Public-private relationships, administrative capacity and public service efficiency

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Economic theory and the New Public Management suggest that public agencies that proactively engage with the private sector are more likely to reap efficiency gains. By working with business, public organizations are able to: access funds for capital investment; reap scale economies; gain managerial, technical or professional expertise; develop more flexible service provision; and even share risk. Nevertheless, empirical research indicates that the realization of these benefits may come at the price of an expansion of administration to cope with the increased transaction costs associated with cross-sectoral service coordination. We examine the relationship between public-private relationships, administrative capacity and the technical, allocative and distributive efficiency of a set of English local governments. We find that public-private relationships have no independent effect on technical efficiency and a negative one on allocative and distributive efficiency. We also find that administrative capacity moderates the impact of public-private relationships on both technical and distributive efficiency. Theoretical and practical implications are discussed.
Introduction

The private sector is widely, although not unanimously, regarded as enjoying a number of resources which may benefit public service efficiency. By working with business, public organizations might be able to: access funds for capital investment; reap scale economies; gain managerial, technical or professional expertise; develop more flexible service provision; and even share risk. The involvement of the private sector in the delivery of public services can, however, take several forms. Public organizations can contract out clearly specified functions, externalise the delivery of whole services or create mixed or hybrid forms of organisation often described as public-private partnerships. Taken together, the relative commitment of an organization to each of these forms of relationship may be said to constitute a general attitude of receptiveness on their part to the involvement of the private sector in the delivery of public services. To date, however, scant research has examined the effects of such a commitment to public-private relationships on multiple dimensions of public service efficiency within the same study. Still fewer examine the potential moderators of those effects.

The current economic and political climate places ever greater pressure on public organizations to deliver services in a cost-effective way – pressure, which inevitably has led governments to look across sectoral boundaries for service delivery solutions. However, in recent times, academic and policy debates about efficiency have largely evinced a narrow focus on technical efficiency, or the maximization of outputs over inputs, to the exclusion of other key values of public administration (Grandy 2009). Beside the dominant interpretation of efficiency as a straightforward input/output ratio, there are at least two further interpretations of public service efficiency, which should matter to both theorists and practitioners concerned with the
pursuit of efficiency in public organizations. The first, *allocative efficiency*, refers to the match between the demand for services and their supply; and the second, *distributive efficiency*, relates to the pattern of service distribution amongst different groups of citizens. To date, theories and evidence on the development of public-private relationships for the delivery of public services, in particular, have paid insufficient attention to these other faces of public service efficiency. Yet it is highly likely that the involvement of the private sector in public service production will have serious implications for these dimensions of efficiency as well as for technical efficiency. For example, it is conceivable that allocative efficiency may be enhanced where private sector providers are able to bring an enhanced customer focus to public service provision. By contrast, distributive efficiency may suffer as the voice of the most powerful consumers of services drowns out those of their less resourced and pushy counterparts.

The aim of this paper is to examine whether the effects of a commitment to public-private relationships vary for technical, allocative and distributive efficiency. At the same time, we are also interested in the extent to which the realization of benefits from public-private relationships may be contingent upon the administrative capacity within public organizations. Although evidence on the actual efficiency gains from the involvement of the private sector in public service delivery remains (at best) mixed (Andrews, 2010), policy-makers across the world continue to laud the merits of public-private relationships. Moreover, several researchers have pointed to the expansion of administrative capacity that may be required to make a success of public-private relationships (e.g. O’Toole and Meier, 2004; Bhatti, Olsen and Pedersen 2009). Is a commitment to public-private relationships associated with gains across multiple dimensions of efficiency? Are the benefits of public-private
To answer these questions, we examine the relationship between a commitment to public-private relationships, administrative capacity and the technical, allocative and distributive efficiency of a sample of English local governments. In the first part of the paper, we review theories about the benefits (and costs) of public-private relationships for public service efficiency. Next, we reflect upon the potential moderating effects of administrative capacity on the impact of public-private relationships on efficiency. In the following section, we introduce our data and methods. Our dependent variables are drawn from national secondary data sources and our measures of commitment to public-private relationships from a large-scale survey of managers in English local governments. All other independent and dependent variables come from secondary data sources. Seemingly Unrelated Regressions modelling the impact of public-private relationships on technical, allocative and distributive efficiency are presented, before the theoretical and practical implications of the findings are discussed in the conclusion.

