

Feeling the squeeze: Public employees' experiences of cutback- and innovation-related organizational changes following a national announcement of budget reductions

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ABSTRACT

Fiscal austerity is having major impacts on public service organizations, but little is known about the effects of these changes on employees' well-being, attitudes and behaviors. Following a major UK national government announcement of budget reductions, we conducted a longitudinal field study of employees in diverse public sector organizations across the UK to address how the communication and the implementation of this external policy event affected employees. We ask two questions: First, how does a national policy announcement about substantial budget reductions affect employees' well-being and attitudes at work? Second, how do cutback- and innovation-related changes that followed the budget announcement affect employees' well-being, attitudes and behavior? Results suggest that the budget announcement itself – before any changes had been implemented – negatively affected individual well-being and attitudes at work. Further, we found differential effects on employees, depending on whether the budget reductions were followed by cutback-related or innovation-related changes. Increases in cutback-related changes had negative effects on employees, yet an increase in innovation-related changes did not just have less negative, but positive effects on employees' positive well-being, job satisfaction and engagement over time. However, contrary to previous research, some employee outcomes were not affected by either of the changes in this longitudinal study. We discuss implications of our findings for public management and for the psychological processes underlying the experience of organizational change across all sectors in times of budget reductions.

Keywords: organizational change, innovation, cutback, employee well-being, employee attitudes, budget reductions, policy announcement

INTRODUCTION

The period of fiscal austerity in many countries has major impacts on public service organizations as resource scarcity leads to budget reductions and organizational retrenchment (Bozeman, 2010; Pandey, 2010). Yet, very little is known about the effects of these changes on employees' well-being, attitudes and behaviors at work. Even in periods of financial munificence, the public management literature has placed more emphasis on identifying policies and strategies which bring about improvements to services than understanding the effects of those changes on the employees who ultimately deliver those improvements. Yet, the generic change management literature emphasizes the importance of understanding employee reactions to change in order to achieve organizational change goals, but has primarily analyzed internal change projects and focused on dysfunctional processes and negative outcomes for employees (as noted by Kelman, 2005; Dent and Goldberg, 1999; Kiefer, 2002).

In the public management literature, the impact of external policy events on the organization (for example, through the announcement and implementation of budget reductions) has often been assumed to reduce organizational performance, though recent research shows that this is not always the case (Meier and O'Toole, 2009). The impact of such events on employees is under-investigated, and, as van Ryzin (2012, 13) concludes, "more research should be done on the potential impacts that large-scale political and social events may have on the morale and productivity of the public sector".

This article focuses on the effects of a national policy event, announcing public finance reductions, on employees' well-being, attitudes and behaviors across public service organizations in two ways: first, by examining the effects of its communication, and, second, by examining the effects of its implementation through ongoing changes following the policy announcement. Specifically, we contribute to the literature on change in public service organizations in three significant ways: First, we examine whether and how a national announcement about budget reductions impacts on employees' well-being and attitudes. While

research suggests that announcing and communicating a change within an organization can affect employees' well-being and attitudes (e.g. Shapiro and Kirkman, 1999), this study is unusual in examining the effects of a national, governmental policy announcement on a broad range of employees working in a wide variety of types of public service organization.

Second, we explore employee reports of changes implemented in organizations following that budget announcement. We focus in particular on two types of changes: cutback- and innovation-related changes. Resource scarcity has sometimes been assumed to hinder innovation (Berry, 1994; Bingham and Wise, 1996), and the focus is generally on introducing cuts to services and organizational resources (Foster and Meinhard, 2002; Walker and Brewer, 2008). Another stream of literature suggests that an external policy event, such as significant budget restrictions, can under certain circumstances foster innovation (van de Ven, 1993; Boyne, 2006; Mone, McKinley, and Barker, 1998). In earlier recessions, public organizations have engaged in both cuts and innovation. These two broad types of change, cutback- and innovation-related changes, are not mutually exclusive, but they represent different aspects of ongoing organizational change following the external budget announcement.

Third, we examine the potential negative and positive effects of these two types of change on employees, which remain unclear and require further investigation (Bozeman, 2010). The change literature tends to focus on the negative outcomes of organizational change, yet some authors have highlighted that change can elicit a range of positive as well as negative emotional reactions, but that they tend to be caused by different aspects of change (e.g. Kiefer, 2002; Cameron, 2008). Little research has so far been able to demonstrate positive effects of change on individuals' experience at work, though a few studies have shown change to have no effect, including changes following budget reductions to public service organizations (e.g. Meier and O'Toole, 2009). Here we argue against the grain of the organizational change literature, and suggest that not all change leads to dysfunctional outcomes for individuals and that the implementation of change following an external announcement about budget

reductions will have differential effects on employees' well-being, attitudes and behavior depending on the type of change enacted. In order to demonstrate differential effects, our design measured both types of change simultaneously and over time.

We capitalized on a naturally occurring event by conducting a field study with two elements, a quasi-experimental element at Time 1 (with separate pre- and post-event samples, invited at different times) to examine the effects of the communication of a national governmental statement of budget reductions on public service employees (for Hypothesis 1) and a longitudinal element (for Hypothesis 2) to examine the effects of the implementation of organizational changes on employees following the announced budget reductions (following up the participants six months after the policy announcement with a second survey).

BUDGET REDUCTIONS IN THE PUBLIC SECTOR, CUTBACK- AND INNOVATION-RELATED CHANGE

Scholars have noted that external budgetary reductions have a variety of sources and consequences for public organizations. Levine (1979), in his seminal work on management in the public sector during recession, noted that budgetary reductions created significant organizational challenges to service provision and employee engagement. We view a national announcement about significant spending reductions as a relevant external event (Meier & O'Toole, 2009) which is likely to affect public organizations and which can have a number of consequences for their change strategies, as well as having positive and/or negative effects on employees, through the communication and implementation of the governmental budget reductions. Public organizations may implement such finance reductions in a variety of ways (Levine, 1979; Bozeman, 2010).

We here use *ongoing organizational change* as an overarching term, referring to incremental or substantial alterations to an organization's structures, processes or social systems (Kiefer, 2005). The literature on ongoing change draws attention to the fact that changes, such as

downsizing, are not a single change, but rather consist of multiple, continuous sets of parallel and sequential organizational changes and form a “cacophony of change” (Dutton, Ashford, O’Neill, and Lawrence, 2001, 716). This conceptualization of change is useful here as it shifts the focus from change as a particular intra-organizational event (with specific employee reactions to a particular intra-organizational change project) to understanding the broader experience of working in the context of ongoing, multiple changes.

