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Beyond hollowing out: Public sector managers and the use of external management consultants

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Abstract

Expenditure on management consultants in public sector organizations is generally seen as contributing to a “hollowing out” of the state through the substitution of internal management capability. However, there is little systematic evidence for this view which also ignores how public sector managers may, themselves, drive consulting use. Looking at 125 English public hospitals over 6 years, we explore the relationship between the development and composition of management functions and spending on consultants. Our findings show the absence of a substitution effect and, therefore, challenge the “hollowing out” thesis. Instead, they point to a more active, occupationally varied and political use of consultancy. We find that larger management functions overall are associated with greater reliance on consultants—a complementary relationship. However, where a higher proportion of managers are engaged in internal consulting functions, this results in the lower use of external management consultants, with implications for theory, research and policy.

Evidence for practice

- The findings challenge the widespread view that external management consultancy use substitutes for in-house management functions.
- The use of external management consultancy does not lead to a ‘hollowing out’ of in-house management functions.
- Public sector organizations with larger management functions use more consulting advice, suggesting a complementary relationship.
- Public sector organizations with more managers involved in internal consulting work tend to make less use of external consultants.

“We contend that one of the major reasons for the heavy use of outside experts is the belief prevalent in our society that government ... is inefficient, ineffective, and staffed with idle, incompetent, security-seeking individuals.” (Kline, 1979, 226)

Debates about the hollowing out of the state are long standing in the public administration literature (Milward & Provan, 2000; Rhodes, 1994). Hollowing out denotes a number of processes that lead to a smaller and altered role for the state, including the loss of authority to supra national

bodies (such as the European Union) and moves to privatize and outsource public services (Skelcher, 2000, 5). Most recently, the latter has become increasingly salient in the case of expert advice drawn from management consulting firms (Craft & Halligan, 2020). While initially concentrated in the United States and Westminster-based governments, consultancy use has spread further on the back of New Public Management (NPM) reforms (Saint-Martin, 2012). Globally, it is estimated that consulting revenue from governments exceeded \$85bn in 2018 (IBIS World, 2019). The appeal of these services to clients includes the promise of fast and efficient delivery, the acquisition of new skills

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and reputational benefits, especially when consulting advice is associated with 'modernization' (Saint-Martin, 2012).

However, as the opening quotation from a special issue of this journal, over 40 years ago, suggests, the use of consultants is also controversial. Regardless of the validity of the belief expressed, the quotation illustrates how internal and external expertise are often pitched against each other and management consultancy represents a challenge to the practices and values of public administration (Galwa & Vogel, 2023). As public sector organizations increase their use of consultants, this could be at the expense of developing *internal* management capabilities. Indeed, the notion that consultants pose a challenge to public managers is widespread in the media, policy and academic research (Ylönen & Kuusela, 2019).

Often, this trend in the use of consulting advice is presented in terms of a hollowing out process, not in the dominant sense, linked say to outsourcing of shared services (Milward & Provan, 2000), but specifically in relation to the downsizing of internal management expertise (Althaus et al., 2021; Howlett & Migone, 2013; Lapsley, 2009). Momani (2013, 396), for example, concludes that, in the United States, 'the increased use of management consultants is further evidence of the hollowing of the state'. In Australia, Browne (2021, 17) also points to an 'over-reliance on consultancy contracts which are a symptom of the hollowing out of the public service'. Specifically, it is claimed that 'governments have moved to reduce or "hollow out" permanent staff, assuming that external help can be hired on demand' (Vogelpohl et al., 2022, 374).

Common to all these accounts is the belief that the greater dependency on the use of external consultants has gone hand in hand with cuts (or caps) on internal management staff numbers, as responsibility for certain key internal functions associated with the planning and co-ordination are effectively outsourced. However, the hollowing out idea in this context is problematic. First, the evidence base is limited to a small number of cross-sectional organizational cases or interview-based studies (e.g., Lapsley, 2009), making it hard to generalize. To date, there has been no systematic research showing a link between consulting use and the development of management functions across wider populations of public sector organizations.

Second, there exist theoretical problems. In most accounts of hollowing out, managers are assigned a largely passive role, as victims of others' decisions to cut their numbers, but this is clearly an over-simplification. In practice, using consultants is rarely obligatory (Fincham, 1999) so managers are better conceived of as principal agents or clients, who often have considerable discretion over how much consulting advice public sector organizations use and for what purposes. In some contexts, they may oppose using this advice, especially where consultants are perceived as 'intruders' (Menon & Blount, 2003), posing a threat to managers' ethos, expertise, jobs and prospects or

simply as being unnecessary (Ruef, 2002; Sturdy & Wright, 2011). On the other hand, managers could support the use of consulting as a means of introducing new expertise from the commercial sector (Sturdy et al., 2021) and/or to enhance 'agency reputation', legitimacy and autonomy (Carpenter & Krause, 2012). Either way, it seems erroneous to assume that the growing 'use of consultants' will 'necessarily "hollow out" capacity' (Althaus et al., 2021, 1).

Given these concerns, the aim of this article is to critically investigate the notion of a *substitution* effect. Specifically, it seeks to address the following research questions: (1) what is the relationship between the development of management functions in public sector organizations and the use of external consulting advice; and (2) does the use of consulting advice lead to decreasing investment in managers (i.e., hollowing out)? Answering these questions is theoretically important as a possible corrective to the hollowing out thesis which dominates the public administration literature on this topic. There are also potentially significant implications for policy around governing consulting use and associated costs. This is especially in light of evidence suggesting that rising expenditure on consultants can have negative consequences for performance (Kirkpatrick et al., 2019).

