

LEADERSHIP, TRUST AND ORGANIZATIONAL PERFORMANCE IN THE PUBLIC SECTOR

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Abstract

This study uses survey data on U.S. federal employees to investigate whether employee trust in leaders mediates the relationship between transactional and transformational leadership behaviors and organizational performance. The findings suggest that both transactional and transformational leadership behaviors and employee trust in leaders are positively associated with organizational performance.

Employee trust in leaders was found to mediate the relationship between transformational and transactional leadership and organizational performance. The study suggests that public leaders need to continue to develop their leadership skills, particularly their transformational leadership ones, as well as build trust to improve performance within their organizations.

Keywords: transactional leadership, transformational leadership, trust in leaders, organizational performance, U.S. federal employees, mediation.



1. Introduction

Improving performance within government organizations is a key concern of public administration (Brewer and Selden, 2000), and it has become a very important issue in the last few decades (Vermeeren, Kuipers and Steijn, 2013). After all, if government is to make a difference in people's lives and public trust is to be restored, it is important that public agencies perform well. In an effort to contribute to our understanding of the factors that influence performance within government organizations, public administration scholars have developed and tested different conceptual models of performance (e.g., Brewer and Selden, 2000; Chun and Rainey, 2005; Hassan and Hatmaker, 2015; Kim, 2005; Meier and O'Toole Jr, 2002; Rainey and Steinbauer, 1999; Pitts, 2005).

Leaders are commonly regarded as key drivers of performance within public organizations (Brewer and Selden, 2000). Leaders engage in behaviors that contribute to the achievement of goals within organizations (Van Wart, 2011). They engage in transactional leadership behaviors – e.g., they clarify roles (Van Wart, 2011) and reward improved performance (Bass and Avolio, 1990); they also engage in transformational leadership behaviors – e.g., they provide '... an overarching sense of direction and vision ...' (Van Wart, 2003, p. 214). These leadership behaviors can help increase employee job satisfaction (Trottier, Van Wart and Wang, 2008), which in turn results in more motivated and productive employees (e.g., Bass and Riggio, 2006). Scholars have found both transactional (Bass *et al.*, 2003; Fernandez, 2008) and transformational leadership behaviors (Bass *et al.*, 2003; Belle, 2014; Caillier, 2014; Fernandez, 2008; Park and Rainey, 2008) to be positively related to performance within government agencies.

While the public administration theory developments in the last twenty years have significantly contributed to our understanding of the factors – including leadership – that affect performance within public organizations, empirical research on the relationship between leadership and performance needs further development (Hassan and Hatmaker, 2015). Specifically, large-scale empirical studies are needed on the direct and indirect effects of different leadership behaviors on performance within public agencies.

In an effort to contribute to the public administration literature on leadership, this study uses data from the 2010 Federal Employee Viewpoint Survey (FedView survey) conducted by the United States (U.S.) Office of Personnel Management (OPM) to answer the following research question: do employee perceptions of trust in leaders mediate the relationship between employee perceptions of transactional and transformational leadership behaviors, and employee perceptions of organizational performance? Answering this question is important for a few reasons.

On the one hand, there is a need for empirical evidence on the effectiveness of different leadership behaviors in increasing performance within government organizations. This is important given the difficulties that public leaders face when motivating employees (Cho and Lee, 2011) as a result of the constraining environment in which

they operate (Rainey, 2014), particularly when it comes to the use of extrinsic rewards (Rainey and Bozeman, 2000). This without forgetting that the key differences between public and private organizations (see, Perry and Rainey, 1988; Rainey and Bozeman, 2000, for reviews) require that public leaders emphasize certain leadership behaviors over others (Hansen and Villadsen, 2010) as they seek to increase performance within their organizations.

On the other hand, there is a need for empirical research on the role that employee trust in leaders plays in mediating the relationship between different leadership behaviors and performance within public agencies. After all, leaders play a fundamental role in building trust among employees (Carnevale, 1995; Shaw, 1997), and followers who trust in their leaders are more comfortable acting in ways that may put them at risk in the relationship with their leaders – by sharing sensitive information or admitting mistakes – (Dirk and Ferrin, 2002; Mayer, Davis and Schoorman, 1995); employees also tend to reciprocate with their leaders by working hard on required tasks and going above and beyond in their performance (Dirks and Ferrin, 2002; Konovsky and Pugh, 1994). Despite the aforementioned, to the author’s knowledge, no recent study in the public administration literature has investigated whether trust makes a difference in the relationship between leadership and organizational performance within public organizations¹.