In the context of this study, it is also important to distinguish between cutback change and innovation change. The generic terms “change” and “innovation” have been used in somewhat different ways, are not always well defined and have fuzzy boundaries. Osborne and Brown (2005, 5) note that “Change and innovation are overlapping phenomena,” but argue that “innovation is a specific form of change.” A number of writers argue that innovation is conceptually different (e.g. Hartley, 2005; Lynn, 1997) because it is something new for the organization (Damanpour and Walker, 2009), generating or adopting new products, processes and practices (Damanpour and Schneider, 2009; Hartley et al., 2013).

Cutbacks represent a particular type of ongoing change. Levine (1979, 180) described cutback management as “organizational change toward lower levels of resource consumption”. Cutback strategies include changes such as redundancies, recruitment freezes, reduced service provision, or merging teams (Wanna, Jensen, and de Vries, 2010). They are common in times of budgetary constraint (Pandey, 2010) and are sometimes referred to in the public policy literature as “salami-slicing” of administration and services (Hood, 2010).

Based on the above distinctions, in the remainder of this article, the term *cutback-related change* refers to changes aimed at reducing expenditure (upper half of Table 3) and the term *innovation-related change* refers to changes that focus on doing something new in the organization by generating or adopting new practices and services (lower half of Table 3).

The distinction between cutback- and innovation-related change is useful because we expect employees to react differently to these types of change. Improving public services has been an

enduring theme for public management scholars over the past couple of decades, yet the literature tends to focus on particular management practices (e.g. accounting methods or performance management) (O’Flynn, Buick, Blackman, and Halligan, 2011; Fernandez and Rainey, 2006) and less on their impact on employees (Pollitt and Bouckaert, 2011). Yet questions have been raised about how organizational cutback management has impacted on employees (e.g. Pandey, 2010; Bozeman, 2010), and a growing body of work argues for a better understanding of employee reactions to ongoing change (e.g. Yang and Kassekert, 2010; Rubin and Kellough, 2012; Battaglio and Condrey, 2009; Fernandez and Pitts, 2011).

DEVELOPMENT OF HYPOTHESES: EMPLOYEE REACTIONS TO ONGOING CHANGES IN PUBLIC SERVICE ORGANIZATIONS FOLLOWING AN EXTERNAL BUDGET ANNOUNCEMENT

Building on the above notion of ongoing change, we discuss two main ways in which the external national budget announcement may affect employees in organizations, namely through its communication (Hypothesis 1) and through its implementation (Hypothesis 2).

How does a national policy announcement about budget reductions affect employees’ well-being and attitudes at work?

Why should an external budgetary announcement affect employees’ well-being and attitudes before any actual changes signaled by the announcement have been implemented? We argue that employees surveyed after the policy announcement will show lower levels of well-being and more negative attitudes towards their organization than those surveyed before the announcement. In general, the communication of an intra-organizational event can affect how employees react to organizational change, based on expectations and sense-making processes (Isabella, 1990; Armenakis and Bedeian, 1999; Woods and Dekker, 2000). We suggest that a policy announcement of budget reductions (in this instance, of about 25% over a short period) is likely to affect individuals’ well-being and attitudes at work mainly through increasing

uncertainty about the future of jobs and services as part of a sense-making process. First, such an announcement is likely to jeopardize feelings of *job security* by reducing expectations of being able to continue to work in a job or organization as long as one chooses (Kraimer et al., 2005). Employees may wonder how public organizations will continue to function with 25% less budget and hence may become less confident about the organization's ability to maintain current levels of employment. A number of scholars have noted that public sector reform and cutbacks can have negative effects on job security and other attitudes (Rainey, 2009; Battaglio and Condrey, 2009; Feldheim, 2007).

Second, *job satisfaction*, defined as an overall judgment about the extent to which one is contented with one's job (Fisher and Locke, 1992), and *emotional well-being* may also be affected (Weiss & Cropanzano, 1996). We predict that the external announcement of budget cuts affects job satisfaction and well-being negatively because uncertainty about the upcoming implementation of the budget reductions reduces perceived control and predictability (Nelson et al. 1995), which in turn affects job satisfaction and mood (Laschinger et al., 2004; Amiot et al., 2006). The announcement of budget reductions may lead employees to anticipate negative changes to several facets of the job and therefore could negatively affect job satisfaction and their emotional well-being at work, prior to any implementation of change.

Hypothesis 1: Participants responding in the two weeks after the budget announcement report lower well-being (higher negative and lower positive emotional well-being) and more negative attitudes (job satisfaction and job security) compared to participants responding in the two weeks before the announcement of the budget reductions.

How do cutback-related and innovation-related changes affect employees' well-being, attitudes and behaviors at work over time?

Public service organizations can respond in different ways to an external announcement of budget reductions (as noted above) and the focus here is on the two broad types of

organizational responses, cutback- or innovation-related change. We expect employees' well-being, attitudes and behaviors at work to be more negatively affected by increases in cutback-related change and more positively affected by increases in innovation-related change.

Previous research on generic organizational change across all sectors and a wide variety of organizations has shown it to have negative effects on employees in both cross-sectional (e.g. Mossholder et al., 2000) and longitudinal studies (Fugate, Kinicki, and Prussia, 2008; Kiefer, 2005). Resource reductions in the public sector have also been found to have negative effects on employees in terms of higher job security, lower job satisfaction, lower morale, greater threat to motivation and greater frustration about (not) being able to provide an adequate service (Levine, 1979; Cameron, Whetten, and Kim, 1987; Yang and Kassekert, 2009). Hence, we expect cutback-related changes to reduce employees' *job satisfaction*, *job security* and *emotional well-being* over time.

We also expect a reduction in levels of *engagement with the job*, *public service delivery* and *helping colleagues* caused by several factors including increased workload (Bartunek et al., 2006) and a perceived inability to perform the job in an adequate manner (Kiefer, 2005). Workload is likely to increase for a number of reasons; one in particular is the Government's policy mantra of "doing more with less" (e.g. The Prime Minister's Press Office on 30 June 2010), which means fewer employees will have to manage the same workload to achieve the existing goals. An increased workload is likely to make it harder for public employees to maintain in- and extra-role behaviors, such as helping and service delivery.

While the change literature has focused on negative outcomes and largely ignores positive experiences for employees during change, we propose that not all ongoing change is experienced negatively and that some change may even have positive implications for employee well-being, attitudes and behaviors. We argue that innovation-related change is theoretically different from cutback-related change and therefore has different consequences for employees. While the implementation of innovation may also cause disruption for

employees, it at the same time requires more employee involvement (Borins, 1998). Research suggests that where employees are encouraged to engage in innovation, they report more positive attitudes towards the organization, specifically job satisfaction (e.g. Fernandez and Pitts, 2011). Notably, in innovation-related change, employees tend to participate in creating new ideas, in piloting and testing prototypes and in implementing innovation (Bason, 2010). While not all innovation is participative (Hartley, 2005), in contrast, cutback-related change is more likely to be imposed and involve less participation (e.g. Pandey, 2010). One could argue that this is particularly likely to be the case where financial resources are being cut, as in salami-slicing change, as this tends to be a top-down decision (Wanna et al., 2010).

