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Please cite the final published version:

Pedersen, M. J., & Stritch, J. M. (2016). Internal Management and Perceived Managerial Trustworthiness: Evidence from a Survey Experiment. *American Review of Public Administration*, 48(1), 67-81. DOI: 10.1177/0275074016657179

Publication metadata

Title: Internal Management and Perceived Managerial Trustworthiness: Evidence from a Survey Experiment

Author(s): Pedersen, M. J., & Stritch, J. M.

Journal: *American Review of Public Administration*, 48(1), 67-81

DOI/Link: <http://dx.doi.org/10.1177/0275074016657179>

Document version: Accepted manuscript (post-print)

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INTERNAL MANAGEMENT AND PERCEIVED MANAGERIAL TRUSTWORTHINESS: EVIDENCE FROM A SURVEY EXPERIMENT

Abstract

What is the effect of internal public management on individuals' perceptions of managerial trustworthiness (MTW)? MTW is associated with a range of positive organizational outcomes, but research examining how a public manager might affect employees' perception of MTW is sparse. This article complements extant research on MTW in public organizations with causal evidence from a randomized survey experiment among 1,829 U.S. residents. We examine how five aspects of internal public management affect individuals' perception of MTW: (a) setting challenging but feasible goals, (b) making credible commitments, (c) encouraging employee participation, (d) providing frequent performance feedback, and (e) rewarding employees who perform well. We find positive effects of the "credible commitment" and "performance feedback" treatments on overall MTW perception. In addition, we find significant effects for four of the treatments (a–d) when looking separately at the three sub-dimensions that together comprise the multidimensional MTW construct (ability, benevolence, and integrity).

Keywords: internal management; managerial trustworthiness; survey experiment

INTERNAL MANAGEMENT AND PERCEIVED MANAGERIAL TRUSTWORTHINESS: EVIDENCE FROM A SURVEY EXPERIMENT

Though scholars offer different lists of the core aspects of public management (Boyne & Walker, 2006; Ingraham, Joyce, & Donahue, 2003; Rainey, 2014; Terry, 2002), public management scholarship is in agreement that public management is a multidimensional activity that has important implications for public service performance. At the macro-level, public management involves two main components: *external management* (management in relation to the organizational environment; outside stakeholders and agencies) and *internal management* (management within the organization). Both of these managerial foci involve numerous sub-aspects and both can be expected to have important implications for public service performance (Boyne, Meier, O'Toole, & Walker, 2006; Meier, O'Toole, Boyne, & Walker, 2006; Nicholson-Crotty & O'Toole, 2004; O'Toole & Meier, 2011; Rainey, 2014; Walker, Boyne, & Brewer, 2010). Nevertheless, public management research has focused disproportionately on the consequences of external management relative to internal management (see Favero, Meier, & O'Toole, 2014). In addition, the majority of internal management studies focus on a specific set of outcomes involving employee job satisfaction, organizational commitment, motivation, and performance (Brewer & Selden, 2000; Choi, 2009; Soonhee Kim, 2002; Sangmook Kim, 2005; Moynihan & Pandey, 2005, 2007; Park & Rainey, 2007). Additional inquiry on the consequences of internal management for other important employee outcomes is thus warranted.

This article examines how key aspects of internal management identified and analyzed in the extant public management literature affect an important but understudied construct: individuals' perceptions of managerial trustworthiness (henceforth MTW), i.e., "the trustworthiness attributed to supervisors" (Cho & Ringquist, 2011, pp. 53-54). We use the MTW term synonymously with managerial trust (or trust in manager), i.e., the willingness of

one party [employee] to be vulnerable to the actions of another party [manager] based on the expectation that the other party will perform a particular action important to the trustor, irrespective of the first party's ability to monitor or control that other party (Mayer, Davis, & Schoorman, 1995, p. 712).

The article uses data from a randomized survey experiment among 1,829 U.S. residents. Via an experimental vignette, we examine the posttest effects of five aspects of internal management: (a) setting challenging but feasible goals, (b) making credible commitments, (c) encouraging employee participation, (d) providing frequent performance feedback, and (e) rewarding employees who perform well. As we elaborate later, our focus on these particular aspects of internal management builds on past research and we test the effects of information on these management activities in relation to Mayer and Davis' (1999) multidimensional measure of MTW.

The article contributes to public management scholarship in two important ways. First, the causes of MTW in public organizations are understudied: "Although public administration scholars have recognized trust as a valuable resource from both political and management perspectives ... there is not much empirical research in the field yet" (Cho & Poister, 2014, p. 180). Very little public management research examines the association between specific management activities and MTW—and we can find no public management research that directly examines the relative effects of different aspects of internal management on MTW. Such a research focus is warranted, however. Scholars have long theorized that trust in management is related to important productivity-related outcomes (Argyris, 1964), and researchers continue to acknowledge the concept of trust as a theoretically important variable affecting organizational outcomes (Behn, 1995; Carnevale, 1995; Kramer, 1999). Empirical studies moreover find that MTW is associated with a wide display of employee-level outcomes such as employee satisfaction, commitment, motivation,

and performance (e.g., Cho & Park, 2011; Cho & Ringquist, 2011; Nyhan, 2000). How public managers may cultivate and maintain MTW is thus a critical question. From this perspective, this article aims to identify specific internal management activities that may have a positive effect on individuals' MTW, in turn expanding our knowledge on routes toward attainment of an effective, efficient, and equitable public service.