The paper proceeds as follows. The first section reviews the literature on transactional and transformational leadership, employee trust in leaders, and organizational performance. The next section describes the data and methods employed. Then, the results of the statistical analyses are presented. The paper concludes by discussing the implications of the findings, limitations of the study, and suggestions for future research.

2. Conceptual framework and hypotheses

2.1. Organizational performance

In the public sector, organizational performance can be said to refer to ‘whether the agency does well in discharging the administrative and operational functions pursuant to the mission and whether the agency actually produces the actions and outputs pursuant to the mission or the institutional mandate’ (Kim, 2005, pp. 250-251).

1 No studies were found after searching in each volume and issue of the following public administration journals for the period 2000-2015: *Journal of Public Administration Research and Theory*, *Public Administration Review*, *American Review of Public Administration*, *Review of Public Personnel Administration*, *Administration and Society*, *Public Administration Quarterly*, *International Review of Public Administration*, *International Journal of Public Administration*, *Public Performance and Management Review*, *State and Local Government Review*, *Transylvanian Review of Administrative Sciences*, *Public Management Review*, and *Public Administration*.

Also, although difficult to measure as a construct (Kim, 2005), in the absence of objective data, organizational performance can be estimated based on employees' perceptions of a public organization's internal and external performance in terms of efficiency, effectiveness, and fairness (Brewer and Selden, 2000).

2.2. Transactional and transformational leadership

As a concept, transactional leadership originated in the 1960s as researchers at the University of Michigan and Ohio State University started to challenge the assumptions of early management and trait theories of leadership (Van Wart, 2011). With the publication of 'Leadership' by James MacGregor Burns in 1978, transformational leadership emerged as an important approach to leadership (Northouse, 2015). Burns considered leaders to be either transactional or transformational – not both. In 1985, building on Burns' work, Bernard Bass argued that, depending on the situation, leaders could be transactional or transformational. To achieve the best results, Bass (1985) believed that leaders needed to possess both types of leadership.

Transactional leadership is a process of exchange between leaders and subordinates in which leaders recognize subordinates' needs and provide them with financial incentives and organizational recognition to motivate them (Bass, 1990, 1998). It also involves clarifying expectations and required tasks to obtain rewards. Transactional leadership emphasizes task and people-oriented behaviors (Van Wart, 2011). Transactional leaders engage in (1) contingent reward – they reward subordinates for acceptable behavior, such as improved performance (Bass and Avolio, 1990), and penalize them for unacceptable behavior (Bass, 1998) – and (2) management by exception (Bass, 1985; Bass and Avolio, 1990) – they actively or passively monitor performance and take corrective action when there is a problem or when standards are not met (Avolio, Bass and Jung, 1999; Bass, 1985; Hater and Bass, 1988).

Transformational leadership takes place 'when leaders broaden and elevate the interests of their employees, when they generate awareness and acceptance of the purposes and mission of the group and when they stir their employees to look beyond their own self-interest for the good of the group' (Bass, 1990, p. 21). Although transformational leaders also emphasize people-oriented behaviors, they do not rely on financial incentives to motivate employees (Van Wart, 2011). Instead, they motivate subordinates to do more than the expected by raising their levels of consciousness about the importance and value of stipulated and idealized goals; getting them to transcend their own self-interest for the sake of the group; and moving them to address higher-level intrinsic needs (Bass, 1985).

Transformational leaders engage in different leadership behaviors. They employ idealized influence – they act as role models and display ethical behavior; they are admired, respected; and subordinates identify with them, want to be like them (Bass, 1996; Northouse, 2015; Tracey and Hinkin, 1998). They also utilize inspirational motivation – they communicate and demonstrate commitment to organizational goals (Stone, Russell and Patterson, 2004), and communicate an inspiring, shared vision of

the future (Hater and Bass, 1988; Stone, Russell and Patterson, 2004). Further, transformational leaders engage in intellectual stimulation – they ask for employees’ ideas and encourage them to view issues from new perspectives (Avolio and Bass, 2002; Bass, 1985; Judge and Piccolo, 2004). Last, they display individualized consideration – they show concerns for employees’ welfare and development and empower them (Bass, 1990; Avolio and Bass, 2002).

