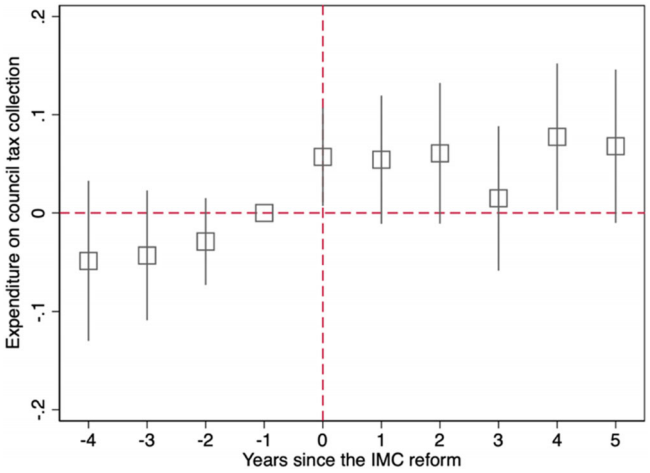

FIGURE 4 IMC and the cost of council tax collection across the year.

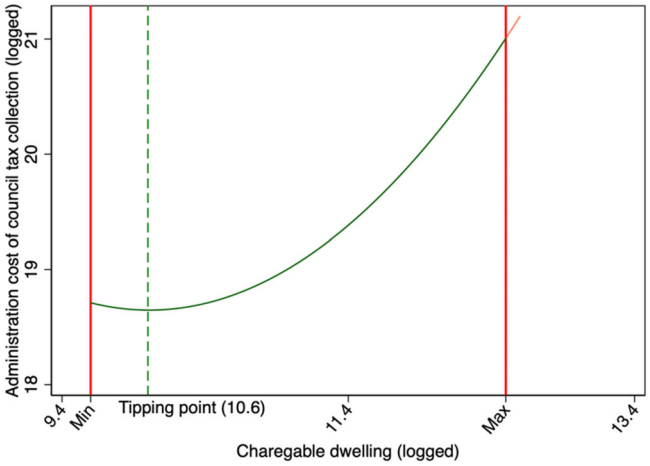

FIGURE 5 Estimated relation between scale and optimal cost of tax collection.

Degree of interdependence

Having established that collaboration failed to achieve cost savings or quality improvements in domestic property tax collection, we turn now to explaining this. IMC reform is predicated on the notion that small local governments fail to reach technical efficiency and so, short of amalgamation, depend upon each other to approach minimum efficient scale by pooling service delivery across jurisdictions. To test this assumption, we analyze the cost function for this service in 2009 before most IMCs were implemented. Following Niaounakis and Blank (2017), who performed a similar analysis in the Netherlands, Figure 5 graphs the estimated relation between expected collection costs and scale (number of chargeable dwellings) using stochastic frontier analysis. This econometric method measures efficiency by estimating the maximum possible output for a set of given inputs, or conversely, the minimum required inputs for a given set of outputs. It has the advantage of quantifying how close a local government is to theoretical maximum efficiency by creating a frontier, and provides a more standardized efficiency measure by comparing each local government to the estimated efficient frontier, rather than to each other. To execute the analysis, we set administration cost as input. We then take the natural logarithm and adopt the maximum likelihood estimates for the parameters of the time-invariant model.

This analysis reveals that the optimal taxbase is about 40,100 dwellings (logged 10.6). Importantly, the smallest council in England is nearly parallel to this optimal, and most actually fall on the right side of the quadratic function, displaying marginally decreasing productive efficiency. Contrary to the "services shared, costs spared" mantra that guided this wave of collaborative reforms (Local Government Association [LGA], 2012), therefore, we find no evidence that most English councils displayed any external interdependence with regard to obtaining cost improvements in tax collection.

Transaction costs, inertia, and time

Turning to the principal alternative explanations for failed collaborations, we begin with transaction costs. Prior research on IMCs tends to distinguish between two types of governance with differing levels of transaction costs: joint organization, in which participating municipalities have an equal say in decision-making about the shared service and, normally, establish a new organization to execute those decisions; and inter-local contracts, where one member of the IMC is contracted by all others to undertake the shared work and is empowered to make most decisions without consultation. The former is thus more participative and complex, and incurs higher transaction costs; the latter is simpler and allows for more streamlined decision-making (Blåka, 2017a; Hulst et al., 2009). As Hulst, et al. (2009, p. 278) explain: "[by] using contractual agreements, municipalities can avoid the start-up costs and costs related to the governance and management of a joint organization, and still create the same economies of scale."

The two main types of IMC governance in England map closely onto these two approaches. "Joint committees" involve participating councils sharing equal voting rights, and may or may not use a new joint organization to execute those decisions. (If not, employees are distributed among each participating council, making the governance even more convoluted.) "Lead authorities," on the other hand, occur when one partner has delegated authority from all others to act as agent. As internationally, this is recognized as far the simpler (albeit less participative) option for IMCs. Indeed, qualitative evidence suggests that some cooperations that began as joint committees subsequently changed to lead authority models in order to reduce governance costs. As one interviewee said, "once the councils had more confidence in the process, we were able to remove that layer of bureaucracy" (see Elston et al., forthcoming).