Public-private relationships and public service efficiency

The literature suggests three main reasons to think that engagement with the private sector, either through short term contracting or longer term partnership type arrangements, might increase the efficiency of local governments. The first – a contestability effect – results from procurement processes which put suppliers into competitive or potentially competitive situations. The second – an ownership effect – suggests that by partnering with outside organisations, local governments can secure access to a range of non-state resources. The third – a scale effect – may result from
the fact that because private contractors can work for a number of small local
governments they can pass on the lower costs resulting from economies of scale.

The contestability effect suggests that when suppliers are required to compete
for a contract they will focus on their core performance – improving the quality of the
work and reducing the costs wherever possible – for fear that a failure to please their
clients will lead to a loss of business (Bel, Fageda and Warner 2010). In this vein it
can be argued that it doesn’t matter whether contracts are awarded to public or private
suppliers since it is the process of competitive tendering which provides the drive for
increased efficiency (Hodge 1998). It is possible of course, that a public-private
partnership may be long lasting and rather cosy. Indeed one of the important changes
in public procurement practice in recent years has been the switch from short term to
relational contracts (Entwistle and Martin 2005; Parker and Hartley 2003). It seems
reasonable to assume, however, that local governments which are positively disposed
to private contractors – as evidenced through either contracting, partnership or whole
sale externalisation – will enjoy the benefits of stronger contestability effects than
those governments that are determined to protect public sector monopolies.
Contestability requires neither regular contracting nor perfect competition so much as
the fear that markets can be contested by rivals (Baumol and Willig 1986).

The ownership effect stems not from the procurement process, but from the
intrinsic qualities of privately owned organisations. Ownership or property rights
theories suggest that ‘private producers have a much larger interest in knowing and
controlling costs’ (Christoffersen, Paldam and Wurtz 2007, p.312). Fundamentally
different attitudes to the search for value, translate into a private sector culture which
is argued to be more enterprising, flexible, innovative and more accepting of risk than
its public counterpart (Osborne and Gaebler 1992). With fewer formal decision-
making procedures and less administrative oversight, private sector organizations can also be less hampered by bureaucratic rules and controls (Rainey 1989).

The third driver of efficiency stems from the scale of service delivery. Although English local governments are large by international standards (John, 2010), some of the functions they are responsible for are performed on a relatively small scale. Whether in IT, refuse collection, or general back office functions like the processing of taxes and benefits, the private sector organisation providing local government services may be considerably larger and more specialised than their clients. Local governments which partner with these organisations may then be able to enjoy the efficiency gains – apparent in lower prices and higher service quality – which result from providing services on a greater scale (Christoffersen, Paldam and Wurtz 2007; Warner and Bel 2008).

Taken together these lines of argument suggest that those governments which partner with the private sector may be more efficient than their non-partnering counterparts. Evidence of that superior performance might be apparent in any of our three dimensions of efficiency. The effect on the technical dimension of efficiency should be the starkest. Local governments enter into contracting partnership arrangements first and foremost to reduce the unit costs of service delivery. Allocative efficiency will be improved if private partners suggest new services, or new ways of delivering existing services, which better match the preferences of citizens. Alternatively, allocative efficiency may be improved when local governments plough back the savings from more efficient production into tax reductions or a greater quantity or variety of services. The line of argument linking private partnering with distributive efficiency is more tenuous. Unless specifically instructed by their government clients, there is no obvious reason to think that private contractors will be
better able to deliver a more efficient distribution of services than their government counterparts. Indeed the reverse might be true (Amirkhanyan 2008). Whereas governments and government employees may be driven by a public service ethic which requires them to deliver service in a just or fair manner, private companies are attuned to developing services for those with the wherewithal to pay.

