

Does public service performance affect top management team turnover?*

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Abstract

Is the turnover of chief executives and other members of top management teams influenced by the performance of their organizations? We address this question by analysing a panel data set of 148 English local authorities over 4 years. The empirical results show that performance and turnover are negatively related, but that this effect is weaker for chief executives than for members of their senior management teams. In addition, top management turnover is higher in the years following chief executive succession. This evidence suggests that chief executives can influence top management turnover by new appointments and by 'scapegoating' other senior managers when organizational performance is poor.

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The tenure of public officials in democratic systems of government is subject to contradictory pressures. On the one hand, chief executives and other senior managers in public organizations are expected to be insulated from political patronage and the partisan preferences of governing elites. On the other hand, they are expected to be accountable for the performance of their organizations and to accept responsibility for poor results, ultimately by resigning or being dismissed from their positions. This latter view has become more prominent since the advent of reforms associated with new public management, which have emphasised both ‘managing for results’ and ‘accountable management’ (Hood 1991; Pollitt and Bouckaert 2004). This raises the question of whether managerial turnover is associated with organizational performance. Are the top officials able to insulate themselves from performance problems, or are they more likely to move on when public service standards are deemed to be weak? Furthermore, does the impact of performance on turnover vary between chief executives and their senior management teams?

We provide the first systematic test of whether and how service performance is associated with the level of top management turnover in public organizations. Theoretical arguments that organizational performance is associated with turnover derive mostly from the large literature on control of senior management in private firms. We derive hypotheses about the relationship between service results and turnover in the public sector, based largely on political principals’ motives for removing bureaucratic agents who appear to have led an organization to weak performance, and their motives for retaining agents who have overseen strong performance. We take account of the performance perceptions of both higher governments and local citizens, and examine whether the link between performance and turnover differs between these. We operationalize our theoretical variables and test our hypotheses

against a new panel data set on 148 English upper-tier local authorities observed over four years (financial years 2002/03-2005/06). We estimate linear panel data models of the senior management turnover rate and logit models of the presence or absence of a chief executive succession. Finally, we draw a number of conclusions.

Theories of organisational performance and managerial turnover

Although the sources of senior management turnover in public organizations are of great practical interest¹, little theoretical or empirical work on this topic has been undertaken. To build a theoretical framework, we therefore draw on the large literature on senior management turnover and executive successions in the private sector. As Pfeffer and Salancik (1977) have suggested, there are three main strands to this literature. One is concerned with the consequences of top management turnover for large organizations. Another strand is concerned with the causes and consequences of ‘insider’ or ‘outsider’ succession. Much research fits in this strand, as does the limited work on the public sector, such as Boyne and Dahya (2002, 185-187), Hamidullah and Wilkins (2007), and Hill (2005). The final strand is concerned with the effects of organizational effectiveness on senior management turnover. Our paper fits squarely into this third strand: we provide the first large-N, multi-year test of the effect of organizational performance on the level of senior management turnover in public the public sector.

Many empirical studies of private corporations have found that the tenure of top managers is contingent on organizational performance, as measure by financial indicators such as share prices and rate of return on investment (for summaries and reviews of these studies see Brickley 2003; Furtado and Karan 1990; Kesner and Seborá 1994). The main theoretical

¹ See for instance, “Making a move” in the British local government professionals’ magazine *The MJ*, October 11, 2007.

interpretation of this finding is that Board members use performance information to punish or reward senior managers. If performance falls below the standard achieved by competitors, or is less than has recently been achieved by the firm, then Board members take steps to ease out or move aside the chief executive or the entire senior management team in an attempt to turn the tide. This is not an altruistic act to save the company: the reputation and remuneration of the Board members themselves is linked strongly to the financial success of the companies that they are associated with. Their ability to obtain other directorships, and to retain their current positions, is contingent on the results produced by senior managers.

This set of relationships between principals and agents in private firms is mirrored closely in democratic governments. Ruling parties' prospects of re-election are partly dependent on the judgements of external stakeholders on the standard of public service provision. Thus politicians have a direct incentive to apply rewards and sanctions to appointed officials, depending on the level of organizational performance that is achieved. One such set of rewards and sanctions is to retain or replace the senior managers who run the organization. Elected bodies such as legislatures, councils, and school boards can therefore be seen as the rough analogue of the board of directors. Senior administrators are responsible to them, even though in developed democratic countries there are often statutory protections against dismissal. Even if outright dismissal might be difficult, many senior managers can be induced to leave voluntarily through increases in oversight and micro-management by the elected body. For example, Brady and Helmich (1984, 30-31) describe how a school board heavily involved itself into the day-to-day operations of the school district until the superintendent chose voluntary early retirement. Generally we expect that politically motivated change mostly occurs by these and other means, including negotiated early retirements and early departures with severance packages. In any case,

it is often impossible to disentangle such induced departures from truly voluntary departures, even in the private sector (Osborn et al. 1981; Wagner et al. 1984). The bottom line is that politicians have means at their hand of removing senior managers as an action when organizational performance is perceived to be low. Thus our first hypothesis is:

H₁: The relationship between organizational performance and the turnover of senior managers is negative.