We thus use this dummy structure to examine if the simpler, "lead authority" governance model alters the earlier negative evaluation result. The insignificant coefficient of the interaction term in Table 4 indicates that governance type does not affect quality or cost improvements under the IMC.

Organizational inertia could also explain underperformance. We test this by examining two areas of tax policy that are (largely) left to individual councils' discretion: rate of increase year-on-year, and empty property discounting. Inertia will be present when, post-IMC, intercouncil variance between partnership members in these discretionary policies fails to decrease compared with the status quo ante. One interviewee told us that, "harmonizing working practices was probably the biggest challenge" in forming their IMC; and a team leader in another said that "the biggest challenge" was "trying to get everyone to understand what [the different member councils] want" (Elston et al., forthcoming). Thus, IMCs where discretionary policies continue to diverge post-collaboration should perform worse than those that achieve standardization across their members.

To infer organizational inertia, we aggregate our treatment at the IMC conglomerate/group level and simulate both their pre- and post-IMC effects. The first outcome variable is measured by the absolute value of change in Band D tax rate. In Table 5, column 1 and 3 reports the baseline specification including and excluding parish precepts (additional charges outside of the control of billing authorities). On average, IMC-reformed councils experienced a reduction in the tax adjustment of between 46.4 to 52.3%. The results also hold when restricting with more controls (columns 2 and 4). Figure 6a,b further demonstrate that our findings persist in each post-reform year. Both results suggest that the IMC councils are more likely to follow a uniform tax standard after cooperation, indicating that inertia is unlikely to explain reform failure.

As a second test of inertia, we compare policy variance across the group of (prospective) council partners prior to and after collaboration in terms of the range and type of empty-home discounts offered. Such policy decisions are of greater consequence for administrative performance than the setting of tax levels, since adjudicating multiple discount schemes that vary by jurisdiction is very labor-intensive. Using data returned by local authorities to national government on the size (percentage deduction, in ordinal categories) and property type (tax band) of empty-home discounts awarded each year, we

TABLE 4 Transaction costs: Lead authority versus joint committee.

Variables	(1) Council tax in-year collection rate	(2)	(3) Expenditure on council tax collection	(4)
IMC*Lead authority	0.0534 (0.131)	−0.0780 (0.126)	0.0219 (0.0488)	0.0180 (0.0487)
IMC	−0.345*** (0.107)	−0.382*** (0.134)	0.0153 (0.0340)	0.0477 (0.0390)
Reform wave * Local council FE	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y
Controls	N	Y	N	Y
IMC sample	All	All	All	All
Observations	1300	1300	1300	1300
R^2	0.879	0.880	0.916	0.911

Note: Robust standard errors are clustered at local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

TABLE 5 Organization inertia: Change in Band D council tax.

Variables	(1) Change in B and D council tax (Include parish precepts) abs value	(2)	(3) Change in Band D council tax (Exclude parish precepts) abs value	(4)
IMC conglomerate	−0.523*** (0.127)	−0.445*** (0.124)	−0.464*** (0.146)	−0.391*** (0.144)
Reform wave * Local council FE	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y
Controls	N	Y	N	Y
IMC sample	All	All	All	All
Observations	23,167	22,742	23,158	22,733
R^2	0.648	0.658	0.666	0.678

Note: Robust standard errors are clustered at the IMC conglomerate/local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

