

# **ORGANIZATIONAL SOCIAL CAPITAL AND PUBLIC SERVICE PERFORMANCE**

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*Organizational theorists suggest that the development of social capital within organizations is a critical means for improving performance. This paper tests these assumptions by exploring the impact of organizational social capital on the service achievements of English local governments between 2002 and 2005 using panel data. The statistical findings suggest that structural and relational social capital have a positive impact on performance, but that cognitive social capital is neither positively nor negatively related to service outcomes. High levels of external social capital were also found to have a positive influence on performance.*

*Key words: Organizational social capital; local governments; performance; empirical analysis; England.*

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In recent years, management scholars have begun to develop a more socialized view of the firm that is based on the creation and transfer of knowledge, rather than efficiency and opportunism (Kogut & Zander, 1996). Organizational advantage, it is argued, can accrue from the distinctive capabilities for the generation and communication of ideas and information within an organization (Kogut & Zander, 1992). A critical asset in maximizing organizational advantage is therefore the organizational social capital inherent in “the fabric of social relations” that can be “mobilized to facilitate action” (Adler & Kwon, 2002, p.17). If an organization is viewed as “a social community specializing in speed and efficiency in the creation and transfer of knowledge” (Kogut & Zander, 1996, p. 503), then goodwill amongst its members is essential for this to occur as effectively as possible.

The realization of the potential benefits of organizational social capital is an increasingly important issue for scholars of public administration. Initiatives to build organizational social capital within public services have now assumed an important place in public sector reforms across the globe (OECD, 2001; Pollitt & Bouckaert, 2004). These reforms reflect the growing popularity of management theories suggesting that through the cultivation of collaborative relationships with internal and external stakeholders, managers are able to improve communication and coordination, and build stocks of ideas and knowledge that can enhance organizational processes and routines (Nahapiet & Ghoshal, 1998; Leana & Van Buren, 1999; Adler & Kwon, 2002). This

paper seeks to examine the impact of organizational social capital on public service performance, by exploring its relationship with the service achievements of English local governments using multivariate statistical techniques.

Despite growing numbers of studies examining the effects of organizational social capital on the performance of private firms in recent years (e.g. Collins & Clark, 2003; Tsai & Ghoshal,1998), scant attention has so far been paid to its impact on the achievements of public organizations (a notable exception is Leana & Pil, 2006). To what extent is public service performance the result of collaboration within organizations? Is trust between managers linked to performance? Do shared values amongst managers affect service achievements? Is stakeholder engagement conducive to better outcomes? To answer these questions, the Nahapiet and Ghoshal (1998) model of organizational social capital is applied to English local governments. In the first part of the paper the Nahapiet and Ghoshal model is formalized, before hypotheses on the potential impact of organizational social capital on performance are proposed. Measures of performance, along with measures of social capital, organizational structure and appropriate controls are identified and described. Results of statistical models of organizational social capital and performance in English local governments are then presented and discussed. Finally, conclusions are drawn on the implications of the results for theories of public service improvement.

## **ORGANIZATIONAL SOCIAL CAPITAL**

Social science has contained wide-ranging debate about social capital and its benefits and pitfalls for more than two decades now (see Putnam, 2002). Broadly speaking, social

capital can be understood as either the capacity accruing to the position an individual occupies within a society's power structure (Bourdieu, 1985), or as the collective capacity arising from "connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam, 2000, p. 19). It is therefore to be distinguished from human capital, because it is a collective good created by groups of people rather a property right belonging to individuals. This focus on the quality of social relationships and networks has obvious appeal for organizational theorists seeking to developing new understandings of the firm based on their nature as "social communities where individual and social expertise is transformed into economically useful products and service" (Kogut & Zander, 1992, p. 384). Indeed, Leana and Van Buren (1999) argue that the array of social relations found within organizations comprises their distinctive "organizational social capital". The "sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet & Ghoshal, 1998) p. 243) therefore constitutes the source of "organizational advantage".

Nahapiet and Ghoshal (1998) claim that relationships between organizational members are "a valuable resource for the conduct of social affairs" (p. 243), providing organizational members with collectively-owned assets that can be brought to bear in efforts to improve performance and decision-making. Social capital is "a productive asset facilitating some forms of social action while inhibiting others" (p. 245), because it is central component in the development of the "socially and contextually embedded forms of knowledge and knowing" latent within organizations (p. 246). As a result, it is possible to identify three key distinct, though interrelated, dimensions of social capital which may

enable the unlocking of ideas and information that can positively influence organizational outcomes: *structural* (connections among actors); *relational* (trust among actors); and *cognitive* (shared goals among actors) (Nahapiet & Ghoshal, 1998).