2.3. *Organizational performance as an outcome of leadership*

Leaders play a key role in building performance within public organizations (Brewer and Selden, 2000). From a transactional leadership perspective, when leaders engage in contingent reward, organizational performance will rise as a result of employees being clear on what they need to do and being motivated by the rewards they receive (Bass, 1985; Bass *et al.*, 2003). Similarly, when leaders engage in active management by exception, they are able to anticipate deviations from standards and take corrective action (Hater and Bass, 1988), which ultimately results in increased performance. The empirical evidence lends support to these propositions as several scholars find that leaders who engage in contingent reward and management by exception behaviors are likely to increase organizational performance within public organizations (e.g., Bass *et al.*, 2003; Fernandez, 2008).

Hypothesis 1: Employee perceptions of transactional leadership behaviors are positively related to employee perception of organizational performance.

It can be said that when leaders display transformational leadership behaviors employees will be inspired to perform beyond standards (MacKenzie, Podsakoff and Rich, 2001). A few reasons can be given to explain this relationship. When leaders role model behaviors are consistent with the values and goals of the organization – i.e., idealized influence –, they can be more effective at clarifying employee’ roles within the organization (MacKenzie, Podsakoff and Rich, 2001), which in turn can increase performance. Also, when leaders engage in inspirational motivation – i.e., when they are able to communicate an appealing and inspiring organizational vision (Hater and Bass, 1988) –, they also help clarify employees’ role within the organization (MacKenzie *et al.*, 2001); by providing meaning to employees, leaders can motivate them (Boerner, Eisenbeiss and Griesser, 2007), which in turn can result in increased performance. Further, by intellectually stimulating employees, leaders encourage them to view issues from new perspectives (Bass, 1985), and to find creative ways to improve their performance (MacKenzie, Podsakoff and Rich, 2001). Last, when leaders show concern for their employees’ needs and welfare – i.e., individualized consideration –, they motivate them (MacKenzie, Podsakoff and Rich, 2001), which can lead to increased performance. Existing empirical research has positively linked the practice of transformational leadership behaviors and organizational performance within public agencies (e.g., Bass *et al.*, 2003; Belle, 2014; Caillier, 2014; Fernandez, 2008; Park and Rainey, 2008).

Hypothesis 2: Employee perceptions of transformational leadership behaviors are positively related to employee perceptions of organizational performance.

2.4. Employee trust in leaders and organizational performance

Employee trust in leaders is a multidimensional construct that can be defined as 'a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another' (Rousseau *et al.*, 1998, p. 395). It has to do with the level of confidence one has in others to behave in a fair and predictable manner (Luhmann, 1982). In other words, employee trust in leaders refers to followers' faith in the intentions and confidence in the actions of leaders (Cook and Wall, 1980).

Interpersonal trust is fundamental for ensuring effectiveness within organizations (Cook and Wall, 1980). Although some scholars dispute the extent to which employee trust in leaders affects employee performance (see, Bachmann and Akbar, 2006, for discussion), when followers trust in their leaders, they are more comfortable acting in ways that may put them at risk in the relationship with their leaders – by sharing sensitive information or admitting mistakes – (Dirk and Ferrin, 2002; Mayer, Davis and Schoorman, 1995); they also tend to reciprocate with their leaders by working hard on required tasks and performing beyond standards (Dirks and Ferrin, 2002; Knovsky and Pugh, 1994). This is important as employees who believe they cannot trust their leaders will spend more time covering their backs by documenting their satisfactory work, for example, which in turn can affect their overall performance (Dirks and Ferrin, 2002; Mayer and Gavin, 2005). Existing empirical studies have found a positive link between employee trust in leaders and employee motivation and performance (e.g., Dirks and Ferrin, 2002; Konovsky and Pugh, 1994; Gillespie and Mann, 2004).

Hypothesis 3: Employee perceptions of trust in leaders are positively related to employee perceptions of organizational performance.

