Should Councils Collaborate?

Evaluating Shared Back-Office Administration and Tax Collection Services in English Local Government

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Abstract

Decentralized public organizations have many advantages, but can be inefficient due to suboptimal organizational size and duplication of activities. Selective inter-organizational collaboration may produce economies of scale without undoing the benefits of decentralization, assuming that coordination and re-organization costs are low. We test this popular reform logic using data from all English councils, focusing on shared administration and tax collection. We find no significant benefit from either kind of collaboration.

Keywords

Collaboration; efficiency; local government; shared services; tax administration

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Impact

Shared service policies have been widely implemented, despite any firm research evidence that they are efficiency-enhancing. In one of the first empirical studies of its kind, this article challenges the assumption that sharing administrative and tax collection services invariably leads to cost savings. We describe three conditions that must be met if shared services are to achieve savings, and discuss alternative routes to improved efficiency that avoid the “perils” of collaboration. While the analysis focuses on English local government, our framework offers insights to public managers and policymakers in other jurisdictions and levels of government.

Introduction

Reorganization of local government institutions is often undertaken as part of public sector reforms (Baldersheim and Rose, 2010, Carr, 2004, Lago-Peñas and Martinez-Vazquez, 2013). Expectations of improved efficiency, effectiveness, and accountability have supported diverse restructuring strategies, with both mergers and de-mergers proving popular at different times and in different places. Aside from institutional factors, political choices, and changing fashions, a number of basic administrative dilemmas explain this frequent and inconsistent reorganization at the local level. One is the complex relationship between council size and efficiency, which is sometimes enhanced, sometimes diminished, by increased output (Travers et al., 1993). Another is the difficulty of balancing the cost of decentralized service delivery with the need for accountability and responsiveness to citizens (Andersen, 2011).

Collaboration between councils – variously known as "shared services," "inter-municipal collaboration," and "inter-local agreements" – is increasingly viewed as a "middle-way" strategy for managing these dilemmas (Ostrom et al., 1961, Dollery et al., 2012, Shrestha and Feiock, 2011, Bel and Warner, 2015, Chen and Thurmaier, 2008, Elston et al., forthcoming). Rather than merging organizations wholesale to form larger but more remote authorities, inter-council collaboration in select service areas should bring economies of scale and scope without the perils of overly-large organization or significant loss of local autonomy. This assumes, however, that initial re-organization costs and the on-going costs of bargaining and information exchange in a network are minimal.

Empirical research has begun to test the logic of inter-council collaboration as a route to improved efficiency, mainly by examining joint production of frontline public services with significant capital investments (Bel et al., 2014, Zafra-Gómez et al., 2013, Blåka, 2017). To date, most results have been positive; for example, collaboration between councils was found to reduce the cost of municipal waste collection. However, two of the most popular areas for joint provision – back-office administration and local tax collection – have received little rigorous evaluation, despite significant claims as to their suitability and cost-saving potential (although see Niaounakis and Blank, 2017, Allers and de Greef, 2018). We address this uncertainty by first summarizing and then extending a recent large-scale analysis of

costs in English local government, which has seen extensive adoption of shared service arrangements since a period of significant fiscal retrenchment began in 2010. Our aim is to evaluate whether this popular cost-saving strategy delivered its sizable promises in these two important areas of local authority activity.

Overall, although we find that the efficiency of both administrative and tax collection services increased over the period 2008–2016, in neither case can the improvement be attributed to the use of shared services. Increased efficiency was just as likely among councils that did not collaborate as councils that did, and showed no systematic variation with the degree of collaboration, controlling for a variety of other variables. Against the backdrop of existing literature, these results reinforce the view that different council services should be treated differently when it comes to selecting the mode of provision. There is no "one-size-fits-all" solution, and partnerships which at face value seem sensible can, in practice, prove ineffectual. Determining the cost function of individual services, the resources required for managing the network, and the cost of re-organization provides a basis for forecasting which service areas are most likely to benefit from collaboration.

Our analysis is structured as follows. First, we present the general case for sharing services in local government, and describe three conditions necessary for successful cost saving. Then, in light of these conditions, we examine the potential for sharing back-office administration and tax collection specifically. Next, we present our evaluation methods and results for each kind of collaboration. Finally, we discuss our findings and their implications for future policy and research.

Shared Services: The Argument and its Conditions

Policymakers and researchers often debate the optimal scale for public service delivery in decentralized local government systems (Ostrom et al., 1961, Oakerson, 1992, Lago-Peñas and Martinez-Vazquez, 2013). Periodically, enthusiasm grows for increasing the size of council jurisdictions in the hope of benefitting from economies of scale and scope (Dollery and Crase, 2004). Economies of scale occur when the unit cost of a producing a good or service declines as level of output increases; economies of scope occur when costs fall as the variety of goods and services produced by a single delivery system increases (Andrews and Entwistle, 2013). Growing the size of an organization through merger is a common strategy for

harnessing economies of scale and scope. But when council amalgamation is considered undesirable, often out of respect for local identity or the need for local democratic anchorage and accountability, comparable benefits are expected from inter-municipal collaboration (Ostrom et al., 1961).

Inter-council collaboration is not new, but became more popular in the wake of the global financial crisis and the strain that put on public finances (Elston et al., forthcoming, Raudla and Tavares, 2018). Baldersheim and Rose (2010) refer to such joint provision as the "trans-scaling" of public services (rather than "up-scaling"), while Andrews and Entwistle (2013) describe this as a "softer" kind of aggregation than wholesale merger. As they explain: "In theory, economies of scale can be garnered just as effectively where one or more providers are required to produce outputs jointly, as when those providers are merged to increase the overall scale of the operation" (Andrews & Entwistle, 2013, p.38).