The benefits of administrative capacity

While contestability, ownership and scale arguments all suggest that private contractors will be capable of delivering more efficient services than their public counterparts, there is no guarantee that these potential gains will be realised in any one case. The translation of potential into concrete efficiency improvements depends upon the ability of local governments to extract and then deploy those savings. Allocative and dynamic efficiency, particularly, require the government principals to manage their agents appropriately by adopting suggested innovations and channelling resources to the most appropriate uses. That is to say, the realisation of efficiency is mediated by the administrative capacity of the contracting government.

Public policy scholars have become increasingly concerned with exploring the ways in which organizations build the administrative capacity to deal with public service delivery problems (Ingraham and Donahue 2000). Administrative capacity is particularly important in the management of contracts or networks because without it the potential efficiencies of working with the private sector might be squandered in economic rent. Brown and Potoski (2004, pp.665-666) explain: ‘Even under conditions that favor contracting, public managers must have the skills to understand market operations and the tools to address market failures.’ Amirkhanyan too, observes that, ‘as counties minimize their roles as service providers’ they need to put
in place arrangements to protect the quality of services and the interests of low income clients (2008, p. 665).

The administrative capacity of public organizations constitutes their ‘intrinsic ability to marshal, develop, direct, and control its human, physical and information capital to support the discharge of its policy directions’ (Ingraham and Donahue 2000: 294). This organization-wide potential for action resides principally within the central office of organizations. Since staff within central administrative departments deal with cross-cutting issues, such as finance, performance management and personnel, rather than more narrow functional responsibilities, they are especially well-placed to make a contribution to the broader policy goals of public organizations, such as the management of relationships with the private sector.

In this sense, the concept of administrative capacity signifies the stock of resources that can be mobilized in support of proactive or reactive efforts to shape, or respond to, the business of managing private sector contractors and partners. Thus, while it is conceivable that administrative capacity may itself have a positive independent effect on public service efficiency, its true contribution may be to enable governments to deal with core strategic management challenges, such as cross-sectoral service coordination.

By storing resources within the central administrative office, public organizations can, though, amass a flexible ‘slack’ that can be reconfigured, redirected or redeployed in order to respond to management challenges. For example, central administrative managers, unlike their more specialized functional counterparts, can be moved from task to task in response to changing priorities. This may be especially beneficial for the overcoming the challenges of managing and monitoring private organizations involved in public service delivery.
**Data and measures**

Our units of analysis are English local governments. Local governments are elected bodies, operate in specific geographical areas, employ professional career staff, and receive approximately two-thirds of their income from the central government. They are multi-purpose organizations and deliver services in the areas of education, social care, land-use planning, waste management, public housing, leisure and culture, and welfare benefits. In England there are 386 local governments of five types. 32 London boroughs, 36 metropolitan boroughs, and 46 unitary authorities are primarily found in urban areas and deliver all of the services listed above; in predominately rural areas, a two-tier system prevails with 34 county councils administering education and social services, and 238 district councils providing welfare and regulatory services. County councils are by far the larger of these organizations (according to most recent UK national census serving, on average, 675,574 people, while districts serve on average 96,501) and account for around two-thirds of local service expenditure in the two-tier system. In this study, we do not include district councils because our measure of technical efficiency is not available at this level.

**Dependent variables**

*Technical efficiency* To gauge the technical efficiency of local governments we seek to create a ratio of the financial inputs to the overall outputs/outcomes delivered by each organization. We draw upon an established (see Andrews, Boyne and Walker, 2011) output/outcome measure grading the quality of services provided by single and upper tier local governments: the core service performance element of the Comprehensive Performance Assessment (CPA) undertaken by the Audit Commission (a central government agency) in 2008.
Six key local government services (children and young people, adult social care, environment, housing, libraries and leisure and benefits) were graded 1 (lowest) to 4 (highest) on the basis of statutory performance indicators (Audit Commission, 2002). Each service score is then weighted by the Audit Commission to reflect its relative importance and budget of the service (children and young people and adult social care = 4; environment and housing = 2; libraries and leisure, and welfare benefits = 1). These weighted scores are then summed to provide an overall service performance judgement, ranging from 14 (11 for county councils which are not responsible for housing or benefits services) to 56 (44 for county councils). To make these scores directly comparable across county councils and other governments, we take each organization’s overall score as a percentage of the maximum possible score.