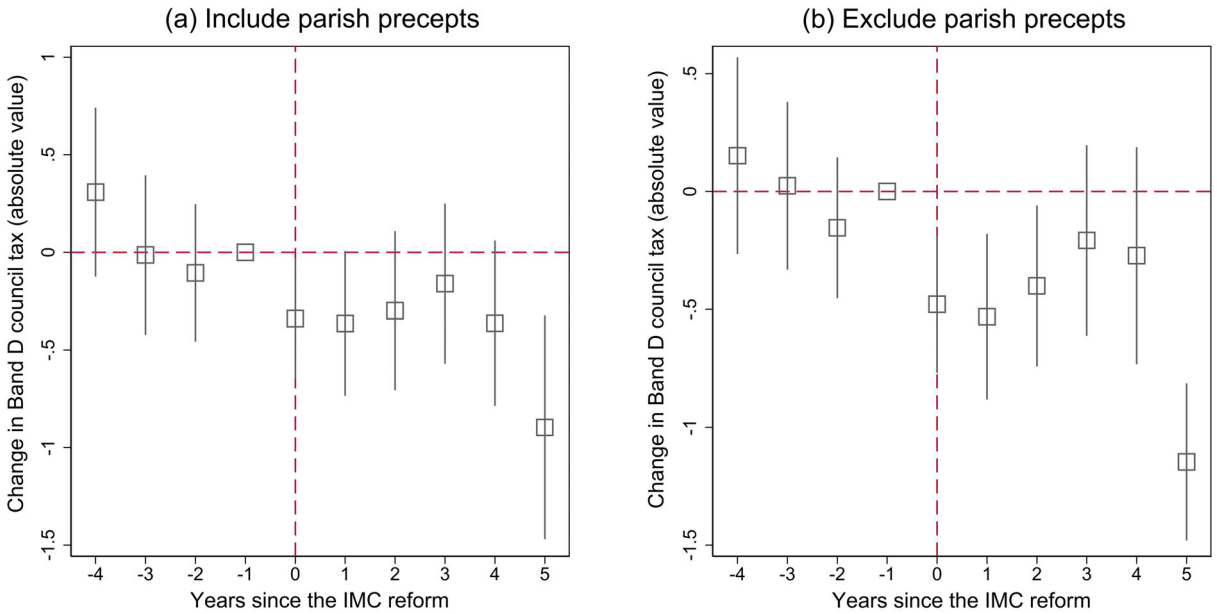

FIGURE 6 IMC and change in Band D council tax across year.

TABLE 6 Organization inertia: HHI of empty properties discount type.

	(1)	(2)	(3)	(4)
	HHI of empty properties discount type			
Variables	**Total level**		**Band average level**	
IMC conglomerate	0.158*** (0.0309)	0.148*** (0.0316)	0.135*** (0.0278)	0.128*** (0.0286)
Reform wave * Local council FE	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y
Controls	N	Y	N	Y
IMC sample	All	All	All	All
Observations	22,041	20,645	22,041	20,645
R^2	0.877	0.876	0.872	0.870

Note: Robust standard errors are clustered at the IMC conglomerate/local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

construct a Herfindahl–Hirschman Index (HHI) measuring the concentration (or not) of discount categories awarded each year across each *group* of (prospective) partner councils. Policy harmonization post-IMC should lead to more discounts being awarded in fewer categories, and thus an increase in HHI concentration.

Table 6 shows that, for both total and band-average discounts, concentration within IMC-grouped councils increased significantly after collaboration, indicating mutual adjustment of discounting policies, not inertia. Data for the 2014 financial year is missing in the government record, meaning that the parallel trends assumption cannot be tested; hence this positive evidence is only suggestive. But even when we scrutinize the concentration of each band respectively (see Table A6 in the Appendix A), our findings consistently indicate that inertia is unlikely to have inhibited performance gains among IMCs.

Finally, given the likely disruption to staffing and routines during the formation of these tax collection IMCs, we compare short- and longer-term effects through a set of cooperation duration cutoffs. We distinguish short-term effects by adopting the IMC duration from 1 to 3 years; whereas the aggregate of the corresponding subsequent years is the longer-term impact. Table 7 shows that this temporal dimension is indeed an important factor, with both the coefficient and significance of our results having a significant short-term decrease. While negative effects disappear in the long-term on some occasions, neither quality nor costs improve in mature IMCs.

DISCUSSION

Collaboration was intended to increase the quality and reduce the cost of domestic property tax collection in

TABLE 7 Precipitate evaluation: Short-term versus long-term effects.

Variables	(1) Council tax in-year collection rate	(2)	(3) Expenditure on council tax collection	(4)
IMC duration = 1	−0.212*** (0.0604)	−0.182*** (0.0625)	0.0838*** (0.0291)	0.0780** (0.0322)
IMC duration >1	−0.259*** (0.0889)	−0.226** (0.0887)	0.0795*** (0.0304)	0.0727** (0.0333)
IMC duration ≤2	−0.223*** (0.0619)	−0.194*** (0.0634)	0.0819*** (0.0293)	0.0848*** (0.0316)
IMC duration >2	−0.268*** (0.101)	−0.232** (0.103)	0.0795** (0.0309)	0.0655* (0.0346)
IMC duration ≤3	−0.226*** (0.0630)	−0.198*** (0.0636)	0.0822*** (0.0296)	0.0815** (0.0320)
IMC duration >3	−0.283** (0.113)	−0.244** (0.116)	0.0779** (0.0322)	0.0619* (0.0365)
Reform wave * Local council FE	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y
Controls	N	Y	N	Y
IMC sample	All	All	All	All
Observations	23,663	23,185	23,654	23,176
R^2	0.903	0.911	0.946	0.946

Note: Robust standard errors are clustered at the local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

England, driven by what one council's business case described as the "economies of scale *inherent* within any shared service." By sharing indivisible factors of production over larger volumes of activity, balancing peaks and troughs in demand across jurisdictions, attaining greater specialization, and securing bulk-buy discounts from contractors, councils hoped to reduce costs *and* increase tax revenue (albeit from high baseline performance) at a time of great financial peril following the 2008 global financial crisis. Our empirical analysis firmly refutes this first hypothesis, however. Following IMC adoption, *under*-collection of property taxes rose compared with both the *status quo ante* and those councils that chose to retain autonomous service delivery, while administrative expenditure at the aggregate level *rose* (attributable to district rather than all-purpose councils).