Although the logic behind inter-council collaboration is persuasive, at least three conditions must be met if significant savings are to result:

1. Fundamentally, the public services selected for collaborative provision must exhibit strong economies of scale. Councils are agglomerations of activities, with each element displaying various (positive, neutral and negative) returns to scale depending on, for example, the ratio of fixed to variable costs involved (Oakerson, 1992). Relationships may also be non-linear, with returns to scale slowing at mid-range output (an L-shaped curve) or even turning negative at the highest volumes (U-shaped). These diverse cost functions for local public services explain why wholesale amalgamation of multi-service councils often produces disappointing results (Dollery and Crase, 2004). Yet, collaboration in service areas carefully selected as having cost functions with greatest potential for scale economies holds the promise of a more nuanced reform solution.
2. The added costs of operating in an inter-organizational network must not exceed the savings derived from more efficient service delivery. Members of a network depend upon one another for resources. As a group, decisions must be coordinated, information communicated, and individual interests protected and advanced through bargaining. All of this incurs additional administrative costs – as has been demonstrated in both institutional

economics and organizational sociology (Brown and Potoski, 2005, Elston et al., forthcoming). Thus, for collaboration to produce positive net results, these added "transaction" costs must be less than the "production" cost savings they facilitate.

3. Finally, the practical disruption of re-organizing activities and institutions to enable collaborative provision must not be so great as to delay the realization of cost savings beyond a reasonable period of time (Andrews and Boyne, 2012). For example, ICT systems may need to be modified, new ways of working and organizational structures could be required, and staff redundancy or redeployment schemes might be necessary. Unfortunately, such implementation costs are often underestimated in local government reform (Chisholm, 2002).

Overall, then, theory suggests that collaborative provision of local public services should be more efficient than autonomous service delivery, provided that each of these three conditions – about service selection, coordination and re-organization costs – is met. Conversely, if one or more is violated, inter-council collaboration may have no benefit for local government finances, or even a detrimental effect.

Administration and Tax Collection: Prime Candidates for Sharing?

Back-office administration is generally considered an obvious choice for sharing. As Briskman (2015) observes, "The business case ... often writes itself." In numerous public sectors around the world, personnel, accounting, procurement, and many other support processes are being dislocated from their home organizations and provided to many "clients" under a variety of governance arrangements (Elston and MacCarthaigh, 2016, Paagman et al., 2015). Moreover, alongside this transactional work, there is growing interest in sharing professional and advisory services, such as legal counsel and internal audit (Cabinet Office, 2015). English local government is among the most ardent adopters of both kinds of reform.

What accounts for this international enthusiasm for back-office consolidation? Part of the explanation lies in the private sector, often held as the standard which government should follow. Since the 1980s, many multi-divisional firms have shifted administrative tasks into "shared service centres," claiming significant efficiencies as

a result (Gospel and Sako, 2010). In addition, widespread duplication of back-office functions across agencies, especially after the decentralizing reforms of the "new public management" era, presents an obvious target to public managers looking for opportunities to rationalize. After the 1980s, public services became increasingly autonomous and self-contained, at least in a formal sense (Brunsson and Sahlin-Andersson, 2000). The aim was improved management flexibility and accountability, but two unintended consequences were to remove the scale advantages of larger organizations and to instill a certain amount of duplication (Elston, 2017). Shared administration is a way to overcome some of these problems (OECD, 2015). Finally, in the case of local government, compared to high-salience, public-facing services, re-configuration of back-office processes is considered unlikely to attract public or political opposition (Local Government Association, 2011). The political narrative that accompanied many central and local reforms was to protect frontline public services by cutting back-office costs, particularly in response to the financial crisis (Cabinet Office, 2012, National Audit Office, 2016) but in some cases pre-dating it (Gershon, 2004). These political drivers were accompanied by advances in electronic communication and computerization that made the reforms technically feasible (Margetts and Dunleavy, 2013). All these factors make administration an attractive starting place from which to demonstrate the promise of inter-council collaboration.

Despite this widespread enthusiasm, existing organization theory provides only moderate support for the shared administration model. Many empirical studies find that larger organizations do spend proportionately less on administration than smaller organizations, indicating that administrative work, or a significant part thereof, is subject to scale economies (see review in Donaldson, 2001). However, no studies have examined whether such economies are replicable through collaboration between small organizations. Moreover, there are counterexamples where administrative costs are proportionately higher in larger organizations, indicating diseconomies of scale (Hinings and Bryman, 1974, Daft, 1978). This is because large institutions that perform many different tasks can be more complicated to manage, requiring more, rather than less, administration (Blau, 1970). Furthermore, "administration" is itself a heterogeneous activity with numerous cost functions. Studies indicate that control and coordination tasks readily achieve economies of scale, whereas professional-technical advice and clerical support do

not (Daft, 1978, Ward et al., 1992; for a fuller discussion, see Elston & Dixon 2017). The balance between these different scale effects determines whether an overall economy of scale is achieved.

Together, this research suggests that sharing administrative services may be more appropriate for some elements of the back-office than others. So Condition 1 (strong scale economies) of our three-part framework is likely to be only partially met when considering local government administration as a whole. Similarly, Condition 2 (costs of coordination) may be met more easily under some circumstances than others. If councils build trusting relationships through a history of partnership working, and if they share common objectives, coordination may be easier and less expensive. Condition 3 (implementation costs) will depend on whether partners operate similar or dissimilar technologies and working practices. When these are more aligned to begin with, the disruptive effects of collaboration should be less. Overall, therefore, and in light of our three conditions, literature provides moderate but not total support for the hypothesized benefits of shared back-office administration.

