

Examining the effects of a performance management reform on employee attitudes and organizational climate

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Abstract

This article employs a difference-in-differences design to study how a ‘managing for results’ reform in New York City public schools affected employees’ attitudes and perceptions of organizational climate. Findings show that the reform produced largely negative effects on employees’ attitudes and perceptions, and the effects were heterogeneous by organizations’ performance levels. This study expands performance management research by examining its effect on employee attitudes and organizational climate. It presents a more nuanced view of how employees react to and receive performance management reforms and contributes to a comprehensive understanding of the consequences of performance management reforms.

Key words: managing for results, employee attitudes, organizational change, organizational climate, performance management

Introduction

The research on performance management has understandably focused on the effects on organizational performance (Gerrish 2016; Pasha 2018; Sun and Van Ryzin 2014). How do these reforms affect employees' attitudes and organizational climate? From a practical perspective, employees are important stakeholders of public organizations, and understanding how they react to and receive these reforms is important (Yang and Kassekert 2010). Implementing performance management reforms without fully understanding their effects on employees runs the risks of losing employee support and the legitimacy of the reforms. Moreover, employee attitudes and organizational climate have been associated with other important outcomes, such as employee turnover and organizational performance (Hameduddin and Fernandez 2019; Cantarelli, Belardinelli, and Belle 2016). However, only a few studies in public management have examined how employees are affected by performance management reforms (Destler 2017; Lee and Jimenez 2011; Stazyk 2013; Yang and Kassekert 2010; Yang and Pandey 2008).

In public management literature, the limited evidence on the effect of performance management reforms on employees is mostly positive: research has found motivating effects, such as higher employee job satisfaction and lower turnover intention (Lee and Jimenez 2011; Yang and Kassekert 2010; Yang and Pandey 2008). While the positive effects revealed have theoretical support from goal-setting theory and expectancy theory, they are not consistent with the broader literature on organizational change. Performance management reforms inevitably disrupt previous organizational routines, create uncertainties, and, in many cases, impose more demands and pressure on employees, leading to stress and burnout (Korunka et al. 2003; Noblet and Rodwell 2009). More research is needed to at least reconcile the inconsistency or to deepen the research on how employees react to performance management reforms.

To advance the research on this topic, this study investigates how the ‘Empowerment Zone’ experiment in New York City public schools affected some employee attitudinal variables, namely trust in colleagues and leaders, and organizational climate variables, namely perceived support from leaders and organization, perceived leadership effectiveness and willingness to collaborate. The ‘Empowerment Zone’ was a classic case of a ‘managing for results’ (MFR) reform, which is defined as ‘using performance information to increase performance by holding managers accountable for clearly specified goals and providing them with adequate authority to achieve these goals’ (Moynihan 2006). MFR is a high-powered and high-stakes performance management system. Compared with other performance management practices such as performance measurement, MFR is unique in its emphases on using performance information and empowering managers to manage. Although this study focuses on a specific MFR reform, it uses the broader performance management literature as a theoretical basis and also aims to speak to the performance management literature. Using panel data and a difference-in-differences strategy to compare schools that implemented the reform with schools that did not, the study found overall negative impacts on employee attitudes and organizational climate, but the impacts were heterogeneous across schools with different performance levels.

Compared with previous research that often relied on self-reported performance management practices, this study exploits the introduction of a specific performance management reform and has better measurement validity. It uses a difference-in-differences design that improves the validity of findings. This study makes both theoretical and practical contributions. First, it contributes to a more comprehensive and fine-grained understanding of the impacts of performance management reforms. The study directly addresses the lack of research on how employees receive and react to performance management reforms by examining a broad array of employee attitude and organizational climate variables that have

often been overlooked. These variables show a comprehensive picture of how employees feel about performance management reforms. Together with the research on the performance effects of performance management reforms, this study contributes to a full understanding of the consequences of these reforms. Second, this study develops a contingency perspective of the effects of performance management reforms on employees. It not only reveals the negative effects on employees but also goes one step further to show that the negative impacts vary depending on prior performance levels. The same organizational change in different contexts may have different effects on employees. This finding complicates our understanding of the effects of performance management reforms, and it also carries important implications for theory building – the role of organizational context should be taken into account when studying the effects of organizational changes. Moreover, the study carries important managerial implications. Managers should be alarmed by the largely negative effects of MFR reforms on employees and organizational climate. The results show negative impacts in areas such as interpersonal trust and perceived organizational support. Managers should take measures, such as providing more support to employees, to mitigate the negative impacts. The negative impacts vary in different organizations, which means that managers need to design organization-specific reform strategies.

Literature review

The effects of performance management reforms are multifaceted. The implementation of reform measures such as performance measurement and using performance information affects not only organizational performance but also employees who ultimately deliver those improvements (Kiefer et al. 2015, 1280). The effects on employees can be divided into two broad categories: one is on their attitudes, such as trust in leaders and colleagues, which is a focus in this study, and the other is on perceived organizational climate, which can be defined as the shared perceptions of and the meaning

attached to organizational policies, practices, and procedures that employees experience (Schneider, Ehrhart, and Macey 2013). Organizational climate reflects how employees perceive interpersonal relationships, their work and authority in their organizations (Destler 2017). Public management research on the consequences of performance management has typically focused on organizational performance (Nielsen 2014; Pasha 2018; Sun and Van Ryzin 2014; Wang and Yeung 2019; Gerrish 2016). With a few exceptions such as Destler's (2017) research on teachers' responses to the implementation of broader performance management reforms in New York City public schools, existing research on how performance management reforms affect employee attitudes and organizational climate has been limited.

The limited research has generally focused on a few attitudinal variables, such as commitment and job satisfaction, and revealed mostly positive effects. An important element of performance management reforms is to set clear and measurable goals for organizations and individual employees. According to goal-setting theory, clearly specified goals direct public employees' attention to goal-relevant activities, and challenging goals bring out better efforts from employees (Wright 2004). Yang and Pandey (2008) found that the implementation of MFR reforms in state-level primary health and human service agencies was positively related to employees' normative organizational commitment, and the relationship was mediated by goal clarity. Yang and Kassekert (2010) found that MFR was positively related to employees' job satisfaction in federal agencies. Lee and Jimenez (2011) found that performance-based reward system and performance-supporting supervision were associated with a decrease in employees' turnover intention. Their theoretical argument was based on expectancy theory that employees are more motivated and less likely to leave if supervisors can objectively and fairly appraise employees' performance and if high-performing employees are rewarded monetarily based on performance appraisals.