Another theoretical interpretation of the impact of performance on turnover is that senior managers are made ‘scapegoats’ by the board of directors or by the chief executive (Khanna and Poulsen 1995). In other words, even if the blame for poor results cannot be fairly laid at the feet of senior managers, the need to be ‘seen to be doing something’ may lead to their replacement. The appointment of a new top management team can provide reassurance to powerful internal and external groups that performance problems are being taken seriously. Thus whenever performance is poor, turnover is likely to be higher, regardless of the quality of the managers. Boeker (1992) provides an important and illuminating study of scapegoating in the private sector. He provides a rare comparison of the effect of performance on rates of chief executive succession and top management team turnover, and argues that chief executives are likely to shift blame to their top management teams when performance is weak. His study of 67 organizations over a 22 year period shows that “powerful chief executives buffer themselves from performance responsibility but ‘compensate’ by replacing top managers” (Boeker, 1992, 418).

We are not aware of any prior research on this topic in the public sector, but scapegoating also seems possible in this context. Chief executives are more likely than other senior managers to spend time with their political masters, and may develop close working (and perhaps social)

relationships with them. Indeed, the chief executive may take on the role of policy adviser and political confidante to the ruling political group, and thereby have the opportunity to shape their perceptions of the organization in her favour. If performance problems emerge then chief executives may shift the blame to other senior managers, thereby protecting their own power and reputation. In this case, chief executives may be largely insulated from the effects of declining or poor performance, whereas their colleagues in the senior management team are more vulnerable. Our second hypothesis is, therefore:

H₂ The negative relationship between performance and turnover is weaker for chief executives than for other members of the top management team.

The tenure of the top management team is likely to be influenced not only by organizational performance but also by the arrival of a new chief executive. Many theoretical and empirical studies suggest that incoming chief executives seek to distance themselves from their predecessors and to adopt distinctive priorities and strategies (Bigley and Wiersema 2002; Simons 1994). In the public sector, radical strategic change such as moving into new markets or closing down services altogether is seldom possible because of legal and political constraints (Boyne and Walker 2004). The 'default' strategy is therefore to change the organization itself, which usually involves internal restructuring and transfer of responsibilities between departments. This may lead to the reconstitution of the senior management team, either through expansion, contraction or reshuffling of portfolios between existing and new members. Even if no structural change takes place, a new chief executive is likely to want people in the senior management team who are sympathetic to the revised agenda for the organization. Managers appointed by the previous chief executive may be viewed as loyal to the old regime, or lacking the skills to

implement the new strategies. In this case, new senior managers who ‘fit’ the chief executive’s preferences and policies are likely to be appointed. For these reasons, our third hypothesis is:

H₃ Chief executive succession is positively related to top management team turnover.

Measures and Data

We test our hypotheses against data on all 148 major English principal local authorities (London boroughs, metropolitan boroughs, unitary authorities, and county councils). These entities are governed by politically elected bodies with a Westminster-style cabinet system of political management. They are multipurpose authorities that provide education, social services, regulatory services (such as land use planning and waste management), housing, libraries, leisure services, and welfare benefits. The advantages of studying these public organizations are that senior management appointments are subject to uniform statutory and regulatory constraints, and that a wide range of consistently reported secondary data are available on them.

We now discuss our dependent, explanatory, and control variables. Summary statistics for them are provided in table 1.

[Table 1 about here]

All summary statistics are listed for the common estimation sample that we use in all of our panel data models. It covers the four financial years from 2002/03 through 2005/06. We are constrained to this time period because our indicators of performance as perceived by the central government were first reported for the 2002/03 financial year. As we explain below, we also estimate a few models on a cross-section for the 2003/04 financial year. The estimation sample for these models is a proper subset of the common estimation sample described in table 1. This

implies that the descriptives for all variables in the cross-sectional models are bounded by the extremes listed in table 1.

Management Turnover

The dependent variables are the senior management turnover rate and the presence or absence of a chief executive succession. We collected data on the composition of senior management teams from several sources—identifying the posts in the senior management team in every principal local authority and year beginning with the 1999/2000 financial year and the names of the post holders in every year. While the coding of a chief executive succession is relatively straightforward, there are a number of ways to measure the senior management turnover rate.

We measure the turnover rate as:

$$\text{Turnover 1} = \frac{\text{Number of genuinely new names on senior management team}}{\text{Number of positions mentioned}}$$

$$\text{Turnover 2} = \frac{\text{Number of genuinely new names on senior management team} + \text{number of new vacancies on senior management team}}{\text{Number of positions mentioned}}$$

In these definitions, the denominator is the number of positions on the senior management team in that year. Note that for both measures, we exclude the chief executive from the senior management team.