The article first draws on the extant literature on consulting and management and highlights a possible relationship between the development of the management function and its influence over decisions about how much external consulting advice is used. Attention is then drawn to the largely neglected issue in consultancy research of how public management is itself occupationally diverse with competing political interests (Sturdy & Wright, 2011). This could shape whether consulting advice is perceived by managers either as a threat (lowering its use) or opportunity (increasing its use). In the main body of the article, these assumptions and related hypotheses are then tested, focusing on the illustrative case of the English National Health Service (NHS). This case is theoretically relevant for two main reasons: (a) a growing annual expenditure on management consulting (Oliver, 2016) and; (b) the relatively low numbers and internally weak occupational status and position of managers (Kirkpatrick et al., 2017). The presence of a weaker occupational group could exaggerate the tension between managers and consultants and the risks of substitution. Conversely, it could mean that managers are strongly motivated to control and promote the use of consultants as a way of extending their own power base and supplementing their expertise. The results of the analysis, focusing on *125 English public sector hospitals over 6 years*, provide no evidence to support the hollowing out view. They also suggest that organizations with larger management functions tend to use more consulting advice, while the opposite is true in situations where a greater proportion of managers have overlapping, internal consulting expertise.

THEORY

While definitions of management consultancy are often debated, there is some consensus over the core roles of providing expertise in the form of advice, support for implementation and, more politically, legitimacy for client decisions (Saint-Martin, 2012; Sturdy et al., 2017). As noted earlier, recent trends have seen a growing uptake of this advice by public sector organizations, which many believe has resulted in a hollowing out of internal management capabilities. Specifically, this implies a substitution effect, whereby certain roles, usually performed by managers, are passed over to external consultants. For example, in UK public health care, a review by the Royal College of Nursing (2009) found that 78% of consulting expenditure was focused on non-clinical projects (e.g., assisting with governance, IT implementation, and public finance initiative contracts) rather than “direct patient care.” Thus, external consultants were mostly covering activities that normally fall under the purview of in-house management functions. Over time, this might contribute to the wider process of hollowing out of the state, as private sector organizations come to play a bigger role in running and shaping public services.

The assumed drivers of this localized hollowing out process are complex. For some, it is understood as an outcome of a rational “make or buy” decision, linked to the perceived greater efficiency of external consultancy which offers economies of scale and scope in the provision of standardized advice (Armbrüster, 2006; Canback, 1999). For others, hollowing out of internal management capabilities is more an ideological matter, signaling the growth of a “consultocracy” (Ylönen & Kuusela, 2019), and the preference of policy makers for commercial expertise (Galwa & Vogel, 2023). But whether the push toward hollowing out is driven by rational or ideological considerations (or both at the same time), the end result is assumed to be a substitution effect. As Laage-Thomsen (2022, 472) puts it, “the literature tends to emphasize the replacement of long-term civil servant work with short-term outsourced expert knowledge production.”

However, as mentioned earlier, these assumptions are theoretically problematic for two reasons. First, they fail to acknowledge the active role of managers (the assumed subjects of hollowing out) as clients who often decide the amount of consulting advice that is used. Second and directly related to this, they do not pay adequate attention to the occupational dynamics within the management functions of public sector organizations and how different configurations might either support or resist the use of consulting services.

The active role of managers in the use of external consulting

When seeking to explain how much consulting advice is sought (the level of demand), an important starting point

is role and interests of the “client.” In the public sector, the demand for consulting advice can sometimes be mandated by regulators, politicians, or even NGOs. However, in most situations, consulting is a non-obligatory service, with managers acting (directly or indirectly) as the primary purchasers (Lonsdale et al., 2017). This is even more so in organizations which have greater formal autonomy (with private sector-like governance arrangements) and semi-independent status such as in the case of English hospital trusts (Kirkpatrick et al., 2017). In such contexts, managers typically act as the primary gatekeepers and mediators of consulting use, with consultants themselves in structurally subordinate position as contractors (Waisberg & Nelson, 2018). Essentially, this reflects a principal-agent relationship, with managers as principals and consultants as agents (Sharma, 1997). More specifically, consultants can be seen as the “agent’s agent” or an “extrusion of management power” (Fincham, 2002, 67): while “the agent is no slave to the principal’s (i.e., client’s) interests... still, there is no doubting the basic asymmetry” (ibid., 73). Rather than being passive victims, managers are normally the main arbiters of consulting services, determining how much they are used and for what purpose.

Highlighting this active role of managers (as principals) has a number of implications. Firstly, it suggests that the size and power of managers, as a function within organizations, will shape how much consulting advice is used. While only a small minority of managers will act as the direct clients of external consultants, one might expect their decisions to be influenced by the collective priorities of managers as an interest group. It also begs further questions about when and how managers (as a collective interest) are likely to favor or oppose using consulting advice. On the one hand, popular management and media discourse is replete with criticism of consultants, including jokes which imply rivalry and a direct challenge to management jobs and careers (Sturdy, 2009). This is also evident in research findings, identifying management resistance or, at best, wariness (Faust & Schneider, 2014). Managers can also feel threatened by consultants and seek to maintain a distance or “arms-length embrace” (Jackall, 1988, 140).

Nevertheless, against this notion of consultants as a threat, other critical accounts point to their role as “servants of power” or “foot soldiers” (Hodge & Bowman, 2006). They offer managers, collectively and individually, the opportunity to enact their policies and, in an informal political sense, enhance their prospects, status, and control (Wilson, 1989). Additionally, managers sometimes use consultants as scapegoats to protect them from difficult or controversial decisions. For example, public managers may try to leverage the legitimacy of external consultants’ assumed independence to signal their own strategic importance to other managers, civil servants, or politicians and advance their individual, departmental, or functional prospects (Abrahamson, 1996).