Conversely, the logic for councils sharing tax collection operations is perhaps more straightforward. Economies of scale occur when indivisible factors of production receive fuller utilization, when increased volumes mean that contracts with suppliers can be negotiated more advantageously, and when greater workload allows specialization of method and personnel (Shepherd, 1990). All three sources can be reasonably expected to apply in the case of local tax collection. Tax collection uses extensive information technology, which has to be bought, maintained, and upgraded (Hood and Dixon, 2015, ch.5, Dunleavy and Carrera, 2013, ch.4). This ICT represents a significant “indivisibility” that is ripe for fuller utilization (and cost dilution) across localities. Moreover, in central government, there is some evidence that recent productivity gains in tax collection are partly attributable to earlier investments in ICT (Dunleavy and Carrera, 2013). Collaboration between councils could enable significant new investments in expensive ICT so that similar gains are possible at the local level. Finally, tax administration is a bureaucratic activity likely to benefit from subdivision and specialization of personnel. Thus, Condition 1 should be met in several respects.

As for Condition 2, the tax code specifies activities to a significant degree (Niaounakis and Blank, 2017), resulting in organizations of the “machine

bureaucracy" type with clearly defined and rigidly enforced procedures (Dunleavy and Carrera, 2013). Moreover, compared with other areas of public management, success or failure in tax administration can be evaluated with relative ease (as we discuss below). Ease of specification, observation and performance measurement all favour a low-transaction-cost environment (Brown and Potoski, 2005). Hence, the network costs of information exchange, coordination and bargaining in tax-collection collaborations should be relatively low (Condition 2).

Finally, if this policy specificity translates into inter-council similarity of tax collection methods and procedures, Condition 3 may also be met, since standardization should make the move to collaborative provision relatively straightforward. (Contrast this with the implementation of shared back-office administration, where there is no such sizable body of law specifying and standardizing how councils operate their administrative processes.)

This optimistic assessment of the potential for local tax administration to meet the conditions necessary for successful inter-municipal collaboration is borne out by recent research in the Netherlands (Niaounakis and Blank, 2017). Niaounakis and Blank find that: first, there are economies of scale for municipal tax collection, albeit these are exhausted once 30,000 properties (approximately 60,000 inhabitants) are served (Condition 1); second, that there is no significant difference in service costs between large municipalities which serve these populations autonomously and groups of smaller municipalities that achieve the same scale collaboratively, indicating that coordination costs between network members are low (Condition 2); and third, that disruption effects are present, but only last for one year after a council joints a shared tax arrangement (Condition 3). Thus, while the academic literature on scale economies in tax collection is far less developed than the many studies on administrative resourcing in organizations, the available evidence leads us to expect that collaboration in tax collection will result in greater efficiency gains than the sharing of back-office administration.

Finally, there is a question about whether sharing services will not only improve efficiency, but also effectiveness. The critical mass afforded by sharing administrative and tax services between multiple organizations may mean that functions become more professional, better able to implement best practices, and better supported with state-of-the-art IT (Reilly, 2000). On the other hand, collaboration might obscure accountability pathways and thus lower performance

(Page, 2004, Callahan, 2006, Reilly, 2000) Addressing these issues fully is beyond the scope of this article, but one measure of effectiveness – the council tax collection rate – is recorded annually and allows an initial analysis of this important rationale for reform.

Empirical approach

English local government is an ideal case for evaluating whether sharing back-office administration and tax collection improves efficiency. English local authorities have been subject to considerable budget cuts since the financial crisis of 2007-08, accelerating the need to reduce costs through changes to working practices (Hastings et al., 2015, Fitzgerald and Lupton, 2015). Of the 353 councils in total, over 95 per cent participated in one or more partnership in 2016, covering a wide range of frontline and back-office activities (LGA, 2016).

The measures of efficiency (our dependent variables) for the two evaluations come from the Local Government Revenue Expenditure statistics for financial years ending 2008 to 2016. The relevant categories of expenditure are: for back-office administration, gross costs of “Management & Support Services” compared to total council spending; and for tax collection efficiency, real-terms costs of council tax collection per chargeable dwelling (DCLG, 2016a, 2016b). The average annual change in these ratios for each local authority was calculated as the slope of the natural logarithm of the annual values from 2008 to 2016 and transformed using an arcsinh function to improve normality (Thode, 2002). The additional dependent variable for the effectiveness analysis was the council tax collection rate (DCLG, 2016a).

The main independent variables derive from the 2016 edition of the Local Government Association’s “Shared Services Map” dataset (LGA, 2016). This is produced from questionnaire responses from council managers, and covers 96 per cent of English local authorities. By coding the dataset, we produced an index of English councils’ participation in shared administrative activities and a binary variable reflecting their participation or non-participation in tax collection partnerships. To allow for a lag period before collaborations were likely to produce cost savings, only partnerships entered into between 2004 and 2014 were included in the analysis. In order to control statistically for other sources of inter-council variation, additional

demographic variables were obtained from the Office of National Statistics (population, population density, deprivation score, and ethnic and age diversity, transformed where necessary to reduce skewness).

A change-score analysis (Allison, 1990) using ordinary least-squares regression was used to relate the relevant dependent variables to the index of participation in back-office and tax shared services, as well as the other explanatory variables. As local authorities typically participated in several partnerships with different (and sometimes unknown) starting dates, this method allowed us to analyse the cumulative effect of shared service participation on the long-term change in administration and tax-collection costs. Analysis was performed with the R statistical package (R Core Team, 2012).

Results

The characteristics of English councils are shown in Table 1. Local authorities are either single-tier (metropolitan districts, London boroughs, and unitary authorities) or two-tier (shire counties and their associated shire districts). Only four of the five types of council have tax-collecting responsibilities; shire counties were thus excluded from the tax analysis. The population of councils was relatively stable during the period of analysis, although in 2009 seven shire counties and thirty-seven shire districts were amalgamated to become nine new unitary authorities. In the table, shire districts (lower-tier councils) are shown separately from the other types of council as they have rather different characteristics and responsibilities and generally serve much smaller populations.