Hypothesis 2a: An increase in cutback-related change following the budget announcement predicts a decrease in emotional well-being (decrease in positive and increase in negative emotional well-being), attitudes (job satisfaction, job security) and behaviors (engagement, helping and service delivery).

Hypothesis 2b: An increase in innovation-related change following the budget announcement predicts an increase in emotional well-being (increase in positive and decrease in negative emotional well-being), attitudes (job satisfaction, job security) and behaviors (engagement, helping and service delivery).

METHOD AND RESEARCH DESIGN

The UK national context of the research

In our study, we used the announcement of the Comprehensive Spending Review (CSR) as an event constituting a *policy announcement*. On 20 October 2010, the UK Finance Minister announced the CSR, consisting of a budget reduction of 25% to most public service organizations over four years. The global financial crisis, starting in 2008, led to a number of governments creating rescue packages for the financial services sector, which in turn has led to a high level of government debt. The incoming coalition government aimed to introduce

austerity measures to bring down the budget deficit as rapidly as possible to address the debt. In the UK, such spending reviews happen periodically (every four years) and outline the budget limits for each government department and public service. In a highly centralized governmental system such as the UK (Pollitt and Bouckaert, 2011), the CSR is seen as the definitive statement of medium-term growth or cutback for all public services because only a small percentage of UK revenue is raised through local taxes. Commentators noted that this was the largest budget reduction since World War 2, and the Office for Budget Responsibility predicted that the CSR would lead to the loss of 490,000 public sector jobs by 2015 (OBR, 2010), representing about 10% of overall public sector employment. The CSR received widespread media coverage with many discussions of its implications for the economy, the provision of public services and public sector jobs in the UK.

Participants

We conducted a web-based study of employees working across a range of public organizations in the UK. All participants received an email invitation directly from the researchers that included a link to the surveys at Time 1 (October/November 2010) and at Time 2 (May 2011). We assured confidentiality and that responses would be used solely for research purposes. The response rate was 25%¹, which is an acceptable response rate for online surveys with a high proportion of respondents with managerial responsibility (Anseel et al., 2010).

The original distribution list consisted of databases containing alumni held by the researchers' universities. A separate list consisted mostly of middle to senior public sector managers who had participated in a various higher education courses. A subsequent snowball procedure produced 43% of the final data set. There were 744 respondents overall at Time 1, of whom

¹ The calculated response rate was 21%, which is too conservative an estimate as it includes all potential participants whose email addresses were no longer valid (for reasons including retirement, change in employer etc.) or who were absent during the period of the survey (owing to annual leave, maternity, secondment etc.). According to the alumni offices, who sent out the email invitations on the researchers' behalf, this is likely to be 15–25% of email addresses. The adjusted response rate is therefore 25%, following recommendations by Baruch & Holtom (2008).

339 completed the survey before and 378 after the policy announcement.² At Time 2 there were 340 responses from those who completed at Time 1. We conducted tests for potential panel participation bias to examine whether there were any systematic attrition effects. Following Goodman and Blum's (1996) recommendations, we used multiple logistic regression to test whether psychological measures (see Table 1) and a number of control variables³ predicted participation at Time 2. Those who completed surveys at Time 1 and Time 2 did not differ significantly on any of these variables. In summary, our data were not biased by attrition. Further, we tested whether responses differed by source (database)⁴ and found no differences in demographics, employee well-being, attitudes or behavior.

The sample was not designed to be representative of the public sector, but instead we aimed to cover a range of public organizations, ensuring heterogeneity. For Time 1 (N=744), it consisted of 26% senior managers, 31% middle managers, 14% first-line managers and 29% non-managers (based on self-ratings). Senior managers are over-represented with an adequate spread throughout the other hierarchical levels. The sample consisted of 53% females; the average age was 43; 77% had a university degree; 80% were employed full-time; and 77% had permanent employment. 50% were in organizations of 1,000 employees or larger. The sample came from all four UK countries, with 28% of the sample employed in London. We compared our sample to the Workplace Employee Relations Survey 2011 dataset (WERS 2011; see van Wanrooy et al., 2013).⁵ This revealed our sample to be proportionately similar in terms of organization size, age and tenure, but different in that our sample included a higher proportion

² Note that 27 respondents at Time 1 did not have a time stamp and could therefore not be allocated to the pre- or post-announcement group. Those 27 participants had to be excluded from the analysis for H1.

³ Control variables included age, gender, education, tenure, geographical location of organization, size of organization.

⁴ Different sources were: respondents from either University alumni database, the list of participants participating in higher education as well as participants recruited by snowball procedure.

⁵ WERS 2011 is a nationally representative survey of British workplaces, covering all workplaces with five or more workers. It includes 26802,680 workplaces and 26802,680 face-to-face questionnaire interviews with the main manager responsible for personnel relations and self-completion questionnaires of up to 25 randomly selected employees per workplace, resulting in 2198121,981 employee questionnaires.

of men (47% compared with 34% in WERS), graduates (85% compared with 33% in WERS), full-time workers (77% compared with 67% in WERS), senior managers (26% compared with 3% in WERS), and a lower proportion of workers from health, police and education sectors (29% compared with 53% in WERS). In summary, our sample was skewed towards university-educated male managers, compared to the public sector population.

Measures

Tables 1 and 2 show the means, standard deviations, inter-correlations and Cronbach alphas in the diagonal. Scale items were presented in randomized order within question blocks to reduce order effects and common method bias (Fraley, 2007; Podsakoff et al., 2003).