To explain these results, we first tested the presumed interdependence between councils in securing the desired performance improvements. Using data from 2009, we performed stochastic frontier analysis to estimate that economies of scale would be exhausted with a service volume of around 40,100 dwellings. (This is somewhat larger than the optimal estimated by Niaounakis and Blank (2017) for a not dissimilar set of municipal tax services in The Netherlands.) The vast majority of English councils already operate at a size larger than this minimal efficient scale, unlike many other parts of Europe (e.g., France, Spain, and Italy) and the USA—but not the Scandinavian countries, which similarly tend not to achieve savings from IMC adoption. This indicates that after decades of serial council amalgamations that made English local authorities "larger and larger" (John, 2010), there are in fact no opportunity costs in failing to further up-scale tax operations across council jurisdictions, and thus no external interdependencies warranting collaboration (Hypothesis 2).

Collaborative excess is compatible with other prominent explanations of failure, including those derived from transaction costs, organizational inertia, and premature evaluation. But we did not find differential effects among simpler ("lead authority") and more consultative and complex ("joint committee") modes of governance (Hypothesis 3a). Furthermore, our two tests of policy inertia (discretionary choices about tax rates and discounting regimes) led us to dismiss the possibility that the negative evaluation could be explained by partners' failure to relinquish autonomy and consent to service harmonization (Hypothesis 3b). Finally, we showed that both costs and quality deteriorated in the short term; and, while negative effects disappeared as IMCs matured, they still did not outperform stand-alone production by independent councils. Consequently, the reforms cannot be rationalized as an "invest-to-save" strategy, whereby an initial cost outlay is justified by larger long-term gains.

Study limitations

There are a number of limitations to our analysis. Firstly, we have tested the effect of cooperation on an administratively complex yet highly transactional service, which has low fixed costs (mainly ICT) and requires little regular citizen-state interaction. It is thus uncertain whether our results would be replicated either for local services with higher fixed costs, or for those requiring intensive citizen-state co-production (e.g., welfare services; although see Elston et al., 2023). Secondly, given the extreme size of local authorities in England compared with elsewhere, it might be argued that we have tested the effects of IMC in an unusually unfavorable environment. (A counterargument, of course, is that we have tested the reform where

it has been widely implemented—in England, since the global financial crisis.) Thirdly, our data does not allow us to test differing degrees of cooperation, since IMC is typically an "all-or-nothing" choice without much scope for a middle-way between autonomous and shared production. Thus, in diagnosing the English case as one of "over-" or "excessive" collaboration, we have been unable to test whether a more nuanced change in service delivery arrangements might have proved more beneficial. Finally, while we have used quasi-experimental techniques to attain a high standard of causal identification, we still lack a perfect counterfactual. In particular, some councils may have adopted IMC not to improve their *current* level of performance, but to obviate a *future* decline caused by, say, impending senior staff retirements or changes in national legislation. Such benefits are, however, unmeasurable.

CONCLUSION

Gray (1985, p. 921) suggests that collaboration "make[s] no sense" without there being "some fundamental interdependence" among partners. Other scholars have gone further, inserting interdependence into the very *definition* of inter-organizational collaboration itself.[3] Yet, in this article, we have shown that forging multi-agency relations *without* material interdependence—which we termed "collaborative excess"—is not merely a remote or purely theoretical possibility, like supersymmetric particles in physics or the Carnot Cycle in thermodynamics. Rather, collaborations that are unwarranted by the level of interdependence binding their participants together are a highly realistic prospect given the many imperfections in the way decisions are taken about public management reform. Interdependencies are difficult to observe or quantify. Reform solutions often present themselves precipitately, before performance problems are known or fully understood. And, despite often being portrayed as a rational tool "for solving public problems" (Scott & Thomas, 2017), collaboration also enjoys "an inherently positive moral feel about it" —so that advocating for more joint working is like "arguing for 'mother love and apple pie,'" as McLaughlin (2004, p. 103) writes. Indeed, it seems that collaborative public management has become "institutionalized"—"infuse[d] with value beyond the technical requirements of the task at hand" (Selznick, 1957, p. 17). This turns collaboration into what Molenveld, et al. (2020, p. 12) label "a socially-desirable super-standard," to which all organizations must be seen to comply. Consequently, rather than collaboration being defined by the presence of interdependence, it is imperative that researchers distinguish collaboration from its logical (but not necessarily most probable) cause, and avoid jumping to premature or unnecessarily elaborate explanations for reform failure without first discounting the possibility of problem misdiagnosis and collaborative excess.

Using longitudinal data and quasi-experimental methods, we supported this argument by demonstrating how a significant wave of inter-local collaboration in England was essentially trying to "fix" a public service that, upon closer inspection, was never really "broken." Subnational tax administration was not suffering the effects of suboptimal organizational size in England's already super-sized councils. And, in the short term, shared services actually damaged performance. We have thus shown that collaborative excess helps to explain reform failure where more orthodox explanations of collaborative "friction" (transaction costs, inertia), or premature evaluation, fail to do so.