>>> TABLE 1 ABOUT HERE <<<

Shared back-office administration

Full results and discussion of this first evaluation are published separately (Elston and Dixon, 2017), and here we provide only a brief summary along with new graphs to aid comparison with the tax analysis below.

We compared changes to administration costs in local authorities with the extent of participation in shared administrative activity, both as a whole and differentiated into two broad types: transactional and clerical tasks, and professional

and advisory work. We found that administration costs fell on average relative to total spending across the period 2008–2016. The size of this reduction varied by council type, with, in particular, district councils showing a greater relative fall than did other types of council – though from a much higher baseline – as shown in Figure 1a. However, there was no evidence of a relationship between the degree of participation in shared services and the change in relative administration costs, either for all councils taken together, or for upper and lower-tier councils separately, as demonstrated by the near-horizontal best-fit lines in Figure 1b. (This finding was robust to the inclusion of demographic control variables, and also to various definitions of the dependent variable based on staff and/or non-staff costs). Finally, the type of shared administration ("clerical" or "professional") had no impact on the change in administrative spending. Overall, therefore, we concluded that, while the ratio of administrative to total costs has, on average, fallen slightly since 2008, councils that shared back-office services were no better at reducing that ratio than those that did not.

>>> FIGURE 1 ABOUT HERE <<<

This study was the first rigorous evaluation of back-office shared services. It used a large population, administrative (rather than perceptual) data on cost savings, and a longitudinal design. Nonetheless, the sensitivity of the analysis was limited in several respects. In particular, the shared services varied greatly in scope, with some councils retaining most administrative activity, and others sharing nearly all functions. Our index partly reflected this variance, but a degree of uncertainty remained as to the ratio of shared-to-retained administrative activity. Additionally, costs for individual back-office functions (human resources, legal, finance, etc.) were combined into one heterogeneous spending category which could not be broken down into individual components, nor mapped directly to specific shared services. We now seek to improve upon the sensitivity of the analysis by examining shared tax collection services.

Shared tax collection

Not only is local tax collection an ideal complementary case for testing whether shared services are associated with lower costs, given its likelihood of meeting

Conditions 1 to 3 described above, but this analysis also overcomes some data limitations in the evaluation of shared administration. In particular, here the activity (council tax collection) can be related directly to the specific service costs. Moreover, the potential for unmeasured variation in the shared-to-retained ratio is significantly reduced for this more homogenous and highly specified area of local authority activity. Data on tax collection effectiveness is also available, allowing us to assess the effect of shared services on performance. As before, we first examine whether the efficiency of council tax administration improved over the period of analysis, and then test statistically whether the degree of change reported in individual councils is associated with their participation (now a binary yes/no measure) in shared tax collection arrangements.

As shown in Table 1, gross and net costs of council tax collection per dwelling fell in real terms from 2008 to 2016, consistent with the trend reported by the Audit Commission (2013) for the earlier period 2006–2012. Across all councils, gross unit costs fell by over six per cent per year, a greater proportional decrease than found for back-office costs. Each council type showed a consistent decrease in tax collection costs, as shown in Figure 2a, in contrast to the variety of trends in back-office costs shown in Figure 1a.

>>> FIGURE 2 ABOUT HERE <<<

Forty-four shire districts, two London boroughs and two unitary authorities reported joining shared tax collection partnerships between 2004 and 2014. Nineteen separate partnerships were identified, containing two to five members each during the relevant period. As shire districts were the only type of local council that participated in shared tax services to an appreciable extent, the following analysis includes only that type of council. Thus, our population contained 44 participants (22%) and 157 non-participants. Participating and non-participating shire districts did not differ significantly on the basis of size or any other demographic or administrative variable.

No significant relationship was found between participation in shared tax collection arrangements and the change in council tax collection costs per dwelling, as demonstrated by the near-horizontal best-fit line in Figure 2b. This finding was robust to the inclusion or non-inclusion of demographic variables and alternative

definitions of the dependent variable as the change in gross or net costs and in total or unit costs. The only consistently significant explanatory variable was the number of chargeable dwellings, which showed a small but significant ($p<0.01$) negative relationship with the change in collection costs, indicating that larger shire districts cut costs more rapidly over the period. However, none of the models explained more than about five per cent of the variance in the dependent variables.

Turning from efficiency to effectiveness, our data allows us to explore changes in one performance metric as a result of sharing services. The ranges of 'collection rates' (tax collected as a percentage of the maximum collectable amount) in 2016 were 90.7–99.5% for all LAs and 94.1–99.4% for shire districts. There was no significant change from 2009 to 2016 for all LAs or for shire districts alone. We found that district councils that participated in shared tax services had slightly worse collection rates in 2016 than district councils that did not (an average of 97.6% for participants versus 98.0% for non-participants, $p=0.02$). The difference between the same groups in 2009 (before most partnerships were established) was not significant, showing that councils did not choose to partner on the basis of tax-collection performance. Tax collection rates deteriorated by an average of –0.19 percentage points from 2009 to 2016 for participants and –0.03 percentage points for non-participants, a non-significant difference ($p=0.1$). Thus, contrary to expectations of improved effectiveness, we found no evidence that shared tax services were associated with improved collection rates, but neither was there evidence of a substantial deterioration.