This does not, of course, mean that consultants are entirely passive. It is well-established how consultants can wield power over the priorities and decisions of clients (Sturdy et al., 2021). Indeed, over time, clients may become dependent on, or even addicted to, consulting regardless of any “objective” need (Ernst & Kieser, 2002). Important here are ‘demand creating’ skills of consultants, including the ability to exploit client insecurities and ambition in ways that generate and prolong demand. An example is the practice of consultants translating organizational conditions into problems which can then be solved through pre-existing consulting products. In the terms of the garbage can theory of decision-making, this is a case of “solutions chasing problems” (Sturdy, 2018, 83). Thus, the opportunities that managers perceive from using these services are to some extent co-produced through the agency of consultants as well.

Hypothesis development

The above observations have important implications for our understanding of the relationship between managers and consultants and debates about hollowing out. First, if managers are viewed as principals, when are they likely to support or oppose consulting use, viewing it as either an opportunity or threat? Second, how likely is it that, over time, the use of consulting advice will act as a substitute for internal management expertise (hollowing out)?

With regard to the first question, the answer is likely to be highly context specific, depending on the nature of problems faced and services used as well as individual participants’ technical expertise and experience as clients (Althaus et al., 2021; Fincham, 1999). For example, an inexperienced client (or one with limited expertise) might be more likely to see external consultancy as an opportunity (Sturdy & Wright, 2011). Also important here are the occupational characteristics of the management function and how this might shape interests and orientations toward external consultants. While public sector managers can be described as a single function or occupational group within organizations, they are by no means homogeneous (Kirkpatrick et al., 2017; Wilson, 1989). Accordingly, it is possible that sub-groups within the management function will perceive the opportunities and threats posed by consultants differently and that this, in turn, will impact on their support for using their services.

Developing this argument further, it can be argued, on the one hand, that managers in general will tend to favor the use of consultants. This follows from the points made earlier about the opportunities that consultants provide for managers, as an occupation or function, to enhance their power base and expertise and/or allay their insecurities. If anything, this is even more likely in contexts such as health care where managers are likely to face continuing challenges to their dominance from powerful clinical professions, especially medicine (Battilana, 2011).

As such, it is possible that managers will perceive the consulting advice and extra help as a means of supplementing their expertise, advancing their collective interests or enhancing “agency reputation” (Carpenter & Krause, 2012). Implied here is that managers, as a whole, will push for the greater use of external consultants and that their ability to do so will be enhanced in situations where the management function itself is larger and (arguably) more influential. Our initial hypothesis, therefore, states that:

Hypothesis H1. Public sector organizations with a larger management function will tend to make greater use of external consulting advice.

While managers as a generic function may tend to perceive opportunities from consulting use, this is likely to vary between sub-groups. Important for understanding this assumption are the core roles of managers, the nature of their specialist expertise and how far they duplicate or compete with the work of external consultants. Indeed, the thrust of recent work on consultants has been to conceptualize them essentially as an occupation within management, drawing on some similar bodies of knowledge and expertise (Fincham, 2012). This creates the potential for overlap, especially in situations where managers are involved in work focusing on planning and the creation and implementation of new projects. An obvious example are managers involved in “internal consulting,” change management roles or what Mintzberg (1993, 15) loosely terms the “technostructure.” As a sub-group, technostructure managers comprise “analysts...who serve the organization by affecting the work of others.” Although “removed from the operating workflow” or line, these managers “design it, plan it, change it, or train the people who do it” (ibid). In this respect, the activities of technostructure managers may replicate, to a considerable extent, the work of all but the most specialist external consultants—essentially providing similar kinds of advice, expertise, and support (Daudigeos, 2013).

Thus, it is possible that a sub-group within the management function associated with internal consulting activities (technostructure) will perceive greater threats and/or fewer opportunities from the use of external consultants. These managers—who themselves often specialize in knowledge development and transfer—are also less likely to be convinced about the superior quality and utility of externally sourced knowledge (Menon & Pfeffer, 2003). This, of course, does not rule out the possibility that internal “consultant-like” managers and external consultants will sometimes work in partnership. However, the overall orientation of internal consulting managers will be likely less favorable toward external consultant use. In practice, this could involve acting as gatekeepers, controlling or resisting the outsourcing of work to external consultants, including actively blocking it or limiting subsequent use, once contracts have been awarded (Sturdy & Wright, 2011).

Hence, while managers as a generic function are likely to favor the use of consultants (Hypothesis H1), where a sub-group within management with overlapping expertise and interests is more strongly represented in organizations, one might expect the opposite scenario to apply. Specifically, this leads to a further hypothesis:

Hypothesis H2. Public sector organizations where technostructure (internal consulting) managers are strongly represented within the management function will tend to make lower use of external consulting advice.

Lastly, the arguments presented so far have implications for the broader notion of a substitution effect or hollowing out process over time. In principle, the growing use of management consulting services can arguably have a directly negative impact on the development of internal management capabilities in situations where consulting use is mandated by regulators. Yet, this seems less likely in those contexts where managers themselves are the primary clients, especially in more independent and semi-autonomous public sector organizations like in the English NHS (Kirkpatrick et al., 2017). Here, managers are likely to have greater control over outsourcing, including scope to use consulting services in ways that further their own interests. In these situations, one would also not expect consulting services to be used in ways that directly undermine the position of managers—substituting their expertise, practices and numbers with the use of outsiders. Accordingly, the final hypothesis predicts:

Hypothesis H3. A greater use of external consulting advice by public sector organizations will not lead to a subsequent decline (“hollowing out”) of management functions.

METHODS

To test our hypotheses, the study focused on the use of management consulting services in one area of the UK public sector—the English NHS—and more specifically the acute (secondary) care hospital sector. The NHS is publicly owned, funded and (for the most part) independently managed. Over the past four decades, there have also been sustained attempts to develop management functions and capabilities (The King’s Fund, 2011). However, contrary to media hype, managers in the NHS are relatively few in number: approximately 2% of the total workforce (Veronesi et al., 2019). This, combined with its scale, complexity, and rate of change, makes the NHS a large and expanding market for management consulting services (see Kirkpatrick et al., 2019). We sought to identify and explain patterns

of consulting use beyond the individual project or organizational case which are the focus in almost all consulting research.