Structural social capital pertains to the opportunities for organizational members to gain access to relevant peers with desired sets of knowledge or expertise. Such information flows create organizational advantage by enhancing the capacity to absorb, assimilate and transfer ideas. The existence of formal network linkages between actors is therefore a critical determinant of the strength of structural social capital (Scott, 1991). Relational social capital refers to the underlying norms of reciprocity that guide exchanges between organizational members. In particular, trusting relationships amongst members may permit the transfer of sensitive information that is unavailable to those beyond the boundaries of trust. It also fosters collaborative action in the absence of formal mechanisms for that purpose (Coleman, 1990). Finally, cognitive social capital is constituted by the broader values that form the context in which any such exchanges can take place. The extent to which organizational members share a common vision and goals, promotes both integration and collective responsibility (Coleman, 1990). This, in turn, can ensure that exchanges are guided by a clear sense of purpose.

Overall, high levels of structural, relational and cognitive social capital can enable organizations to generate important collective assets, such as knowledge, reciprocity, and commitment, which may lead to better performance. Indeed, due to its nature as a jointly-owned (and not easily traded away) resource, “social capital makes possible the achievement of ends that would be impossible without it or that could be achieved only at extra cost” (Nahapiet & Ghoshal, 1998). Nonetheless, although levels of collaboration,

trust and shared values within organizations are the primary constituent of organizational social capital, the extent to which managers are able to realize benefits from networking beyond the organization's boundaries can also contribute to the growth of social capital.

Public managers now operate in complex networked settings that place an ever greater burden on their ability to trust more and monitor less (O'Toole, 1997). This has meant that they are increasingly reliant on their relationships with a host of diverse external actors and agencies. These relationships represent an organizational asset constituting the external social capital through which managers can access vital exogenous sources of resources and support, including knowledge and information. For example, engagement with community-based organizations can lead to "better policies which are more sensitive to local needs", by facilitating "a more finely grained analysis of social need that complements the work of professional analysts and statisticians" (Williamson, Scott, & Halfpenny, 2000, p. 60). The resources latent within external relationships thus constitute an important counterpart to those found within an organization. Both sets of relationships may also require the presence of other favourable internal characteristics if they are to make a meaningful contribution to organizational advantage.

Contrary to the "bonding" notions of cohesive social networks associated with the Nahapiet and Ghoshal (1998) model of organizational social capital, structural hole theory suggests that the value of social capital is contingent on the "bridging" opportunities available within organizations for enterprising managers to create links across different networks (Burt, 1997). Managers are thus only able to realize the value of social capital if they are situated in a "structural hole" within their organization. For

example, less hierarchical or formal organizational structures afford greater freedom to entrepreneurial managers seeking to access and transfer valuable knowledge from an organization's peripheries. Similarly, the greater the professional autonomy experienced by a manager, the more motivation and skill they will likely have for bringing together diverse groups and ideas. High levels of occupational specialization within an organization may therefore present managers with more scope for reaping the benefits of their expertise (Burt, 2004). The substantial influence of organizational structures on managerial behaviour therefore means that it is essential to consider the opportunities managers have for bridging "structural holes" when exploring the relationship between organizational social capital and performance.

## **HYPOTHESES**

The first key dimension of organizational social capital that may influence organizational performance is the internal arrangements for cross-departmental collaboration and coordination. Such arrangements can plug gaps in statutory mandates and ameliorate "negative externalities" associated with the provision of public services through single-purpose agencies or programmes (6, 2004). Almost all public organizations can benefit from a "joined-up" approach to building and formalizing relationships across organizational boundaries, but it is especially applicable to multipurpose local governments. School outcomes are, for example, influenced by factors – like housing and welfare – that are beyond the remit of education departments. By encouraging interaction between different departments it becomes increasingly possible for vital information and knowledge about the task environment from across an organization to be brought to bear

on “wicked issues” (Ling, 2002; Willem & Bulens, 2007). Moreover, such “joining-up” across service departments in local governments is essential for successful implementation of centrally driven policies and initiatives (see Cowell & Martin, 2003). Thus, the first hypothesis is that:

H1: Structural social capital is positively related to public service performance.

The second key dimension of organizational social capital that is likely to affect public service performance is the level of ‘generalized trust’ within an organization. Higher levels of interpersonal trust are associated with lower transaction costs, which thereby facilitate a greater range of exchanges and provide stronger incentives for innovation and the sharing of risk (Fukuyama, 1995). La Porta *et al.* (1997) find that high levels of interpersonal trust within schools in economically advanced nations had a statistically significant positive effect on their overall performance. Similarly, Boix and Posner (1998) argue that greater interpersonal trust within multipurpose public organizations increases bureaucratic efficiency and effectiveness by encouraging managers to freely exchange ideas and information. Shared norms of reciprocity both underpin access to such exchanges and provide the necessary motivation to do so. As a result, it is anticipated that:

H2: Relational social capital is positively related to public service performance.