Our indicators capture exclusively those senior management successions where the new person was not already part of the senior management team. Turnover rate 1 is more conservative than turnover rate 2 because the latter also counts vacancies, which can arise due to departures that have not been replaced during the same year or due to the creation of a new post on the senior management team. The two indicators of senior management turnover are fairly similar, as the summary statistics in table 1 show. They have a mean of about .2, which means

that on average a fifth of the senior management team gets replaced in a given year. Although the definition of turnover rate 1 is more conservative than turnover rate 2, both indicators have nearly the same distribution.

In addition, we examine the presence or absence of a chief executive succession in a local authority in a given year as our third and final dependent variable. We code a chief executive succession in the first year that a new person occupies the post of chief executive. In our estimation sample, there are 90 chief executive succession events. Out of 439 observations in the sample, this gives a naïve expected probability that a chief executive succession will occur in any given council in any given year of about .2. This figure squares with an average tenure of English local government chief executives of about five years that is mentioned in the practitioner press.²

In order to test hypothesis 3, that chief executive successions tend to lead to replacements of other senior managers, we include one- and two-year lags of chief executive succession as explanatory variables in the models of top team turnover.

In our panel data set, variation is made up of two components: variation within the local authorities over time and variation between local authorities. The former can be considered ‘higher quality’ variation for the purpose of causal inference since it does not depend on fixed differences between the authorities, which may be difficult to capture adequately with control variables. This is one of the fundamental problems that bedevil purely cross-sectional analyses. It turns out that about 60% of the variation in the senior management turnover rate is within the local authorities over time. Similarly, for the binary variable ‘presence or absence of a chief executive succession’, about 57% of the variation is within the local authorities over time. All

² Cf. “Making a move” in *The MJ*, October 11, 2007.

this is fairly encouraging for the robustness of our inferences against alternative explanations based on time-invariant omitted variables.

Organizational Performance

This paper is first and foremost about the existence and magnitude of an effect of public service performance on senior management turnover. We operationalize public service performance in three different ways. The first two capture the central government's perceptions of performance, as filtered through the formally independent Audit Commission, which evaluates the public service performance of local authorities. The last captures local citizens' perceptions of performance.

The service performance percentage, our first indicator of performance, represents the quantifiable element of the central government's understanding of public service performance. This measure seeks to tap the 'objective' elements of services (e.g. quantity and quality of output, speed of delivery) as they are experienced by citizens. It is a weighted index of many different quantitative indicators that local authorities have to report annually. More precisely, it covers output and outcome indicators on education, social care, environment, housing, benefits, and libraries and leisure, as well as efficiency in the 'management of resources' (Andrews et al. 2005, 641). The service performance percentage ranges from 40 to 90 in our estimation sample, with a mean of 69.5. This measure is important to local politicians because deficiencies on these indicators are highlighted in league tables, can trigger visits by government inspectors, and are likely to be publicised in local media. Thus there is a direct incentive to monitor managerial success in delivering high scores on these indicators.

The Comprehensive Performance Assessment (CPA), our second indicator of performance, includes not only the service performance percentage but also the Audit Commission's judgement of local authorities' 'ability to improve.' The CPA is a performance evaluation and incentives program that the central government introduced in 2002. Most interesting about the CPA is that it has real teeth: Local authorities classified as performing in the highest category may be awarded some loosening of central government control, while those classified as performing only in the lowest category will see a tightening of central government control (Lowndes 2003). Moreover, the CPA classification has special prominence for local politicians and officers because their authority is publicly labelled in the national media as 'excellent', 'good', 'fair', 'weak', or 'poor'. Since the CPA is clearly not an interval variable, we create dummy variables for all but the two lowest categories, poor/one star and weak/two stars, which form our base group. This contains about twelve percent of observations in our estimation sample. About twenty-four percent show fair performance (three stars), forty-one percent show good performance (four stars), and twenty-three percent show excellent performance (five stars). Comparing the last election before the introduction of the CPA and the election immediately following it, James and John (2007) have shown that performing badly on the CPA had adverse consequences for political incumbents' electoral support, so ruling parties have a strong incentive to retain managers who can contribute to success on this measure.

Finally, local citizens' perceptions of performance are captured by the estimated percentage of the population stating that they are satisfied overall with the services provided by their local authority. For each authority, this estimate is based on a large random sample of the adult population residing in the local authority and is carried out according to government quality standards. These surveys only take place every three years. We use the value for the 2003/04

financial year. As one would expect from a casual glance at the British media, overall the public are not too happy with local government. On average, only 52.5% of the population in a local authority are content with the way the authority carries out its business. There is some evidence that citizen satisfaction is positively related to electoral support for the ruling party (Boyne et al. 2007), so again politicians have a direct incentive to control managerial behaviour in an attempt to improve this aspect of performance.

We examine performance not only in levels but also relative to the past. Even if performance remains above average, a dip from recent levels is likely to lead to pressures on senior managers (Farrell and Whidbee, 2003; Puffer and Weintrop, 1991). For this reason we include indicators of performance change.³ For the service performance score we include the difference in performance between this year and last year. For the CPA, we include a dummy variable that takes on the value of one if the CPA rating declined by one or more categories relative to last year or remained unchanged. Otherwise the variable takes on the value of zero. For citizens' perceptions of performance, we include the percentage point difference between the population satisfied in 2000 and the population satisfied in 2003. On average, the percentage of the population who are content with their authority has shrunk, in spite of (or perhaps because of) the introduction of the CPA and further reforms to local government.