Inter-municipal cooperation provided a valuable test case for this endeavor, affording transparent observation of both the degree of interdependence (or not) between collaborators and the outcomes of their joint working. But the presence of more emergent and contested goals, and the attendant difficulties of measuring inter-organizational interdependence, will necessitate much methodological innovation if collaborative excess is to be sought out among other subtypes of collaborative public management. Researchers contemplating such a formidable enterprise may seek comfort in the idea that: the greater the challenge of observing and quantifying interdependence, the greater the prospect of uncovering collaborative excess.

ACKNOWLEDGMENTS

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ENDNOTES

[1] But the occurrence of IMC is also notably lower among unitary authorities compared to district authorities. Throughout the duration of our study, the likelihood of unitary or "all-purpose" authorities participating in IMCs stood at 9.4%, whereas the probability of district governments engaging in IMCs was significantly higher at 30.8%.

[2] We also tested whether the results for either cost or quality were affected by the political composition of IMCs, on the understanding that cooperations formed from councils led by the same political party might achieve greater consensus on partnership goals, greater inter-party trust, and so lower transaction costs. But we found no evidence that political alignment affected performance (results available on request).

[3] For instance: "Network collaboration involves enduring interactions between a set of interdependent actors…" (Koppenjan, 2008, p. 700); and "Interagency collaboration can be defined as the formal and informal processes between networks of interdependent agencies…" (Mu et al., 2019, p. 583).

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APPENDIX A

Summary of robustness checks: Figures A1 and A2 confirm that one-off performance problems during the year a council joins an IMC do not bias our results, either for service quality or service costs. Figures A3 and A4 further underscore the consistency of our findings for within council-type estimations over time: IMC adoption is worse for district councils. Table A1 indicates that council characteristics do not impact the IMC reform rollout (see also Dixon & Elston, 2020). Tables A2 and A4 show that incorporating councils that joined IMCs before 2010 (necessarily excluded from our difference-in-difference estimations) does not alter our findings. Table A3 demonstrates that our results for service quality remain consistent whether tax collection is assessed by relative ratios or absolute values. Table A5 reaffirms the persistent effects of IMC adoption over time, while Table A6 confirms that our estimation results for organizational inertia remain valid even when variation in councils' tax discounting regimes is analyzed at the property tax band level.