Discussion

Our analyses show that both back-office services and – particularly – council tax collection became more efficient in English local government since 2008. Nevertheless, in both cases, this was unrelated to participation in inter-council collaborations. While partnering may have allowed some councils to reduce costs, 'non-collaborating' councils achieved similar reductions. Moreover, in the case of back-office administration, the magnitude of the cost saving over this period was far beneath the 25-45 per cent savings forecast in the policy literature (HM Treasury, 2009). The effectiveness of council tax collection remained high throughout this period, with councils collecting on average over 97% of the maximum possible

revenues. Sharing tax services was not associated with either an improvement or a deterioration in collection rates.

To explain these negative findings, we can return to the framework of three conditions outlined earlier. These argued that efficient collaboration requires selection of appropriate service areas with cost functions suited to up-scaling, as well as low coordination and re-organization costs. Our expectations were that council tax collection would meet these three conditions more readily than back-office administration. Yet, in practice, we found that neither service showed any extra benefit from inter-council collaboration. From the available data, it is difficult to assess the contribution of Conditions 2 and 3 to these results. But the first and most fundamental of the requirements is that the activity selected for sharing demonstrates strong potential for economies of scale. One way of testing whether that cornerstone condition holds in our two cases is to look at the cross-sectional data presented in Figures 1a and 2a.

Considering first back-office costs, Figure 1a shows that the smallest types of council (shire districts) indeed had higher administration costs relative to total spending than other councils, indicating that economies of scale might be possible. However, the responsibilities of shire districts are very different from other council types, so that the comparison is not of like with like. For instance, district councils do not provide education and social care services. The result is that the denominator against which administrative costs are compared is significantly smaller in shire districts, making for a higher proportion of 'administration' spending. A better test might be whether economies of scale can be detected within each council type. This was analysed by Andrews and Boyne (2009) using cross-sectional data from 2004. They found a negative relationship between administration/total costs and population (as a proxy for council size) after allowing for council type. We re-tested this on more recent data, and found similar (though smaller) cross-sectional effects in 2016 as shown by the downward-sloping lines of best fit in Figure 3a. This suggests that, within a particular category of local authority, larger councils are administered slightly more efficiently than smaller ones, and that there is a potential for economies of scale from shared administration services, but the effect is likely to be small. Moreover, since research in organization studies strongly indicates that it is managerial administration, rather than professional and clerical services, that exhibit

economies of scale, it is unclear that sharing transactional and professional-advisory services will replicate the slight scale advantages of larger councils.

Turning to the cost function of council tax collection, Figure 2a tells a different story. In this case, the smallest councils had the lowest average cost per dwelling in 2008; and, while the collection costs of other types of council fell somewhat more rapidly, by 2016 shire districts still had lower unit costs on average than other types of council. Nevertheless, within shire districts, we detected an economy of scale for tax collection costs, as demonstrated by the downward slope of the shire-district best-fit line in Figure 3b. The same relationship was found for all council types taken together, in agreement with the findings of Andrew and Boyne (2009). However, this relationship did not hold for non-shire-district councils alone (the almost horizontal line in Figure 3b). This suggests that if an economy of scale is possible for tax collection costs, it does not continue at larger scales (an L-shaped cost function). This is consistent with the aforementioned analysis of Dutch tax collection costs, which showed that efficiency was maximized for groups of about 30,000 dwellings (Niaounakis and Blank, 2017). Dutch municipalities are far smaller than English councils, which are the largest in Europe (Baldersheim and Rose, 2010, Table 1.1). The average shire district has over 45,000 dwellings, and other types of council have on average over 100,000, suggesting that further economies are unlikely at such large scales. Equally, though, we found no evidence of a U-shaped relationship, with some of the very largest councils (with over 200,000 dwellings) having relatively modest unit costs.

>>> FIGURE 3 ABOUT HERE <<<

Conclusion

Collaboration between councils has long been recognized as a way of handling several pernicious dilemmas in local public service delivery. The practice has become increasingly popular in recent years, particularly in England; yet empirical analysis here and elsewhere remains modest. In this article, we used administrative data to evaluate the financial effects of collaboration in back-office and tax collection services, these being two activities for which there is wide consensus on their suitability for sharing. Our evaluation shows that, although there have been

efficiency gains in both areas during the period of study, in neither case can these be attributed to use of a shared services approach. Moreover, sharing tax services neither improved nor diminished tax collection effectiveness.

Our results carry a mixture of good and bad news for English local government. Observed efficiency gains in the period 2008-2016 indicate a trajectory of improving performance during a challenging period, and demonstrate that non-frontline services have helped manage the challenging fiscal environment post-2010. There are also signs of some discriminate, evidence-led decision-making about collaboration. Specifically, given the L-shaped curve implied by our data on tax collection costs, the almost complete absence of shared tax collection arrangements among large upper-tier and unitary authorities, which have already exhausted returns to scale, is good news. Equally, the lack of a U-shaped curve indicates that some very large councils maintain high efficiency despite the known challenges of bureaucratic growth in large organizations. This is a testimony to management skill in local government. Nonetheless, it seems undeniable that the benefits of shared services have been oversold in recent years; and highly likely that, in some cases, investments of time, attention and finance required for collaboration might have been better spent elsewhere. Central government advice to English councils on how best to manage funding shortfalls in the so-called "age of austerity" ranks shared back-office services first among "50 Ways to Save" (DCLG, 2012). But significant – unstated – conditions must be met if sharing is to deliver financial benefits, and current evidence suggests that both back-office administration and tax collection fall at the first hurdle of possessing a cost function conducive to further scale economies.