For the input side of the technical efficiency ratio, we draw upon the total service expenditure in 2008 (minus expenditure on central administration, to remove this from both sides of the equation) of each local government. A measure of technical efficiency is then derived by dividing core service performance by the service expenditure measure. This technical efficiency ratio indicates the financial cost of producing a given unit of service output/outcome (Ostroff and Schmitt 1993). Unlike the contract prices and narrow output measures used in much of the work on technical efficiency (Boyne 1998), our methodology provides both a measure of the quantity and quality of public service delivery per unit of expenditure. Organisations which focus purely on maximising outputs or minimising inputs will not perform well against this measure.

**Allocative efficiency** To gauge the match between citizens’ demands for the services provided by local governments and those that they receive we first draw upon a
measure from the Place Survey carried out by all English local governments in 2008, which asked respondents how satisfied they are with the way that their council “runs things”. The survey was based on a demographically representative random sample of 1,100 residents in each local government. The data were collected by local governments using a standard questionnaire, independently verified by the Audit Commission (a central government regulatory agency), and later published by the Department of Communities and Local Government. The published figures show the percentage of respondents in each area agreeing with the survey statements. We then create an indicator of allocative efficiency by dividing the satisfaction score by the total service expenditure per capita.

**Distributive efficiency** Distributive efficiency refers to how well public organizations are able to tailor service provision to meet the needs of the diverse groups of citizens that they serve. To gauge the extent to which citizens’ perceive the services provided by local governments to be distributed efficiently in this way we first draw upon a survey item from the Place Survey. Specifically, a question asking respondents to indicate if they agreed that local public services “treat all types of people fairly”. An indicator of distributive efficiency is then constructed by dividing the perceptions of fair treatment by the total service expenditure per capita.

**Independent variables**

To minimise the potential problems associated with reverse causality, the independent variables are all operationalised prior to the dependent variables. This time lag also enables us to provide substantive interpretations of the statistical effects associated
with the independent and combined effects of public-private relationships and administrative capacity.

Public-private relationships index Data on public-private relationships were drawn from an email survey of managers in English local authorities. The survey was administered in late 2007. Email addresses for the entire population of senior and middle managers in English local government were drawn from a national contacts database, and questionnaires were then delivered as an excel file attached to an email. Multiple informant data were aggregated from senior and middle managers in each organization. The responses of these two echelons were used to overcome sample bias problems associated with surveying a higher proportion of informants from one organizational level (Payne and Mansfield, 1973; Walker and Enticott, 2004). The number of informants surveyed varied across each type of local authority due to the differing role and responsibilities of single and two-tier authorities. The total number of potential informants was 6,975, and the number of actual respondents was 1,082, yielding a response rate of 15.5 per cent. Responses were received from 28 London boroughs, 36 Metropolitan boroughs, 45 unitary authorities, 31 county councils and 188 district councils.

Since only governments from which there were responses from each of the two echelons (senior and middle management) were included in our analysis, some cases could not be matched when we aggregated these echelons up to the organizational level due to missing data. As a result, our statistical analysis of the environmental and organizational determinants of external networking was conducted on 87 (out of a population of 148) single and upper-tier local governments. To establish the representativeness of our sample, we tested for differences between
included/omitted authorities by undertaking independent sample t-tests on our control variables. No statistically significant differences between our sample of local authorities and the population of local governments were found, indicating that our sample are representative of the population on key distinguishing characteristics such as deprivation, population and ethnic diversity.