Cognitive social capital relates to the subjective interpretations of organizational goals that are shared by actors within a given organization. Such interpretations can influence organizational choices, by providing more or less coherent ways of symbolizing an organization's mission (Meyer & Rowan, 1977). These processes of identification may enable organizational members to cope with uncertainty where the framework of meaning on which they are based is broadly shared across an organization. Multiple points of identification within an organization, by contrast, can exacerbate collective action problems associated with attempting to implement policies and strategies, such as the need for coalition building. This may, in turn, make it harder for public organizations to respond effectively or equitably to new challenges or opportunities, increasing the likelihood of poor performance. By contrast, a strong sense of mission that is effectively communicated throughout an organization can galvanize managers and staff (Duncan, Ginter, & Kreidel, 1994). The "willingness and ability to define collective goals that are then enacted collectively" (Leana & Van Buren, 1999, p. 542), is thus associated with greater overall synchronization of organizational effort, leading to the expectation that:

H3: Cognitive social capital is positively related to public service performance.

Engagement with the external environment is a critical function for public managers (Rainey, 2003). One important way in which this can be accomplished effectively is through the cultivation of collaborative arrangements with relevant external agencies (Agranoff & McGuire, 2003). Such arrangements are characterized by multiple, overlapping partnerships with various combinations of the public, private and voluntary

organizations involved in policy implementation (Entwistle & Martin, 2004; Hall & O'Toole, 2000). Nevertheless, public organizations also require the support of external stakeholders other than their institutional partners in collaborative governance. Consulting service users, for example, can help generate trust and confidence in public organizations and increase responsiveness to citizens' needs (Berman, 1997; Yang, 2006). By "managing outward" in this way, public managers may also gain a broader sense of the external contingencies faced by their organizations, which in turn, translates into better decision-making. Thus, it is hypothesized that:

H4: External social capital will be positively related to public service performance.

Within organizations, social capital is created where there are greater opportunities for enterprising managers to locate and transmit new ideas and information. As a result, flatter organizational structures with a low degree of formality are likely to be more conducive to the kind of horizontal symmetrical relationships in which social capital flourishes (Putnam, 1993). Indeed, Burt (1997) argues that the value of social capital within organizations is contingent on the "structural holes" that managers are able to exploit. Where managers are less constrained by centralized decision-making processes, and formal rules and procedures they have to rely on their own capacity for bringing together relevant internal and external stakeholders to maximize organizational advantage. Occupational specialization, in particular, can enable managers to reap the benefits of organizational social capital. If managers have few peers able to carry out their duties, they are better placed to define the terms of their role, increasing their

chances of subsequently exploiting wider opportunities for unlocking and transferring new knowledge and ideas presented by “structural holes” (Burt, 2004). It is, therefore, also hypothesized that:

H5: The relationship between organizational social capital and public service performance will be contingent on structural holes.

### **RESEARCH CONTEXT, METHODS AND DATA**

The panel data set for the analysis consists of a maximum of 139 English single and upper tier local governments (county councils, London boroughs, metropolitan districts and unitary authorities), and includes measures taken from a six year period (2000 to 2005). These governments are multipurpose organizations providing education, social care, regulatory services (such as land use planning and waste management), housing, welfare benefits, leisure and cultural services. They represent an especially suitable context for testing the relationship between organizational social capital and public service performance. The 2006 Local Government White Paper *Strong and prosperous communities* stated that to “deliver better and more efficient services”, local governments should “make a fundamental change in attitudes and culture, engaging with citizens and working with their partners in new ways” (Department for Communities and Local Government, 2006, p. 5).

## **Dependent variable**

Organizational performance in the public sector is complex and multidimensional. The achievements of public organizations are typically judged by multiple constituencies, such as taxpayers, staff and politicians (Boyne, 2003). The different interests of various stakeholder groups therefore influence performance measurement at every point. The criteria, weighting, and interpretation of performance indicators, are all subject to ongoing debate and contestation amongst key stakeholders (Andrews, Boyne, & Walker, 2006). The analysis presented here focuses on the views of the primary external stakeholder on the service performance of English local governments: UK central government.

In England, central government performance classifications are important (though contestable) means for assessing the achievements of local governments. Central government provides the majority of their funding and monitors administrative accountability on behalf of citizens. For example, local government services receive substantial grant allocations adjusted for spatial variations in need. Even for those services where it may not be the primary funder (e.g. housing, which in many areas has been transferred to private and voluntary sector providers), central government's judgements about performance have similar antecedents and effects to those in which it is. A local government function classified as 'poor' may be externalized, new management imposed or stricter regulation introduced. Such services may even be temporarily or permanently closed.

### *Core service performance*

The major external assessment of English local government performance carried out by central government inspectors is the yearly Comprehensive Performance Assessment (CPA) conducted by the Audit Commission. For four years during the period covered by this analysis (2002-2005), this classified the service performance of single and upper tier local governments by making judgements about their achievements in six key service areas (education, social care, environment, housing, libraries and leisure and benefits) together with their broader “management of resources” (Audit Commission, 2002a; 2003a; 2004a; 2005).

The services are given a score from 1 (lowest) to 4 (highest), based on a mixture of performance indicators, inspection results and service plans and standards. Each service score is then weighted to reflect its relative importance and budget (children and young people and adult social care = 4; environment and housing = 2; libraries and leisure, benefits and management of resources = 1) and summed to provide an overall service performance judgement. These range from 15 (12 for county councils which do not provide housing or benefits) to 60 (48 for county councils). Because these scores are not directly comparable across all types of authority, each government’s score is taken as a percentage of the maximum possible score.