Second, much empirical research on the consequences of public management is marked by limitations to the research's internal validity, i.e., the extent to which a causal conclusion based on a study is warranted. This is especially true for research on MTW antecedents in public organizations. Extant studies provides valuable knowledge about MTW in real-life public organizations but rely on cross-sectional survey data (e.g., Battaglio & Condrey, 2009; Carnevale & Wechsler, 1992; Cho & Poister, 2013, 2014; Choi, 2011; Gilbert & Tang, 1998; Nyhan, 2000; Rubin, 2009). Their potential for making causal claims is therefore somewhat limited. The article aims to complement the findings of the extant MTW literature with causal evidence from a randomized posttest experiment. However, our own empirical approach does entail a tradeoff as well as other limitations that we will consider throughout and discuss in the conclusion. Calls for more experimental public administration and management research (Perry 2012) have been answered by an increasing number of experimental studies with the same fundamental aim and contribution as us: providing causal inference to our understanding of themes and topics important to the discipline (e.g., see Anderson & Stritch, 2015; Avellaneda, 2013; Belle, 2013, 2015; Belle & Cantarelli, 2014; Brewer & Brewer, 2011; Grimmelikhuijsen & Meijer, 2014; Herian et al., 2012; Hock, Anderson, & Potoski, 2013; Jilke, Van Ryzin, & Van de Walle, 2015; Kaufman & Feeney, 2014; Kim & Kim 2015a, 2015b; Marvel, 2015a, 2015b; Pedersen, 2015).

We begin by first discussing existing public sector MTW research. Second, we elaborate on the specific aspects of internal management that are the subject of the study and

develop our hypotheses with respect to how each might affect trust in management. Third, we describe our data and survey experimental design. Fourth, we present and discuss the analytical results. In conclusion, we summarize our findings and discuss their implications for practice and future research.

Managerial Trustworthiness in Public Management Research

Public management research that focuses on the MTW construct is relatively sparse. This is not, however, to say that empirical inquiry has fully ignored the concept of trust and its determinants. At the manager-level, Battaglio and Condrey (2009) find that perceived job security and perception of procedural justice are positively related to trust in management. Rubin (2009) also examines the role of procedural justice in MTW. Rubin finds that key indicators of procedural justice—such as perception of merit-based promotions, fair handling of complaints, fair performance appraisals, and satisfaction with involvement in decisions—are positively associated with trust in leadership. Similarly, Choi (2011) finds that perceptions of organizational justice are positively associated with MTW. Cho and Poister (2013) also find a positive relationship between fairness perceptions and MTW. Importantly, they observe that perception of good manager-employee communication and perception of fair and constructive performance feedback relate to higher levels of MTW (see also Cho & Poister, 2014). Finally, Nyhan (2000) develops a trust-based model for public sector management and finds that perceived participation in decision making and feedback on performance are positively associated with MTW.

The work of Cho and Poister (2013, 2014) and Nyhan (2000) indicates that some aspects of internal management—those involving participation and performance feedback—may have a positive effect on MTW. However, the potential for drawing causal inference from these studies is limited by the use of cross-sectional survey data. As mentioned, this article's experimental design provides a strong framework for estimating how different

aspects of internal management may directly affect individuals' perception of MTW. It thus complements the work of Cho and Poister (2013, 2014) and Nyhan (2000): The survey experimental design we employ yields posttest estimates marked by high internal validity, but the results suffer from weak external validity (as we will explain later). Conversely, the extant estimates of managerial effects on MTW suffer from weak internal validity but higher external validity.

The relevance of examining the effect of internal management on individuals' perception of MTW—and thus the contribution of the present article—is contingent on a key prerequisite: That MTW matters to organizational outcomes. In support of this notion, much public management research suggests that MTW is positively associated with employee satisfaction (Cho & Lee, 2011; Cho & Park, 2011; Cho & Ringquist, 2011; Jung, 2014; Ko & Hur, 2014; Rubin, 2009; Yang & Kassekert, 2010) and negatively associated with turnover intention (Gould-Williams & Davies, 2005; Ko & Hur, 2014). Similarly, studies find that MTW is positively related to employee commitment and motivation at work (Chen, Hsieh, & Chen, 2014; Cho & Park, 2011; Gould-Williams & Davies, 2005; Nyhan, 2000). In addition, high MTW appears to correlate with higher levels of cooperative and citizenship behavior (Cho & Poister, 2014; Cho & Ringquist, 2011; Cho & Lee, 2011; Lundin, 2007) and with higher levels of self-reported performance and productivity (Cho & Ringquist, 2011; Nyhan, 2000).