Interestingly, the positive effects of performance management on employee attitudes contrast starkly with the broader literature on how organizational changes affect employee attitudes and organizational climate. Organizational change, broadly defined as ‘alterations of existing work routines and strategies that affect a whole organization’, is often disruptive and intrusive (Herold et al. 2008). Public management research has shown a negative relationship between organizational changes and employees’ attitudes and organizational climate (Battaglio 2010; Conway et al. 2014; van der Voet and Vermeeren 2017). For example, reforms based on ‘New Public Management’ principles have lowered job satisfaction (Noblet and Rodwell 2009). Van der Voet and Vermeeren (2017) found a negative relationship between cutbacks and public employees’ organizational commitment and work engagement. Conway et al. (2014) found that organizational changes in public organizations, such as cutbacks and service contract out, were associated with psychological contract breach, meaning that employees felt their organizations increasingly failed to fulfill their promises during organizational changes; employees, in return, expressed reduced willingness to offer ideas to improve the functioning of the organization or take actions to protect the organization from potential problems. Battaglio and Condrey (2009) found that low perceived job security and spoils caused by the ‘employment at will’ reform in Georgia was negatively associated with perceived fairness, trust in management, and trust in organization.

The education literature is particularly enlightening on this topic because school accountability reforms have been popular in the past two decades. However, the research on how teachers react to accountability reforms has revealed mixed findings. On the one hand, some research reported that accountability reforms, such as the No Child Left Behind (NCLB) Act, did not negatively affect teacher job satisfaction or commitment (Grissom, Nicholson-Crotty, and Harrington 2014). On the other hand, a negative relationship between

accountability reforms and teacher attitudes has received considerable empirical support. The negative relationship may be a result of more job demands: teachers, especially those of high-stakes subjects, had to work longer hours and had less flexibility and autonomy in classroom teaching (Wronowski and Urick 2019). Accountability measures greatly increased teachers' stress and the feeling of burnout (Erichsen and Reynolds 2020), leading to a decline in perceived job security, teacher job satisfaction, and morale (Koedel et al. 2017). Moreover, performance management reforms shift power from teachers to school administrators, policy makers, parents and even students (Lundström 2015; Apple 2007); these reforms expand managerial control and threaten teachers' professional control over classroom teaching. These changes may create more conflicts between teachers and school administrators, changing how teachers perceive their relationships with leaders and colleagues (Lundström 2015; Wronowski and Urick 2019).

The current literature has offered some evidence on the impacts of performance management reforms on employee attitudes, but the research on this topic is still limited and some puzzles have not been addressed. The finding that performance management reforms produced positive effects on employees while other organizational changes, based on similar New Public Management principles, largely produced negative attitudinal effects is especially puzzling. It is likely that performance management reforms are different from other public management reforms such as Total Quality Management, and the positive effects of performance management outweigh the negative effects. Nevertheless, given the limited empirical evidence, we need more research on this topic to gain a deeper understanding of the effects of performance management reforms on employees. A related limitation is the narrow scope of investigation – a few popular attitudinal outcomes, such as job satisfaction, commitment and turnover intention, have attracted disproportionate attention. Limited

evidence has been offered on how broader organizational climate, such as willingness to collaborate with colleagues or perceived support from leaders, changes after reforms.

Theoretical framework

An MFR reform attempts to build a results-oriented organization, which is almost antithetical to traditional bureaucratic organizations (Sanger 2008). It is a profound organizational transformation and a significant departure from the routines in public organizations. The reform affects employees' perception of support from organizations, which is defined as beliefs concerning the extent to which the organization values employees' contribution and cares about their well-being (Rhoades and Eisenberger 2002), in at least two ways. First, the changes force employees to unlearn previous routines and to adjust to new work processes, reporting structures and even new organizational cultures (Destler 2017). Employees are very likely to feel a high level of pressure and uncertainty about their future in the organizations. The MFR reform thus poses greater emotional and intellectual demands to employees, leading employees to question whether their organizations care about their contributions or welfare. Some meta-analyses in the psychology literature has shown that stressful work environment reduces employees' *perceived* support from their organizations (Kurtessis et al. 2017; Rhoades and Eisenberger 2002). Second, the reform disrupts previous routines and imposes new practices and policies on measuring performance and using performance information for rewards and punishment on all employees (Shin, Taylor, and Seo 2012). This means a reallocation of resources from some existing programs, such as employee training, to new emphasis areas and practices. Experiencing these changes and disruptions, employees, especially those who are used to previous routines or who are supported by previous programs, may see a decline in the support they receive from organizations. Through the two ways, the MFR reform may thus reduce the level of perceived support from organizations.

Moreover, MFR reforms may cause a decline in perceived leader support, which is defined as ‘general views concerning the degree to which supervisors value employees’ contributions and care about their well-being’ (Eisenberger et al. 2002, p.565). There are two potential mechanisms: one is through changes in leader behaviors and the other is through potential conflicts between leaders and employees during MFR reforms. First, traditional leadership theories broadly categorize leaders’ behaviors into two types: task-related behaviors and relationship-related behaviors (Stogdill 1963; Judge, Piccolo, and Ilies 2004). While task-related behaviors focus on planning, managing and goal attainment, relationship-related behaviors focus on giving attention to subordinates’ needs and building trust (Judge, Piccolo, and Ilies 2004; Hatmaker and Hassan 2021). The MFR reform may change leaders’ behaviors to focus more on tasks and less on relationships because leaders are under significant pressure to improve performance. Leaders may thus need to design and navigate changes and give less attention to building relationships with employees or improving employees’ welfare. Destler (2017) documented that during the performance management reforms in New York City public schools, some school principals spared no efforts to emphasize training and professional development to improve school performance, but they had little attention to teachers’ welfare. Research on leadership behaviors has suggested that there is a positive relationship between perceived leader support and leaders’ behaviors to consult with, support and recognize employees (Amabile et al. 2004; Ford et al. 2019). With changes in leaders’ behaviors to focus more on leading the change, employees may perceive a decline in support from leaders. Secondly, MFR reforms expand managerial authority and may threaten employees’ professional autonomy, which may lead to conflicts between leaders and employees (Lundström 2015; O’Reilly and Reed 2011). MFR reforms grant managers more authority, which may allow them, in the name of improving performance, to interfere with and exercise control over areas that have traditionally been controlled by employees

based on their professional expertise. For example, under accountability pressure, principals increasingly interfere with classroom teaching and reduce teachers' autonomy in deciding what and how to teach (Wronowski and Urick 2019). The potential conflicts may cause employees to feel a decline in support from leaders.