We draw upon three measures of public-private relationships to construct an index of commitment to the involvement of the private sector in public service provision. First, the extent to which local government’s *contract services out* to private sector providers was gauged by asking survey respondents to indicate on a scale of 1 (strongly disagree) to 7 (strongly agree) that their organization pursue “a policy of contracting out/outsourcing”. This measure provides a good proxy for the role that contracting-out plays in the service delivery decisions of English local governments in the absence of detailed accounts of the proportion of services contracted out or payments made to private contractors. Second, the extent to which local governments *externalise service provision* or pass them across to private firms was gauged by asking respondents to indicate whether their organization pursued “a policy of externalisation”. Third, we use a broad-based measure to capture the variety of alternative *partnership arrangements with the private sector* – ranging from single-issue networks incorporating relevant private sector organizations through relational contracting practices with firms to the establishment of formal private finance initiatives – which respondents may associate with cross-sectoral partnership-working (O’Toole 1997). Specifically, we asked respondents to indicate the extent to which their organization ‘works in partnership with the private sector’.

Drawing on these three measures we construct an index from the three measures of public-private relationships using principal components analysis.
Descriptive statistics and the factor loadings for the networking measures are shown in Table 1.

The table highlights that the measures load on to a single factor accounting for nearly three quarters of the variance in the data. The factor loadings are all 0.75 or above, signifying that they are important determinants of the variance explained. The index also demonstrates strong inter-item reliability (Cronbach’s Alpha score of .83; see Nunnally, 1978).

Administrative capacity We measure the stock of administrative capacity in English local governments as the expenditure on central administration per capita. Data on central administration costs are collected annually in accordance with the Chartered Institute for Public Finance and Accounting (CIPFA)’s Financial Reporting Standard 17. They cover expenditure on central services (e.g. finance, internal audit, legal) and management and support services (e.g. human resources, IT, organizational development). The principal source of this expenditure is staffing costs, thus indicating that a higher level of central administrative spending will likely reflect a larger stock of human resources within the administrative centre of local governments.

Control variables
Nine measures were used to control for the effects of external circumstances, which may influence the technical, allocative and distributive efficiency of local
governments. The Formula Spending Share (FSS) per capita for 2005 was used as a measure of *quantity* of service needs. This is the index of needs currently used by central government to distribute grant funding to councils. It is heavily weighted towards the major local government functions (such as education and social services) and is based on indicators of service need, such as the number of schoolchildren and elderly people in the local population. We also include the average ward score on the indices of deprivation in 2007 as a further measure of service need. This is the instrument UK central government uses to gauge levels of disadvantage in: income, employment, health, education, housing, crime, and environment.

We measure three dimensions of *diversity* of service needs: age, ethnic and social class (see table 2 for further details). The proportions of the various sub-groups within each of the different categories identified by the 2001 national census within a local authority area (e.g. ages 0-4, Black African, Small Employers and Own Account Workers) was squared and the sum of these squares subtracted from 10,000. The resulting measures are the equivalent of the Hehrfindahl index used by economists to measure market concentration and diversity. The measures give a proxy for ‘fractionalisation’ within an area, with a high score on the index reflecting a high level of diversity (see Trawick and Howsen, 2006).

A measure of the *discretionary resources* available to each local authority was derived by dividing its total expenditure in 2005 by its FSS in the same year. This shows whether councils were spending above or below the level deemed necessary to meet their service needs. “Overspending” organizations seem likely to suffer from lower levels of technical efficiency than their more frugal counterparts, though it is conceivable that they may be more allocatively and distributively efficient.
Differences in the resource levels available to public organisations also arise from variations in the size of the population they serve. In particular, local authorities serving big populations can accrue economies of scale by distributing fixed costs over more units of output (Boyne, 1995). The relative size of public organisations was measured using population figures for each local area from the 2001 national census. While some central government grants compensate for the geographical dispersion of clients and services, public organisations in urban areas can reap scope economies by offering multiple services from the same site (Grosskopf and Yaisawamg, 1990). Population figures were therefore divided by the area of each local authority to measure density.