In addition, private sector management research provides strong support for the importance of MTW to employee-level outcomes. Many studies show that MTW is positively related to organizational citizenship behaviors and job performance (see Dirks & Ferrin, 2002, and Kramer, 1999, for useful reviews, see also Colquitt et al., 2012). At the organization-level, research suggests that MTW decreases transaction costs and increases transaction benefits in an organization (Zaheer, McEvily, & Perrone, 1998), improves

internal information sharing (Clegg, Unsworth, Epitropaki, & Parker, 2002; Creed & Miles, 1996), and increases employee deference to managerial decision making (Kramer & Tyler, 1996).

Research efforts toward identification of particular aspects of internal management that affect an individuals' perception of MTW is both necessary and invaluable given the well-established links between MTW and both employee-level and organizational outcomes. Promoting employees' MTW via use of particular internal management activities may be one way forward toward public service effectiveness and efficiency. But to which aspects of internal management should we first direct our research attention? As internal management is a multidimensional craft involving numerous sub-behaviors, examination of all aspects of internal management would be a Herculean task. Therefore, we focus our attention on five specific behaviors that emerge from the public management literature.

Internal Management and Managerial Trustworthiness

This article examines the posttest effects of five aspects of internal management: (a) setting challenging but feasible goals, (b) making credible commitments, (c) encouraging employee participation, (d) providing frequent performance feedback, and (e) rewarding employees who perform well. Our focus on these specific actions builds on past research by Favero et al. (2014). The authors test the relationship between different aspects of internal management and the performance of New York City schools. Their study involves four internal management activities that reflect the first four aspects of internal management that we examine (a-d). Similar to us, they recognize that the analyzing all potential aspects of internal management is not feasible, and therefore focus on a limited set of internal management activities. The key aspects of internal management they identify "are common to most theories of public management" (Favero et al., 2014, p. 20) as they reflect the core elements of "the tried-and-true functions of internal organizational, what we might think of as

... the POSDCORB-style elements of traditional public administration” (Favero et al., 2014, pp. 2-3). While it has been suggested that certain aspects of internal management might cultivate perceptions of MTW among employees (Favero et al. 2014; Nyhan, 2000; Tyler, 2006), research has yet to fully consider the ways that these aspects of internal management might generate MTW among employees.

The first aspect of internal management we examine—*setting challenging but feasible goals*—refers to internal management activities concerned with setting clear, feasible yet challenging goals that allow employees to understand what the manager expects of them (Latham, Borgogni, & Petitta, 2008). Managerial goal setting behavior may reflect positively on employees’ perceptions of the manager’s vision, ambition, and general care for the future and performance of the organization, and thus cultivates higher levels of MTW (Conger, Kanungo, & Menon, 2000). Studies show that transformational leadership practices such as communicating clear goals and setting high expectations have a positive impact on trust in the leader (Butler, Cantrell, & Flick, 1999; Gillespie & Mann, 2004). When a manager sets clear goals for an organizational unit she or he signals to the employees that the manager is engaged and willing to take responsibility for certain levels of performance. When employees perceive their manager taking a level of responsibility for the unit or group’s performance, this might increase MTW among those she/he is leading. On the other hand, avoiding the establishment of goals might signal to employees that the manager does not want to take ownership and, thus, decrease perceptions of MTW. Our first hypothesis is thus as follows:

H1: *Emphasis on internal management that relates to setting challenging but feasible goals has a positive effect on an individual’s perception of MTW.*

The second aspect of internal management we consider—*making credible commitments*, or “managerial credibility” (Dull, 2009)—refers to activities that managers undertake to elicit support and cooperation from employees. These are specific actions

demonstrating that a manager strives to communicate clearly and follow through on what he or she says that he or she will do. We expect that actions demonstrating “credible commitment” will have a relatively strong positive effect on MTW. Essentially, one of the main purposes of this aspect of internal management is to build trust among employees in the manager’s qualifications (Dull, 2009). Favero et al. (2014, p. 5) note that “credible commitment can be viewed as establishing the legitimacy of the manager and the manager’s actions (Tyler, 2006), which is designed to establish trust between management and employees.” In sum, an employee’s perception of trust in a manager should increase when that manager appears credible by communicating clearly and following through on commitments. Our second hypothesis is thus as follows:

H2: *Emphasis on internal management that relates to making credible commitments has a positive effect on an individual’s perception of MTW.*

As to the third and fourth aspects of internal management, *encouraging employee participation* refers to activities that elicit worker participation in organization decision making—a venerable issue in the public administration literature (e.g., Mosher, 1967), while *providing frequent performance feedback* refers to activities in which the manager provides consistent feedback to employees so that the employees learn about their performance at work. Research suggests that both management activities may have a positive effect on individual’s perception of MTW. Favero et al. (2014) emphasize that employee participation may improve the trust relationship between manager and employees, and that feedback between managers and workers is important for trust perceptions. In support of this notion, Cho and Poister (2013, 2014) find that perception of good manager-employee communication and perception of fair and constructive performance feedback are positively associated with MTW. Moreover, Nyhan’s (2000) model for public sector management explicitly highlights participation in decision making and feedback on performance as key predictors of MTW