Hypothesis 1: 'Managing for results' reforms lead to a decline in employees' perceived support from organizations

Hypothesis 2: 'Managing for results' reforms lead to a decline in employees' perceived support from leaders

Social exchange theory provides a broader framework for understanding how employees respond to organizational changes such as MFR. Exchanges can be categorized into two types: exchanges with organizations and exchanges with leaders. These exchanges involve interactions that generate obligations between parties involved. Particularly, employees may feel obligated to reciprocate in kind for what they believe they have received. For example, if they perceive organizations or leaders as being supportive, they may reciprocate with loyalty and organizational commitment (Eisenberger et al. 2010).

The exchanges influence the quality of relationship – positive treatment induces positive employee reciprocity, while negative treatment causes negative responses from employees (Eisenberger et al. 2004). If leaders give subordinates individualized attention, support and growth opportunities, subordinates reciprocate with loyalty and support (Eisenberger et al. 2010). If perceived support from leaders declines in MFR reforms, as Hypothesis 2 postulates, employees may feel imbalanced in their exchanges with their leaders, and they may reciprocate by, first, lowering trust in leaders (Noblet and Rodwell 2009). Trust in leadership is a positive judgement of the goodwill and honesty of leaders. The expanded managerial control in MFR reforms threatens employees' control over their

specialized areas and is likely to cause conflicts between leaders and employees, leading subordinates to question the benevolence of leaders, which is a key element of leaders' trustworthiness (Mayer and Davis 1995; Oomsels and Bouckaert 2014). Second, research has found that the quality of exchange relationship may affect employees' perception of leadership effectiveness (Hassan et al. 2013). The MFR reform introduces uncertainty and disruptions to the exchanges between leaders and employees. Employees may attribute the disruptions to leaders' inability to manage change, and they may lower their evaluation of leadership effectiveness accordingly.

Hypothesis 3: 'Managing for results' reforms lead to a decline in employees' perceived leadership effectiveness

Hypothesis 4: 'Managing for results' reforms lead to a decline in employees' trust in leadership

MFR reforms are likely to negatively affect interpersonal trust within organizations. To build interpersonal trust, organizations need a culture that encourages showing care and concern for other people's needs and considering people's interests (Six and Sorge 2008). The incentives provided by MFR reforms make such a culture unlikely, and may even encourage the opposite culture. To improve performance, performance management reforms emphasize better measuring individuals' performance and tying individual performance to rewards and punishment. Employees compete with one another in performance rankings, which creates a more competitive, rather than a mutually caring, culture among employees. Destler's (2017, 528) fieldwork in NYC public schools show that during the implementation of performance management reforms, teachers in some schools got so competitive that they would 'go back and tell administrators [about what other teachers say or do wrong].' The competition may thus lead employees to be less trustful towards their fellow colleagues.

The decline in interpersonal trust may lead to a series of negative outcomes.

Interpersonal trust is the basis for teamwork – trust facilitates interactions and exchanges among coworkers, which further leads to cooperation or collaboration (Jones and George 1998). There is a robust body of research in public administration that shows interpersonal trust is beneficial for collective action and collaboration (Ostrom 1998; Thomson and Perry 2006). When employees are less trustful in their colleagues, their willingness to collaborate tends to decline. Another aspect of performance management that may discourage teamwork is tying individual evaluation and pay to their performance (Yang 2011). This arrangement creates strong incentives for individuals to focus on improving their own performance – working with others may waste time, hurt individual efficiency, and individuals may not be fairly recognized for their contributions to teamwork.

Hypothesis 5: 'Managing for results' reforms lead to a decline in employees' trust in colleagues

Hypothesis 6: 'Managing for results' reforms lead to a decline in employees' perceived willingness to collaborate with colleagues

The impact of an MFR reform may not be uniform across all organizations. Differential impacts may be produced on organizations that perform at different levels. Leaders of poor-performing organizations are under greater accountability pressure, and they may be forced to make more drastic changes in performance monitoring and using performance information to improve organizational performance. As a result, previous routines are highly likely to be changed, creating more disruption and uncertainty. In contrast, leaders of high-performing organizations are under less pressure to make immediate and drastic changes to their current practices, which means less disruption and less adaptation for employees to make. Moreover, recent research suggests high performance signals lead

employees to support organizational change, and employees thus may have a higher level of tolerance of disruptions (Nielsen and Jacobsen 2018) .

Hypothesis 7: The negative impacts of ‘managing for results’ reforms on employee attitudes and organizational climate are stronger in poor-performing organizations than in high-performing organizations.

Settings

This study investigates the Empowerment Zone experiment in New York City public schools to examine its impacts on employee attitudes and organizational climate. The Empowerment Zone was a classic case of ‘managing for results’ in which principals were granted more autonomy to make decisions that best fit their schools while being held accountable for performance targets. In the 2006-07 Academic Year (AY), New York City Department of Education (NYCDOE) formally launched the ‘Empowerment Zone’ experiment. The experiment was open to all the around 1,300 public schools in the city at that time. About 330 schools joined the Empowerment Zone in the 2006-07 AY, and the number of empowered schools increased in the following two years, reaching 490 schools in the 2008-09 AY.

Principals needed to sign a performance contract as a condition to join the Empowerment Zone. In the performance contract, principals were held accountable for meeting performance targets, which were set annually by NYCDOE’s Office of Accountability based on schools’ past performance and the performance of similar schools. Principals were also held accountable for complying with laws and regulations of NYCDOE and demonstrating fiscal integrity. On the other hand, the performance contract granted principals a wide range of authorities in such areas as curriculum, teacher professional development, summer programing, and school schedule. Principals were also granted

additional discretionary funding averaging \$150,000 per year and were exempted from some administrative requirements such as reporting requirements or attending DOE meetings.

The performance contract also specified rewards and consequences. Each school that signed up for the Empowerment Zone was evaluated annually and at the end of the contract term. Intervention teams would be used if schools failed to meet performance targets; principals could be removed if schools failed to meet student achievement targets over a period of two years and the quality review suggested little capacity to do so; school closure would be considered if new principals still could not make progress in the following two years. The escalation of intervention measures meant that school administration and teachers were all under accountability pressure because external intervention or school closure was probably not in anyone's best interests. On the other hand, schools that consistently showed high performance received rewards such as additional funding and an early extension of their performance agreements.