### **Independent variables**

#### *Social capital*

Data on perceptions of internal and external social capital were derived from an electronic survey of managers in English local governments carried out each summer

from 2001 to 2004. Email addresses for the survey were collected from participating authorities and questionnaires were delivered as an Excel file attached to an email. The electronic questionnaires were self-coding and converted to SPSS format for analysis. Informants had eight weeks to answer the questionnaire, save it and return by email (Enticott, 2003). Multiple informant data were collected from different tiers of management to ensure that the analysis took account of different perceptions within the local governments. Senior and middle managers were selected because research has shown that attitudes differ between hierarchical levels within organizations (Walker & Enticott, 2004). In each participating government, questionnaires were sent to at least three senior and four middle managers. In 2001, the total sample consisted of 121 single and upper tier governments, with a 56 per cent (1259) informant response rate. In 2002 and 2003, the total sample was 77, with response rates of 65 per cent (922) and 56 per cent (790) respectively. In 2004, the total sample was 136, with a response rate of 54 per cent (1052).<sup>1</sup>

Some cases could not be matched when the survey variables and performance measures were mapped, due to missing data within the respective datasets. As a result, the statistical analysis of the relationship between social capital and performance was conducted on an unbalanced panel of 96 local governments in 2001, 70 in 2002, 71 in 2003 and 128 in 2004. Nonetheless, these cases are representative of the diverse operating environments faced by English local governments, including urban, rural and socio-economically deprived areas.

Five items from the survey were used to measure internal organizational social capital in English local governments. The *structural* dimension was gauged by asking

informants about the extent to which “cross-departmental and cross-cutting working” was “important in driving service improvement”. Informants were asked whether “there is a high level of trust between top-management and staff” and if “there is a high level of trust between top-management and politicians” in order to assess the *relational* dimension of social capital.<sup>2</sup> Finally, the *cognitive* dimension was evaluated by enquiring about the extent to which the government’s “mission, values and objectives are clearly and widely owned and understood by all staff”. One item was then used to measure *external* social capital. Informants were asked to gauge the extent to which “strategy is made in consultation with our external stakeholders”.

### *Structural holes*

The presence of “structural holes” within local governments was measured by assessing survey respondents’ evaluations of the internal structure of their organization. Organization theorists suggest that relative levels of centralization, formalization and specialization are the three principal ‘structuring’ dimensions, which may influence organizational choices and outcomes (see Dalton, Todor, Spendolini, Fielding, & Porter, 1980; Hage & Aiken, 1967). To gauge the presence of “holes” within each of these dimensions of the organizational structure, informants were therefore asked to indicate the extent to which “control is devolved to service managers” (*decentralization*); whether “written policies and procedures are important in guiding the action of employees” (*formalization*); and if staff were “frequently” transferred or seconded to “different departments/services” (*specialization*). The direction of the final two items was reversed in order to tap the degree of opportunity that the organization structure presented for

managers to by-pass formal procedures and to reap the benefits of their occupational specialism.

### ***Control variables***

#### *Financial slack*

In England, the allocation of central grants compensates local governments for high service needs and/or a low tax base (Boyne, Powell, & Ashworth, 2001). However, this equalization applies only to a 'standard' level of service. Local governments may deviate from this figure because they have a surplus (or shortage) of 'discretionary resources' bestowed by historically high (or low) spending. A measure of the financial slack available to each local government was derived by dividing its net service expenditure per capita by its Standard Spending Assessment (SSA) per capita. The SSA is an index of service needs used by central government to distribute grant funding to councils. The inclusion of this measure of slack therefore shows whether governments spending above the level deemed necessary to meet their service needs perform better or worse than their more prudent counterparts.

#### *Past performance*

The performance of most public organizations changes only incrementally over a period of time (O'Toole & Meier, 1999). It is therefore important to include prior achievements in statistical models of performance, to ensure that the coefficients for the independent variables are not biased. The effects of past performance were controlled in this analysis by including core service performance in the year prior to the survey data.<sup>3</sup> This also

controls for the possibility that performance may influence levels of organizational social capital. Similarly, the effects of other relevant environmental constraints on organizational performance are controlled, as their likely impact is contained in prior achievements.<sup>4</sup> Table 1 presents the descriptive statistics for all the measures.<sup>5</sup>

[Position of TABLE 1]

## **STATISTICAL RESULTS**

To address potential methodological problems associated with the use of panel data, random effects estimations with robust standard errors are reported. This controls for the possibility that the error terms across panels are time correlated, and for the error term for one local government to be correlated with another's during the same year. It also addresses the effects of panel heteroscedasticity and within panel autocorrelation (Beck & Katz, 1995). The inclusion of dummy variables for each year of the survey further reduced the possibility of within panel autocorrelation.