The policy implications of this analysis are two-fold. First, given the contrast between the negative results reported above and existing positive evaluations of collaborative provision of other, capital-intensive service areas elsewhere (Bel et al., 2014, Zafra-Gómez et al., 2013), a discriminate approach to public management reform is essential. Options appraisal and business case development can be strengthened by focusing on the three key conditions for successful cost-saving through collaboration (about service selection, and coordination and re-organization costs). Secondly, up-scaling through merger or "trans-scaling" through collaboration are but a small fraction of the available methods for improving organizational efficiency. Our observation of parallel efficiency gains in non-collaborating councils

remind us that an in-house focus on streamlining processes, better organization of work, staff motivation, etc., can all deliver incremental and sustainable cost-savings without the hassle of external partnerships. As collaboration experts Huxham and Vangen (2005) explain: "Seeking collaborative advantage is a seriously resource-consuming activity so is only to be considered when the stakes are really worth pursuing. Our message to practitioners and policy makers alike is *don't do it unless you have to*" (original emphasis).

Finally, in terms of further research, a number of areas are highlighted as worthy of investigation. Our statistical model contains significant unexplained variance, indicating that a fuller understanding of cost drivers in local public service provision is required. Research is also needed to clarify whether the distinction between capital- and labour-intensive services is key to understanding the potential for public services to deliver returns to scale; and, if so, to explain why significant capital investments in technology, in both back-office processing and tax collection, have not altered the cost function of these service so as to favour up-scaling through collaboration. Finally, research should explore in greater depth the role of Conditions 2 and 3 (network and re-organization costs) in facilitating successful reform.

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Table 1. Descriptive statistics.

	All councils (N = 353)[a]		Unitary and upper-tier councils ('Other councils') (N = 152)		Shire Districts (N = 201)	
	Mean	*StdDev*	Mean	*StdDev*	Mean	*StdDev*
Average values in 2016						
Administration costs as a percentage of total gross costs	23.4	*18.8*	7.9	*3.7*	36.0	*16.6*
Council tax collection costs per dwelling (gross)	£20.19	*£11.69*	£22.31	*£14.41*	£18.98	*£9.62*
Council tax collection costs per dwelling (net)	£12.76	*£9.14*	£13.79	*£11.81*	£12.23	*£7.33*
Average annual percentage change from 2008 to 2016						
Change in administrative costs as a percentage of total gross costs	-1.49	*9.48*	-0.47	*9.99*	-2.29	*9.01*
Change in gross tax collection costs per dwelling	-3.85	*7.57*	-4.85	*8.33*	-3.25	*7.03*
Change in net tax collection costs per dwelling	-6.54	*10.23*	-7.48	*12.85*	-5.98	*8.25*
	Number	*Percentage*	Number	*Percentage*	Number	*Percentage*
Councils participating in shared back-office services (joined 2004-2014)	274	*78%*	104	*68%*	170	*85%*
Councils participating in shared tax collection services (joined 2004-2014)	48	*15%*	4	*3%*	44	*22%*
	Mean	*StdDev*	Mean	*StdDev*	Mean	*StdDev*
Index of participation in shared back-office services (none=1, low=2, medium=3, high=4)	2.58	*1.10*	2.29	*1.13*	2.81	*1.03*
Population	217,868	*223,339*	356,920	*278,086*	107,884	*30,614*
Population density (inhabitants/square km)	1,700	*2,526*	2,876	*3,305*	769	*924*
Number of chargeable dwellings	71,000	*46,754*	110,480	*54,501*	46,840	*13,160*
Lone parent households (percentage of households)	6.60	*1.71*	7.47	*1.87*	5.92	*1.20*
Ethnic diversity index	1,814	*1,779*	2,709	*2,188*	1,107	*872*
Age diversity index	8,787	*72*	8,772	*96*	8,798	*41*

a. N represents the whole population of English councils in 2016, while individual cells in this table are based on the numbers used in the analysis. Councils were excluded if they reported insufficient costs data to calculate the relevant changes over the period (24 shire districts and 12 other councils were excluded from the administration costs data, and 2 shire districts and 6 other councils were excluded from the tax costs data). The 27 shire counties were not included in calculations of tax collection costs, as they do not collect taxes.

Figure captions

Figure 1. (a) Administration costs as a percentage of total costs for each council type 2008 to 2016 (L, London borough; MD, metropolitan district, SC, shire county; SD, shire district; UA, unitary authority). (b). Increase or decrease in administration/total costs versus participation in shared back-office services for shire districts (SD) and other council types.

Figure 2. (a) Average gross costs of council tax collection per dwelling from 2008 to 2016 (omitting unitary authorities created since 2009, and Tower Hamlets, which had highly anomalous values in some years). Council types as in Fig 1(a). (b) Increase or decrease in gross tax collection costs per dwelling versus participation in shared tax collection services (shire districts only).

Figure 3. (a) Administration/total costs versus population in 2015-16 for shire districts (SD) and other council types. (b) Tax collection costs per dwelling versus number of chargeable dwellings in 2015-16 for shire districts (SD) and other council types. Councils reporting zero costs and outliers City of London and Isles of Scilly were omitted from both graphs.

Figure 1a. Administration costs as a percentage of total costs for each council type 2008 to 2016 (L, London borough; MD, metropolitan district, SC, shire county; SD, shire district; UA, unitary authority).