Data, measurement and empirical strategy

Data

We collected and merged data from publicly available sources: New York State School Report Card database and New York City School Survey. The study period was from the 2006-2007 AY to the 2010-2011 AY. Schools with missing data were dropped, resulting in a balanced panel that included 1,054 public elementary, middle and high schools in NYC over the five-year period.

Measurement

Dependent Variables. The dependent variables came from the New York City School Survey that NYCDOE has conducted annually since the 2006-07 AY. In these surveys, teachers respond by indicating how much they agree or disagree with statements on various topics such as school climate. Typically, there are four options: strongly disagree,

disagree, agree and strongly agree. This study followed the current procedures used by NYCDOE to aggregate survey results to the school level (New York City Department of Education 2017). For dependent variables measured by one item from the questionnaire, the percentages of ‘positive’ responses were calculated by adding the percentages of ‘agree’ and ‘strongly agree’. For dependent variables that involved multiple questions from the survey, the percentages of ‘positive’ responses to each question were calculated, and then the average of all the questions were taken as the measurement. The measurements thus reflected the average percentages of people who had positive attitudes and views of organizational climate variables at the school level. Lastly, in some years, a ‘does not apply’ option was added to the four response options for some dependent variables. Even though the percentages of ‘does not apply’ were very small, it may still make percentages of positive responses across years not exactly comparable. To overcome this problem, dependent variables were standardized by year with a mean of zero and standard deviation of one.

Details of measurement are presented in table 1. Since we did not design the questionnaires, post hoc assessment of the reliability and validity of the measurements is thus crucial. Cronbach’s alpha was calculated to check internal consistency and factor analysis was used to check dimensionality. Factor loadings and Cronbach’s alpha are presented in tables A1 and A2 in the appendix.

[Insert Table 1 Here]

Control variables. The fixed effect difference-in-differences model employed in this article controls for unmeasured time-invariant confounders, but it does not control for time-variant covariates. To guard against omitted variable bias, the model includes a series of

school characteristics that have been found to affect teachers' attitudes and evaluations of their schools. Teachers' attitudes, such as trust, and perceptions of organizational climate, are affected by student characteristics and demographic factors, such as racial backgrounds, percentages of English language learners, special education student, students eligible for free or reduced price lunch and male student (Hornig 2009; Boyd et al. 2008; Koedel et al. 2017; Johnson, Kraft, and Papay 2012). We thus control for these variables. Moreover, we control for student-teacher ratio because research has found that teachers prefer smaller class sizes (Hornig 2009). While we believe it is important to control for these time-variant covariates, we can confirm that the results are robust to excluding covariates (results presented in Appendix A3).

Empirical Strategy

As a policy experiment, some schools opted into the Empowerment Zone, while others did not. This created an opportunity for us to use a difference-in-differences design. More specifically, this study compares schools that signed up for the experiment with those that did not sign up in terms of organizational climate and employee attitudes. The study uses the schools that were in the Empowerment Zone in the 2008-09 AY as the treatment group for two major reasons. The first one is that dependent variables only started to be available from the 2006-07 AY, which was the same year in which the first cohort entered the Empowerment Zone. This eliminates the 2006-07 cohort from our consideration because we need to have data prior to the policy change in order to conduct difference-in-differences analysis. Secondly, compared with the 2007-08 cohort, the 2008-09 cohort was the most complete cohort. We thus picked the schools that were in the Empowerment Zone in the 2008-09 AY as the treatment group, and schools that were not in the Empowerment Zone as the control group. Schools with incomplete information were dropped, leaving 340 schools in the

treatment group and 714 school in the control group (total school-year observations over the study period were 1,700 for the treatment group and 3,570 for the control group). We used the 2007-08 cohort as an alternative sample in robustness tests and the results are presented in Appendix A5.

Our difference-in-differences model is:

$$\begin{aligned}
y_{st} = & \beta_0 + \beta_1 Empowerment + \beta_2 AY_{0708} + \beta_3 AY_{0809} + \beta_4 AY_{0910} + \beta_5 AY_{1011} \\
& + \beta_6 (Empowerment * AY_{0708}) + \beta_7 (Empowerment * AY_{0809}) \\
& + \beta_8 (Empowerment * AY_{0910}) + \beta_9 (Empowerment * AY_{1011}) + \beta_{10} S_{st} \\
& + \pi_s + \varepsilon_s
\end{aligned}$$

Where y_{st} is a measure of employee attitude or organizational climate in school s and year t . *Empowerment* indicates whether a school participated in the Empowerment Zone, and S_{st} is a vector of time-varying school attributes in school s and year t . π_s is school fixed effect and ε_s is an error term. AY_{0708} , AY_{0809} , AY_{0910} , and AY_{1011} are a set of year dummies that control for year fixed effect, the 2006-07 AY is used as the reference year. School fixed effect and year fixed effect reduce the threat of unmeasured time-invariant confounders to internal validity. Four interaction terms between *Empowerment* and year dummies are included, and β_7 , β_8 , and β_9 are coefficients of interest because they indicate if there is a difference in dependent variables between the control group and experimental group over the three years after the experiment. β_6 is the coefficient of the interaction term between empowerment status and the dummy variable of the 2007-08 AY. Since we are using the 2008-09 cohort as the treatment group, this interaction term resembles a placebo test for the parallel trends assumption: assuming that the intervention had started one year earlier, if β_6 was not statistically significant, we would conclude that the empowered and non-empowered schools did not have different trends in the 2007-08 AY.

The Empowerment Zone was open to all schools, which means that there could be selection biases that threaten the validity of findings. Schools that signed up for the reform might be different from those that did not sign up, which threatens the parallel trends assumption. A valid difference-in-differences design does not require the treatment group and control group to start with the same level of outcome variables; instead, the two groups should have parallel trends had there not been the intervention to the treatment group (Angrist and Pischke 2008). To check selection bias and test parallel trends assumption, we did the following: First, we compared the treatment group and control group at the baseline to see if student demographics and school characteristics were balanced. The results, presented in Table 2, suggest all characteristics were balanced as none of the differences was statistically significant at the 5% level. Second, we graphed the trends of the outcome variables in the two groups longitudinally (presented in Figure 1) and the two groups in general had very similar trends. Third, the placebo tests (presented in the main results) gave more accurate assessment of the parallel trends assumption and the results did not indicate any violations. Though we are confident that the key identifying assumption holds, we still want to acknowledge that the lack of random assignment, which oftentimes is not feasible in the real world, is a limitation of this study.