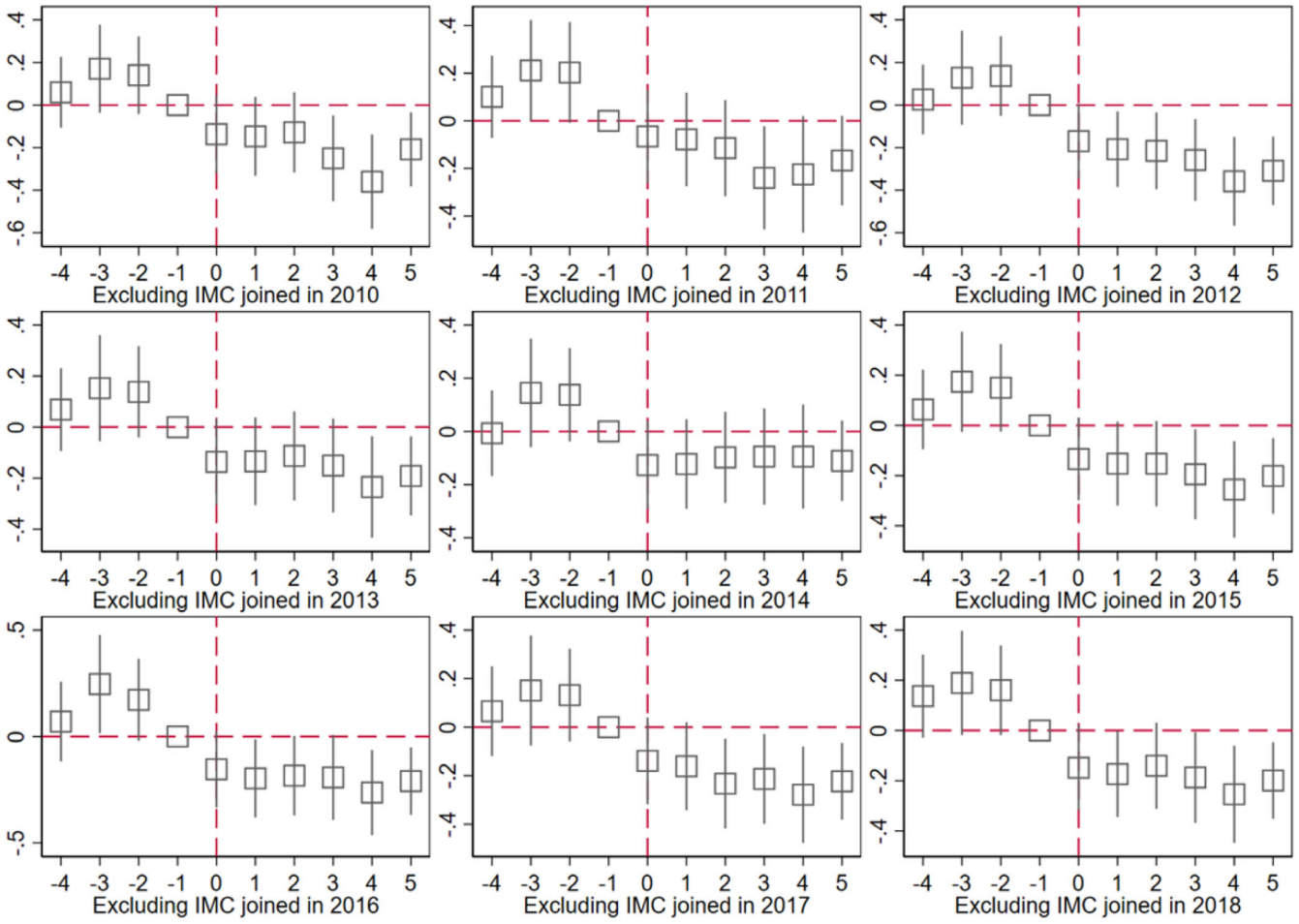

FIGURE A1 IMC and the effectiveness of council tax collection across years, dropping one IMC treatment year at a time.

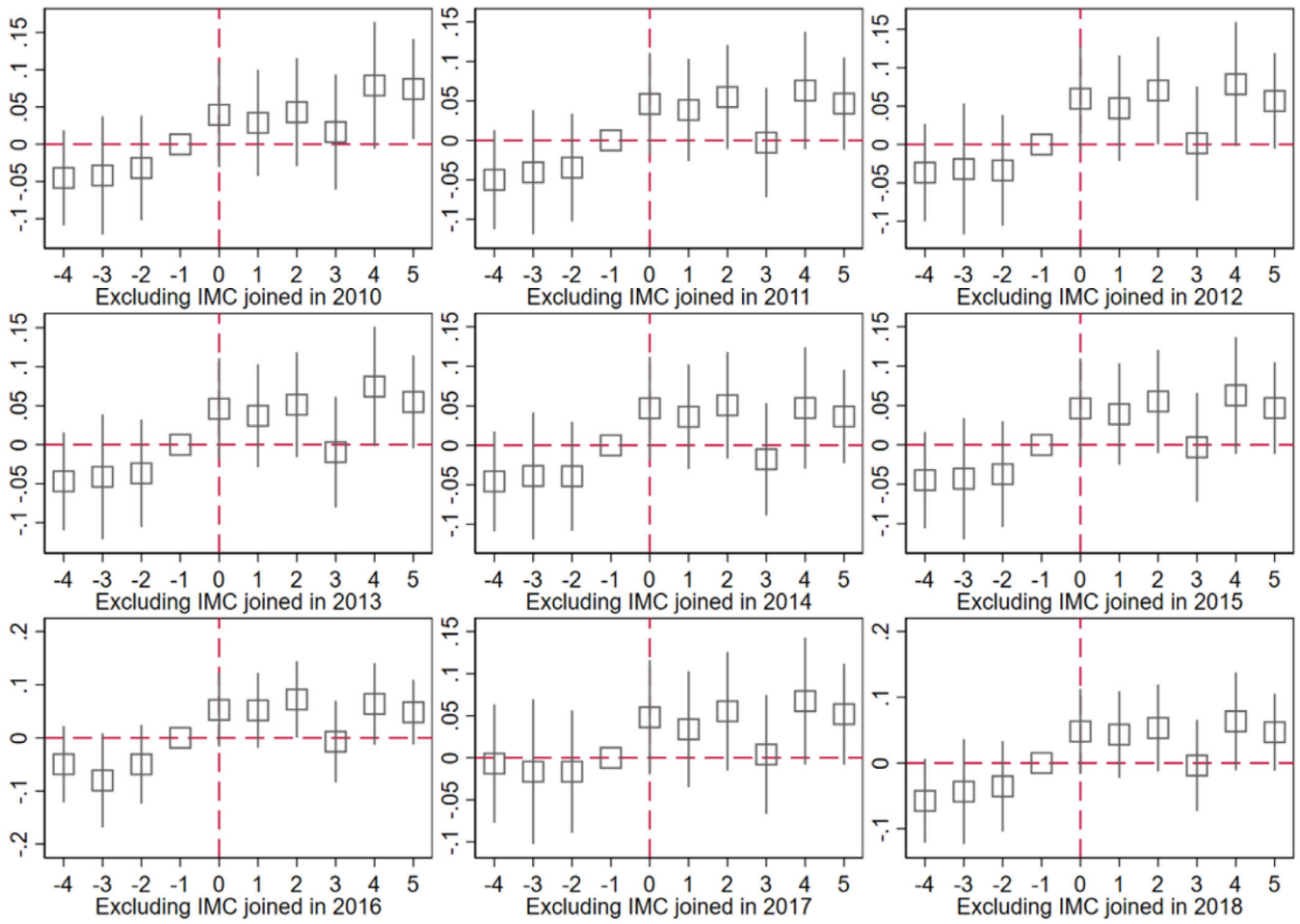

FIGURE A2 IMC and the cost of council tax collection across year, dropping one IMC treatment year at a time.