The results for the statistical tests of the impact of organizational social capital on public service performance are shown in tables 2 and 3. Table 2 presents the relationship between the control variables and performance, and then the additional explanatory power offered by the measures of internal and external social capital. In table 3, the impact of each dimension of social capital and “structural holes” on performance is shown. Twelve interaction terms for social capital and decentralization, formalization (reversed), and specialization are then added to the statistical model to explore the extent to which the relationship between social capital and performance is contingent on

“structural holes”. The average Variance Inflation Factor score for all the independent variables used in the statistical analyses is about 1.6, with no single variable exceeding 3, indicating that the results are not likely to be distorted by multicollinearity (Bowerman & O’Connell, 1990). Inevitably, though, the level of collinearity increases considerably when interacted variables 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.

Table 2 highlights that the control variables account for nearly 40% of the variation in the performance of English local governments between 2002 and 2005. Governments spending within their service needs perform better than their more profligate counterparts. Furthermore, performance is autoregressive – the relative success (or otherwise) of local governments tends towards stability from one year to the next. Taken together, the  $R^2$  and the effects of both control variables suggest that the model provides a sound foundation for assessing the influence of organizational social capital.

[Position of TABLE 2]

A joint f-test revealed that inclusion of the measures of social capital makes a statistically significant improvement to the explanatory power of the model of 7%. This suggests that it is important to consider the effects of organizational social capital when investigating the determinants of public service performance. The first hypothesis on the relationship between organizational social capital and performance is supported: the coefficient for structural social capital has a positive sign and is statistically significant.

This finding indicates that the presence of internal collaborative arrangements is associated with better service performance. Local governments may therefore be benefiting from a high level of departmental coordination and cross-cutting working because it enables managers to access and transfer learning and knowledge across the organization. For example, qualitative research in private firms suggests that structural social capital may provide “access to asymmetrically distributed information” (Edelman, Bresnen, Newell, Scarborough, & Swan, 2004). Case study data would elicit greater understanding of the processes by which such information is transferred across departments within local government, and how it can be created and disseminated more effectively.

Hypothesis 2 is confirmed by the results shown in Table 2. Relational social capital has a statistically significant positive association with service performance. High levels of trust between organizational members seem to be conducive to improved outcomes. One potential explanation for this finding is that trusting relationships enable organizational members to overcome collective action problems associated with improving services, especially within intra-organizational networks (Tsai & Ghoshal, 1998). Higher levels of interpersonal trust may therefore lower transaction costs as managers are less constrained by the need to monitor the behaviour of colleagues and partner organizations when seeking to implement policies and programmes. They may also lead to a greater propensity to knowledge sharing between departments (see Willem & Buelens, 2007), which, in turn, can generate enhanced service outcomes. Research in the private sector has suggested that trust is a critical moderator of the relationship between the capability to exchange and combine knowledge and performance in high

technology firms (Collins & Smith, 2006). The extent to which relational social capital is a determinant of willingness to share and disseminate information within public organizations is therefore an important topic for further research.

The third hypothesis is not supported by the statistical results. The coefficient for cognitive social capital has a positive sign, but it is not statistically significant. A sense of shared mission therefore appears to be having no independent influence on the service performance of English local government. It is possible that the positive effects of cognitive assonance are counterbalanced by negative externalities associated with infusing and sustaining positive values, such as the costs associated with processes of organizational acculturation (Fernandez & Rainey, 2006). An alternative explanation is that the effect of cognitive social capital is non-linear: as a collective sense of direction increases so to does the potential for an organization to become afflicted by “threat-rigidity” or “groupthink” (Janis, 1972; Staw, 1981). However, the inclusion of a quadratic term alongside the basic term did not reveal a statistically significant nonlinear effect nor add to the explanatory power of the model.

The results confirm the fourth hypothesis. The coefficient for consultation with external stakeholders is positive and statistically significant. Local governments that make strategic decisions in concert with partner organizations and local citizens appear to be more likely to have better performing services. This finding on the value of external linkages corroborates evidence on improvements in sales growth and stock returns in high-technology firms attributable to boundary spanning activity (Collins & Clark, 2003). Engagement with external stakeholders may be integral to both better public service performance and to a host of other important organizational outcomes (see Leach, Pelkey,

& Sabatier, 2002). Empirical investigation of the impact of external social capital on outcome measures that are valued by stakeholders other than UK central government, in particular, would reveal a great deal about its value to English local governments.

Table 3 presents the results of the inclusion of the “structural hole” measures and the interactions between these measures and those for each dimension of social capital. “Structural holes” do not alter the relationship between organizational social capital and performance shown in table 2. While the findings in table 3 suggest there is a positive relationship between fewer rules and procedures and performance, this statistical association has not disconfirmed the existing support for the hypotheses on structural, relational and external social capital. Indeed, a joint f-test showed that the “structural hole” base terms failed to add statistically significant power to the model. To fully explore the extent to which the link between social capital and performance may be contingent on “structural holes”, it is therefore necessary to enter interaction terms in the statistical model.