[Insert Table 2 Here]

To examine if the Empowerment Zone experiment has differential effects, this study further divides the full sample into three subsamples: high-performance group, medium-performance group, and low-performance group. The average proficiency rates of ELA and mathematics in elementary and middle schools and overall graduation rates in high schools are used to determine schools' performance levels. To make these indicators comparable, the

overall graduation rates and average proficiency rates are standardized. Schools whose performance indicators are one standard deviation above the mean are defined as high-performance schools, and those whose performance indicators are one standard deviation below the mean are considered as low-performance schools. The rest are defined as medium-performance schools.

The proficiency rates and graduation rates are absolute performance indicators that are highly correlated with students' socio-economic background and thus may not accurately reflect the effectiveness of schools in improving students' performance. However, during the study period, proficiency rates and graduation rates were part of the performance indicators that principals were held accountable to in the performance contracts they signed with NYCDOE, and thus levels of proficiency rates and graduation rates may be inversely related to levels of accountability pressure. Schools with very low proficiency rates or graduation rates were under greater pressure to implement drastic changes to improve performance, which may create more disruption. The reform may thus produce differential impacts on schools with different performance levels.

Results

Longitudinal trends of dependent variables

Figure 1 presents six time-series graphs to show the longitudinal trends of employees' attitudes and perceptions of organizational climate in the control and experimental groups. The continuous lines indicate employee attitudes of empowered schools and the dotted lines show the trends of non-empowered schools. All but one graphs in Figure 1 show similar trends between the two groups prior to the 2008-09 AY. Admittedly, trend lines in panel (a) are not exactly parallel between the two groups. However, relying only on the graphs to

check the parallel trends assumption is not very accurate. The first row of Table 3 shows that none of the placebo interaction terms in different models was statistically significant, suggesting that the two groups did not have different trends prior to the intervention. The difference-in-differences models thus did not violate the parallel trends assumption.

[Insert Figure 1 Here]

Results of Difference-in-Differences Model

Table 3 presents abbreviated results of the difference-in-differences analyses (full results including control variables are shown in appendix A4). Coefficients in the second, third, and fourth rows show the influence of the Empowerment Zone on employee attitudes and organizational climate starting from the 2008-09 AY. Hypothesis 1 and 2 mainly explored if the reform caused a decline in support from schools and principals, which were signs of disruption in school operations. The results in the first two columns supported these two hypotheses. Compared with non-empowered schools, empowered schools showed a decline in the percentage of teachers who believed the professional development they received provided them with teaching strategies or content support in their subject areas. The statistically significant effect showed up in the 2008-09 AY with a decline of 0.15 standard deviations, which translates to about 2.41 percentage points. The decline was 0.257 standard deviations (4.55 percentage points, $p < 0.01$) and 0.212 standard deviations (3.70 percentage points, $p < 0.01$) in the following two years. Moreover, empowered schools saw a decline in the percentage of teachers who felt supported by their principals, though the effect was only statistically significant in the 2009-10 AY. Hypotheses 3-6 explored how teacher attitudes and

school climate changed after the reform. Most of the models showed a deterioration of employees' attitudes and perceived organizational climate. For example, empowered schools showed a decline in the percentage of teachers who held positive evaluations of principal effectiveness in the 2009-10 AY. The decline was 0.136 standard deviations (2.16 percentage points) and was statistically significant at the 5% level. Interestingly, there was no statistically significant differences in trust in leadership in the two groups after the reform. Perceived lack of support caused by the reform did not hurt teachers' trust in their principals, though they seemed to believe leadership effectiveness had declined. Hypothesis 4 was not supported.

[Insert Table 3 Here]

The Empowerment Zone had a negative effect on interpersonal trust among teachers in empowered schools. Specifically, the percentage of teachers who trusted their colleagues decreased by 0.114 and 0.157 standard deviations in the first two years after implementing the Empowerment Zone, which translates to about 1.4 percentage points and 1.75 percentage points. However, statistical significance disappeared in the third year, suggesting that the negative impact might be transitory. Moreover, implementing the Empowerment Zone also negatively influenced teacher collaboration. The perception of teacher collaboration significantly deteriorated in the experimental group after the 2008-09 AY, which supported Hypothesis 6. The decrease worsened from 0.103 standard deviations in the 2008-09 AY (about 1.27 percentage points) to 0.305 standard deviations in the 2010-11 AY (about 5.27 percentage points).

Contingency Tests by Proficiency Levels

Now that the results showed overall negative impacts on employee attitudes and organizational climate, were the effects uniform? Contingency tests were conducted to

examine if the effects of the MFR reform varied in schools with different performance levels at the baseline. Table 4, 5 and 6 present the results of contingency tests, which, in general, suggest that the reform produced heterogeneous effects on schools. However, contrary to Hypothesis 7, the negative impacts were weaker in low-performance schools than in high-performance schools.

[Insert Table 4 Here]

[Insert Table 5 Here]

[Insert Table 6 Here]

Table 4 shows the regression results with low-performance schools. Surprisingly, implementing the Empowerment Zone in this group did not significantly influence any of employees' attitudes or climate variables. For example, employees in empowered schools and non-empowered schools did not have significant differences in their perceived support from principals or organizations, evaluation of leadership effectiveness, or trust in leadership and colleagues.

In contrast, as table 5 shows, the negative impacts in high-performance schools were more visible. The Empowerment Zone produced negative and statistically significant effects on five of the six dependent variables, though the specific year in which the effects appeared was different. For example, fewer teachers in empowered schools positively evaluated support from principals, and the effect started to show up in the 2009-10 AY and lasted for two years. Fewer teachers in empowered schools positively evaluated collaboration with colleagues. The effects started to appear in the second year and became stronger in the third year in both cases.

Table 6 presents the results of the medium-performance group. The reform had negative impacts on two dependent variables. More specifically, the reform caused a decline in organizational support to teachers in this group, and the effect appeared in the first year. Fewer teachers in empowered schools collaborated with colleagues, and the effect started in the 2009-10 AY and lasted for two years.