(see Nyhan, 2000 for a more detailed list of studies and theories). In sum, an employee's perception of trust in a manager may increase when that manager appears to care about the employees' opinions, inputs, and work behaviors—i.e., by including the employees in organization decision making and providing persistent feedback on the employees' work performance. Our third and fourth hypotheses are thus as follows:

H3: *Emphasis on internal management that relates to encouraging employee participation has a positive effect on an individual's perception of MTW.*

H4: *Emphasis on internal management that relates to providing frequent performance feedback has a positive effect on an individual's perception of MTW.*

The fifth aspect of internal management we examine—*rewarding employees who perform well*—relates to managerial efforts to reward an organization's high-performing employees. Our conceptualization captures some of the New Public Management (Hood, 1991; Kettl, 2005) reform trends that emphasize the use of performance-based reward schemes, but it also covers non-pecuniary reward behavior such as verbal acknowledgments and recognitions, assignment of special job responsibilities, and additional qualification training courses. Favero et al. (2014) do not examine this particular internal management activity. Our choice to do so builds on the continued emphasis on pay for performance in the public sector (Perry, Engbers, & Jun, 2009); that use of contingent rewards is a widely applied management tool. Additionally, it has received increased attention in the public sector in the wake of New Public Management and public personnel reforms (Kellough, 1993; Kellough & Nigro, 2002, 2006). Some research finds that contingent rewards are ineffective in enhancing follower work effort (Belle & Cantarelli, 2014) and achieving high levels of trust (Jung & Avolio, 2000), while other research reports a positive relationship between contingent rewards and MTW (Butler et al., 1999; Dirks & Ferrin, 2002). Hence, there are

competing theories and mixed findings about the effect of managerial rewarding behavior on MTW perception.

In line with Gillespie and Mann (2004), we recognize this ambiguity but theorize that managerial rewarding behavior may have a positive impact on MTW perception. Use of performance-contingent rewards may signal clearer role responsibility for achievement of organizational performance goals, in turn increasing individuals' perception of the manager's competence (Gillespie & Mann, 2004). Our fifth and final hypothesis is thus as follows:

H5: *Emphasis on internal management that relates to rewarding employees who perform well has a positive effect on individual's perception of MTW.*

Data

Our data consist of 1,829 U.S. residents. We collected the data using Amazon's *Mechanical Turk* (or MTurk)—a frequently used platform for experimental research in the social sciences (examples from a much longer list include Arceneaux, 2012; Berinsky, Huber, & Lenz, 2012; Eriksson & Simpson, 2011; Horton, Rand, & Zeckhauser, 2011; Fishbach, Henderson, & Koo, 2011). Recent public administration studies use MTurk for survey experimental purposes and highlight the opportunities that MTurk brings to public administration scholarship (e.g., Jilke et al. 2015; Marvel, 2015a, 2015b; [blinded for review]). Research shows that data obtained via MTurk are at least as reliable as data obtained via traditional methods and that MTurkers from the U.S. are generally more representative of the U.S. population than in-person convenience samples commonly used in laboratory studies and experiments (Berinsky et al., 2012; Buhrmester, Kwang, & Gosling, 2011; Casler, Bickel, & Hackett, 2013; Johnson & Borden, 2012). In line with these findings, descriptive statistics (shown later) suggest that our sample respondents are similar to the working age U.S. population. Still, our sample is not representative of a particular subpopulation of public employees. We discuss the generalizability issues that our MTurk sampling method entails

for the article's findings later—including how to perceive the article's conclusions and contributions in light of this caveat.

We collected the data and the experiment was approved by an author's IRB. We received informed consent from participants prior to the collection of the data.

Research Design

We test our five hypotheses using a randomized survey experiment involving a case vignette describing a public manager exhibiting internal management activity. Each of the 1,829 respondents was randomly assigned to one of six experimental groups. 330 were assigned to the control condition (henceforth C^0). The other respondents were assigned to treatments reflecting the five aspects of internal management mentioned above. Figure 1 shows the C^0 case vignette. The case vignette describes the work behavior and performance of an average public manager.

[Figure 1 here]

Respondents in the treatment groups received the exact same information as those in C^0 . In addition, however, they were each randomly provided one of the following lines of text—stated after the sentence, “That is, managerial activities seeking to organize and coordinate subordinates and resources to get things done”:

- a) **Treatment goal:** “In particular, Benjamin prioritizes setting clear work goals that are feasible but somewhat challenging to achieve—though this means that Benjamin has less time available for other internal management activities.”
- b) **Treatment commitment:** “In particular, Benjamin prioritizes communicating clearly and fully following through on commitments—though this means that Benjamin has less time available for other internal management activities.”