Data sources

To undertake this study it was possible, for the first time, to combine three main data sources:

- data on the expenditure of NHS organizations, including on consulting, publicly available in the annual report and accounts of each hospital;
- official statistics relating to the organizational and employment characteristics of NHS organizations, sourced from NHS Digital. This includes the National Workforce Data Set (for employment records), the Hospital Episode Statistics database (for organizational activity), and the NHS Reference Costs Data Set (for tariffs and costs related to treatments);
- a database owned by Wilmington Health care Ltd. which includes a complete breakdown of NHS managers (individuals with decision-making power over budgeting, financial management, and allocation of resources) by job responsibility and organization type. The latest edition (n. 67) used in this study dates from May 2014 with information on 30,000 managers in over 100 job functions.

Drawing on these sources, the study employed an unbalanced panel over 6 years (2008/09–2013/14) for a total of 641 hospital trust (hereafter HT) year cases. The final sample represented around three quarters of the total population of hospital trusts.

Variables employed

Dependent variable

For the main dependent variable—the use of management consultants – the analysis focused on the annual expenditure of HTs on “consulting services.” To reduce the influence of outliers and skewness in the distribution of the variable, the use of consulting advice (Lnconsult_exp) was calculated as the natural logarithm of the total amount spent for the hiring of management consultants as recorded in each HTs’ financial statement. In accordance with the NHS Manual for Accounts, consulting expenditure comprises any “objective advice and assistance relating to strategy, structure, management or operations of an organization in pursuit of its purposes and objectives” (DoH., 2013; Annex 5). This includes activities such as providing advice on the management of services, process management, and rationalization of services (like procurement) and strategic consulting for financial matters and is therefore

consistent with definitions used in other consulting research (Kirkpatrick et al., 2019).

Explanatory variables

Turning to the main predictors, the analysis focused on the employment of managers overall in each HT and specialist management functions in particular. The first variable accounted for the overall size of managers in each HT (All_managers) and was created by combining the data from the Database of NHS Management and the National Workforce Data Sets (from NHS Digital). It was calculated as the proportion between total number of managers and the total number of full-time equivalent (FTE) employees in each HT. A manual check was conducted to confirm alignment between databases for management occupational codes.

Following Mintzberg's (1993) definition of technostructure introduced earlier, the analysis also identified roles from the Database of NHS Management which corresponded to the work of advising on, designing, planning, and (sometimes) running the formal systems to achieve coordination. The first variable (Techn1) was obtained as the proportion between the number of technostructure managers and the total number of managers in each HT. The second variable (Techn2) was calculated as the proportion between the number of technostructure managers and the total number of FTE employees in each HT.

As all predictor variables were ratios, we followed best practice by calculating the coefficient of variation for each of the predictors. According to Certo et al. (2020), low levels of dispersion in the ratio of independent variables reduce the likelihood of Type II errors (i.e., false negatives) in the analysis. All coefficients turned out to be well below the threshold value of 1, indicating low dispersion.

Control variables

Drawing from other research in the sector (Kirkpatrick et al., 2019), eight main control variables were introduced in the analyses to account for factors that might influence the use of external consultants and its relationships with managers. These included controls such as organizational size, measured as the natural log of overnight beds (Size_log); the "busyness" of HTs, in terms of activity levels in relation to patient admissions (Admissions) and occupancy rates (Availability); and structural complexity (Multisites), based on the number of sites or units within each HT. Further controls accounted for differences in the governance of HTs, differentiating between those that had acquired the status of Foundation Trust with greater formal autonomy (Foundtr) and those which had more basic decision-making autonomy (see Kirkpatrick et al., 2017).

Related to this, as a sixth control a dichotomous variable (Teaching) was created, to differentiate between (university) teaching and non-teaching HTs. Seventh, the level of competition between HTs in a given area (HHI) was accounted for. This was calculated as the Herfindahl–Hirschman Index of providers' concentration based on the contiguity of HTs in 10 different areas. Lastly, a measure of contracting out (Outsourcing) of non-core activities in each HT such as estates and facilities management was included.

In addition to these controls, it was necessary to account for the potential influence of past organizational performance (at t-1) on consulting expenditure and the presence of managers in each HT. Two main indicators were used for this purpose. The first (Efficiency) captured the operational efficiency of an organization, proxied by the Reference Cost Index (RCI) (found in the NHS Reference Costs Data Sets). This represents an indicator of (both production and allocative) efficiency of each trust in comparison to the mean level of efficiency for the NHS as a whole (see Veronesi et al., 2019). The second indicator is a traditional measure of profitability—Return on Assets (ROA)—which was calculated as the ratio between the net profit generated and the net value of the assets. In some of the regression analyses, a further measure of efficiency (Adjust_eff) was added (obtained dividing total expenditure by the total number of FTE employees). Lastly, to support the main analysis, two other performance indicators relating to the broad quality of HT services were used. These included the overall patient experience (Experience) (available from the NHS Adult Inpatient Experience Survey), and the safety of the health care provided (Safety). The latter was derived by looking at infection levels in HTs, specifically the rate of *C. difficile* infection (calculated by the NHS as a rate of infection per 100 bed days).

Methodology

The empirical approach adopted sought to test the hypotheses while controlling for the possibility of endogenous relationships between the proxies for the presence of managers in each HT and the use of management consulting services. Endogeneity occurs in the presence of omitted variables bias, selection bias, misspecified or erroneous variables, measurement errors, and joint simultaneity (Verbeek, 2008). Here, it was important to exclude the potential existence of a feedback loop between the variables of interest and causation running in both directions, such that the dependent and independent variables are jointly determined leading to spurious inferences. As formulated in Hypothesis H3, one potential outcome of a higher usage of management consultants could be a subsequent decline or hollowing out of management (substituting internal with external management expertise).