[Position of TABLE 3]

Although the interactions make a statistically significant contribution to the model’s explanatory power of 3%, the marked absence of statistically significant interacted terms suggests that there is unlikely to be a strong relationship between organizational structure, social capital and service achievements – at least for the local governments studied here. Nevertheless, the statistically significant coefficients for *RSC x specialization* and *ESC x formalization (reversed)*, provide some support for structural

hole theory. Governments characterized by trusting relationships amongst managers and politicians appear to be likely to derive further benefits from a high level of occupational specialization. Similarly, governments which involve external stakeholders in their strategic decisions may reap additional performance gains from having fewer written rules and procedures. To substantively interpret these interactions it is, however, necessary to consider the marginal impact of organizational social capital on performance at different levels of “structural hole”. These marginal effects can be best illustrated graphically (see Brambor, Clark, & Golder, 2006).

[Position of FIGURE 1]

Figure 1 displays the marginal impact of relational social capital on occupational specialization. The figure provides a clear example of the complexities involved in the interpretation of interaction equations. Despite the statistically significant coefficient displayed in table 3 and the positive inclination of the slope, the combined impact of interpersonal trust and occupational specialization is not statistically significant from zero. This suggests that the independent positive association between relational social capital and performance observed in table 2 is generally unaffected by variations in the professional autonomy experienced by managers.

[Position of FIGURE 2]

Figure 2 shows the marginal impact of external social capital on formalization (reversed). The slope is positive, but this time is significantly different from zero when it is above the median level of formalization (reversed). In this instance, the positive association of stakeholder engagement with the performance of local governments appears to be significantly enhanced by the absence of written rules and procedures. This finding implies that public organizations seeking to reap the rewards of external social capital can do so best by reducing the reliance of managers on formal established decision-making processes.

Although the analysis presented above has provided strong support for the application of the Nahapiet and Ghoshal (1998) model of social capital to the public sector, the results for the interactions imply that the insights of structural hole theory may be less applicable. Relative levels of decentralization, formalization and specialization play little part in enhancing the impact of social capital on the performance of local governments. It may be the case that the positive and negative consequences of “structural holes” are simply cancelling each other out. Gargiulo & Benassi (1999) provide evidence of trade-offs between the safety of cooperation within cohesive networks and the flexibility afforded by “structural holes” amongst manufacturing managers. It is also conceivable that alternative measures of organizational structure, such as “network centrality” (Freeman, 1979) might uncover different causal relationships within local governments than those found here. Given the increasingly networked environments in which public managers now operate, this is a topic deserving further empirical investigation.

## CONCLUSIONS

This paper has contributed to the growing literature on organizational social capital by testing a model of its impact on public service performance. The statistical results show that variations in the performance of English local governments over a four year period (2002-2005) are significantly associated with organizational social capital. High levels of structural and relational social capital are associated with better service achievements. In addition, external social capital has a statistically significant positive relationship with performance. Cognitive social capital displayed no statistically significant association with performance. The effects of organizational social capital were contingent on “structural holes” for only 1 out of the 12 measures tested (*ESC x formalization (reversed)*). It is therefore fair to assert that, for this sample at least, structural hole theory is not supported. These findings have important theoretical and practical implications.

The analysis expands on work on organizational social capital and performance in at least three ways. First, it establishes a connection between organizational social capital and the achievements of multipurpose local governments. Previous quantitative studies have so far focused on its impact on the performance of single purpose public organizations (e.g. Leana & Pil, 2006). Second, it explores the link between social capital, “structural holes” and performance at the organizational level. Existing studies of these relationships are firmly rooted in analyses at the individual level (e.g. Burt, 1997). Finally, the unit of analysis is public organizations delivering services in diverse local areas rather than a single type of public organization operating within only one context (e.g. Leana & Pil, 2006). The geographical areas analysed vary widely in terms of a range of environmental characteristics, including population density, prosperity and

demographic diversity. Despite these differences, there appears to be a positive relationship between organizational social capital and public service performance which is sustained through time.

The analysis, however, has clear limitations. Although the findings are at the organizational level, such an aggregative exercise inevitably obscures aspects of the relationship between social capital and performance. It would, therefore, be necessary to conduct more detailed investigation at different levels of the organizational hierarchy to fully explore how the different dimensions of internal social capital translate into public service delivery. The analysis has also aggregated a range of different types of local service within multipurpose governments. Disaggregating these services may reveal that the impact of organizational social capital produces different results for different service areas. It would also be important to identify whether the relative importance of organizational social capital differs in other contexts and over other time periods. English local governments operate within a highly regulated environment, which tightly constrains many aspects of their behaviour (see Kelly, 2006). The role of “structural holes” in unlocking the value in social capital may therefore be more apparent in other organizational contexts that permit greater leeway for managerial discretion and entrepreneurialism.

Different measures of organizational social capital may also influence different measures of performance, and their impact may be either stronger or weaker than the variables included in this model. In particular, due to data limitations it was not possible to explore additional dimensions of external social capital in detail on this occasion. Given the strong association of relational social capital with performance, it seems

reasonable to assume that a high level trust between local governments and their external stakeholders, for instance, will have a similarly positive association (see Yang & Holzer, 2006). Future research would benefit greatly from exploration of this theme.