- c) **Treatment participation:** “In particular, Benjamin prioritizes ensuring employee participation in decision making—though this means that Benjamin has less time available for other internal management activities.”
- d) **Treatment feedback:** “In particular, Benjamin prioritizes providing frequent feedback to employees on their job performance—though this means that Benjamin has less time available for other internal management activities.”
- e) **Treatment reward:** “In particular, Benjamin prioritizes rewarding high-performing employees—though this means that Benjamin has less time available for other internal management activities.”

All treatments highlight how emphasis on a particular internal management activity necessarily involves less time available for other activities. The *goal* treatment describes a focus on setting clear goals that are feasible but challenging. The *commitment* treatment captures the internal managerial action of a public manager who focuses on making credible commitment as to establish managerial legitimacy and support and cooperation from employees. The *participation* treatment involves managerial focus on eliciting participation by employees in organizational decision making, while the *feedback* treatment relates to the provision of frequent feedback to employees about how, and how well, they perform the job. The *reward* treatment involves a focus on internal managerial action that incentivizes high performance through rewarding behavior.

The above case vignette examples describe a male manager (Benjamin). We describe the name (and thus gender) of the public manager to increase the contextual realism of the vignettes. However, the respondents’ perception of the managers is likely affected by the manager’s gender. Social gender role and stereotype beliefs may entail that managers of different genders are associated with different MTW perceptions holding behaviors constant (Eagly & Carli, 2003; Eagly & Karau, 2002; Powell, Butterfield, & Parent, 2002). We

therefore manipulate the name (gender) of the public manager: At random, some respondents received the above male manager version of the case vignettes, others a female manager version, i.e., we essentially substitute the name “Benjamin” with the name “Katherine” at random. We selected these names based on Levitt and Dubner (2005). Because we randomize the name of the manager within each of the six experiment groups, the gender of the case manager should not confound our results whatsoever.¹

Perception of MTW is the dependent variable. Following Mayer et al. (1995), we perceive MTW as a multidimensional construct comprising three sub-dimensions: ability, benevolence, and integrity (see also Cho & Lee, 2011; Cho & Ringquist, 2011; Colquitt & Rodell, 2011). *Ability* refers to skills, competencies, and characteristics that allow a party to have influence within some domain. For a manager, this includes both the formal and informal influences that the manager is perceived to have in the organization, as well as their perceived competence and skill. *Benevolence* refers to the extent to which a manager is believed to want to do good for the employees—care about the employees’ interests. *Integrity* refers to the extent that a manager espouses values that employees see as positive—and that the manager’s actions are consistent with these values.

MTW Measurement

We measure MTW with nine survey items, three for each sub-dimension. We adopt these items from scales developed by Mayer and Davis (1999). Their scales represent a slightly altered and shorter version of scales by Schoorman, Mayer, and Davis (1996) and Rotter (1967). We capture item responses on a seven-point Likert type scale. Table 1 shows the individual items, descriptive statistics, and item factor loadings from a principal component analysis (PCA), rotated.

[Table 1 here]

PCA identifies a three-factor solution (Eigenvalues > 1) with item factor loadings matching the MTW sub-dimensions of ability, benevolence, and integrity. Confirmatory factor analysis reveals significant item loadings ($p < .001$) and acceptable goodness-of-fit statistics (CFI = .966; RMSEA = .092; SRMR = .040; TLI = .949). We construct three scales, one for each MTW sub-dimension, using the predicted factor scores. Each scale is thus standardized (mean = 0, standard deviation = 1), entailing that the model coefficients can be interpreted in terms of standard deviation.

We also operate with an overall MTW measure. We construct this scale using the predicted factor scores from an unrotated PCA (item factor loadings > .70; Cronbach's alpha is .91).

Analyses

Because of the random assignment of control and treatments, only the public manager description should differ systematically across the six experiment groups. All characteristics potentially affecting respondents' perception of MTW should be equally distributed across the groups by design (i.e., the groups should be "balanced"), and the posttest treatment estimates should therefore be unbiased—have a causal interpretation.

In support of this notion, ANOVA tests for differences in means show that the experiment groups are not marked by any significant differences in the distribution of gender, race, age, education, employment status, parents' education, annual household income, and responses to three items from the General Social Surveys (GSS) on general trust perceptions (see Appendix for detail). Similarly, we see that the assignment of case manager name, "Benjamin" or "Katherine," is balanced across the groups—implying that the manipulation of the case manager's gender does not confound the results.

Test Statistics

To examine the effect of the treatments, we regress a set of dummy variables (one for each of the five treatments) on each MTW measure. Table 2 shows the result of regression analyses with robust standard errors testing the effect of each treatment relative to the control group (i.e., with C^0 as the reference category). Models 1 through 4 show the results, respectively, for ability, benevolence, integrity, and the overall MTW measure.²

[Table 2 here]

Figure 2 shows graphical plots of the treatment effects. The X-axis denotes coefficient estimates, the Y-axis the five treatments. The bullets and numerical figures signify the point estimates for each treatment, the horizontal lines 95 percent confidence bands.