2.5. The mediating effects of employee trust in leaders

Existing empirical studies in private-sector settings suggest that trust in leaders mediates the relationship between different leadership behaviors and employee attitudes (see, Dirks and Ferrin, 2002, for review). When leaders consistently reward, punish, and monitor performance or underperformance, both high and low performing employees will develop trust in their leaders; that is, they will feel confident that their leaders will continue to engage in these behavior over time. The empirical evidence suggests that leaders who engage in transactional leadership behaviors are likely to be more trusted among followers (Bradberry and Tatum, 2002; Greenberg, 2003; Pillai, Schriesheim and Williams, 1999; Podsakoff *et al.*, 1990). In turn, employees who trust their leaders will perform at a higher level because they have confidence that their leaders will continue to honor their contracts over time (Avolio, Bass and Jung, 1999).

Hypothesis 4: Employee perceptions of trust in leaders mediate the relationship between employee perceptions of transactional leadership behaviors and employee perceptions of organizational performance.

The existing empirical research suggests that trust in leaders mediates the relationship between transformational leadership behaviors and organizational performance (Podsakoff *et al.*, 1990; Pillai, Schriesheim and Williams, 1999). When leaders role model behaviors are consistent with the values and goals of the organization – i.e., idealized influence –, they show they can be trusted (Gillespie and Mann, 2004). Also, by communicating attainable goals (Bennis and Nanus, 1985) and an appealing, inspiring organizational vision (Hater and Bass, 1988) – i.e., inspirational motivation –, leaders motivate employees to attain such goals and vision, which in turn can facilitate the development of trust. Further, leaders who encourage employees to view issues from new perspectives – i.e., intellectual stimulation – coach their employees; by doing so, they show that they are committed to develop their employees, which can help build trust (Gillespie and Mann, 2004). Last, when leaders show concern for their employees’ needs and welfare – i.e., individualized consideration –, they show that they care about their employees and thus that they can be trusted (Bass, 1985; Jung and Avolio, 2000). Empirical research finds a positive relationship between transformational leadership behaviors and employee trust in leaders (Bradberry and Tatum, 2002; Greenberg, 2003; Gillespie and Mann, 2004; Jung and Avolio, 2000; Kirkpatrick and Locke, 1996; Podsakoff *et al.*, 1990; Pillai, Schriesheim and Williams, 1999). In turn, followers who trust in their leaders will perform at a higher level because they have confidence that their leaders will continue to engage in the aforementioned transformational leadership behaviors.

Hypothesis 5: Employee perceptions of trust in leaders mediate the relationship between employee perceptions of transformational leadership behaviors and employee perceptions of organizational performance.

3. Methods

3.1. Data

To examine the direct and indirect effects of transactional and transformational leadership on organizational performance in this study, analyses of survey data were conducted. The data come from the U.S. Office of Personnel Management’s (OPM) 2010 FedView survey. The survey was previously known as Federal Human Capital Survey (FHCS). These data are available to the public through the OPM’s website.

The FedView survey measured employees’ perceptions ‘of whether, and to what extent, conditions that characterize successful organizations are present in their agencies’ (OPM, 2010, p. 23). It included 78 core questions on such topics as organizational performance, leadership, employee satisfaction, compensation and benefits, family-friendly flexibilities, among others, and 11 demographic items.

According to OPM, the FedView survey was electronically distributed to a probability sample of full-time, permanent employees in U.S. federal agencies between February and March of 2010. All small and independent agencies were invited to participate; 53 chose to do so (OPM, 2010). OPM also administered the survey to 13 De-

partments/large agencies (OPM, 2010). In total, the participating agencies comprise approximately 97 percent of the U.S. federal workforce (OPM, 2010).

The sampling frame for the survey consisted of lists of employees at participating agencies. 'Employees were grouped into 1,066 sample subgroups corresponding to agency, sub-agency, and supervisory status reporting requirements' (OPM, 2010, p. 23). 504,609 U.S. federal employees from 82 agencies received the survey (OPM, 2010). 263,475 returned the survey, resulting in a 52% response rate (OPM, 2010).

OPM weighted the data collected from respondents. 'The weights ... take into account the variable probabilities of selection across the sample domains, nonresponse, and known demographic characteristics of the survey population' (OPM, 2010, p. 24). In the end, 'the final data set reflects the agency composition and demographic makeup of the Federal workforce within plus or minus 1 percentage point' (OPM, 2010, p. 24).