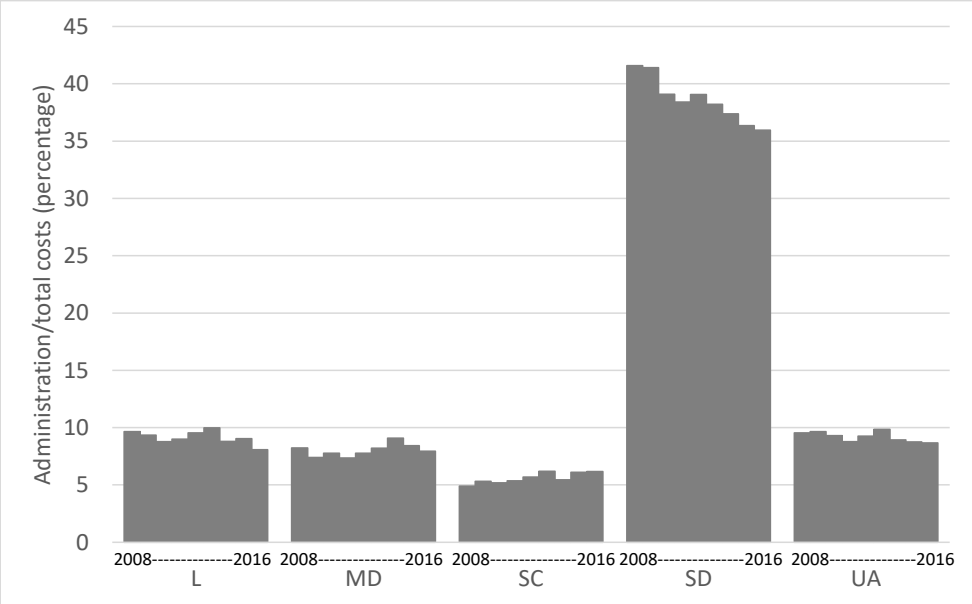
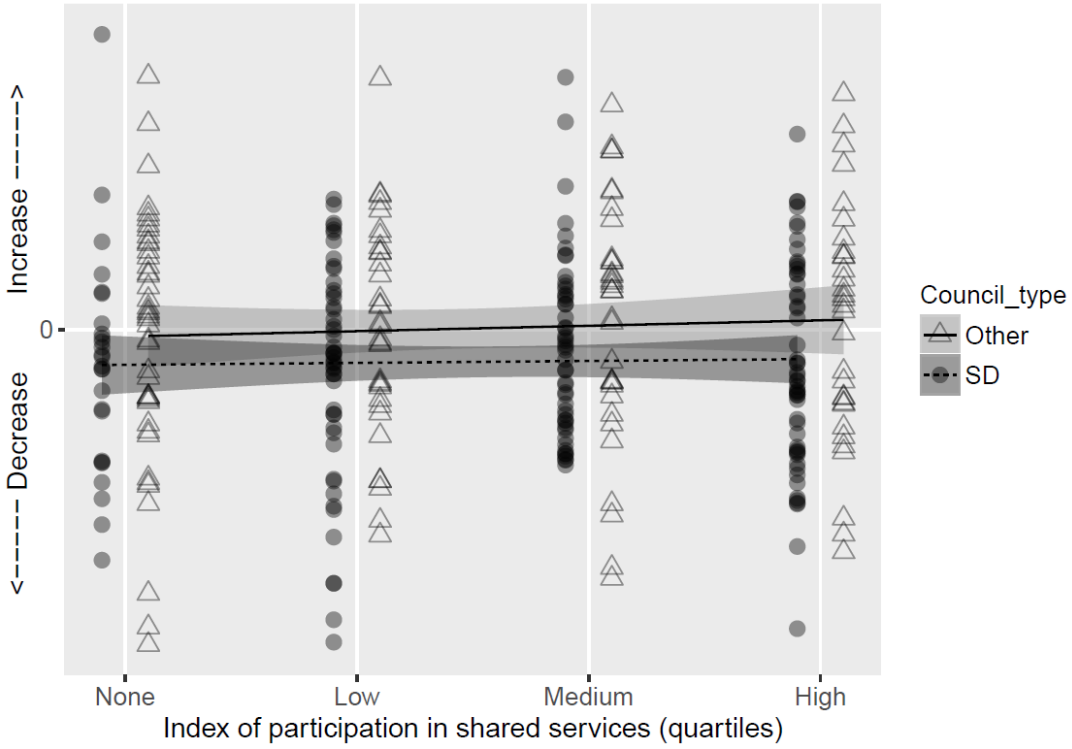


Figure 1b. Increase or decrease in administration/total costs versus participation in shared back-office services for shire districts (SD) and other council types.



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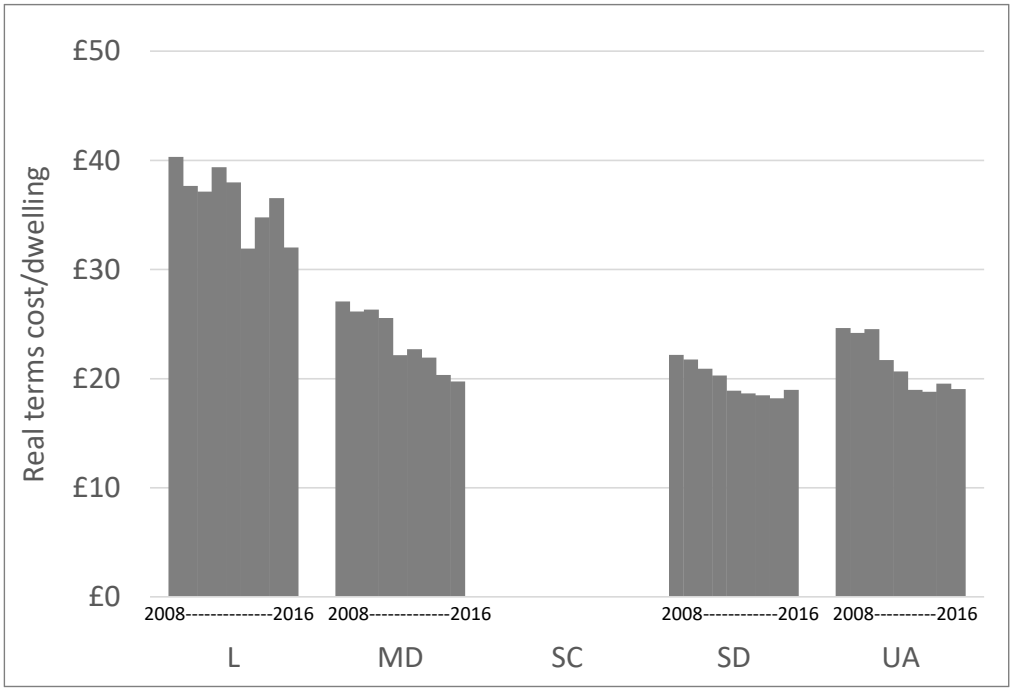

Figure 2b. Increase or decrease in gross tax collection costs per dwelling versus participation in shared tax collection services (shire districts only).