[Figure 2 here]

For the overall MTW measure, the commitment treatment increases respondents' perception of MTW by .26 of a standard deviation relative to C^0 . Similarly, the feedback treatment increases respondents' MTW by .23 of a standard deviation. Moreover, Figure 2 illustrates the relative effects of the treatments. For example, the commitment treatment confidence band is not overlapping with the reward treatment point estimate—suggesting that the commitment treatment has a positive effect relative to the reward treatment ($\beta = .26 - .05 = .21$). The Wald test confirms that the two coefficients are statistically distinct ($p = .01$). Similarly, the feedback treatment yields higher perception of MTW than the reward treatment ($\beta = .18$).

For the ability sub-dimension, the goal and commitment treatments have a positive effect on perception of MTW: Relative to C^0 , the goal treatment increases respondents' trust by .15 of a standard deviation, the commitment treatment by .22 of a standard deviation. In addition, the commitment treatment has a positive effect relative to the participation and feedback treatments ($\beta = .21$ and $.18$, respectively).

For the benevolence sub-dimension, the participation and feedback treatments yield higher MTW relative to C^0 ($\beta = .25$ and $.33$, respectively). Moreover, the participation treatment has a positive effect relative to the goal and reward treatments ($\beta = .21$ and $.33$, respectively), the feedback treatment a positive effect relative to the goal, commitment, and reward treatments ($\beta = .32$, $.20$, and $.41$, respectively). Also, the commitment treatment has a positive effect relative to the reward treatment ($\beta = .21$).

For the integrity sub-dimension, the goal, commitment, and feedback treatments yield higher MTW relative to C^0 ($\beta = .17$, $.33$, and $.19$, respectively). The commitment treatment has a positive effect relative to the participation and reward treatments ($\beta = .21$ and $.20$, respectively).

Results

The empirical findings thus lend support for hypotheses H2 and H4: The commitment and feedback treatments both have a positive effect on the respondents' overall perception of MTW. Analyses of the separate MTW sub-dimensions reveal heterogeneous effects: The commitment treatment has a positive effect for the sub-dimensions of ability and integrity, but not for benevolence, while the feedback treatment has a positive effect for only for benevolence and integrity.

The results are mixed in relation to H1 and H3. The estimates for the goal and participation treatments in relation to the overall MTW measure are both positive (as expected), but fall short of being statistically significant at the .05 level (goal: $\beta = .13$, $p = .088$; participation: $\beta = .15$, $p = .054$). However, the goal treatment has a positive effect for the sub-dimensions of ability and integrity, while the participation treatment has a positive effect for benevolence.

We do not find support for H5. The reward treatment does not have a significant effect in relation to any of the four MTW measures.

Manipulation Check

We use two manipulation checks to assess whether the manipulation of the case managers' internal management activity had the intended effect on the respondents—and to provide evidence for the construct validity of the manipulation (Cozby, 2009). First, the respondents were asked to recall the gender of the case manager at a later stage of the survey. Response options were “male,” “female,” and “do not remember.” 98.3 percent reported the “correct” gender (a response corresponding to the gender of the case manager in the vignette they received). This manipulation check provides evidence that the respondents actually read the case vignette.

Second, the respondents were asked to state the management style best describing the case manager. They had seven response options: “setting clear goals that are feasible, but challenging to achieve,” “communicating clearly and fully following through on commitments,” “ensuring employee participation in decision making,” “providing frequent feedback to employees on their job performance,” “rewarding high-performing employees,” “none of the above,” and “do not remember.” 74.9 percent reported the “correct” management style. We suggest that this result is acceptable as the manipulation check represents a relatively difficult test, not least for the C^0 respondents. For them, the “correct” response was “none of the above,” but they were more inclined, relative to the treatment respondents, to answer “do not remember” or one of the other five response options.

Importantly, as a robustness test, we reran the model specifications in Table 2 on a subsample comprising only the respondents with “correct” responses to both manipulation checks ($N = 1,362$). This procedure resulted in larger treatment estimates relative to C^0 and did not change the relative effects between the treatments.

Limitations

This article's results have a causal interpretation. The experimental design provides results marked by relatively high internal validity, and both the balance and manipulation checks support the robustness of our results. In particular, the experimental groups appear balanced with respect to responses to the GSS items on general trust perceptions. We take this as strong evidence that our findings are not driven by chance differences in general trust; that the observed differences in perception of MTW are an effect of the internal management treatments.