Of the total 263,475 respondents, 27,338 (10.4%) were managers/executives, 43,872 (16.7%) were supervisors, 179,462 (68.1%) were non-supervisors/team leaders, and the others did not respond. In terms of gender, 118,378 (44.9%) were females and 131,629 (50%) were males, 81,188 (30.8%) indicated belonging to a minority group and 163,684 (62.1%) did not. In term of age, 126,210 (47.9%) were 50 years or older, 109,811 (41.7%) were 30 to 49 years, and 12,057 (4.6%) were under 29 years.

3.2. Measures

In this study, organizational performance is defined as the internal and external effectiveness and the internal fairness of an organization. Given the limitations in the FedView survey data, the measure developed for this construct does not capture other dimensions of performance – i.e., internal and external efficiency and external fairness – discussed in the literature (see, Brewer and Selden, 2000; Kim, 2005, for discussion). The six items used to develop an additive index for organizational performance appear in Appendix 1. They were all included in a factor analysis using varimax rotation and loaded on the same factor explaining 56.97% of the variance (eigenvalue = 3.42; $\alpha = .84$).

This study originally measured the following transactional leadership behaviors: (1) contingent reward and (2) management by exception. It also measured the following transformational leadership behaviors: (1) idealized influence, (2) inspirational motivation, (3) intellectual stimulation, and (4) individualized consideration. To measure the aforementioned leadership behaviors a similar procedure employed by Trottier, Van Wart and Wang, (2008) was followed. The literature reviewed also provided the basis for item selection. Trottier, Van Wart and Wang (2008) used 24 items from the 2002 FHCS (now FedView survey) to measure: management by exception (three items), contingent reward (seven items), idealized influence (seven items), inspirational motivation (two items), intellectual stimulation (three items), and individualized consideration (seven items). Several of these items were also included in the 2010 FedView survey; some were worded slightly differently. In this study, a

total of 20 items were used to measure the abovementioned constructs (see Appendix 1): six for contingent reward, two for management by exception, two for idealized influence, three for inspirational motivation, two for intellectual stimulation, and five for individualized consideration.

It is important to mention that although some studies (e.g., Avolio, Bass and Jung, 1999; Trottier, Van Wart and Wang, 2008) include individualized consideration as one of the elements of transactional leadership, in this study, Bass' (1985) original conceptualization of transformational leadership was employed. Thus, in this study, individualized consideration is considered to be an element of transformational leadership.

A factor analysis of all 20 survey items used to measure the aforementioned leadership constructs was conducted and the varimax rotation method extracted three factors (see Appendix 1). Idealized influence, inspirational motivation, and intellectual stimulation loaded on the same factor, which was labeled transformational leadership 1, explaining 22.88% of the variance (eigenvalue = 4.35; $\alpha = .91$). Contingent reward and management by exception loaded on the same factor, which was labeled transactional leadership, explaining 24.84% of the variance (eigenvalue = 4.72; $\alpha = .92$). These results are consistent with previous findings suggesting that (1) contingent reward and management by exception (Tepper and Percy, 1994) and (2) idealized influence, inspirational motivation, and intellectual stimulation (Avolio, Bass and Jung, 1999; Wright and Pandey, 2010) may be best characterized as single factors. The items used to measure individualized consideration did load on the hypothesized leadership behavior, which was labeled transformational leadership 2, explaining 24.06% of the variance (eigenvalue = 4.57; $\alpha = .92$). In light of these results, additive indices were developed to measure the aforementioned leadership constructs, and were used as independent variables in the regression analyses.

In this study, Cook and Wall's (1980) definition of employee trust in leaders is adopted: (1) faith in the intentions, and (2) confidence in the actions of leaders. Given the limitations in the FedView survey data, the measure developed for this construct only contains one item similar to the six Cook and Wall used in their study. The following item was used to measure employee trust in leaders: I have trust and confidence in my supervisor. Responses to this item were coded from 1 = strongly disagree to 5 = strongly agree.