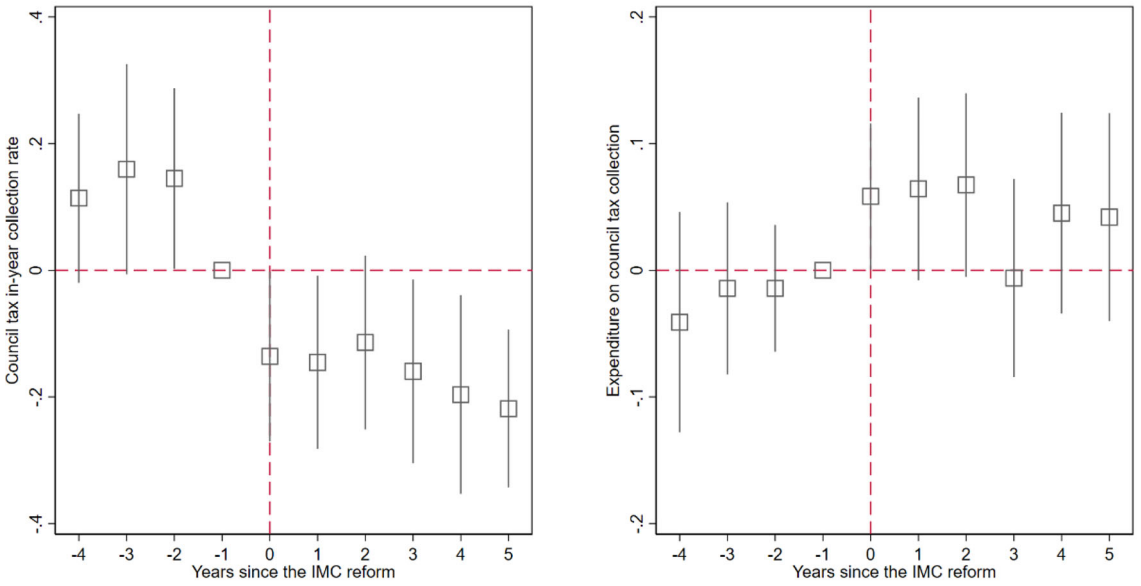

FIGURE A3 IMC and the effectiveness and cost of council tax collection across years, district councils only.

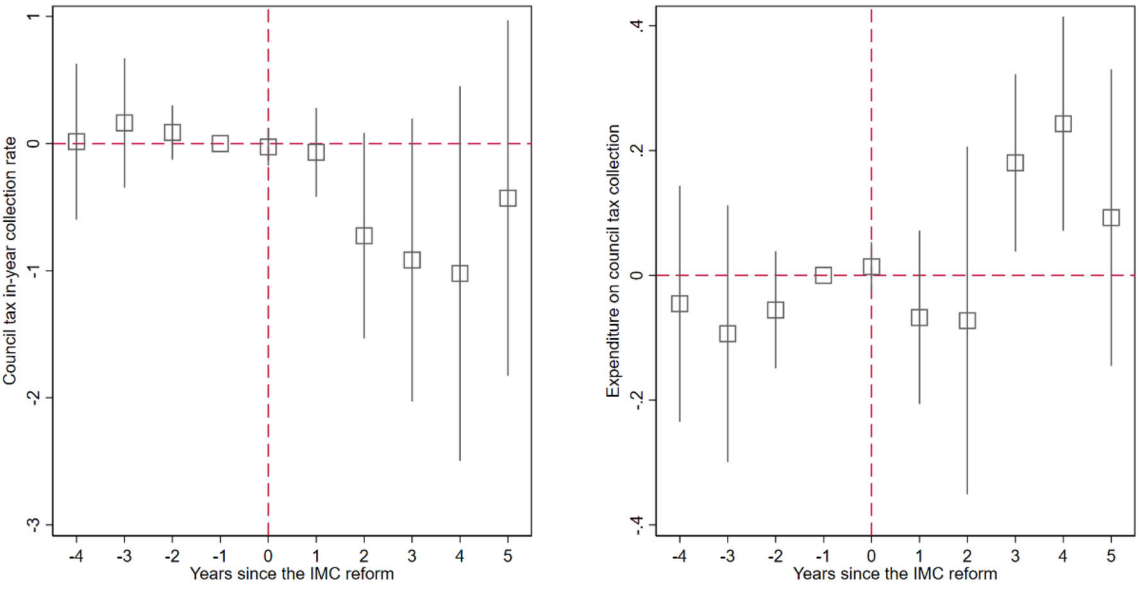

FIGURE A4 IMC and the effectiveness and cost of council tax collection across years, all-purpose councils only.

TABLE A1 IMC rollout year and local authority characteristics.