The findings presented here suggest that relational social capital and external social capital have the most statistically significant effect on the performance of local governments. This implies that policy-makers seeking to promote public service improvement through support for organizational social capital should prioritize these particular dimensions. For example, job and work characteristics, and Human Resource Management initiatives can contribute to greater trust between senior and middle managers in public organizations (see Carnevale & Weschler, 1992; Daley & Vasu, 1998). Similarly, by strengthening the relationship between local governments and their external stakeholders, collaborative partnership arrangements and participatory engagement initiatives may result in better decision-making (see Tunstall, 2001; Nylén, 2007). The results also suggest that less emphasis should be placed on internal organizational structures when attempting to link social capital and service improvement, as the interaction terms had virtually no statistically significant association with performance. By contrast, there was some evidence to corroborate the popular policy prescription for more joined-up working between different departments within the same organization (see, for instance, Office for Public Service Reform, 2002).

This study has provided evidence on organizational social capital in local governments. Despite its limitations, the findings provide a strong platform for the continued application of the Nahapiet and Ghoshal (1998) model to public organizations. Future research could furnish further guidance for the theory and practice of public

service improvement by analysing the linkages between the different dimensions of social capital and alternative organizational characteristics, such as, strategy and networking, and their separate and combined effects on performance.

## NOTES

1. Time-trend extrapolation tests for non-respondent bias in each year (Armstrong & Overton, 1977) revealed no significant differences between the views of early and late respondents.
2. A relational social capital index was created by combining these measures. This index was then assessed using Cronbach's Alpha coefficient of internal consistency based on the average inter-item correlation between each of the aggregated variables, demonstrating a good reliability score of .68 (Nunally, 1978).
3. CPA was first carried out in 2002, hence it was not possible to enter a score for core service performance in 2000 or 2001 in the model. To create a proxy for core service performance in those years based on the available statutory local government performance indicators, a stepwise regression for core service performance in 2002 based on the entire Best Value Performance Indicator dataset for the same year was carried out. Six performance indicators accounted for over half the variance in the core service performance scores awarded by central government inspectors (consumer satisfaction (in 2000); the percentage of pupils aged 16 achieving 5 or more General Certificates in Secondary Education graded A\*-C; the number of motorcyclists killed or seriously injured per 100,000 population; social services satisfaction; the number of days temporary traffic controls were in place per kilometre of road; and the percentage of

pupils aged 11 achieving the required standard in Mathematics). The scores each local government achieved on these performance indicators in 2000 and 2001 were multiplied by their respective coefficients in the stepwise regression model, summing the resulting scores and the constant together to give an overall measure of local government performance in the years prior to the introduction of CPA (Audit Commission 2002b; 2003b; 2004b).

4. Models including time-invariant measures of the external constraints faced by local governments, such as: *quantity of service need* (e.g. index of multiple deprivation, lone parent households), *diversity of service need* (e.g. age diversity, ethnic diversity and social class diversity); *size* (e.g. client population); and *sparsity* (e.g. population density), were also tested, but the results were much the same (available on request).

5. Before running the statistical models, skewness tests were carried out to establish whether each independent variable was distributed normally. A very high skew test result for discretionary resources indicated a non-normal distribution (-4.59). To correct for negative skew, a squared version of the discretionary resources variable was created.

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**TABLE 1****Descriptive statistics**

	Mean	Min	Max	S.D.
Core service performance	68.56	36.67	90.00	9.05
<i>Organizational social capital</i>				
Cross-cutting working	4.94	2.27	6.33	.66
SMT and staff trust	4.85	2.00	6.40	.73
Politicians and SMT trust	4.93	2.25	6.50	.86
Mission widely shared	5.07	2.44	6.57	.78
Stakeholder consultation	5.43	3.00	7.00	.59
<i>Structural holes</i>				
Decentralization	5.15	3.00	6.67	.63
Formalization (reversed)	2.83	1.54	4.25	.52
Specialization	4.42	1.91	6.58	.92
<i>Control variables</i>				
Financial slack per capita	1.15	.05	1.38	.09
Auto regressive term	68.48	38.93	88.37	8.39

**TABLE 2****Organizational Social Capital and Public Service Performance**

Independent variables	Slope	z-score	Slope	z-score
Constant	43.4030**	7.87	21.6329**	3.50
<i>Organizational social capital</i>				
Structural social capital			1.0494*	1.65
Relational social capital			2.0900**	2.39
Cognitive social capital			.5443	.89
External social capital			1.2222*	1.80
<i>Control variables</i>				
Financial slack	-4.2130*	-1.74	-4.0505**	-1.96
Auto-regressive term	.4509**	8.40	.3959**	7.88
Wald statistic	146.25**		198.75**	
Overall R <sup>2</sup>	.39		.46	
N of observations	365		365	

*Note:* significance levels: +p ≤ 0.10; \*p ≤ 0.05; \*\*p ≤ 0.01 (one-tailed test).