Robustness tests

To check the robustness of the results, a series of tests were conducted. First of all, to make sure that control variables did not drive the results, we run the main regressions without covariates. Results, presented in Table A3 in the appendix, changed only slightly. Moreover, to check if the results are unique to the group of schools that we selected, we run the main DID regressions with an alternative sample – the cohort of schools that entered the Empowerment Zone in the 2007-08 AY – and found similar negative impacts on employee attitudes and perceptions. The results are presented in Table A5. In general, the results are robust to alternative samples and regression specifications.

Discussion

This study investigates the effects of the ‘Empowerment Zone’ reform in New York City public schools on employee attitudes and organizational climate. Results suggest that, first, fewer teachers felt being supported by their organizations or leaders in empowered schools, possibly due to uncertainties caused by the reform and disruptions to organizational operations. Second, the reform also caused fewer employees to have a positive view of leadership effectiveness, though it did not change employees’ trust in their leaders. Third, the reform changed interpersonal relationships among employees. Possibly due to the more competitive culture after the reform, fewer employees indicated that they trusted their colleagues or were willing to collaborate with colleagues. This study also goes one step further and shows the negative impacts of MFR reforms on employee attitudes and

organizational climate were stronger in high-performance schools than in low-performance schools.

Compared with previous research that only focuses on a few attitudinal variables such as job satisfaction (Lee and Jimenez 2011; Yang and Kassekert 2010; Yang and Pandey 2008), this study examines a wide range of attitudinal and organizational climate variables and thus presents a more complete view of how employees react to and receive a managing for results reform. Interestingly, the results are not consistent with prior research that found a positive relationship between performance management reforms and employee attitudes or perceptions, such as job satisfaction. One obvious reason is that this study examines different attitudinal or organizational climate variables. Another possible reason is that the impacts of MFR reforms on employee attitudes and organizational climate are different from those of other performance management practices, such as pay for performance or performance measurement. However, the findings are consistent with organizational change literature that has found a negative relationship between organizational changes, such as New Public Management reforms, and employee attitudes (Battaglio and Condrey 2009; Noblet and Rodwell 2009). Although this study does not completely address the inconsistency between performance management literature and organizational change literature, it reveals that the potentially negative effects on employees should be taken seriously in performance management research.

Overall, the results suggest that employees react negatively to the MFR reform. Although we did not formally test the mechanism through which the 'Empowerment Zone' affected employees, we argue that there are two plausible explanations of employees' negative reactions. One is the conflicts between managerial and professional values during MFR reforms (Noordegraaf 2007). The MFR reform under study granted additional authorities to principals, allowing them to expand managerial control over areas that had

traditionally been controlled by teachers, such as pedagogy and curriculum. For example, under the pressure of meeting performance targets, administrators may pressure teachers to spend more time on high-stakes subjects and contents that are more likely to be covered in standardized tests. Education research has shown that teachers' work has been increasingly standardized, rationalized and monitored, and caused conflicts between teachers and school administrators regarding what and how to teach (Anderson and Cohen 2015; Apple 2007; Wronowski and Urick 2019). Kang, Park and Sorensen (2021) found that teachers in low performing schools in North Carolina reported a lower level of autonomy, suggesting more managerial interference. Teachers may thus hold generally negative attitudes towards the MFR reform that reduced their professional autonomy over teaching. This process is not unique to education – it is likely to happen in other public service areas where bureaucrats used to have considerable discretion, such as case management in social services. Secondly, social exchange theory maintains that employees may reciprocate by adjusting their attitudes or perceptions based on what they have received from their leaders and organizations. The perceived decline in support from organizations and leaders may hold the key in explaining the negative evaluations of leaders and organizational climate. The perceived decline in support from supervisors and organizations may lead employees to feel imbalanced in their exchanges with supervisors and organizations, and thus hold negative views. More research is needed to further test other possible mechanisms. Having a deeper understanding of the mechanisms can help managers to better design interventions to mitigate the negative impacts.

Contrary to our hypothesis, the negative effects on employees are stronger in high-performing organizations than in low-performing organizations. We speculate that it may have something to do with the different levels of accountability pressure that these schools faced. Low-performance schools faced a higher level of accountability pressure, and teachers

along with principals were more likely to feel the urgency to make some changes as a result of their substantial gap from performance targets. Participating in the Empowerment Zone reform was a strategy that was aligned with this goal. Teachers thus might not only have positive views towards the experiment in the first place but also be supportive of some measures such as enhanced performance measurement. Regression results seem to support this argument – there was not a decline in perceived principal support or organizational support in low-performance schools. On the other hand, teachers in schools that already had a high level of performance might not feel the pressure or urgency to change their practices. Changes might be perceived as deviations from good practices and disruptions imposed from the hierarchy that teachers had to deal with. Teachers thus had a lower level of tolerance of disruptions. They may hold more negative views towards these changes once the reform was in full swing. Though this result is opposite to Hypothesis 7, it is consistent with behavioral theory of the firm that performance gaps often become a catalyst for organizational changes (Kelman 2006; Greve 2003). Cyert and March's (1963) emphasize that organizations engage in problemistic search for new approaches and solutions when organizational performance falls short of expectations. Accountability pressure may strengthen the effect of performance gaps in promoting organizational change.

While performance management reforms improve the performance of public organizations, their wide range of negative consequences should be taken seriously. Previous research has highlighted some pervasive responses to accountability pressure, such as gaming and creaming (Bohte and Meier 2000; Koning and Heinrich 2013). Performance management reforms may also create more conflicts between employees and managers by expanding managerial control (Soss, Fording, and Schram 2011; Lundström 2015; Wronowski and Urlick 2019). The negative effects on employees that this article find serve as another

reminder that policymakers should hold a balanced and realistic view of performance management reforms.

Despite some interesting findings, this study also has some limitations. A notable one is that the study did not directly test the mechanisms through which performance management reforms affected employee attitudes and organizational climate. Social exchange theory provides some theoretical guidance, but the research design and data did not allow a formal test of the mechanisms. Second, the causal inference is limited by the lack of random assignment into the treatment and control groups. Though the comparison at the baseline showed the two groups were similar in student demographics and the parallel trends assumption was not violated, there could still be some selection effect that primarily influenced one of the two groups. Lastly, some of the findings, especially those related to leadership, may be culturally contingent. Research on cross-cultural leadership suggests that different cultures have diverse understandings of the values of leaders and leader-subordinate relationships (Dickson, Den Hartog, and Mitchelson 2003; Dickson et al. 2012). In individualistic cultures such as the US, people are more likely to attribute organizational success or failures to leaders (Dickson et al. 2012), and thus leader-subordinate relationships may change more dramatically during organizational changes. Employees losing trust in leaders or lowering perceived leadership effectiveness during organizational changes may be more likely to happen in individualistic cultures.