Variables	(1) IMC rollout year	(2)	(3)	(4)
Council tax in-year collection rate		−0.873 (0.579)		−0.714 (0.711)
Expenditure on council tax collection			1.846 (1.665)	0.635 (2.021)
GDP per capita	−0.917 (1.281)	−0.853 (1.364)	−1.064 (1.493)	−0.925 (1.433)
Population	9.635 (12.06)	7.918 (13.12)	10.21 (13.04)	7.958 (13.36)
Chargeable dwellings	−3.686 (15.15)	−0.0776 (16.42)	−5.452 (16.38)	−0.631 (17.12)
Discount dwellings	−2.453 (6.098)	−4.497 (6.699)	−2.915 (6.384)	−4.541 (6.721)
Chargeable dwellings (SD)	1.637 (4.231)	1.501 (4.390)	1.349 (4.540)	1.386 (4.463)
Discount dwellings (SD)	−2.263 (4.035)	−2.732 (4.184)	−2.430 (4.340)	−2.637 (4.248)
Observations	61	61	61	61
R^2	0.149	0.187	0.176	0.189

Note: This table shows the associations between a list of local authority-specific features and year in which IMC starts before the reform (year 2009). Robust standard errors are clustered at the local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

TABLE A2 IMC and the effectiveness of council tax collection, including local authorities that joined the IMC before 2010.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Council tax in-year collection rate					
	All		With gov. type		Across gov. type	
IMC	−0.249*** (0.0775)	−0.215*** (0.0758)	−0.242*** (0.0602)	−0.313 (0.429)	−0.128** (0.0650)	−0.616 (0.475)
Reform wave * Local council FE	Y	Y	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y	Y	Y
Controls	N	Y	Y	Y	Y	Y
IMC sample	All	All	District	All-purpose	District	All-purpose
Observations	26,493	25,928	12,580	7282	11,446	8038
R^2	0.902	0.910	0.855	0.888	0.895	0.859

Note: Robust standard errors are clustered at local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

TABLE A3 IMC and the amount of under-collected council tax.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Amount of under-collected council tax					
	All		With gov. type		Across gov. type	
IMC	0.110*** (0.0266)	0.0968*** (0.0266)	0.108*** (0.0261)	0.0918 (0.118)	0.0757*** (0.0262)	0.149 (0.132)
Reform wave * Local council FE	Y	Y	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y	Y	Y
Controls	N	Y	Y	Y	Y	Y
IMC sample	All	All	District	All-purpose	District	All-purpose
Observations	23,654	23,176	11,102	6012	10,086	6647
R^2	0.964	0.964	0.884	0.957	0.960	0.888

Note: Robust standard errors are clustered at local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

TABLE A4 IMC and cost of council tax collection, including local authorities that joined the IMC before 2010.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Expenditure on council tax collection					
	All		With gov. type		Across gov. type	
IMC	0.0804*** (0.0284)	0.0738** (0.0313)	0.0636** (0.0322)	0.0602 (0.0871)	0.0929*** (0.0353)	0.0526 (0.0944)
Reform wave * Local council FE	Y	Y	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y	Y	Y
Controls	N	Y	Y	Y	Y	Y
IMC sample	All	All	District	All-purpose	District	All-purpose
Observations	26,483	25,918	12,580	7276	11,437	8038
R^2	0.945	0.946	0.868	0.903	0.917	0.878

Note: Robust standard errors are clustered at local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

TABLE A5 IMC and effectiveness of council tax collection across years.

Variables	(1)	(2)
	Council tax in-year collection rate	
Pre4	0.0425 (0.0853)	0.00645 (0.0823)
Pre3	0.147 (0.107)	0.137 (0.103)
Pre2	0.143 (0.0941)	0.139 (0.0906)
Reform year	−0.194** (0.0853)	−0.157* (0.0822)
Post1	−0.242*** (0.0863)	−0.203** (0.0832)
Post2	−0.241*** (0.0878)	−0.196** (0.0847)
Post3	−0.232** (0.0916)	−0.185** (0.0883)
Post4	−0.251*** (0.0966)	−0.198** (0.0932)
Post5	−0.112 (0.0789)	−0.127* (0.0761)
Reform wave * Local council FE	Y	Y
Reform wave * Year FE	Y	Y
Controls	N	Y
IMC sample	All	All
Observations	3561	3561
R^2	0.888	0.897

Note: Robust standard errors are clustered at the local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.

TABLE A6 HHI of empty properties discount type by council tax property band level.

	(1)	(2)	(3)	(4)
Variables	**HHI at band A**	**HHI at band B**	**HHI at band C**	**HHI at band D**
IMC conglomerate	0.143*** (0.0315)	0.164*** (0.0328)	0.146*** (0.0311)	0.136*** (0.0306)
Observations	20,645	20,645	20,645	20,645
R^2	0.859	0.848	0.868	0.868

	(5) HHI at band E	(6) HHI at band F	(7) HHI at band G	(8) HHI at band H
IMC conglomerate	0.133*** (0.0287)	0.108*** (0.0281)	0.113*** (0.0264)	0.0849* (0.0471)
Observations	20,645	20,645	20,645	20,645
R^2	0.864	0.869	0.792	0.534
Reform wave * Local council FE	Y	Y	Y	Y
Reform wave * Year FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y
IMC sample	All	All	All	All

Note: Robust standard errors are clustered at the IMC conglomerate/local authority level.
***$p < .01$; **$p < .05$; *$p < .1$.