The empirical model used in the analysis is represented through the following estimation equation:

$$\begin{aligned} \text{Ln_consultexp}_{i,t} = & \beta_0 + \beta_1 \text{All_managers}_{i,t} + \beta_2 \text{Size_log}_{i,t} \\ & + \beta_3 \text{Admissions}_{i,t} + \beta_4 \text{Availability}_{i,t} \\ & + \beta_5 \text{Multisites}_{i,t} + \beta_6 \text{Foundtr}_{i,t} \\ & + \beta_7 \text{Teaching}_{i,t} + \beta_8 \text{Outsourcing}_{i,t} \\ & + \beta_9 \text{Efficiency}_{i,t} + \beta_{10} \text{ROA}_{i,t} + \varepsilon_{it} \end{aligned}$$

where β_0 is the intercept and β_i is the coefficient of each independent variable. Subscript i identifies the individual, subscript t identifies the time, and ε_{it} is the error term.

To control for endogeneity, a Two-Stage Least Squares (2SLS) regressions (Berry, 1984) was initially employed. Here, the use of instrumental variables corrects the issue of correlation of the explanatory variable with the error terms in a regression model. The instruments need to be highly related to the endogenous independent variable and unrelated to the dependent variable (Larcker & Rusticus, 2010), as well as being determined outside the model and uncorrelated with the error. The procedure involves regressing the independent endogenous variable on its instrumental variable (IV) and all other predetermined parameters in the model (Finkel, 1995), obtaining a reduced form equation through Ordinary Least Squares (OLS) regressions. The coefficient obtained should then be a reliable measure of the impact of managers on consulting use.

Three instrumental variables were used: (i) the lag of the dependent variable consultancy expenditure (a customary approach); (ii) the Herfindahl–Hirschman index of concentration (HHI) (under the assumption that higher competition in the catchment area of a HT leads to a heightened pressure to employ managers); and (iii) the total costs (which could logically impact on overall resource availability). The Sargan–Hansen test of over-identifying restrictions confirmed the validity of the instruments, which as a group were exogenous. In the second stage, the surrogate instrument is added to the original equation so that all coefficients and associated standard errors are then estimated in another regression consistently with the assumptions of OLS. As the statistics are calculated on the basis of the original values (and not the predicted ones) of the variables of interest, these steps provide correct standard errors, standardized coefficients and R^2 estimates for the second-stage equation (Berry, 1984).

In order to test Hypothesis H3, further tests were performed which also helped to confirm the robustness of the association between managers and expenditure on management consultants. To address this issue, a system of two equations through a Three-Stage Least Squares (3SLS) method was estimated (Zellner & Theil, 1962). 3SLS regressions entail a set of equations with imposed cross-equation constraints that produces estimates which are consistent and asymptotically normal. This method is fundamentally a combination of multivariate regressions (SUR estimations) and 2SLS, where the first equation becomes the general model of the study. By contrast, the

TABLE 1 Descriptive statistics

Variables	Definition	Mean	SD	Min	Max	Q1	Median	Q3
Ln_consultexp	Natural log of annual consulting expenditure	6.714	1.144	0.000	11.016	6.054	6.813	7.440
All managers	Ratio of total number of managers to total number of FTE employees	0.022	0.009	0.007	0.069	0.016	0.020	0.026
Techn1	Ratio of technostucture managers to total number of managers	0.158	0.048	0.048	0.315	0.125	0.154	0.189
Techn2	Ratio of technostucture managers to total number of FTE employees	0.003	0.002	0.001	0.017	0.002	0.003	0.004
Size_log	Natural log of total number of overnight beds	6.410	0.599	3.988	7.694	6.120	6.459	6.768
Admissions	Ratio of total number of patient admissions to total number of FTE employees	21.559	5.111	3.097	34.281	18.874	22.213	24.943
Availability	Percentage of overnight beds available	0.866	0.062	0.423	0.997	0.835	0.867	0.908
Multisites	Number of sites providing care and treatment	5.969	8.867	1.000	72.000	2.000	3.000	6.000
Foundtr	Dummy for Foundation Trust status	0.593	0.492	0.000	1.000	0.000	1.000	1.000
Teaching	Dummy for teaching trust status	0.185	0.389	0.000	1.000	0.000	0.000	0.000
HHI	Herfindahl–Hirschman Index	0.118	0.003	0.115	0.122	0.116	0.117	0.118
Outsourcing	Percentage of non-clinical services outsourced	34.552	27.194	0.000	100.000	12.955	27.000	51.900
Efficiency	Reference Cost Index	99.170	7.893	78.010	156.630	94.248	98.427	102.393
ROA	Return on Assets	−0.022	0.382	−3.826	4.506	−0.032	0.005	0.024
Quality	Overall inpatient experience score	76.111	3.374	67.100	88.200	74.100	75.800	77.525
Safety	Rate of <i>C. difficile</i> infection for 100 bed days	24.817	15.776	0.000	117.911	14.469	21.043	31.166
Adjust_eff	Ratio of total revenue expenditure to total number of FTE employees	67.884	15.479	5.931	146.638	58.648	65.389	74.987

second equation attempts to explain the determinants of management functions in the presence of other variables. In this equation, the analysis incorporated as explanatory factors of management functions the HHI and two additional measures of performance, capturing the perceived quality and safety of the service provided: patient experience (Experience), and the rate of *C. difficile* infection (Safety). The assumption here was that the size of the

management workforce in HTs could be affected by: (a) competition from other trusts in their area; and, (b) from the performance of their clinical services and the public scrutiny this attracts (Kirkpatrick et al., 2017). In line with the underlying reasoning for adopting simultaneous equations, contemporaneous rather than lagged values of the proxies for management functions were entered in the regressions.