The following control variables for demographic characteristics of employees were measured in this study: supervisory status (1 = non-supervisor, 0 = supervisor), gender (1 = female, 0 = male), ethnicity (1 = minority, 0 = non-minority), age (1 = 29 and under, 2 = 30-39, 3 = 40-49, 4 = 50 and older), turnover intention (1 = yes, 0 = no), work location (1 = headquarters, 0 = field), and job tenure (1 = 0-5 years, 2 = 6-10, 3 = 11-19, 4 = 20 or more).

The descriptive statistics and correlations among the variables in this study are provided in Table 1.

Table 1: Descriptive statistics and correlations among study variables

Variables	Min.	Max.	Range	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1 Organizational Performance	6	30	24	23,69	4,57	1											
2 Transformational Leadership 1	7	35	28	24,05	6,58	,82	1										
3 Transformational Leadership 2	5	25	20	19,21	4,76	,85	,71	1									
4 Transactional Leadership	8	40	32	26,06	7,14	,78	,82	,70	1								
5 Trust in Leaders	1	5	4	3,80	1,20	,81	,64	,85	,63	1							
6 Supervisory Status	0	1	1	,68	,47	-,09	-,14	-,09	-,21	-,07	1						
7 Gender	0	1	1	,45	,50	-,01	-,02	-,03	-,05	-,05	,18	1					
8 Ethnicity	0	1	1	,31	,46	-,05	-,01	-,05	-,01	-,06	,11	,18	1				
9 Turnover Intention	0	1	1	,32	,47	-,31	-,31	-,28	-,28	-,27	-,09	-,06	-,01	1			
10 Work Location	0	1	1	,39	,49	,04	,03	,02	,04	,02	,09	,09	,08	,01	1		
11 Age	1	4	3	3,27	,88	-,02	-,01	-,05	,03	-,04	-,17	-,05	-,06	,00*	-,04	1	
12 Job Tenure	1	4	3	2,48	1,20	-,02	-,02	-,02	,02	-,03	-,09	0	-,02	-,15	-,06	,46	1

Note: All correlations were significant at the $P < .01$ level. Missing cases in the dataset were excluded pairwise.

3.3. Statistical procedures

To test Hypotheses 1-3, two ordinary least squares (OLS) regression models predicting organizational performance were developed. To test Hypotheses 4-5, the bias-corrected and accelerated bootstrapping method was employed (Preacher and Hayes, 2004, 2008; Hayes, 2013) – this technique was recently used by Ahmad, Zafar and Shahzad (2015) in their study of authentic leadership. Following the recommendation of Preacher and Hays (2008), 5000 bootstrap resamples were obtained to estimate the effect of transactional leadership, transformational leadership 1, and transformational leadership 2 on organizational performance through employee trust in leaders.

4. Results

Table 2 presents the OLS multivariate regression results. The results of Model 1 indicate that, together with the controls, the three leadership variables had a significant impact on organizational performance, explaining 83% of the variance. The results in Model 2 indicate that employee trust in leaders and the controls explained 74% of the variance in organizational performance. All three leadership variables and employee trust in leaders were found to be positively and statistically related to organizational performance at the $P < .01$ level.

Specifically, the results in Model 1 are as follows (see Table 2). When leaders (role model behavior consistent with the values and goals of the organization) communicate an appealing and inspiring organizational vision, encourage employees to view old and new issues from new perspectives, and stimulate creativity – i.e., transformational leadership 1 – organizational performance is likely to increase ($B = .236$). Also, when leaders show concern for employees' needs and welfare – i.e., transformational leadership 2 – organizational performance is likely to increase ($B = .488$).

Further, transactional leadership – i.e., using performance management and rewards to motivate employees, actively monitoring followers’ performance, and making sure underperforming employees are corrected – is likely to positively impact organizational performance ($B = .104$). The results in Model 2 (see Table 2) indicate that employee trust in leaders is likely to increase organizational performance ($B = 1.68$). These results lend support to Hypothesis 1, 2, and 3.

Table 2: OLS Regression Models of organizational performance

Variable	Organizational Performance	
	Model 1	Model 2
	B	B
Transformational Leadership 1	,236	
Transformational Leadership 2	,488	
Transactional Leadership	,104	
Trust in Leaders		1,68
Control Variables		
Supervisory Status	,34	-,52
Gender	,16	,25
Ethnicity	-,30	-,02*
Turnover Intention	-,14	-,86
Work Location	,04	,18
Age	,04	,04
Job Tenure	-,03	-,09
Adjusted R ²	,83	,74
F ratio	95228,36	81029,91
N	200.282	227.591

Note: Unstandardized regression coefficients are displayed.