Nevertheless, the article's design involves a trade-off. Our experimental case vignette describes a public manager, but the sample respondents are not representative of a particular sub-population of public employees. While this caveat weakens the potential to generalize the article's findings to real-life public organizations, we emphasize two important points. First, our treatments involve manipulation of a single sentence of text nested in a much longer section of descriptive text. The treatment intensity in our experiment is therefore low. *If* our findings differ from the MTW effects of internal management in real-life public organizations, such difference is therefore likely to reflect a "downward bias" (towards zero) on our part: If anything, the positive effects of actual internal management on public employees' MTW are likely larger in magnitude than those that we identify. Moreover, we have tested the robustness of our findings on a subsample involving only the respondents who are currently employed in an organization. The findings are qualitatively similar to our main results.

Second, the present study should be seen as an extension, and not replacement, of our current knowledge on MTW determinants. While extant studies are conducted in real-life public organizations, their use of cross-sectional survey data limits the potential for causal inference. Conversely, our results have a causal interpretation but our findings are less strong in terms of external validity. On one hand, the fact that we examine the phenomenon of

interest among a group of individuals not nested in public organizations is an obvious limitation. However, the phenomenon of interest—how management behavior affects employee perceptions of MTW—is a general phenomenon. The heterogeneity (geographically within the U.S., age, race, education, employment sector, occupation, job tenure, etc.) of the respondents and the fact that most have had work experience, provides us reasonable vehicle for examining how leadership behaviors might affect employees' perceptions of trustworthiness. Despite the limits imposed by our sample, we believe that our study contributes to our knowledge on MTW determinants. Similar to experimental public administration research that draws on student samples for examining questions about the motivation and behavior of public employees (e.g., Anderson & Stritch, 2015; Brewer & Brewer, 2011; Kaufmann & Feeney, 2014; Moynihan, 2006; Pedersen, 2015) we suggest that the article's contribution in terms of causal identification may balance the limits of the sample.

In addition, our findings should be interpreted in light of the validity threats that are common to survey vignette experiments (e.g., see Belle & Cantarelli, 2014; Pedersen, 2015). In particular, our participants were not exposed to real organizational changes in internal management but were simply asked to engage in a thought experiment. The lack of realism diminishes the extent to which we can generalize our findings to real-life settings, but the research design also decreases the possibility that history and maturation are threats to the study's internal validity. Future research should triangulate findings using field experimental or quasi-experimental methods. Moreover, our design does not involve a baseline measure of MTW (e.g., pretest measurement would allow for difference-in-differences estimation). Our causal estimates are therefore built on the assumption that participants' baseline perception of MTW is equally distributed across the six experiment groups. The balance checks (especially those for the three GSS trust items) lend strong support to this assumption, but our findings

should be interpreted in the context of this caveat. Note that MTW perception was measured immediately after the case vignette, thus minimizing the risk of bias due to historical changes unrelated to the treatment or maturation of the subject. Similarly, all participants were exposed to the same testing technique and set of MTW items, thus minimizing the concern that our findings are an artifact of differences in testing procedure.

Conclusion

This article shows that two aspects of internal public management activities may have a positive effect on an individual's perception of MTW: "communicating clearly and fully following through on commitments" and "providing frequent feedback to employees on their job performance." In addition, our findings suggest that "setting clear work goals that are feasible but somewhat challenging to achieve" and "ensuring employee participation in decision making" may also reflect positively on MTW (at least for some of the MTW sub-dimensions).

Given the caveats that mark our study, we emphasize caution in broad interpretation and generalization of the findings. Rather, the article's contribution should be seen in the context of the extant research on how internal management activity influences MTW perception in public organizations. In particular, studies suggest that internal management in the form of goal setting (Butler et al., 1999; Conger et al., 2000; Gillespie & Mann, 2004), making credible commitments (Dull, 2009; Favero et al. 2014; Tyler, 2006), ensuring employee participation, and providing performance feedback (Cho & Poister, 2013, 2014; Nyhan, 2000) may have a positive effect on MTW. This article complements these theoretical insights with causal evidence.

The identification of the causal relationships between aspects of internal management and MTW perception is important. Besides expanding our scholarly knowledge on MTW determinants, such identification elaborates on the significance of public management to

public service performance and speaks to the following question: What are the aspects of internal management that are especially effective in procuring and cultivating organizational performance? As mentioned, scholars have long theorized that trust in management is related to important productivity-related outcomes (Argyris, 1964; Behn, 1995) and much empirical research finds that MTW matters to employee satisfaction, commitment, motivation, and performance (e.g., Cho & Park, 2011; Cho & Ringquist, 2011; Dirks & Ferrin, 2002; Kramer, 1999; Nyhan, 2000). From this perspective, this article highlights four internal management activities that—via positive effects on MTW perception—may assist the delivery of an effective, efficient, and equitable public service.

Interestingly, the four aspects of internal management that impact MTW perception (fully or partially) all relate to people-centered management approaches that rely more on intrinsic motivation than extrinsic incentives (Favero et al., 2014). The opposite seems to hold for the fifth aspect of internal management, “rewarding high-performing employees,” where we fail to identify any effect on MTW. Our findings thus contribute to studies suggesting that managerial activity directed at an individual’s more intrinsic forms of motivation—relative to managerial activity that focuses more on external control and incentives—may result in positive behavior and performance outcomes (Mikkelsen, 2013; Pedersen, 2015. See also Deci, Koestner, & Ryan, 1999).