Conclusion

This study answers the call for more research on how performance management reforms are ‘received and reacted to by employees’ (Yang and Kassekert 2010, 414). Using panel data from in New York City public schools and exploiting the introduction of the Empowerment Zone experiment, the study is able to avoid problems associated with measuring performance management and establish a causal relationship between the MFR

reform and employee attitudes. Another strength of the paper is the broad array of employee attitude and organizational climate variables that are studied, which presents a more nuanced view of employees' responses. The findings show negative impacts on organizational climate and employee attitudes, which furthers the research on the impacts of performance management reforms.

This study also carries significant practical implications. First, an overall lesson for public managers is that the negative impacts on employee attitudes and organizational climate should be taken into account when planning for these reforms. Research has shown that the negative effects on employee attitudes and organizational climate may lead to negative outcomes such as higher turnover rate (Cantarelli, Belardinelli, and Belle 2016). Second, results show that, after the reform, perceived support from organizations and leaders declined, suggesting that the reform caused disruptions. Disruptions may be inevitable during reforms, but more support should be provided to employees to better cope with organizational changes. Moreover, interpersonal trust is vulnerable to performance management reforms, which further hurts cooperative behaviors among employees. Change management research has shown that if employees have more control over their jobs or could participate in the implementation of the reforms, they may be less resistant to changes (Noblet and Rodwell 2009; Korunka et al. 2003). Moreover, social support helps employees better cope with organizational changes (Korunka et al. 2003). Organizations should pay attention to team-building efforts to foster interpersonal trust and cooperative behaviors among employees. Last but not least, the contingency tests show that the negative effects are not uniform across organizations. Managers need to design organization-specific reform strategies to better manage performance management reforms and to mitigate negative impacts on employee attitude and organizational climate. For example, the negative reaction to MFR reforms is particularly strong in high-performing organizations. It is thus necessary for managers of

high-performing organizations to provide more support to employees and to better communicate why MFR reforms are needed.

Data availability statement

The data supporting the findings of this study are available from the corresponding author on request.

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Table 1. Measurement of dependent variables

Dependent variable	Items
perceived organizational support	Q1: The professional development I received this year provided me with teaching strategies to better meet the needs of my students
	Q2: The professional development I received this year provided me with content support in my subject area.
Perceived leadership effectiveness	Q1: School leaders communicate a clear vision for this school
	Q2: School leaders let staff know what is expected of them
	Q3: School leaders encourage open communication on important school issues
	Q4: The principal places the learning needs of children ahead of other interests
	Q5: the principal is an effective manager who makes the school run smoothly
	Q6: The principal has confidence in the expertise of the teachers
Trust in colleagues	Q1: Teachers in this school trust each other
	Q2: Teachers in this school recognize and respect colleagues who are the most effective teachers
	Q3: Teachers in this school respect teachers who take the lead in school
Trust in leadership	I trust the principal at his or her words
Perceived support from leaders	To what extent do you feel supported by your principal?
Teacher collaboration	Most teachers in my school work together to improve their instructional practice

Table 2. School Characteristics at Baseline (2006-2007 AY)

School characteristics	Treatment group		Control group		t value
	Mean	N	Mean	N	
Percentage of English Language Learners	11.776	340	11.577	714	-0.26
Percentage of student in special education	13.619	340	13.669	714	0.13
Percentage of Asian student	10.744	340	12.432	714	1.53
Percentage of Black student	31.458	340	32.911	714	0.80
Percentage of Hispanic student	42.439	340	39.805	714	-1.57
Percentage of white student	13.956	340	13.736	714	-0.16
Percentage of Male student	50.242	340	50.843	714	1.34
Student-teacher ratio	13.654	340	13.925	714	1.70
Percentage of Free and reduced lunch	73.391	340	74.423	714	0.61

Table 3. Differences-in-Differences Regression Results

	(1) Perceived organizational support	(2) Perceived principal support	(3) Perceived leadership	(4) Trust in principals	(5) Trust in teachers	(6) Teacher Collaboration
Empowerment status x 2007-2008 AY	-0.053 (0.063)	0.001 (0.058)	0.022 (0.055)	-0.009 (0.055)	-0.023 (0.053)	-0.008 (0.055)
Empowerment status x 2008-2009 AY	-0.150** (0.064)	-0.015 (0.068)	-0.041 (0.063)	0.001 (0.066)	-0.114* (0.061)	-0.103* (0.062)
Empowerment status x 2009-2010 AY	-0.257*** (0.068)	-0.145** (0.068)	-0.136** (0.064)	-0.081 (0.067)	-0.157** (0.062)	-0.215*** (0.063)
Empowerment status x 2010-2011 AY	-0.212*** (0.071)	-0.100 (0.073)	-0.116 (0.071)	-0.087 (0.071)	-0.082 (0.067)	-0.305*** (0.066)
<i>n</i>	1054	1054	1054	1054	1054	1054
N (n x T)	5270	5270	5270	5270	5270	5270

Note: Abbreviated results shown. All models control for school and year fixed effect, time variant school features. Robust standard errors clustered at the school level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4. Contingency Test by Performance: Low-Performance Group

	(1) Perceived organizational support	(2) Perceived principal support	(3) Perceived leadership	(4) Trust in principals	(5) Trust in teachers	(6) Teacher Collaboration
Empowerment status x 2007-2008 AY	.036 (.197)	.0002 (.166)	.0215 (.156)	-.0731 (.146)	-.0370 (.184)	-.00312 (.222)
Empowerment status x 2008-2009 AY	.071 (.189)	.091 (.191)	.0890 (.183)	.0829 (.189)	-.178 (.172)	-.0385 (.204)
Empowerment status x 2009-2010 AY	-.181 (.210)	-.164 (.218)	-.0695 (.185)	-.101 (.196)	-.202 (.163)	-.307 (.204)
Empowerment status x 2010-2011 AY	-.207 (.220)	-.366 (.249)	-.242 (.247)	-.317 (.241)	-.0424 (.182)	-.259 (.236)
n	160	160	160	160	160	160
N (n x T)	800	800	800	800	800	800