Cutback- & Innovation-related change indices. These measures assess the number of “objective” cutback- and innovation-related changes as perceived by the employees. They were designed to be sufficiently broad to capture the range of different cutbacks and innovations known to be occurring across many different public organizations, professions and contexts. The two measures represent indices, rather than a theoretical construct, consisting of a range of changes relevant to the context (Bollen & Lomax, 1991; Spector & Jex, 1998). They are formative measures, in which the sum of responses to items is a proxy for the extent of change, and separate individual items may not necessarily correlate. Both indices were developed from previous research and theory and amended to suit the current public sector context with the help of group interviews with public sector employees and through trade press reading. The stem question was: “Have you experienced the following in your organization over the past six months?” (yes/no). Each item represents one possible cutback- or innovation-related change activity. Participants had no knowledge of how items were classified by the researchers. The *cutback-related change index* consists of 13 items and is adapted for the public sector from Kiefer (2005). The *innovation-related change index* consists of 11 items and is based the operationalization of those innovations which occur in organizational settings in public service

organizations, derived from Albury (2005), Hartley (2005) and Totterdell and colleagues (Totterdell et al., 2002). The derived list includes innovations of products, services, processes, governance, HRM, work design and strategy. All items are listed in Table 3. We performed a confirmatory factor analysis to ensure the distinction between cutback-related and innovation-related change is appropriate. There was a good level of fit for the two-factor measurement model, supporting our two indexes (two-factor model: $\chi^2 = 388.82$, $df = 225$, $p < .001$; RMSEA = .03; CFI = .98; in comparison to the one-factor model, which had a fit below acceptability: $\chi^2 = 662.65$, $df = 226$, $p < .001$; CFI = .82, RMSEA = .05).⁶ To establish discriminant validity, we used a paired construct test ($\Delta\chi^2 = 273.82$, $df = 1$, $p < .001$; Anderson and Gerbing, 1988; Bollen, 1989), and average variance extracted (difference .03; Farrell, 2010; Fornell and Larcker, 1981). All of the results support the distinctiveness of the two change constructs.

Well-being. We used the short version of the Job-related Affective Well-Being Scale (Van Katwyk, Fox, Spector, and Kelloway, 2000), which assesses a range of positive and negative emotional responses that individuals can have in reaction to their job. *Negative emotional well-being* items are Angry, Frustrated, Worried, Disappointed, Disgusted, Annoyed, Anxious, Betrayed. *Positive emotional well-being* items are Happy, Proud, Optimistic, Excited, Content. Anchors ranged from 1 “very rarely” to 5 “very often”.

Attitudes towards the job. Job satisfaction was measured using one item: “On the whole, how satisfied are you with your job?” (Wanous, Reichers and Hudy, 1997; Nagy, 2002). Anchors ranged from 1 “very dissatisfied” to 5 “very satisfied”. The measure consists of three items from Kraimer et al. (2005): “I am confident that I will be able to work for my organization as long as I wish”; “If my job were eliminated, I would be offered another job in my current organization”; and “My current organization would transfer me to another job if I were laid off from my present job”. Anchors ranged from 1 “strongly disagree” to 5 “strongly agree”.

⁶ Several item error terms were correlated to achieve acceptable model fit; crucially, the same set of error terms were specified in the one- and two-factor models, thereby allowing a direct comparison of the two- versus one-factor models.

Behaviors. *Engagement with the job* represents a behavior which is defined as positive affective or motivational reaction towards the job, and is characterized by vigor, dedication, and absorption (e.g. Schaufeli, Bakker, and Salanova, 2006). The measure consists of six items (Schaufeli et al., 2006): “I feel full of energy in my work”; “I feel strong and vigorous while working”; “I am enthusiastic about my work”; “My job inspires me”; “I am completely immersed in my work”; “Time flies by while working”. Anchors ranged from 1 “never or hardly ever” to 5 “very often”. *Service delivery* describes behaviors directed towards delivering a service to a customer or client. We used four items from Bettencourt, Gwinner, and Meuter (2001): “I follow up in a timely manner to requests and problems raised by members of the public”; “I follow public-service guidelines about how to serve members of the public with extreme care”; “I follow up in a timely manner to requests and problems raised by members of the public”; “Regardless of circumstances, I am exceptionally courteous and respectful to members of the public”. The anchors ranged from 1 “very slightly or not at all” to 5 “a great deal”. Only participants in a service role responded to this scale (N=81 at both Times 1 and 2). *Helping Colleagues* was measured using four items from Lee and Allen’s (2002) measure of organizational citizenship behavior directed towards individuals. The items are: “Willingly gave your time to help others who have work-related problems”; “Adjusted my work schedule to accommodate other employees’ requests for time off”; “Showed genuine concern and courtesy toward co-workers, even when working under high pressure”; “Assisted others with their duties”. Anchors ranged from 1 “very rarely” to 5 “very often”.

Research design and data analysis strategy

Brewer and Brewer (2011) note the need for stronger research designs in public management in order to concurrently maximize both external and internal validity, and they advocate longitudinal and experimental designs to achieve this, but note threats to external validity in pure experimental designs.

So for Hypothesis 1 (based on Time 1), we utilized a quasi-experiment with a combination of manipulated design elements (Shadish, Cook, and Campbell, 2002, 17). Here we are taking advantage of the policy announcement as a naturally occurring event, with one part of the sample (control group) being surveyed before the event and another group after the event (treatment group). Participants were randomly assigned to pre- and post-group. This ensures that the group responding before the policy announcement will not have experienced the event, assuming that all participants responding after the event will have all been exposed to the policy announcement. According to Shadish et al. (2002), this corresponds to a posttest-only design with an independent pretest sample, improved through a randomly allocated sample.

To test Hypothesis 2 we used a longitudinal design. Respondents were followed up six months after the policy announcement at Time 2, a month into the start of the new financial year and therefore at a point at which most of budget implications of the announcement were known for individual organizations for the current year.

Hypothesis 2a and 2b were tested using fixed-effect regression and longitudinal data to provide greater confidence in causal inferences (Brewer and Brewer, 2011; Antonakis et al., 2010). Two important conditions of causality are establishing co-variation and ruling out alternative explanations. Fixed-effects panel regressions establish co-variation between change in an independent variable and change in a dependent variable, which is a more rigorous test of association than associations between levels of variables (i.e. cross-sectional data), and fixed-effects panel regressions rule out all possible time-invariant (between-person in our case) alternative explanations. Fixed-effects regression estimates are therefore not biased by between-person variables (such as individual differences or differences between groups of respondents such as managers versus non-managers, workplace characteristics or culture) (Kohler et al., 2009). This is seen as the major advantage of fixed-effects analyses of panel data because a fundamental problem of regression estimates based on cross-sectional data is that they are biased by the inevitable multitude of omitted between-person variables (Dougherty,

2011). Fixed-effect regression models are therefore suited to studying within-person change and the impact of variables that change over time, and therefore our regression estimates reflect how changes in independent variables relate to changes in dependent variables.

We performed Hausman⁷ tests to check whether the fixed-effects model was more appropriate than a random-effects model (the latter assumes that there are no omitted time-invariant factors that affect the independent variables). It was significant for three of our six outcomes (positive well-being, negative well-being, helping colleagues). While non-significant Hausman tests would suggest a random-effects model is appropriate, we used fixed-effects regressions for all outcomes because we are theoretically interested in within-person change. We wanted to compare regression coefficient estimates, and fixed-effects regressions are advised when observations are not randomly drawn from a given population (Dougherty, 2011), which, given our sample, is the case.⁸ We tested for heteroskedasticity using the modified Wald test, and as results were significant for all outcomes we used robust fixed-effects regressions in STATA.