Service expenditure and, therefore, efficiency may vary because of local political preferences (Sharpe and Newton, 1984). The percentage share of the vote gained by the Labour Party in the most recent local election was included as a measure of a ‘collectivist’ political disposition amongst local residents. Labour voters, in general, are more committed to state provided services than their Conservative or Liberal Democrat counterparts (Clarke et al., 2004). It is conceivable that in areas with more Labour voters it is harder to deliver technical efficiency, yet easier to enhance allocative and distributive efficiency. The descriptive statistics and data sources for all our variables are listed in Table 2.1

We draw on Seemingly Unrelated Regression (SUR) to control for the possibility that the error terms are correlated across separate regression models for different dimensions of performance. In the context of our analysis, the error terms
from three separate equations (for technical, allocative and distributive efficiency) are likely to be correlated for a variety of reasons, such as unmeasured explanatory variables or data imperfections. Thus, as Martin and Smith (2005, p.605) argue, “there is obvious prima facie relevance of methods to estimate systems of equations with correlated disturbance terms when analysing organisations that produce multiple outputs”. We therefore checked the correlations between the residuals from the separate equations and found the following: a very strong positive correlation between the residuals from the models of allocative and distributive efficiency (.59), and positive correlations between those models and that for technical efficiency (.42 for allocative efficiency and .43 for distributive efficiency).

In such circumstances, Ordinary Least Squares (OLS) is inefficient as separate estimations are unable to utilise relevant information present in the cross-regression error correlations (Zellner 1962). SUR remedies this by determining the parameters for all relevant equations in a single iterative procedure. It transforms the standard errors so that they all have the same variance and are no longer correlated, before applying this transformation to all the variables in each equation and then applying Generalized Least Squares (GLS) to these transformed variables. Seemingly unrelated regressions therefore give us coefficients for the independent variables in each separate equation that are purged of any association with the tendency of an organisation that does well on one dimension of efficiency to do well on another. We have, in effect, a “pure” model of each local authority’s achievements on technical, allocative and distributive efficiency.
Results

We present the results of our SUR regressions in the following sequence. Three models are presented in table 3: model 1 regresses the independent and control variables on to the measure of technical efficiency; model 2 regresses the same variables on to the allocative efficiency measure; and model 3 on to the distributive efficiency measure. Table 4 then presents the results of our empirical exploration of the moderating effects of administrative capacity, repeating the same pattern as for Table 3, but with the inclusion of an interaction term for public-private relationships x administrative capacity.\(^2\) The average Variance Inflation Factor (VIF) score for the independent variables in models 1-3 is about 2.5, with no measure exceeding 6. These VIF scores suggest the results in table 2 are not likely to be distorted by multicollinearity (Bowerman and O’Connell 1990). Inevitably, though, the level of collinearity increases considerably when the quadratic terms are included in the equation. Nevertheless, because this does not bias the coefficient estimates, it is still possible to derive substantive interpretations of the results. Since the data are homoscedastic it was not necessary to correct for the presence of nonconstant error variance.

Most of the control variables have the expected signs and are statistically significant. Both measures of service need (FSS per capita and deprivation) are negatively related to technical efficiency. In fact, deprivation also exhibits a strong negative relationship with allocative and distributive efficiency, and FSS per capita a negative association with distributive efficiency. The measures of demographic diversity have varied influences on the three dimensions of efficiency. There are statistically significant negative relationships between age and ethnic diversity and technical efficiency, social class diversity and allocative efficiency, and age diversity
and distributive efficiency. The measure of discretionary resources is, as anticipated, negatively related to technical efficiency and distributive efficiency. As predicted, it appears that larger local governments are reaping economies of scale, and that this is so for each measure of efficiency. By contrast, there is no evidence that local governments operating in more densely populated areas are gaining scope economies. Intriguingly, Labour vote shares are positively related to technical and allocative efficiency.