Control Variables

Our theoretical argument presents the elected council as the local government analogue of the board of directors in a private corporation. This implies that there are a set of political factors which may also influence turnover.

³ Note that the inclusion of performance data in contemporaneous levels as well as in first differences precludes us from additionally including them in lagged levels, as they would be perfectly multicollinear with the former two.

First, an election is likely to lead to some new faces on the local council, even if the incumbents retain control. This churn in the ruling group may disrupt relationships between politicians and managers. To precisely capture any election-induced differences in turnover, we create dummy variables for elections where the whole council is elected and for elections where there is an election by thirds. The latter implies that one council seat from each three-seat ward is up for election. This peculiar type of election takes place exclusively in metropolitan boroughs and a number of unitary authorities. The absence of an election forms the base group of observations.

Second, the expected competitiveness of the political environment in a local authority could also heighten turnover. A more competitive environment implies closer monitoring of management by the ruling party. Our indicator of perceived competitiveness of the next election is the percentage point difference between the vote share of the party with the largest number of votes and the party with the second-largest number of votes at the *last* election.

Finally, if a change in political party control takes place, a new set of political leaders may regard the incumbent officers as too closely associated with the previous regime, and unlikely to support new policies or implement them with zeal. Beyond this, a new ruling party may value the symbolic effects of appointing a new chief executive or entire senior management team. We therefore include a dummy for a change in political control of the council, including changes to or from a situation where no political party holds an overall majority.

Perceived management capacity could be linked to senior management turnover. Where it is relatively low, councils will be more likely to replace senior managers. As a proxy for senior management capacity, we include the council ability for improvement score for 2002/03. It captures most of the elements of management capacity identified by Ingraham et al. (2003),

with the exception of human resources management. This measure is included only in our cross-sectional citizen satisfaction models (tables 4 and 6) because it was only assessed in 2002.

Larger organizations may have a higher likelihood of leadership turnover because a bigger pool of potential replacements for the top leadership posts is readily available (Fredrickson, Hambrick, and Baumrin 1988, 258). As an indicator of the size of the organization, we include the size of the population living within the jurisdiction. This variable stems from the 2001 census. Because of its skew and the extremely large values it takes on for a number of authorities, we log this variable, which is common practice for population size and similar variables.

Several authors suggest that organizations tend to replace their leadership when the environment they exist in is difficult and dynamic (Fama and Jensen 1983; Sharfman and Dean 1991; Tushman and Romanelli 1985; Wiersema and Bantel 1993). According to Dess and Beard (1984), organizational environments vary along three dimensions: munificence (the resources available to an organization, permitting it to grow), complexity (how diverse the environment is) and dynamism (uncertainty—how much unpredictable change occurs). Environmental munificence is expected to be related to lower turnover, while environmental complexity and environmental instability are expected to be related to higher turnover (Wiersema and Bantel 1993).

We use the index of multiple deprivation (ODPM 2004) as an indicator of the lack of environmental munificence—the more deprived a local area is, the more difficulties management faces in achieving good performance (Andrews et al. 2006). Central government generally uses this index as the standard population-weighted measure of deprivation. It is derived from thirty-seven indicators covering income, employment, health and disability, education, housing, and

geographical dispersion (ODPM 2004). Higher values of the index indicate greater deprivation. To capture environmental complexity, we use an index of the occupational diversity of the population, based on census categories (ONS 2003). Different occupations are good proxies for heterogeneity in the needs of the population and their demands on a local authority. Our index is an inverted Herfindahl-Hirschman index. It is developed by squaring the percentage of each occupational category within a local authority and then subtracting the sum of the squares of these percentages from 10,000. Higher numbers of the index indicate higher occupational diversity. Turbulence is the degree to which unpredictable change occurs in the environment (Aldrich 1979). In creating our indicator of environmental turbulence we partially draw on Andrews and Boyne (2008). We take the percentage of lone parent households for each local authority from the 2001 census and regress it on the same variable from the 1991 census. Then we use the absolute value of the residuals from this regression as our indicator of environmental turbulence.

Last but not least, the location and character of the authority may be important. One would expect higher levels of turnover in London and metropolitan authorities because there are many other neighbouring authorities that could be an alternative source of employment for senior managers (and do not require a household move), thus easing exit and replacement. We therefore include dummies for London and metropolitan boroughs, as these are the major population centres of the country and are marked by a greater choice of occupational alternatives for local authority senior managers within commuting distance.

Methods

Our types of dependent variable differ: the senior management turnover rate in a given year is continuous, and the presence or absence of a chief executive succession in a given year is dichotomous. While the specifications explaining the senior management turnover rate can be estimated with linear models, we need to use a binary response estimator for the specifications explaining chief executive succession.