TABLE 2 2SLS: The effect of internal management consultants on the use of management consulting services.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variables	ln_consultexp	ln_consultexp	ln_consultexp	ln_consultexp	ln_consultexp	ln_consultexp	ln_consultexp
All managers	34.432*						
	(19.926)						
All managers*HSCA2012					12.483		
					(8.928)		
Techn1		-4.229***					
		(1.625)					
Techn1*HSCA2012						0.950	
						(1.665)	
Techn2			-338.192**				
			(136.972)				
Techn2*HSCA2012							40.185
							(43.785)
CEO change				0.044			
				(0.079)			
Size_log	0.249	0.293	0.239	0.514***	0.467***	0.515***	0.436***
	(0.416)	(0.419)	(0.449)	(0.147)	(0.162)	(0.134)	(0.160)
Admissions	-0.053**	-0.016	0.046	-0.024*	-0.019	-0.021**	-0.017
	(0.024)	(0.012)	(0.029)	(0.014)	(0.012)	(0.010)	(0.011)
Availability	0.916	1.297*	1.781**	0.521	0.404	0.384	0.379
	(0.783)	(0.762)	(0.844)	(0.838)	(0.605)	(0.608)	(0.606)
Multisites	0.011*	0.012**	0.012**	0.009	0.009*	0.009*	0.009*
	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)
Foundtr	-0.478*	-0.487*	-0.458*	-0.185	-0.227*	-0.226*	-0.231*
	(0.255)	(0.250)	(0.265)	(0.190)	(0.127)	(0.127)	(0.126)
Teaching	0.024	0.006	0.028	0.405*	0.411**	0.396**	0.403**
	(0.469)	(0.470)	(0.505)	(0.234)	(0.187)	(0.189)	(0.186)
Outsourcing	0.006*	0.007**	0.007**	0.005	0.005**	0.005**	0.005**
	(0.003)	(0.003)	(0.004)	(0.004)	(0.002)	(0.002)	(0.002)
Efficiency	0.008	0.010	0.011	0.015**	0.016***	0.016***	0.017***
	(0.007)	(0.007)	(0.008)	(0.007)	(0.006)	(0.006)	(0.006)
ROA	0.083	0.052	0.001	-0.032	-0.040	-0.042	-0.040
	(0.094)	(0.094)	(0.103)	(0.089)	(0.082)	(0.082)	(0.082)
Observations	540	540	540	655	656	656	656
R-squared	0.050	0.039	-0.106	0.219	0.235	0.230	0.237
F-test	2.09**	2.44***	2.14**	51.38***	87.41***	82.42***	87.81***
Chi ²					16.82***	10.82***	12.59***

Note: Clustered robust standard errors in parentheses. Column 4 reports the regression coefficients of panel data random effects estimations. Columns 5–7 report the regression coefficients of difference-in-difference analysis.

*** $p < .01$.

** $p < .05$.

* $p < .1$.

RESULTS

Table 1 reports the descriptive statistics for the sample employed in the estimations for the period 2008/09 to 2013/2014. In the last year investigated, there were 129 HTs with an average of 125 organizations per year. On average, this sample of HTs each managed around 713 beds, provided care from approximately 6 units and

had 4144 FTE employees. The average ratio of managers to staff stood at around 2.2% per HT which is in line with previous research (Kirkpatrick et al., 2017). Technostructure managers comprised on average around 16% of all managers and less than one percent of the whole workforce. HTs spent on average £1,517,670 on consulting advice, with a yearly growth in expenditure across the period of circa 27% which led mean consulting use to almost treble

TABLE 3 3SLS: The effect of internal management consultants on the use of management consulting services and causality loop.

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Ln_consultexp	All_managers	Ln_consultexp	Techn1	Ln_consultexp	Techn2
Ln_consultexp		-0.009 (0.015)		0.066 (0.210)		-0.001 (0.002)
All managers	169.950*** (29.523)					
Techn1			-18.529*** (3.145)			
Techn2					-432.785** (179.374)	
Size_log	2.615*** (0.368)	-0.004 (0.010)	0.275** (0.126)	-0.066 (0.149)	-0.487 (0.468)	-0.002 (0.002)
Admissions	-0.097*** (0.018)	-0.000 (0.001)	-0.022* (0.012)	0.003 (0.010)	0.007 (0.017)	0.000 (0.000)
Availability	1.470 (0.916)	0.001 (0.010)	-0.539 (0.846)	-0.052 (0.140)	-0.260 (0.802)	-0.001 (0.002)
Multisites	0.006 (0.007)	-0.000 (0.000)	0.003 (0.006)	0.000 (0.001)	-0.000 (0.005)	-0.000 (0.000)
Foundtr	-0.087 (0.116)	0.001 (0.003)	-0.066 (0.107)	0.007 (0.036)	-0.162* (0.092)	0.000 (0.000)
Teaching	0.188 (0.169)	-0.002 (0.002)	-0.081 (0.167)	-0.029 (0.032)	0.287** (0.134)	-0.001 (0.000)
HHI		-0.627* (0.344)		10.404** (5.008)		0.038 (0.059)
Quality		0.000 (0.001)		0.001 (0.008)		0.000 (0.000)
Safety		-0.000 (0.000)		0.001 (0.001)		0.000 (0.000)
Efficiency	-0.008 (0.009)	0.000 (0.000)	0.027*** (0.007)	-0.001 (0.003)	0.039*** (0.010)	0.000 (0.000)
ROA	0.141 (0.144)	0.001 (0.003)	0.102 (0.131)	-0.004 (0.042)	0.056 (0.114)	0.000 (0.001)
Adjust_eff		0.000 (0.000)		-0.001 (0.006)		0.000 (0.000)
Outsourcing	0.007*** (0.002)		0.010*** (0.002)		0.007*** (0.002)	
Observations	641	641	641	641	641	641
R-squared	-0.442	-0.250	-0.200	-1.618	0.089	0.520

Note: Clustered robust standard errors in parentheses.