[Position of TABLE 3]

We turn now to the results for the independent effects of the public-private relationships and administrative capacity measures. The findings in Table 3 indicate that a commitment to public-private relationships has no observable benefits for this sample of English local governments. In fact, although such a commitment is neither positively nor negatively related to technical efficiency it actually appears to result in worse allocative and distributive efficiency. At the same time, administrative capacity, though not positively (or negatively) related to technical and distributive efficiency, seems to have a positive influence on allocative efficiency. This implies that local governments with larger central administrations may be better able to deliver customer-focused services. To investigate whether the benefits of administrative capacity can be harnessed by local governments seeking to ensure that public-private relationships enable them to gain efficiencies, interaction terms are entered in the statistical model.

[Position of TABLE 4]
The interactions between public-private relationships and administrative capacity is included in the models are shown in Table 4. The interaction term is positive and statistically significant for technical efficiency, suggesting that the relative level of administrative capacity has an important moderating effect on the relationship between engagement with the private sector and this dimension of efficiency. Thus, we find support for the suggestion that the benefits of public-private partnerships are more likely to become apparent when governments have more capacity for monitoring and managing the relationship. However, *prima facie* we do not appear to have found evidence of such moderating effects for allocative and distributive efficiency. Thus, it seems that local governments with stronger central administration are unable to harness the benefits of public-private relationships for the efficient allocation and distribution of services.

To explore the interaction effects more thoroughly, it is necessary to calculate the marginal effects of public-private relationships on efficiency at varying levels of the moderator variable (i.e. administrative capacity) (see Brambor, Clark and Golder, 2006). Graphing the slope and confidence intervals of the marginal effects is the most effective way to present this information. Accordingly, Figures 1-3 provide a graphical illustration of the moderating influence of administrative capacity on the relationship between public-private relationships and technical, allocative and distributive efficiency.
Figure 1 suggests that the relative level of administrative capacity is likely to have an important moderating effect on the relationship between public-private relationships and technical efficiency. In particular, as administrative capacity rises from its minimum level (£1.92 per capita), local governments are able to prevent public-private relationships from having a negative impact on technical efficiency, with the potentially negative effect becoming statistically indistinguishable from zero when administrative capacity is about one standard deviation below the mean (approximately £12 per capita). Further analysis revealed that twenty local governments had administrative capacity of this strength or lower (i.e. almost a quarter of the sample). At the point that the potentially negative impact of public-private relationships is reduced to zero though, the benefits of administrative capacity appear to become statistically insignificant – there is no additional technical efficiency gain to be made from building capacity in order to manage relationships with the private sector.

Figure 2 indicates that the relative level of administrative capacity makes no difference to the relationship between public-private relationships and allocative efficiency. By contrast, Figure 3 highlights that administrative capacity appears to have very substantial moderating effect on the relationship between public-private relationships and distributive efficiency. As administrative capacity rises from its minimum level (£1.92 per capita), local governments are eventually able to reduce the negative impact of public-private relationships on distributive efficiency to zero at about one standard deviation above the mean (approximately £38 per capita). Further analysis revealed that only thirteen local governments (about 15 per cent of the...
sample) had administrative capacity sufficient to overcome the negative effects of public-private relationships for distributive efficiency.

**Conclusion**

Drawing on economic theories, we presented arguments in this paper on the independent effects of public-private relationships on three key dimensions of public service efficiency and on how administrative capacity can enable public organizations to better harness the private sector. These arguments were at least partially confirmed through statistical analysis of the relationship between a commitment to public-private relationships, administrative capacity and the technical, allocative and distributive efficiency of a sample of English local governments. Public-private relationships have no effect on technical efficiency and a negative one on allocative and distributive efficiency. Administrative capacity moderates the impact of public-private relationships on both technical and distributive efficiency.