RESULTS

Hypothesis 1 draws on the Time 1 survey where participants were invited before and after the policy announcement and proposes that participants responding during the two weeks after the policy announcement report lower well-being (higher negative and lower positive emotional well-being) and more negative attitudes (job satisfaction and job security) compared with participants responding during the two weeks before the announcement.

⁷ The Hausman test is used to examine whether the unique error terms at the individual level are correlated with the independent variables (i.e. indicating the significance of omitted variables) and whether it is appropriate to use a fixed-effects or a random-effects model.

⁸ There is some debate about the reliability of the Hausman test when deciding between fixed and random effects and that it may fail to reject a random-effects model when the number of observations per unit is small (Clark and Linzer, 2012), which is the case here. Furthermore, in such samples a random-effects model may yield a better balance between estimate bias and variance than a fixed-effects model (Clark and Linzer, 2012). We therefore conducted a sensitivity analysis and compared our fixed-effects estimates against random-effects estimates. A random-effects specification did not alter the pattern of findings in Table 4, yet it does suggest that the fixed-effects analysis has produced a more conservative result than the random-effects results: When using a random-effects model, all significant findings from the fixed-effects models remained significant (yet with stronger effect sizes); two non-significant findings using a fixed-effects model became significant when using random-effects models (i.e. innovation change negatively related to negative well-being, $p < .05$; cutback change negatively related to job security, $p < .01$).

Insert Tables 1 and 2 about here

We performed independent-samples t-tests to examine differences between the pre- and post-announcement groups in their well-being and attitudes. Results of the t-tests showed that the post-announcement group reported significantly higher negative well-being ($t = -3.42, p < .01$) and lower positive well-being ($t = 1.94, p < .05$), less job security (i.e. they felt more insecure) ($t = 2.52, p < .01$) and less job satisfaction, which however is only marginally significant ($t = 1.70, p < .10$).⁹ This confirms Hypothesis 1 overall.

The quasi-experimental design leaves the possibility that the differences found are (a) due to features of the sample rather than effects of the events and (b) due to other, unmeasured events that affected public sector employees across the country and organizations at that particular time. We therefore explored alternative explanations, performing extensive post-hoc tests and analysis. We found no significant differences between the pre- and post-announcement groups with respect to cutback-related or innovation-related change, or any of the control variables including trait negative affectivity, gender, nature of organization, or geographic location. We did, however, find that the post-announcement group was older ($t = -3.47, p < .01$) and had longer tenure ($t = -2.08, p < .05$). Further, we found no differences between late or early responders. And while we did find that the post-announcement group took on average a day longer to respond ($t = 6.97, p < .01$), there were no correlations between time it took to respond and our dependent variables. Neither did we find any significant differences between responses collected at different times of the day or day of the week (e.g. Egloff et al., 1995).

Further, we explored the possibility that another event of national importance occurring outside these organizations might explain the results, such as a significant football match won or lost

⁹Note that senior managers ($n=186$) were excluded from this analysis to control for the effects of their role and experience.

(e.g. Berument and Yucel, 2005), but, after carefully reviewing the media at the time with respect to national news, sports events or events of notable popular culture (e.g. TV soaps), we did not find any. As the policy announcement took place towards the end of the month, we explored the effects of payday. However, payday varies significantly across the public sector and hence could not have systematically influenced the results.

As we turn to Hypothesis 2, we examine the change between Time 1 and Time 2 in the cutback- and innovation-related change items. Table 3 shows the frequencies of cutback- and innovation-related change items. At Time 1, participants reported experiencing an average of 4.58 of 13 cutback-related change items ($sd = 2.6$), and at Time 2 an average of 5.66 of 13 ($sd = 2.5$). A related-measures t-test shows that cutback-related change increased significantly from Time 1 to Time 2 ($t = -8.26, p < .01$). Table 3 shows that changes directly related to reduction in costs increased the most: Voluntary redundancy had increased from 48% at Time 1 to 76% at Time 2, compulsory redundancy from 27% to 44%, cutbacks in service provisions increased from 39% to 54% and merger of teams or service area from 53% to 65%. Recruitment freeze and cutbacks in revenue budget for the team remained high at over 76% and 68% at Time 2 respectively. The closing or merging of organizations was reported by less than 10% of participants at Time 2.

A paired samples t-test revealed that, by contrast, innovation-related change did not change significantly over time ($Mean_{t1} = 4.33$ out of 11, $sd_{t1} = 2.64$; $mean_{t2} = 4.50$, $sd_{t2} = 2.55$; $t = -1.29, p = .15ns$), and only one item increased significantly. Yet, the standard deviation of the paired differences was 2.54 ($mean = .05$), suggesting that innovation-related change varied across respondents over time. The correlation between innovation-related change at Time 1 and Time 2 was .57, which also suggested variation over time.

Table 3 shows that “sharing services with other partners or agencies” saw the largest increase of any of the innovation-related changes, from 41% at Time 1 to 48% at Time 2. The overall

most frequently experienced innovation-related change was “new ways of organizing office systems and procedures processes”, with 59% at Times 1 and 2.

The inter-correlation between cutback- and innovation-related change is .25 ($p < .01$) at Time 1 and .24 ($p < .01$) at Time 2, indicating an overlap between the two of 6% shared variance.

Insert Table 3 about here

Results for Hypothesis 2a and 2b are shown in Table 4. Hypothesis 2a states that an increase in cutback-related change predicts a decrease in emotional well-being (decrease in positive and increase in negative well-being), attitudes (job satisfaction, job security) and behaviors (engagement, helping, service delivery) over time. An increase in cutback-related change predicted an increase in negative emotional well-being ($B = .08$, $p < .01$) and a decrease in positive emotional well-being ($B = -.04$, $p < .05$), job satisfaction ($B = -.08$, $p < .01$) and engagement ($B = -.04$, $p < .01$), but was not significantly related to job security, helping and service delivery.

Insert Table 4 about here

Hypothesis 2b states that an increase in innovation-related change predicts an increase in emotional well-being (increase in positive and decrease negative emotional well-being), attitudes (job satisfaction, job security) and behaviors (engagement, helping and service delivery) over time. Innovation-related change predicted an increase in positive emotional well-being ($B = .04$, $p < .05$), but not a decrease in negative emotional well-being. Innovation-related change predicted an increase in job satisfaction ($B = .07$, $p < .01$) and engagement in the job ($B = .02$, $p < .05$), but not job security, helping or service delivery.