We have up to four observations on each of the different local authorities, so we can exploit one of the major advantages of panel data: test for the presence of omitted time-invariant factors that bias our results. For this purpose, we use Hausman tests that statistically compare the results from a model that controls for all time-invariant differences between authorities (a fixed effects model) to the results from a model that assumes that there are no omitted time-invariant differences that affect the results (a random effects model). If the results from the two models do not differ statistically, it is possible to use the random-effects model. It has two advantages. First, it allows the researcher to make statements about time-invariant explanatory variables. These would be swept out in a fixed effects model. Second, it is more efficient because it can better discern existing but noisy relationships.

Fortunately, in this study the Hausman tests indicate that all but one of our models produce statistically the same results whether they are estimated by fixed or random effects.⁴ To some extent this is not so surprising since in our turnover rate indicators there is quite a bit more variation over time within the local authorities than between the local authorities, so that time-invariant factors (those that vary only between authorities) are relatively less important. Also,

⁴ There sole exception is the second model in table 2. It shows some evidence of unobserved factors that are correlated with the included variables (Hausman test: $p=.04^*$). Yet if one looks at the differences in the coefficient estimates between fixed effects and random effects, the impact of the service performance score is virtually identical regardless of which estimator is used. For the sake of comparability, we therefore still report the random effects results for this model.

for all linear panel data models we carry out the test for serial correlation suggested by Wooldridge (2002) and implemented by Drukker (2003). Fortunately, this test indicates that none is present.

Finally, in both of the random effects logit models we carried out a check of whether the results, which are obtained by numerical approximation, are robust against slight changes to the approximation method. If a set of results changes a lot because of this, it would be unwise to place much importance upon them. Fortunately, in our cases the results are robust overall, and the coefficients on the variables of theoretical interest show only very slight changes, at the very most at the third digit to the right of the decimal point. We therefore believe the random effects logit worked reasonably well.

Findings

Our findings are reported in tables 2-6. We discuss them in the order of our hypotheses.

[Tables 2-6 about here]

Hypothesis 1 suggested that lower organizational performance is related to higher senior management turnover and vice versa. Our results for the central government assessments of performance (the service performance score and the CPA) clearly bear this out across all models explaining the turnover rate of the senior management team. As table 2 shows, a one-percentage point higher service performance score is related to about four tenths of a percentage point lower turnover rate in both models, all else equal. Similarly, in table 3 any of three highest categories of the CPA predict a lower rate of turnover than the base group. On average, compared to the base group, council-years with a CPA of three stars have a seventeen percentage point lower rate of turnover; council-years with a CPA of four stars have an eleven to twelve percentage point

lower rate of turnover; and council-years with a CPA of five stars have a sixteen to eighteen percentage point lower rate of turnover. These reductions in turnover compared to the base group are not statistically identical: a joint test of the restriction that the coefficients on the three higher CPA category dummies are equal is rejected ($p < .03$ in both models). This is because the reduction in turnover is somewhat smaller for councils with four stars than for those with three or five stars. The reduction in turnover is identical for the latter: the hypothesis that the coefficients on the dummies for three stars and five stars are equal cannot be rejected ($p > .83$ in both models).

The results in table 4 suggest that there is no clear, strong impact of the level of citizen satisfaction on turnover. Changes in local citizens' satisfaction with their local authority's service provision show a negative but noisy ($p = .09$) relationship with the senior management turnover rate: authorities that saw a ten percentage point reduction in citizen satisfaction (not an uncommon occurrence, as table 1 shows) on average had a four to five percentage points higher senior management turnover rate. Thus senior management team turnover appears to be more closely connected to central than local perceptions of service performance, which may reflect the high level of centralisation in the English local government system. This pattern might be reversed in a setting where local authorities have substantial legal autonomy and are heavily reliant on local revenues rather than intergovernmental transfers.

The only relationships between performance and the likelihood of a chief executive succession can be seen in the second model in table 5, which uses the CPA as the indicator of performance. Two findings are clearly discernible: i) the odds of a chief executive succession occurring are 77% lower in council-years that had a four star CPA ratings than the odds in councils that had a rating of only one or two stars; ii) surprisingly, the odds of a chief executive succession occurring are 60% lower in council-years that maintained their CPA rating or got

worse.⁵ Although one interpretation of this finding is that it may be more difficult to attract new chief executives to such authorities, we would not wish to attach too much weight to a single unexpected coefficient. Further comparisons of successions in councils that stayed the same with those that deteriorated (too small a group to be entered separately in the model) might help to resolve this puzzle. On the other hand, neither the service performance score nor citizen satisfaction (in table 6) have any relationship with the likelihood of a chief executive succession. Indeed, the chief executive succession model using citizen satisfaction as the indicator is statistically equivalent to a constant-only model.