Both regression models and all variables were significant at the $P < .01$ level, except for those marked with *. Missing cases in the dataset were excluded pairwise.

The results in Table 3 suggest that employee trust in leaders mediates, in part, the relationship between transactional and transformational leadership behaviors and organizational performance.

First, transformational leadership 1 was found to marginally increase organizational performance through employee trust in leaders ($ab = .227$). Second, the positive effect that transformational leadership 2 had on organizational performance was partially mediated by employee trust in leaders ($ab = .276$). Last, transactional leadership was found to increase, in a limited way, organizational performance through employee trust in leaders ($ab = .098$). These results support Hypotheses 4 and 5.

Table 3: Bootstrapped Indirect Effect results

Model	Boot Indirect Effect	Organizational Performance			Boot z
		Boot SE	LL 99% CI	UL 99% CI	
Transformational Leadership 1 (through Trust in Leaders) ^o	,227	,000	,008	,010	20,88
Transformational Leadership 2 (through Trust in Leaders) ⁱ	,276	,001	,208	,215	149,53
Transactional Leadership (through Trust in Leaders) ^a	,098	,000	,004	,007	13,89

Note: N = 180,578, Bootstrap sample size = 5,000. LL = lower limit, CI = confidence interval, UL = upper limit.

Bias-corrected and accelerated confidence intervals are reported.

^o Control Variables = Transformational Leadership 2, Transactional Leadership, Supervisory Status, Gender, Minority Status, Turnover Intention, Work Location, Age, Tenure.

ⁱ Control Variables = Transformational Leadership 1, Transactional Leadership, Supervisory Status, Gender, Minority Status, Turnover Intention, Work Location, Age, Tenure.

^a Control Variables = Transformational Leadership 1, Transformational Leadership 2, Supervisory Status, Gender, Minority Status, Turnover Intention, Work Location, Age, Tenure.

5. Discussion and conclusion

This study addresses the call in the literature for empirical research on the relationship between leadership and organizational performance (Hassan and Hatmaker, 2015). It investigates the direct and indirect effects of transformational and transactional leadership behaviors on organizational performance in government settings. The empirical evidence found suggest that both transformational and transactional leadership behaviors are positively related to organizational performance (Hypothesis 1 and 2), which is consistent with previous findings in the literature (e.g., Bass *et al.*, 2003; Belle, 2014; Caillier, 2014; Fernandez, 2008; Park and Rainey, 2008). The findings also suggest that employee trust in leaders is positively associated with organizational performance (Hypothesis 3); this is consistent with previous findings on the relationship between trust in leaders and performance (e.g., Dirks and Ferrin, 2002; Konovsky and Pugh, 1994; Gillespie and Mann, 2004). Furthermore, the results in this study suggest that employee trust in leaders mediates the relationship between transactional leadership behaviors and organizational performance (Hypothesis 4) and between transformational leadership behaviors and organizational performance (Hypothesis 5).

The findings in this study have several implications. Leaders play a crucial role in increasing performance in the public sector. Also, public leaders need to continue to develop their leadership skills. In particular, it is important that they – particularly those who tend to be more transactional – develop their transformational leadership skills – i.e., role modeling behavior consistent with the values and goals of the organization (idealized influence), communicating an appealing and inspiring organizational vision (inspirational motivation), encouraging employees to view old and new issues from new perspectives; stimulating creativity (intellectual

stimulation), and showing concern for employees' needs and welfare (individualized consideration). This, given the limitations they face on the use of extrinsic rewards – i.e., transactional leadership – when attempting to motivate employees and thus increase performance within their organizations.

Further, public leaders need to focus on building trust within their organizations. After all, when employees trust in their leaders they are more likely to go above and beyond in their performance (Dirks and Ferrin, 2002; Knovsky and Pugh, 1994). In addition, as the findings in this study suggest, employee trust in leaders plays a very important role within government agencies – especially in those managed by leaders who engage in individualized consideration; this, since they significantly increase performance within their organizations thanks to the trust that employees have in them.