Our analysis shows that public-private relationships in themselves seem to have few benefits for the efficiency of public services, yet can still be managed by organizations in ways that prevent their potential costs for the technical and distributive dimensions of efficiency (if not for the allocative dimension). The findings provide food for thought for policy-makers about the merits of private sector involvement in public service delivery, as well as the organizational requirements for making a success of that involvement. The statistical results illustrate that administrative capacity, in particular, plays a critical role in enabling local governments to ease the bureaucratic burden of managing relationships with the private sector. Public administration scholars increasingly draw attention to the benefits of strong administrative capacity for organizational functioning, especially in
terms of managing other stakeholder organizations involved in service production, but few provide empirical tests to confirm these notions. We illustrate these benefits by theorising and empirically exploring capacity’s role in the management of public-private relationships.

The findings we present nonetheless raise further questions about the relationship between public-private relationships, capacity and efficiency that are worthy of systematic analysis. We draw upon an index of commitment to public-private relationships, which may or may not correlate well with the actual resources allocated to contracting-out, externalisation and partnership with the public sector. More research is therefore required to identify precisely the potentially varying effects that each of these forms of public-private relationship may have on the different dimensions of efficiency. It is also important to note that our research design could produce different results within and across different national contexts, especially as policies and attitudes towards public-private relationships vary greatly across different countries. Systematic cross-country comparisons of the public-private relationships, capacity and efficiency could therefore make a valuable contribution to the wider literature on comparative government performance. In addition, investigation of the reciprocal effects of administrative capacity and public-private relationships over the medium to long-term would provide a useful indication to scholars and policy-makers alike of the extent to which each may be responsible for an expansion in the other.

Finally, it is conceivable that other organizational factors, such as strategy, structure, or a commitment to public participation, may play a crucial role in enabling local governments to harness the potential benefits of public-private relationships for efficiency. Thus, further research needs to be conducted to uncover the full range of the organizational dynamics associated with the management of public-private
relationships in order to establish the most effective policy responses to the involvement of the private sector in public service provision. Future studies of the determinants of efficiency should therefore seek to assemble data sets that include multiple organizational and managerial variables.

Notes

1 Before running the models, skewness tests were carried out to establish whether each independent variable was distributed normally. High skew test results for population (1.85) and population density (1.76) indicated non-normal distributions. To correct for positive skew, logged versions of these variables were created.

2 Five was added to the public-private relationships index to ensure that two positive scores were combined when they were interacted.

References


<table>
<thead>
<tr>
<th>Public-private relationships measure</th>
<th>Mean</th>
<th>SD</th>
<th>Factor loading</th>
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<tbody>
<tr>
<td>We pursue a policy of contracting out</td>
<td>4.57</td>
<td>.82</td>
<td>.756</td>
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<tr>
<td>We pursue a policy of externalization</td>
<td>2.51</td>
<td>.76</td>
<td>.907</td>
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<tr>
<td>We work in partnership with the private sector</td>
<td>3.64</td>
<td>.69</td>
<td>.912</td>
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<td>Eigenvalue</td>
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<td></td>
<td>2.23</td>
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N=86
Table 2. Descriptive statistics

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<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical efficiency (CPA/spend)</td>
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<td>.030</td>
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Control variables

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Data sources

Core service performance


Place Survey


Age diversity, ethnic diversity, population, population density, social class diversity


Service expenditure

http://www.communities.gov.uk/localgovernment/localgovernmentfinance/

Standard Spending Assessment, discretionary resources

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1 (technical efficiency)</th>
<th>Model 2 (allocative efficiency)</th>
<th>Model 3 (distributive efficiency)</th>
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Notes: number of observations = 86. $+ p = 0.10$; $* p = 0.05$; $** p = 0.01$ (two-tailed tests).
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*Notes: number of observations = 86. $+ p = 0.10; * p = 0.05; ** p = 0.01 (two-tailed tests).*
Figure 1  Marginal impact of public-private relationships on technical efficiency contingent on administrative capacity
Figure 2 Marginal impact of public-private relationships on allocative efficiency contingent on administrative capacity
Figure 3  Marginal impact of public-private relationships on distributive efficiency contingent on administrative capacity