While there are strong relationships between performance (at least the central government's perceptions of it) and the senior management turnover rate⁶, in the direction predicted by hypothesis one, only one category of the CPA is statistically related to the likelihood of a chief executive succession. And neither the service performance score nor citizen satisfaction bears any relationship to the likelihood of a chief executive succession. Thus hypothesis 2, which predicted that any negative relationship between performance and turnover would be weaker for chief executives than for other members of the top management team, is clearly corroborated in our study. This is unfortunate news for those who think that 'a fish rots from the head', as the Russian proverb goes. From our findings it appears that when there is rot, the gills are removed, not the head.

Hypothesis 3 suggested that chief executive successions will be followed by increases in senior management team turnover. There is quite a bit of evidence for this in our data: in tables

⁵ Of course, in a logit model, the odds ratio for any right-hand side variable can be obtained by exponentiating the coefficient. Subtract one from the odds ratio and subsequently multiply by a hundred to obtain the percent change in the odds.

⁶ We also examined whether the effect of performance might be moderated by the political variables (occurrence of an election, perceived competitiveness of the political environment, and change in political party control) but in most cases, the interactive models were not different from the additive ones.

2 and 3, a chief executive succession two years ago is clearly related to a senior management turnover rate that is about six percentage points higher this year. The relationship between a chief executive succession last year and the senior management turnover rate this year is of similar magnitude but noisier ($p=.07$).⁷ In the cross-sectional models using citizen satisfaction as the indicator of performance (reported in table 4), a chief executive succession in financial year 2002/03 is related to a twelve percentage point higher turnover rate in 2003/04. Thus new chief executives appear to have the power to alter the composition of their senior management team.

Few of our control variables show any statistical relationship with the senior management team turnover rate, and none do so in our chief executive succession models. Management capacity, as measured by the ability to improve score, shows a negative relationship with the senior management turnover rate in both cross-sectional models in table 4. Recall that the ability to improve score was only available up to 2002/03, so we could only include it in our cross-sectional models for 2003/04. In both models in table 4, a one point greater ability to improve is related to a one percentage point lower rate of senior management turnover. The tenure of senior officials is, therefore, more secure in authorities that are judged by external inspectors as having appropriate structures and processes, regardless of citizen evaluations of performance. The Audit Commission inspectors appear to bestow legitimacy on top management teams that protects them from the repercussions of performance problems. Our analysis also reveals a locational effect on turnover. There is some evidence that London boroughs tend to have a higher rate of turnover than local authorities in the more rural parts of the country. The second model of table 2 suggests that London boroughs tend to have a six percentage points higher rate of turnover than shire counties and unitary authorities. The same relationship, of similar

⁷ We examined whether the relationship between lagged chief executive succession and senior management turnover is moderated by performance but there is no evidence of this in any model.

magnitude, can also be weakly discerned in the other linear panel data models in tables 2 and 3. This may partly reflect the extra pressures on managers in the capital that stem from population flows and ethnic diversity, or may stem from a more plentiful supply of potential senior managers in this densely populated area covered by 32 separate jurisdictions.

Conclusions

We have provided evidence that points to a connection between local government performance and the rate of turnover of the appointed senior management team. Especially the central government's perceptions of performance but to some extent also local citizens' satisfaction with services predict the rate of senior management turnover. As we speculated, lower perceptions of performance are associated with a higher rate of senior management turnover. On the other hand, there appears to be a weaker relationship between council performance and CEO succession. This is consistent with arguments that chief executives can deflect blame for poor results onto their senior management teams who, like their private sector counterparts, are vulnerable to 'scapegoating'. Our results show that chief executives also have a direct effect on top team composition: the rate of senior management turnover tends to be higher in the wake of their own arrival at the top of the organization.

These results suggest that the tenure of senior managers in the public sector is partly contingent on organizational performance. They are more likely to remain in post when performance is high, and more likely to depart when performance is poor. Our findings suggest that public managers are not insulated from performance, but are at least loosely accountable, either through forced or voluntary resignation, when public services are deemed to be unsatisfactory. The relationship between performance and turnover clearly needs to be

investigated in a variety of contexts before general conclusions can be drawn. Nevertheless it seems plausible that the strength of this relationship may be contingent on factors that vary across national and institutional settings, such as the clarity of performance information, the nature of employment contracts, constitutional arrangements between elected politicians and appointed officials, and the impact of public service standards on electoral support for ruling parties. A rich research agenda awaits future studies of the relationship between organizational performance and management turnover in the public sector.