*** $p < .01$.

** $p < .05$.

* $p < .1$.

from 2008/09 to 2013/14. The raw values indicated considerable variation in the hiring of consultants (Q1/Q3 £0,380/£1.66M; median £841,000) and hence it was appropriate to employ logged values of the relevant proxy. The widespread use of consulting was confirmed by the fact that less than 5% of the observations in the original sample were dropped for not reporting any expenditure on consultants.

The values for the Pearson bivariate correlations between the variables of interest were well below the usual threshold levels and so did not cause any reasons for concern (see Table A1 in Appendix). Nevertheless, we also ran Variance Inflation Factor (VIF) analysis to further alleviate concerns of potential multicollinearity issues. All resulting VIF values were well within acceptable limits and, therefore, no variables were excluded from further analyses.

Turning to the hypotheses, the analysis looked firstly at the impact of managers on the use of consulting advice. As explained, in the regressions IVs were employed to deal with potential endogeneity in both 2SLS and 3SLS estimations. The findings reported in Table 2 reveal two opposite trends. First, in support of Hypothesis H1, in column 1 it is shown that a greater ratio of all managers to staff is associated with a higher level of expenditure on management consultants. Essentially, this means that a HT with a larger management workforce (in proportion to FTE employees) is likely to spend more on consulting advice. Conversely, the analysis indicated that a greater presence of technostructure managers (for both proxies) leads to a lower expenditure on consulting advice (columns 2–3). This latter finding confirmed the predictions of Hypothesis, in the sense that higher levels of an internal consulting management function led to a lower usage of consulting advice. Fixed effects panel data estimations were also run as a robustness test and the results for the three main predictors, not reported here for the sake of simplicity and brevity, were all confirmed.

To further test the robustness of these findings, we carried out additional analyses to control for the effects of endogenous and exogenous shocks on the use of consulting. The first test accounted for a potential spike in consulting use due to the replacement of the organization CEO. Public sector managers would be more open to seek consultant expertise to help devise and implement the changes that newly appointed CEOs are likely to introduce. The second test investigated the effect of the system-level changes in the English NHS generated by a reform, the 2012 Health and Social Care Act, which increased the supply of managers with relevant expertise in the labor market. As shown in Table 2, columns 4–7, these additional analyses did not reveal any statistically significant consequence of both endogenous and exogenous shocks on consulting expenditure, thereby confirming the effects of the three main predictors on the use of consulting advice.

In the next step, the findings above reported for the three main variables were replicated when running 3SLS

regressions. As shown in Table 3, ‘All managers’ was significantly and positively linked to consulting expenditure (column 1), while the greater presence of technostructure managers had a significant negative effect on the use of consulting advice (columns 3 and 5). Furthermore, the analysis reported in columns 2, 4, 6 of Table 3 excluded the existence of any feedback loop between consulting expenditure and all the proxies for management functions. This confirmed the assumption of Hypothesis H3, calling into question the idea that consulting use in the NHS has led to a hollowing out of management numbers (at least where HTs are concerned).

In economic terms and using Table 2 as a reference point, the analyses suggested that for a 10% increase in the proportion of all managers to the total number of employees (essentially nine more managers in each HT), the expenditure on management consultants would increase by roughly 3.4% (or around £51,600). With regard to the other management sub-grouping, a unit growth in the proportion of technostructure managers to all managers (roughly 1 more technostructure manager per 10 managers overall) would decrease the expenditure on consultants by approximately 4.3% (or roughly £65,300).

DISCUSSION

As the opening quotation in this article suggests, external management consultants have long been seen as an alternative or substitute for public sector managers. This view also chimes with contemporary assertions of a hollowing out process (Althaus et al., 2021; Howlett & Migone, 2013; Lapsley, 2009): the idea that a growing reliance on consultants undermines in-house public management expertise and, ultimately, numbers. However, there has been little systematic research beyond organizational cases or interview-based studies to support this claim. There are also risks, theoretically, of depicting public sector managers themselves as both occupationally homogeneous and structurally passive actors rather than principal agents.

Drawing on ideas from the wider literature on management consulting and 6 years of data from the English NHS, the analysis raises concerns about the assumption of a hollowing out effect. Specifically, three primary findings are highlighted. First, public sector managers appear to be drivers of consulting use. The analysis found that organizations where managers were more numerous and influential as a function, they tended to make greater use of management consulting services. This finding runs against rational ‘make or buy’ accounts of outsourcing (Armbrüster, 2006; Canback, 1999) and also questions the idea of a substitution effect. On the contrary, it suggests that managers as a group may have a direct interest in pushing up the use of consulting services. This is consistent with wider research that points to consultancy use as an opportunity to support the interests of client managers both collectively and

individually (Hodge & Bowman, 2006). Previous studies have shown that consultants often provide legitimation for managers, allay insecurities, and, in some cases, co-produce the demand for their advice (Sturdy et al., 2021).

Second, the analysis highlights the importance of occupational differences within management and how these may lead to variations in the demand for consulting services. In particular, it reveals that in those public sector organizations where technostructure managers were more present, the use of consulting advice was significantly lower. This may be partly due to the overlapping expertise between this sub-group and external consultants. It is also consistent with the assumption that, for some managers, consultants are perceived more as a threat than an opportunity (Menon & Pfeffer, 2003; Ruef, 2002). As such, an element of substitution is present here, but specialist internal managers substituting for external consultants rather than the other way around.

Finally, the findings provide no evidence to suggest that, over time, rising levels of consulting expenditure are having a negative impact on the employment of managers or the overall size of the management function. Against the hollowing out thesis, this lends support to Hypothesis H3 and the argument that managers, as the primary clients of consulting services, are unlikely to use these services in ways that systematically undermine their own position.