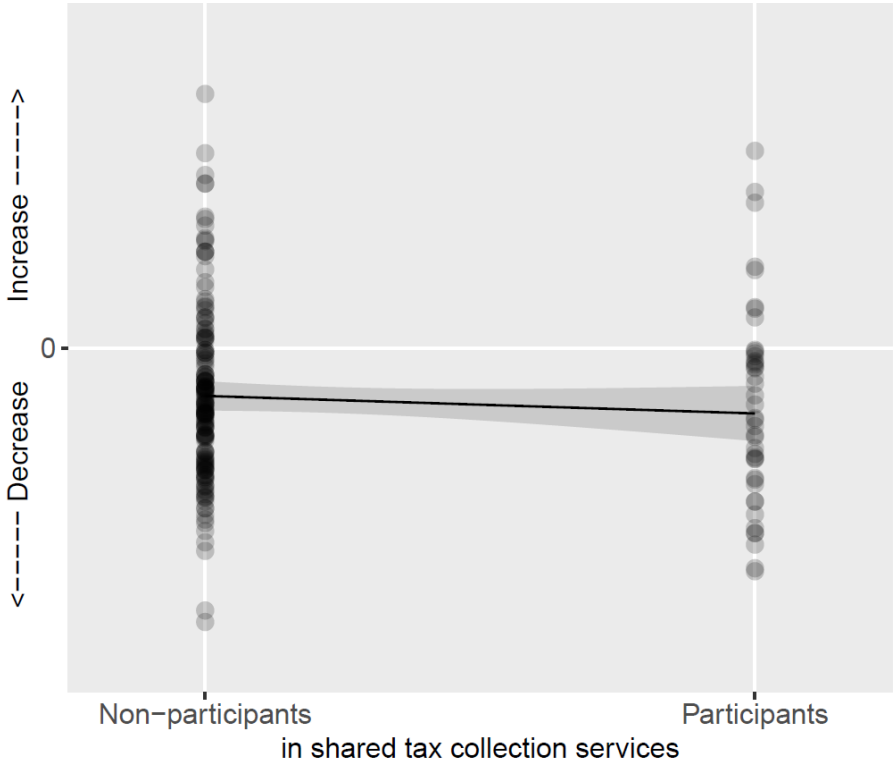

Figure 3a. Administration/total costs versus population for financial year ending 2016 for shire districts (SD) and other council types.

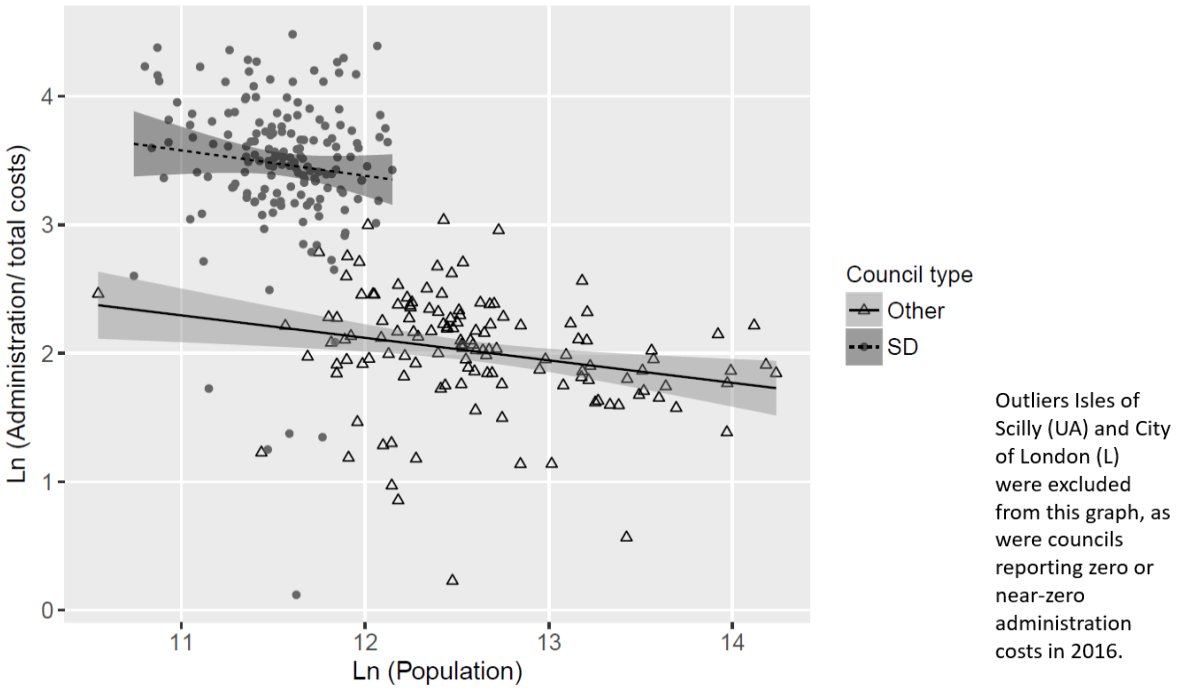

Figure 3b. Tax collection costs per dwelling versus number of chargeable dwellings for financial year ending 2016 for shire districts (SD) and other council types.