Note: Abbreviated results shown. All models control for school and year fixed effect, time variant school features. Robust standard errors clustered at the school level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5. Contingency Test by Performance: High-Performance Group

	(1) Perceived organizational support	(2) Perceived principal support	(3) Perceived leadership	(4) Trust in principals	(5) Trust in teachers	(6) Teacher Collaboration
Empowerment status x 2007-2008 AY	-.057 (.128)	-.159 (.110)	-.0406 (0.109)	-.0304 (.113)	-.115 (.0967)	-.751 (.971)
Empowerment status x 2008-2009 AY	-.182 (.140)	-.102 (.140)	-.0342 (.131)	-.0336 (.148)	-.163 (.110)	-.976 (.102)
Empowerment status x 2009-2010 AY	-.192 (.148)	-.290** (.137)	-.201 (.139)	-.127 (.142)	-.214* (.124)	-.247** (.123)
Empowerment status x 2010-2011 AY	-.221 (.146)	-.383*** (.143)	-.289** (.136)	-.239* (.137)	-.138 (.123)	-.290** (.126)
n	204	204	204	204	204	204
N (n x T)	1020	1020	1020	1020	1020	1020

Note: Abbreviated results shown. All models control for school and year fixed effect, time variant school features. Robust standard errors clustered at the school level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6. Contingency Test by Performance: Medium-Performance Group

	(1) Perceived organizational support	(2) Perceived principal support	(3) Perceived leadership	(4) Trust in principals	(5) Trust in teachers	(6) Teacher Collaboration
Empowerment status x 2007-2008 AY	-.052 (.077)	.065 (.074)	.0551 (.0695)	.0181 (.0698)	.0169 (.0645)	.0171 (.0637)
Empowerment status x 2008-2009 AY	-.174** (.078)	.017 (.084)	-.0508 (.0767)	.0111 (.0794)	-.0688 (.0779)	-.106 (.0781)
Empowerment status x 2009-2010 AY	-.271*** (.083)	-.064 (.082)	-.105 (.0770)	-.0459 (.0812)	-.0994 (.0794)	-.148* (.0770)
Empowerment status x 2010-2011 AY	-.197** (.087)	.075 (.087)	-.0183 (.0853)	.0191 (.0875)	-.0347 (.0870)	-.286*** (.0785)
n	690	690	690	690	690	690
N (n x T)	3450	3450	3450	3450	3450	3450

Note: Abbreviated results shown. All models control for school and year fixed effect, time variant school features. Robust standard errors clustered at the school level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

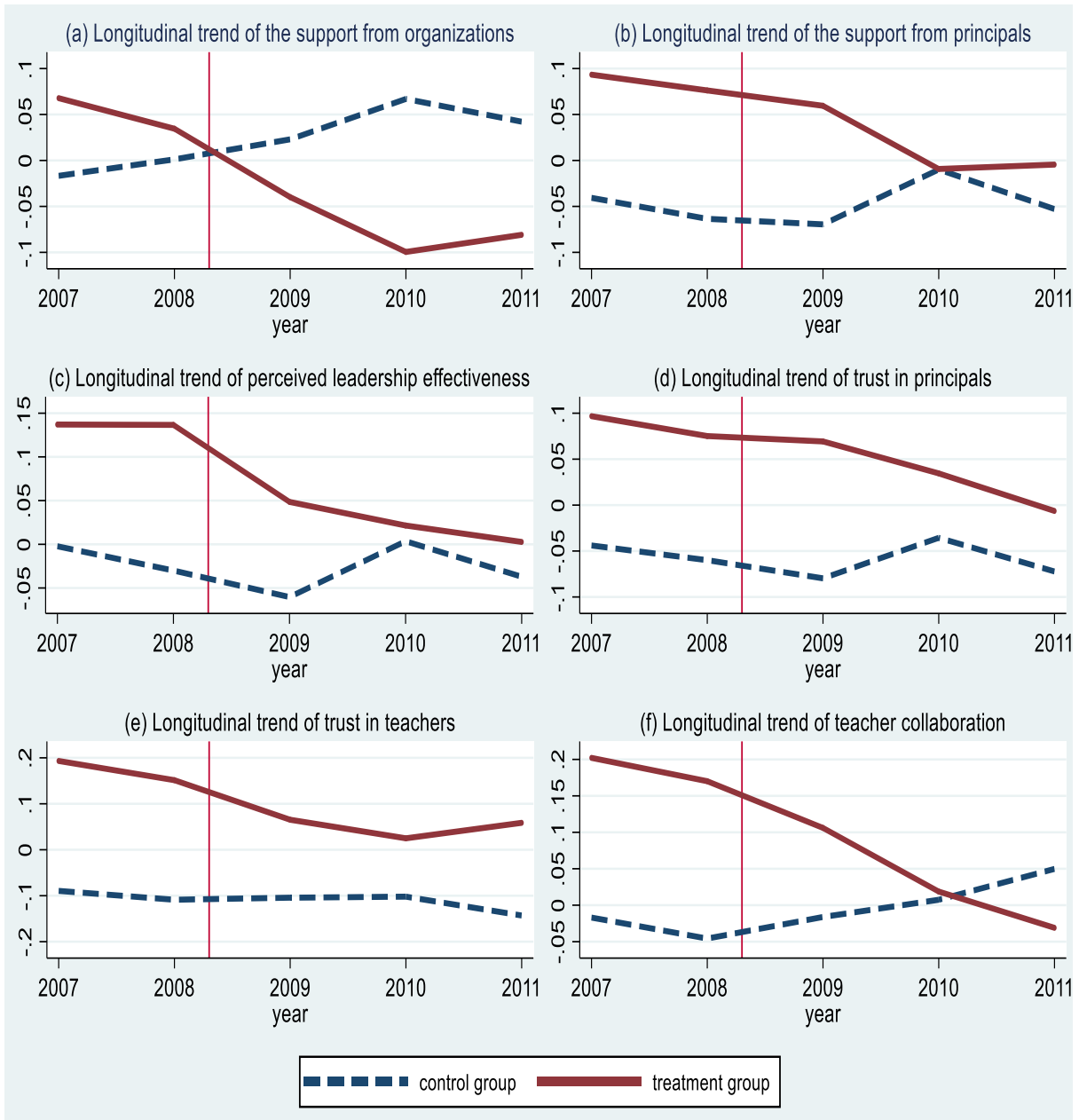


Figure 1. Longitudinal trends of dependent variables