Dummy variables for individual years not reported

**TABLE 3**

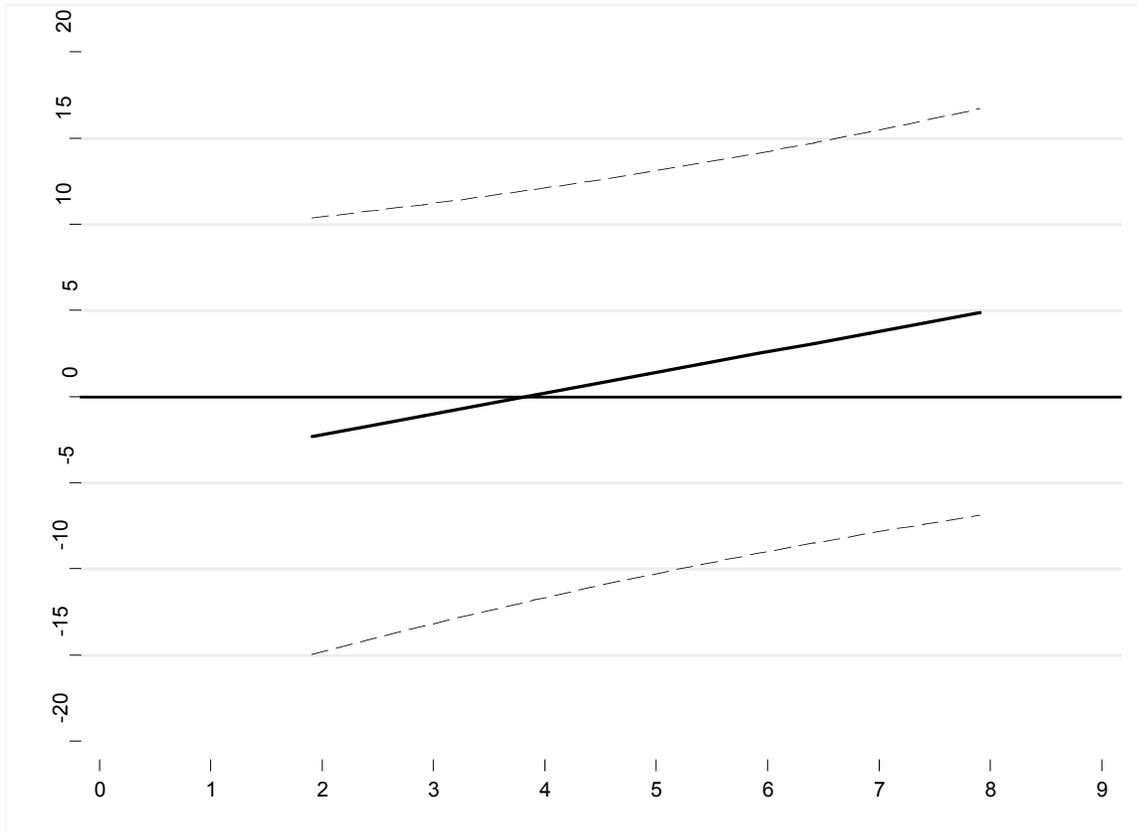
**Do Structural Holes Make a Difference?**

Independent variables	Slope	z-score	Slope	z-score
Constant	15.6395*	1.79	-23.7845	-.51
<i>Organizational social capital</i>				
Structural social capital (SSC)	1.0941*	1.63	-1.4926	.23
Relational social capital (RSC)	2.1642**	2.33	-4.5738	-.55
Cognitive social capital (CSC)	.7419	1.18	10.2859+	1.32
External social capital (ESC)	1.4381*	1.98	5.2298	.68
<i>Structural holes</i>				
Decentralization	-.0865	-.11	9.0243+	1.47
Formalization (reversed)	1.2217+	1.56	4.6456	.76
Specialization	-.2325	-.54	-4.7616	-1.11
<i>Interacted terms</i>				
SSC x decentralization			.1128	.13
SSC x formalization (reversed)			-.7009	-.73
SSC x specialization			.2458	.41
RSC x decentralization			.5858	.56
RSC x formalization (reversed)			-.5241	-.44
RSC x specialization			1.1982*	1.71
CSC x decentralization			-1.1538	-1.17
CSC x formalization (reversed)			-1.3853	-1.21
CSC x specialization			.1350	.22
ESC x decentralization			-1.2901	-1.28
ESC x formalization (reversed)			1.8200*	1.71
ESC x specialization			-.6059	-.97
Wald statistic	228.27**		312.97**	
Overall R <sup>2</sup>	.47		.50	
N of observations	365		365	

Note: significance levels: +p ≤ 0.10; \*p ≤ 0.05; \*\*p ≤ 0.01 (one-tailed test). All equations control for all variables in Table 2.

**FIGURE 1**

**Marginal Impact of Relational Social Capital on Specialization**



**FIGURE 2**

**Marginal Impact of External Social Capital on Formalization (Reversed)**