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Tables

Table 1: Summary Statistics

	Mean	Standard deviation	Min.	Max.
Turnover rate 1	0.20	0.21	0	1
Turnover rate 2	0.21	0.21	0	1
Chief executive succession (dummy)	0.21	0.40	0	1
Service performance score (from CPA)	69.5	8.4	40	90
Year-on-year change in service performance score	0.8	7.1	-25	21.7
CPA grade Fair/3 stars (dummy)	0.24	0.43	0	1
CPA grade Good/4 stars (dummy)	0.41	0.49	0	1
CPA grade Excellent/5 stars (dummy)	0.23	0.42	0	1
CPA same as or worse than last year (dummy)	0.75	0.43	0	1
Satisfaction with the local authority (% very/fairly satisfied) in 2003	52.5	8.4	31	77
Change in % satisfaction with the local authority from 2000 to 2003	-7.7	8.2	-26.7	17
Whole council election (dummy)	0.24	0.43	0	1
Election by thirds (dummy)	0.13	0.34	0	1
Difference between vote share of 2 biggest parties LAST election	11.2	8.8	0.04	44.7
Change in political party control (dummy)	0.12	0.32	0	1
Chief executive succession last year (dummy)	0.16	0.37	0	1
Chief executive succession two years ago (dummy)	0.18	0.38	0	1
Ability to improve score	32.5	6.6	15	48
Logged population	5.43	0.27	4.54	6.12
Index of multiple deprivation	27.6	12.2	4.9	61.3
Occupational mix (common definition)	8578	344	7271	8975
Turbulence indicator	2.24	2.08	0.06	10.2
London borough (dummy)	0.22	0.41	0	1
Metropolitan borough (dummy)	0.24	0.43	0	1

These summary statistics are for the common estimation sample used by all models in tables 2, 3, and 5. The estimation sample of all cross-sectional models in tables 4 and 6 is a proper subset of this larger common estimation sample.

Table 2: Panel Linear Regression Models (Random Effects) Explaining Senior Management Turnover Based on the Service Performance Score

	Dependent variable:	
	Turnover rate 1	Turnover rate 2
Service performance score (from CPA)	-0.004 (2.64)**	-0.004 (2.88)**
Year-on-year change in service performance score	0.001 (0.53)	0.001 (0.75)
Whole council election (dummy)	0.04 (1.39)	0.04 (1.38)
Election by thirds (dummy)	0.03 (0.76)	0.02 (0.57)
Difference between vote share of 2 biggest parties LAST election	-0.002 (1.44)	-0.002 (1.66)
Change in political party control (dummy)	-0.001 (0.03)	-0.001 (0.04)
Chief executive succession last year (dummy)	0.05 (1.90)	0.05 (1.89)
Chief executive succession two years ago (dummy)	0.06 (2.19)*	0.06 (1.96)
Logged Population	0.03 (0.86)	0.03 (0.83)
Index of multiple deprivation	0.001 (0.97)	0.001 (1.13)
Occupational mix (common definition)	0.00003 (0.64)	0.00004 (0.82)
Turbulence indicator	0.01 (1.18)	0.01 (1.41)
London borough (dummy)	0.06 (1.76)	0.07 (1.99)*
Metropolitan borough (dummy)	-0.01 (0.47)	-0.02 (0.56)
Constant	-0.03 (0.07)	-0.07 (0.15)
Wald Chi ² test of H0: “The model explains nothing”	p<.0001**	p<.0001**

Both models estimated over the same 439 observations on 148 local authorities.

The absolute values of Huber-White t-statistics are provided in parentheses. Dummies for individual years are not reported. * indicates a p-value of .05 or less; ** indicates a p-value of .01 or less.

Table 3: Panel Linear Regression Models (Random Effects) Explaining Senior Management Turnover Based on the Comprehensive Performance Assessment

	Dependent variable:	
	Turnover rate 1	Turnover rate 2
CPA grade Fair/3 stars (dummy)	-0.17 (4.64)**	-0.17 (4.58)**
CPA grade Good/4 stars (dummy)	-0.11 (2.98)**	-0.12 (3.13)**
CPA grade Excellent/5 stars (dummy)	-0.16 (4.41)**	-0.18 (4.55)**
CPA same as or worse than last year (dummy)	-0.02 (0.84)	-0.02 (0.73)
Whole council election (dummy)	0.04 (1.47)	0.04 (1.49)
Election by thirds (dummy)	0.02 (0.67)	0.02 (0.47)
Difference between vote share of 2 biggest parties LAST election	-0.002 (1.45)	-0.002 (1.66)
Change in political party control (dummy)	-0.01 (0.39)	-0.01 (0.40)
Chief executive succession last year (dummy)	0.05 (1.79)	0.05 (1.79)
Chief executive succession two years ago (dummy)	0.06 (2.20)*	0.06 (1.95)
Logged Population	0.04 (0.92)	0.04 (0.95)
Index of multiple deprivation	0.001 (0.72)	0.001 (0.92)
Occupational mix (common definition)	0.00003 (0.65)	0.00004 (0.80)
Turbulence indicator	0.01 (1.13)	0.01 (1.35)
London borough (dummy)	0.06 (1.50)	0.07 (1.71)
Metropolitan borough (dummy)	-0.01 (0.55)	-0.02 (0.68)
Constant	-0.17 (0.39)	-0.24 (0.53)
Wald Chi ² test of H0: “The model explains nothing”	p<.0001**	p<.0001**

Both models estimated over the same 439 observations on 148 local authorities.

The absolute values of Huber-White t-statistics are provided in parentheses. Dummies for individual years are not reported. * indicates a p-value of .05 or less; ** indicates a p-value of .01 or less.