In summary, Hypothesis 2a was supported for four out of seven outcomes and Hypothesis 2b for three out of seven outcomes. Three of the outcome variables remained unaffected by

ongoing change (job security, helping and service delivery). Both types of change were found to affect well-being, attitudes and to a lesser extent behaviors, yet with opposed directional effects: In all analyses with significant results, cutback-related change affected outcomes negatively, while innovation-related change affected outcomes positively.

DISCUSSION

This study is one of few to follow over time the effects of an extensive period of organizational change on public sector employees. The changes were initiated by an external event affecting all public organizations, a highly visible national policy announcement of an approximately 25% budget reduction. This external event was widely reported in the media, signaling the largest change for the UK public sector in over half a century. The event provided a rare opportunity to examine the effects of the communication and implementation of a symbolic and tangible policy shift which brought swingeing budget reductions. We discuss our main contributions, address a number of limitations and outline areas for future research.

The negative effects of the policy announcement on well-being and attitudes at work

Our results confirm Hypothesis 1 and suggest that the announcement itself had negative effects on emotional well-being, job satisfaction and job security. It is important to note that little or no actual change could have occurred as a direct result of the announcement during the Time 1 survey because organizations would neither have had enough detail nor enough time to implement changes in the two weeks following the announcement. The fact that pre- and post-announcement groups did not differ with respect to reported cutback- or innovation-related change supports this interpretation.

Why should an external budgetary announcement affect employee well-being and attitudes? On the one hand, it is perhaps surprising that a government minister's announcement would itself affect how public sector workers feel about their jobs. On the other hand, there are several theoretical reasons why these effects are plausible: First, an announcement about cuts is an event with "real" impact that signals potential changes to employees' jobs and career

prospects. The announcement also indicated the scale of change, which may have confirmed - or been worse than - employees' expectations. The communication of this change was in itself an event that led to attitude change, and it was used by employees as a particular frame of reference for their experiences at work (Marshak and Grant, 2008). It further highlights the fact that organizational boundaries are permeable and what happens outside them can be highly to those inside. Yet much of the change literature focuses on events happening *within* the organization. This ignores or plays down a systems view in which interactions take place between the organization and its external environment (e.g. Scott, 2001). This is notably the case for public organizations, which are to a greater degree inter-dependent on the external political, economic and social environment (Rainey and Chun, 2005).

Second, participants responding post-announcement would have been exposed to budget debates across the media, as well as in organizational communications and discussion. The post-announcement group is thus likely to have spent more time reflecting on the implications of the budget reductions for themselves as employees and professionals. The announcement was likely discussed in meetings and coffee breaks, raising awareness through emotional contagion (Pugh, 2001), and shaping a narrative about impact of the budget reductions and having negative effects on attitudes and well-being.

This particular budget announcement was interpreted by many media commentators as a substantial budget reduction, thus signaling public sector decline. If our assumption is correct that the budget announcement had direct effects on employee attitudes and well-being through the narratives shaped within and outside organizations, then the way in which the budget announcement is made may be important. Further, our work links to the work of Meier and O'Toole (2009) and Boyne and Meier (2009) which noted that external events are interpreted by managers and others, which is likely to affect morale and attitudes. Future research should explore and contrast the effects of different types of external policy events, how they are communicated and whether internal communications buffer or moderate effects on employees.

The nature of ongoing change and its differential effects on employees

Regarding Hypothesis 2, we discuss two main ways in which our study contributes to the theoretical understanding of the effects of ongoing change on public sector employees' well-being, attitudes and behaviors: (1) the differential processes for cutback- and innovation-related change; (2) the absence of effects on three outcome variables. First, our study contributes to and extends the theoretical understanding of how ongoing change affects public sector employees. It does so by using a more rigorous design and analysis than most public administration studies, as well as by differentiating between two types of ongoing change, measured simultaneously. While previous, mainly cross-sectional research has suggested a largely negative correlation between (reactions to) change and employee outcomes, our results provide evidence of causality which many previous studies could not. In particular, we found that that increases in *cutback-related change* following the announcement increases negative well-being, and decreases positive well-being, job satisfaction and job engagement. However, our results also demonstrate that, unlike the assumption in much of the change literature, this only holds for one type of organizational change studied here, namely cutback-related change. In addition to what is traditionally researched as change (here labelled as cutback-related change), we focused on innovation-related change. We did so because innovation is much discussed and called for in public services (Hartley et al., 2013; Osborne and Brown, 2011) and because of the absence of research examining the effects of innovation on employees (Kalmi and Kauhanen, 2008). This study therefore also specifically adds to our understanding of employee experiences of innovation.

Our results demonstrate that ongoing change can have positive outcomes for employees, if such changes introduce procedures and processes that are novel to the organization, both with respect to internal processes and serving the public. In particular, we found that an increase in *innovation-related change* was related to an increase in positive well-being, job satisfaction and job engagement. Such consistent positive effects – as opposed to merely less negative or

neutral effects – are theoretically relevant and even counter-intuitive given that (a) the large body of change research emphasizes the negative effects of any kind of change on employees; and (b) the conceptual and practical overlaps between change and innovation discussed earlier. Critically, innovation-related change is concerned with the design and implementation of novel processes and services in contrast to the “salami slicing” or “resource-cutting” cutback-related approach which generally involves doing less of everything across a range of functions (Hood, 2010; Wilks, 2010). The role of participation (and hence also leadership) in innovation may be crucial in explaining our results, a point reinforced by other more detailed studies of innovation (e.g. Borins, 1998; Fernandez and Pitts, 2011; van de Ven, 1993). From an employee perspective, innovation may often be experienced as a more involving process, hence enhancing engagement with the job, satisfaction and positive mood.

Furthermore, the approach adopted here of analyzing different types of ongoing change simultaneously has helped identify differential effects which otherwise might have gone undetected. While not all outcomes were affected by cutback- and innovation-related change, the direction of the significant effects depended on the type of organizational change.¹⁰ It is only recently that particular features and processes of public innovation have started to be understood (Hartley et al., 2013; Osborne et al., 2013; Hartley, 2014). Providing insight into the differential consequences of cutback- and innovation-related change for employees may stimulate a more evidence-based debate and further research about the merits and disadvantages of both approaches for public organizations, employees and service users.

Second, the more rigorous longitudinal design of our study revealed that three variables remained unaffected by both cutback- and innovation-related ongoing change. Contrary to previous research, change did not affect job security, service delivery and helping behaviors.

¹⁰ With the exception of one result: Innovation-related change did not predict negative well-being (only positive well-being), while innovation-related change predicted both an increase in negative well-being and a decrease in positive well-being. This result is in line with research suggesting that negative experiences have a more pervasive effect than positive experiences on well-being over time (Baumeister et al., 2001).