6. Limitations and future research

Although this study has shed some light on the direct and indirect effects of transactional and transformational leadership behaviors on organizational performance, it suffers from several limitations that readers need to keep in mind when interpreting the results. First, since the variables in this study are drawn from the same survey, it is possible for common-source bias to limit the strength of the findings. Second, the measure of organizational performance developed in this study relies on perceptions from U.S. federal employees rather than on objective data. Third, the measures of transactional and transformational leadership behaviors developed in this study suffer from a unique limitation. Specifically, the FedView survey items used to measure the transactional leadership constructs do not measure the interaction between leaders and followers. Rather, they only measure federal employees' perceptions about their agencies.

Given the aforementioned limitations and since this is one of the first attempts in recent years to examine the effects of different leadership behaviors on performance through a mediated process of trust in a public sector setting, other researchers are encouraged to further validate and extend the models tested in this study. For example, they may want to develop more comprehensive models that include variables, such as: type of job performed and pay, as these may be able to better explain the effects of different job requirements and extrinsic incentives on performance. Also, researchers may want to study longitudinal trends within the U.S. federal government, as well as state and local governments. Comparative studies can also be conducted in other organizational settings around the world. Other researchers may want to develop objective measures of organizational performance to further validate the findings in this study and compare whether subjective and objective measures are correlated.

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Appendix 1: Measurement of Dependent and Independent Variables

Variable	Measure	Factor
Organizational Performance	Eigenvalue = 3.42. Proportion of variance = 56.97%. $\alpha = .84$.	
Internal Effectiveness	1. How would you rate the overall quality of work done by your work unit?	.69
	2. Overall, how good a job do you feel is being done by your immediate supervisor/team leader?	.85
	3. Overall, how good a job do you feel is being done by the manager directly above your immediate supervisor/team leader?	.77
External Effectiveness	1. My agency is successful at accomplishing its mission.	.69
Internal Fairness	1. My performance appraisal is a fair reflection of my performance.	.70
	2. My supervisor/team leader treats me with respect.	.81
Transactional Leadership	Eigenvalue = 4.72. Proportion of variance = 24.84%. $\alpha = .91$.	
Contingent Reward	1. Promotions in my work unit are based on merit.	.70
	2. In my work unit, differences in performance are recognized in a meaningful way.	.80
	3. Awards in my work unit depend on how well employees perform their jobs.	.77
	4. Pay raises depend on how well employees perform their jobs.	.71
	5. Employees are recognized for providing high quality products and services.	.60
	6. How satisfied are you with the recognition you receive for doing a good job?	.50
Management by Exception	1. In my work unit, differences in performance are recognized in a meaningful way.	.75
	2. I am held accountable for achieving results.	.56
Transformational Leadership 1	Eigenvalue = 4.35. Proportion of variance = 22.88%. $\alpha = .92$.	
Idealized Influence	1. My organization's leaders maintain high standards of honesty and integrity.	.77
	2. I have a high level of respect for my organization's senior leaders.	.81
Inspirational Motivation	1. In my organization, leaders generate high levels of motivation and commitment in the workforce.	.78
	2. Managers communicate the goals and priorities of the organization.	.71
	3. Employees have a feeling of personal empowerment with respect to work processes.	.59
Intellectual Stimulation	1. I feel encouraged to come up with new and better ways of doing things.	.50
	2. Creativity and innovation are rewarded.	.51
Transformational Leadership 2	Eigenvalue = 4.57. Proportion of variance = 24.06%. $\alpha = .92$.	
Individualized Consideration	1. My supervisor/team leader provides me with constructive suggestions to improve my job performance.	.78
	2. My supervisor supports my need to balance work and other life issues.	.80
	3. My supervisor/team leader provides me with opportunities to demonstrate my leadership skills.	.80
	4. Supervisors/team leaders in my work unit support employee development.	.76
	5. My supervisor/team leader listens to what I have to say.	.82

Note: All the items were measured from 1 = *strongly disagree* to 5 = *strongly agree*, except for item 6 in **contingent reward**, which was measured from 1 = *very dissatisfied* to 5 = *very satisfied*, and items 1, 2, and 3 in **internal effectiveness**, which are measured from 1 = *very poor* to 5 = *very good*.