Table 4: Cross-Sectional Linear Regression Models Explaining Senior Management Turnover Based on Local Citizens' Satisfaction

	Dependent variable:	
	Turnover rate 1	Turnover rate 2
Satisfaction with the local authority (% very/fairly satisfied) in 2003	0.004 (1.66)	0.003 (1.13)
Change in % satisfaction with the local authority from 2000 to 2003	-0.004 (1.71)	-0.005 (1.78)
Whole council election (dummy)	0.02 (0.28)	0.03 (0.38)
Election by thirds (dummy)	0.08 (0.98)	0.07 (0.76)
Difference between vote share of 2 biggest parties LAST election	-0.003 (1.69)	-0.003 (1.60)
Change in political party control (dummy)	-0.02 (0.41)	-0.04 (0.74)
Ability to improve score	-0.01 (2.52)*	-0.01 (2.62)**
Chief executive succession last year (dummy)	0.12 (2.13)*	0.12 (2.14)*
Chief executive succession two years ago (dummy)	0.07 (1.61)	0.08 (1.70)
Logged Population	0.07 (0.66)	0.08 (0.84)
Index of multiple deprivation	0.002 (0.85)	0.002 (1.21)
Occupational mix (common definition)	0.00006 (0.78)	0.00004 (0.53)
Turbulence indicator	-0.003 (0.38)	0.001 (0.10)
London borough (dummy)	0.10 (1.45)	0.08 (1.22)
Metropolitan borough (dummy)	-0.12 (1.41)	-0.10 (1.27)
Constant	-0.71 (0.84)	-0.59 (0.68)
General F test of H0: "The model explains nothing"	p=.003**	p=.002**
R ²	0.20	0.21

Estimated over a cross-section of 144 local authorities.

The absolute values of Huber-White t-statistics are provided in parentheses. * indicates a p-value of .05 or less; ** indicates a p-value of .01 or less.

Table 5: Panel Models (Random Effects Logit) Explaining the Presence or Absence of a Chief Executive Succession

	(1)	(2)
Service performance score (from CPA)	-0.03 (1.42)	
Year-on-year change in service performance score	0.03 (1.24)	
CPA grade Fair/3 stars (dummy)		-0.56 (1.12)
CPA grade Good/4 stars (dummy)		-1.48 (2.84)**
CPA grade Excellent/5 stars (dummy)		-0.91 (1.60)
CPA same as or worse than last year (dummy)		-0.92 (2.75)**
Whole council election (dummy)	0.41 (1.08)	0.44 (1.14)
Election by thirds (dummy)	0.10 (0.18)	0.07 (0.12)
Difference between vote share of 2 biggest parties LAST election	0.01 (0.64)	0.01 (0.69)
Change in political party control (dummy)	-0.73 (1.42)	-0.90 (1.71)
Logged Population	-0.01 (0.01)	-0.00 (0.00)
Index of multiple deprivation	-0.00 (0.17)	-0.01 (0.30)
Occupational mix (common definition)	0.00 (0.85)	0.00 (0.63)
Turbulence indicator	0.02 (0.29)	0.02 (0.27)
London borough (dummy)	-0.61 (0.95)	-0.86 (1.30)
Metropolitan borough (dummy)	-0.59 (1.23)	-0.75 (1.55)
Year dummy for 2004	-0.73 (1.92)	-0.91 (2.31)*
Year dummy for 2005	0.74 (1.96)	0.71 (1.99)*
Constant	-5.35 (0.67)	-4.10 (0.53)
Wald Chi ² test of H0: “The model explains nothing”	p=.06	p=.01**

Both models estimated over the same 439 observations on 148 local authorities.

Absolute values of z-statistics are provided below the estimated logit coefficients in parentheses.

* indicates a p-value of .05 or less; ** indicates a p-value of .01 or less.

Table 6: Cross-Sectional Logit Model Explaining the Presence or Absence of a Chief Executive Succession

Satisfaction with the local authority (% very/fairly satisfied) in 2003	0.06 (1.72)
Change in % satisfaction with the local authority from 2000 to 2003	-0.08 (1.51)
Whole council election (dummy)	0.48 (0.50)
Election by thirds (dummy)	0.92 (1.01)
Difference between vote share of 2 biggest parties LAST election	-0.02 (0.70)
Change in political party control (dummy)	-0.75 (1.03)
Ability to improve score	-0.04 (0.79)
Logged population	0.06 (0.05)
Index of multiple deprivation	0.01 (0.23)
Occupational mix (common definition)	0.0002 (0.14)
Turbulence indicator	-0.01 (0.11)
London borough (dummy)	0.22 (0.21)
Metropolitan borough (dummy)	-1.71 (1.78)
Constant	-6.08 (0.46)
Wald Chi ² test of H0: "The model explains nothing"	p=0.65
Estimated over a cross-section of 144 local authorities.	

The absolute values of Huber-White z-statistics are provided below the estimated logit coefficients in parentheses. * indicates a p-value of .05 or less; ** indicates a p-value of .01 or less.