While perhaps initially surprising, the finding that the help given to colleagues is unaffected make theoretical sense. Previous research shows that the more negative experiences employees report, the more they tend to seek and accept help from others and engage in extra-role behaviors (Barclay and Kiefer, 2012). There are also plausible reasons why service delivery remained unaffected (at least during the study period) by an increase in cutback-related change, given that the public service ethos and public service motivation literature suggests that providing a public service is often a vital to public servants' identity (Perry, 1996; Rayner, 2011). Change might not affect service delivery because public servants exert extra effort to maintain services despite the challenges involved.

It is generally assumed that attitudes and well-being are more immediately affected by negative events and that these changes subsequently affect behaviors (Weiss & Cropanzano, 1996). To test this, we ran post-hoc fixed-effects regression analysis, the results of which suggested that engagement plays a role in explaining how helping behaviors are affected indirectly over time. Changes in positive well-being and job satisfaction positively predicted change in engagement ($B = .08, p < .05$ / $B = .28, p < .01$) and that in turn a change in engagement positively predicted change in helping ($B = .23, p < .01$). This also resonates with a meta-analysis (Harter et al., 2002), which found that employee satisfaction and engagement predicted unit-level outcomes, including customer satisfaction, profit and employee turnover. However, there were no significant post-hoc results for service delivery, reiterating, as discussed earlier, the importance of further research on public sector motivation.

The non-significant effect of change on job security over time contradicts a body of cross-sectional research (Ashford, Lee, and Bobko, 1989). This finding is perhaps even more surprising given that the policy announcement did negatively affect participants' job security at that point (Hypothesis 1) and we observed significant increases in both voluntary and compulsory redundancies across the organizations in the sample. This non-significant result may reflect a survivor bias at Time 2 in that survivors of the first rounds of redundancies did

not feel their jobs were threatened. Another possible explanation is previous research into change and job security has mostly used cross-sectional designs and between-person analysis raising the question of whether job security reflects a stable disposition similar to optimism, rather than a judgment about the current situation. This question requires further research.

Different patterns of cutback- and innovation-related change in times of public service austerity

More generally, our findings add to emerging research about public management in a tough financial climate (e.g. Bozeman, 2010; Hood, 2010; Pandey, 2010). Following the external announcement, participants mostly reported an increase in cutback-related change, such as redundancies and significantly less innovation-related change. First we can assume that both forms of changes are at least in part a direct consequence of the budget reduction announcement (e.g. Miller and Svara, 2009; Hood, 2010). This assumption was also held by the vast majority (83.4%) of participants at who believed at Time 2 that the changes in their organization were due to the government's announcement of budget reductions.¹¹ Hence, it is reasonable to assume that the announcement may have triggered an increase in cutback-related changes. Kets de Vries and Balazs (1997) comment on the illusion of downsizing and cutback as a 'quick fix', noting that a human engineering approach to managing change tends to ignore its impact on employees. The organizational change literature and our study are a reminder that organizational change has a clear impact on emotional experiences, attitudes, and employee behavior, which in turn can affect organizational performance (e.g. Haveman, 1992).

A second and related point is the observation that, unlike cutback-related change, innovation-related change did not significantly change from T1 to T2. Although there are differing assumptions about whether budgetary constraints galvanize or inhibit public sector innovation

¹¹ The question was "In your view, to what extent did the CSR (comprehensive spending review/national policy announcement about budget cuts) in October 2010 trigger the above changes in your organization?" Response: Not at all or very slightly 2.5%; a little 5.5%,%; moderately 8.6%,%; quite a bit 23.9%; extremely 59.5%.

(Lynn, 2013), we would not expect innovation to increase in aggregate in the first six months, because, first of all, innovation generally takes more time to develop than cutback-related change. Second, innovation is facilitated by positive mood and a creative climate; hence, we would expect that most of those organizations demonstrating innovation-related change had already established such a climate.

Limitations and Future Research

This research took advantage of a naturally occurring phenomenon and studied its effects on employees in the field, and, as such, has limitations. First, given that we used alumni databases, the sample was not randomly selected and is not representative of all public sector employees. This was therefore a convenience sample and the aim was to cover a wide range of jobs, levels and different public service organizations. Post-hoc statistical analyses did not reveal any consistent differences between these levels or organizational type. This suggests that there may be as much variation within as between different levels and services (Boyne, 2003). Further, as noted earlier, the sample is skewed towards senior managers. While we control for this in our analysis, management level may affect experiences of and responses to change (Piderit, 2000). Managers are more likely to design and implement ongoing organizational change, although, in the context of the external announcement of national budget reductions imposed from outside by central government, managers are also recipients of change (c.f. Meier and O'Toole, 2009). Consistent with this, post-hoc analyses revealed that, in relation to employees at other levels, senior managers reported similar levels of cutback- and innovation-related change at both Time 1 (both pre- and post-announcement) and Time 2.

Second, as mentioned in the methods section, the quasi-experimental design cannot guarantee that the effects reported for Hypothesis 1 are due to the policy. However, given the results of our extensive post-hoc tests, we can be confident that observed effect unlikely to be due to characteristics of individuals in the group or another unrelated external event. While the quasi-experimental design for Hypothesis 1 does not allow for causal interferences in the same way

as randomized control trials, it still has advantages over the majority of survey research because, as noted earlier, it excludes the possibility of reversed causality.

CONCLUSION

Our results highlight the importance of understanding employee reactions to nationally instigated budget reductions followed by organizational changes. These results do not only have implications for the communication and implementation of cuts, but also for public policy and strategy more generally. They raise the question of whether “doing more with less”, which has become a management mantra internationally (Pollitt, 2010), is possible, given the noticeable effects of this external announcement on individuals who are not only delivering the changes but often are also directly responsible for the provision of public services. The external budget announcement had a clear but short-term impact, while the impact of the organizational changes themselves affected employee well-being, attitudes and behavior over longer term.

The study provides a more detailed analysis of the often-stated but ill-founded assumption that people simply do not like change (Piderit, 2000). Our results suggest that employees of public organizations are negatively affected by one particular type of change (cutting back resources), but benefit in terms of well-being, job satisfaction and engagement from another type of change, in this case innovation-related change, suggesting that not all change is experienced negatively.

We suggest that similar findings are likely to be found in organizations in all sectors experiencing budget reduction. It has been known at least since the work of Cyert and March (1963) that an external event – such as a governmental budget announcement – affects internal organizational responses. However, public organizations may be particularly subject to the effects of policy announcements because of their degree of “publicness” (Bozeman and Moulton, 2011), as they exist under political authority and stronger interactions with their external environments (e.g. Feldman, 2005). As public and private organizations face

continuing financial constraints in a number of countries, understanding the effects of different types of change on employees may become increasingly important.