CONCLUSION

The main findings of this article have important implications for theory, research, and policy. Theoretically, the analysis addresses some limitations of the hollowing out thesis, specifically as it applies to the replacement of internal management functions by private sector experts (Laage-Thomsen, 2022). It also enhances our understanding of the drivers of consulting use in the public sector. Crucially, the findings highlight the decisive role of managers as principal agents who, depending on their level of influence, either push to increase or limit and control the use of external consultants (Fincham, 2002). This point is often neglected by accounts of hollowing out which, for the most part, assume that the use of consulting services results either from prior under-investment in managers or that the latter is a direct consequence of consulting use (for instance, Browne, 2021; Momani, 2013). By contrast, our analysis paints a different picture, showing how managers are the primary drivers of the hiring of consultants. Furthermore, it draws attention to the essentially political nature of these decisions, which may be less about rational 'make or buy' assessments (Armbrüster, 2006; Canback, 1999) and more about the occupational interests of managers and their ability to realize them.

With regard to research, the analysis overcomes many of the limitations of previous work on hollowing out which has relied on cross-sectional case studies of single

organizations (e.g., Lapsley, 2009). By contrast, this study has been able to identify broader patterns over time, focusing on a large sample of NHS organizations and combining multiple administrative data sources in a novel way. The statistical technique employed also has significant advantages, helping to better model dynamic relationships, such as a possible reverse loop between management consulting use and the development of management functions.

Turning to policy, these findings are useful in thinking about the governance of external consulting in the public sector. This has become a matter of growing concern in recent years given risks of consulting failure and under-performance such as relative inefficiency and over-dependence (Galwa & Vogel, 2023; Ylönen & Kuusela, 2019). The NHS case suggests that in order to address this concern, greater attention needs to be given to occupational dynamics and interests, to understand why managers in general appear to favor using external consultants. Only by changing this mindset will it be possible to gain more control over the use of these services. The analysis additionally suggests that a related strategy for controlling demand might also be to focus on the development of specialist management capabilities within public sector organizations. In particular, when technostructure managers (internal consultants) have a greater presence, this is likely to reduce consulting expenditure. Accordingly, further investment in these internal management capabilities might be a way forward to mitigate some of the risks associated with external consultants.

Of course, when drawing these conclusions, it is important to note certain caveats and directions for future research. While the use of external consultants does not appear to be eroding internal management capabilities, this could still occur following other forms of outsourcing—such as the transfer of staff functions (like HR or finance) to shared services centers (Milward & Provan, 2000). In some respects, NHS organizations may also represent a special case given the relative weakness and insecurity of their managers in general in relation to the medical professions (Kirkpatrick et al., 2017). This could increase their motivation to seek additional support from external consultants, which may be less apparent in public sector contexts where managers feel less insecure or where procurement managers, as gatekeepers, have greater influence (Lonsdale et al., 2017). Although we know quite a lot about managers' personal motives for using consulting from organizational cases and interview-based studies, future work might help to reveal more of what lies beneath the occupational dynamics and motivations. This would be helpful for understanding how managers use different types of consulting services and the role of consultants themselves in fostering demand.

However, while more research is clearly needed, the analysis presented here breaks new ground by providing an empirical test of the hollowing out thesis and highlighting the critical and, so far poorly understood, role of

managers and their competing occupational interests as key drivers of consulting use (and non-use).

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APPENDIX A

TABLE A1 Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) Ln_consultexp																
(2) All managers	-0.279***															
(3) Techn1	-0.183***	0.0893														
(4) Techn2	-0.316***	0.8096	0.6088													
(5) Size_log	0.344***	-0.7531	-0.2923	-0.7293												
(6) Admissions	-0.019	-0.1321	-0.0529	-0.1561	0.3819											
(7) Availability	0.065	-0.0960	-0.1014	-0.1266	0.0874	0.1042										
(8) Multisites	0.125***	-0.2539	-0.0461	-0.2196	0.2505	-0.0675	-0.0019									
(9) Foundtr	-0.156***	0.113***	0.081**	0.115**	-0.183***	-0.037	-0.120***	0.036								
(10) Teaching	0.304***	-0.336***	-0.247***	-0.341***	0.435***	-0.084**	0.009	0.118***	-0.025							
(11) HHI	-0.057	-0.107***	0.220***	.049	0.004	0.010	0.013	0.032	0.003	-0.013						
(12) Outsourcing	.228***	-0.086**	0.033	-0.049	0.173***	0.212***	0.148***	0.097**	-0.142***	0.180***	-0.029					
(13) Efficiency	0.145***	0.206***	0.080**	0.235***	-0.182***	-0.393***	-0.116***	-0.000	-0.064	0.106***	-0.006	0.096**				
(14) ROA	-0.015	0.045	0.032	0.052	-0.074*	-0.003	-0.046	0.019	0.118***	0.009	-0.016	-0.062	0.021			
(15) Quality	-0.164***	0.354***	0.132***	0.366***	-0.439***	-0.422***	-0.262***	-0.018	0.369***	-0.048	-0.112***	-0.183***	0.268***	0.103***		
(16) Safety	-0.057	-0.167***	0.134***	-0.046	0.165***	0.054	-0.153***	-0.060	-0.122***	0.104***	0.132***	-0.024	-0.057	-0.054	-0.117***	
(17) Adjust_eff	0.437***	0.106***	-0.228***	-0.043	0.135***	0.095**	0.077*	0.041	-0.298***	0.361***	-0.049	0.410***	0.201***	-0.114***	-0.100**	-0.149***
VIF		1.31	2.49	1.49	1.88	1.14	1.15	1.41	1.71	1.10	1.36	1.41	1.05	1.79	1.21	1.83

*** $p < .01$, ** $p < .05$, * $p < .1$.

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