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TABLES

TABLE 1

Means, Standard Deviations, Mean Differences and Inter-Correlations of Time 1 (below diagonal; N=717) and Time 2 (above diagonal; N=340) and Cronbach Alphas for t1 (diagonal)

Variable	Mean (T1)	SD (T1)	1	2	3	4	5	6	7	8	9
Mean (t2)			5.66	4.5	2.56	2.44	3.25	3.96	4.35	3.01	2.57
SD (t2)			2.53	2.55	.79	.97	.78	.62	.6	1.02	.88
Mean difference t1-t2			-1.08	-.17	.22	-.02	.12	.07	-.06	-.1	.04
(t-value) ^a			(-8.26***)	(-1.29)	(5.26***)	(-.33)	(3.97***)	(2.37*)	(-1.01)	(-1.85)	(.96)
1. Cutback-related change	4.39	2.63	(.75)	.24**	-.25**	-.14**	-.14*	.13*	0	.33**	-.19**
2. Innovation-related change	4.13	2.63	.25***	(.74)	.15**	0.06	.19**	.12*	-0.01	-0.05	.21**
3. Job Satisfaction	2.76	.80	-.20***	.06	(-)	.22**	.64**	0	0.09	-.50**	.61**
4. Job Security	2.40	1.01	-.21***	.07	.28***	(.81)	.12*	0	-0.14	-.17**	.29**
5. Engagement	3.46	.80	-.12**	.10	.67***	.18***	(.91)	.31**	0.13	-.24**	.59**
6. Helping Colleagues	4.07	.61	.09*	.00	.11**	-.00	.32**	(.69)	0.16	.17**	.17**
7. Service Delivery	4.27	.73	.01	.30**	.15*	.11	.18**	.30***	(.73)	0.09	-0.1
8. Negative Emotion	2.90	1.06	.32***	-.06	-.47***	-.34***	-.32***	.06	-.08	(.89)	-.39**
9. Positive Emotion	2.63	.97	-.13***	.12*	.58***	.32***	.58***	.17***	-.03	-.46	(.85)

Notes. ^a Mean difference from t-test for related-samples, with t-values in brackets (N=340). * $p < .05$, ** $p < .01$, *** $p < .001$.

TABLE 2
Inter-Correlations of Time 1 (horizontal) on Time 2 (vertical) (N=340)

Variable	1	2	3	4	5	6	7	8	9
1. Cutback-related change	.56**	.27**	-.15**	-.20**	-.07	.11*	.07	.19**	-.08
2. Innovation-related change	.25**	.57**	.03	-.03	.13*	.14**	-.1	-.03	.21**
3. Job Satisfaction	-.1	.07	.55**	.20**	.55**	.13*	.17	-.29**	.42**
4. Job Security	-.13*	.05	.16**	.58**	.13*	0	-.01	-.16**	.19**
5. Engagement	-.09	0.1	.51**	.14*	.75**	.34**	.20*	-.18**	.50**
6. Helping Colleagues	.20**	.04	.03	0	.26**	.57**	.19*	.16**	.14**
7. Service Delivery	.29**	.31**	.12	.08	.16	.25*	.58**	.06	.11
8. Negative Emotion	.29**	-.05	-.37**	-.22**	-.23**	0.1	-.01	.56**	-.30**
9. Positive Emotion	-.14*	.14*	.40**	.30**	.50**	.18**	-.04	-.28**	.61**

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$

TABLE 3
Frequencies of Responses to Ongoing Changes at Time 1 and Time 2 (N=340)

Cutback-related changes	Mean T1	SD T1	Mean T2	SD T2	Mean difference
Recruitment freeze	.79	.40	.76	.43	-.04
Significant cutbacks in revenue budget for my team or service area	.64	.48	.68	.47	.05
Merger of teams or service area within my organization	.53	.50	.65	.48	.12***
Major changes in organizational strategy	.50	.50	.56	.50	.06
Voluntary redundancies	.48	.50	.76	.42	.28***
Cutbacks in service provisions	.39	.49	.54	.50	.15***
Compulsory redundancies	.27	.44	.44	.50	.17***
Changes to my job description	.23	.42	.30	.46	.07*
Changes to my job conditions (e.g. flexibility) and other benefits	.21	.41	.27	.44	.05
Major changes to products and services	.18	.39	.24	.43	.06*
Services contracted out	.16	.37	.25	.44	-.09**
Merger of my organization with another	.09	.29	.10	.30	-.01
Decision to close my organization	.07	.26	.06	.25	.01

TABLE 3 (continued)

Innovation-related changes	Mean T1	SD T2	Mean T2	SD T2	Mean difference
New ways of organizing office systems and procedures processes	.59	.49	.59	.49	.00
New approaches to funding	.51	.50	.50	.50	-.01
New goals and functions for the organization	.47	.50	.51	.50	.03
New approaches to measuring or evaluating performance of the unit or organization	.46	.50	.43	.50	-.03
New approaches to procurement	.44	.50	.46	.50	.03
Working with other agencies in a partnership a different way	.42	.49	.42	.49	.01
Sharing services with other partners or agencies	.41	.49	.48	.50	.07*
New ways of making corporate decisions	.37	.48	.36	.48	-.01
Working with citizens in a different way	.29	.45	.29	.46	.00
Newly designed or newly used equipment	.19	.39	.16	.37	-.03
New services to the public	.14	.35	.18	.38	.04

Note. ^a McNemar nonparametric paired difference test for dichotomous variables. * $p < .05$, ** $p < .01$, *** $p < .001$

TABLE 4

Fixed-Effects Regressions Examining the Effects of Change on Attitudes, Well-being and Behaviors

	Negative Well-being ^a	Positive Well-being ^a	Job Security	Job Satisfaction ^a	Engagement ^a	Helping Colleagues ^a	Service Delivery ^b
Cutback change	.076**	-.037*	-.010	-.076**	-.035**	-.021	-.011
	(.021)	(.177)	(.019)	(.017)	(.012)	(.012)	(.023)
Innovation change	.003	.044*	.012	.067**	.024*	.007	-.038
	(.025)	(.020)	(.021)	(.019)	(.012)	(.014)	(.021)
Hausman test	16.84**	15.01**	13.38**	.81	3.64	13.58**	5.19
Observations	674	672	678	666	672	678	160
F	6.28**	3.81*	.26	12.83**	5.20**	1.50	1.86
Within R ²	.04	.03	.00	.08	.03	.01	.03

Notes: Huber/White robust standard errors are in parentheses. * $p < .05$ and ** $p < .01$. ^a N=340; ^b N=81