Our findings enhance the call for more research that examines the determinants of MTW in public organizations (Cho & Poister, 2014). As to internal management and MTW, future research should first and foremost seek to strengthen the external validity of this article’s findings by examining the impact of internal management on MTW using public employee data. As noted by an anonymous reviewer, our design entails that we cannot dismiss that our findings may refer not only to employee MTW, but also, to some extent, to general attitudes toward trust in public management.

Similarly, future research should disentangle the extent to which our findings are unique to public organizations. Research finds that public employees are different to private employees (Buelens & Van den Broeck, 2007; Lyons, Duxbury, & Higgins, 2006; Perry & Wise 1990) and that public and private employees operate in different structural settings (Allison 1983; Lynn, 1981). Nevertheless, the internal management effects that we observed may not be exclusive to public organizations.

Moreover, future research should extend the scope to other aspects of internal management—and limited empirical research examines the correlates of MTW in relation to the sub-dimensions of the construct (most only employ an overall measure). Our findings imply that different aspects of internal management may affect the separate sub-dimensions of MTW differently. Such effect difference may exist for other determinants of MTW perception—and some of the MTW sub-dimensions may matter more to organizational outcomes than others.

Finally, future research should examine the organizational and personal characteristics potentially moderating the effects of internal management on MTW. For example, to what extent does the gender of the manager affect the impact of internal management activity? Do some aspects of internal management have a greater effect on the MTW of male relative to female employees? Addressing questions such as these will help distinguish the organizational settings where particular aspects of internal management may be especially useful for procuring high levels of employee MTW. A full and theory-driven examination of how gender moderates the MTW effects of internal management is beyond the scope of this article. Nevertheless, we conducted additional analyses testing for interaction effects of gender. The results are interesting and encourage further research: Interaction analyses suggest that the gender (name) of the case manager did not result in different effects for any of the five treatments (at $p < .1$). However, both the “goal setting” and the “employee

participation” treatment appear to have a greater positive effect on the MTW perception of the male relative to the female respondents ($p = .047$ and $.053$, respectively). These results are in line with behavioral economics research suggesting that men are more responsive to goals than women (Smithers, 2015) and gender research emphasizing that men are more motivated by work autonomy, authority, and influence on decision making than women (Hofstede, 2001).

Research attention to the open questions surrounding the causes and effects of MTW in public organizations may be well worth the effort. In an era when public organizations may be facing more numerous and challenging performance goals and expectations, a greater understanding of the effects and not least determinants of MTW may substantially contribute to the effectiveness and efficiency of the public services.

Notes

- 1 As later shown, the gender of the case manager is balanced across the six experiment groups.
- 2 For each MTW measure, we have estimated a model specification that includes all the balancing check covariates as control variables. The treatment estimates are similar in magnitude across models without and with controls. This finding supports that individual differences that potentially affect perception of MTW are equally distributed across the six experiment groups (Angrist & Pischke, 2009, pp. 23-24).

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Appendix

[Table A1 here]

Figure 1 Sample Case Vignette (C⁰)

Please read the following text very carefully.

Imagine that you are an employee in a public service organization. Benjamin is your immediate supervisor. Benjamin is 48 years old and has been a manager at the organization for 3 years. The absence rate among the personnel is similar to comparable organizations and your fellow employees are, on average, reasonably satisfied with Benjamin's performance as a manager.

Your experience of Benjamin's way of management is as follows: Benjamin appears to be quite hard-working and acts professionally most of the time. Though busy and occasionally out of office, Benjamin is regularly available if the employees need to discuss something. Benjamin devotes some time to "external management." That is, managerial interactions with outside individuals and agencies. The remainder of Benjamin's time is spent on "internal management." That is, managerial activities seeking to organize and coordinate subordinates and resources to get things done.

Figure 2 Plot of Effects of Treatments on Perception of MTW

Table 1 MTW Items, Descriptive Statistics, and Item Factor Loadings (PCA)

	Mean (S.D.)	Min/ Max	Factor loadings		
			Factor 1 (ben.)	Factor 2 (abi.)	Factor 3 (int.)
Ability ($\alpha = .88$)					
1. [manager name] is very capable of performing the job as a manager	5.76 (.92)	1/7	-.01	.92	-.01
2. I feel very confident in [manager name]’s skills	5.64 (.93)	1/7	.10	.88	-.03
3. [manager name] is well qualified	5.58 (.99)	1/7	.01	.82	.08
Benevolence ($\alpha = .90$)					
4. [manager name] is very concerned about my welfare	4.93 (1.98)	1/7	.92	.09	-.05
5. My needs and desires are very important to [manager name]	4.83 (1.14)	1/7	.96	.04	-.06
6. [manager name] will go out of the way to help me	4.82 (1.16)	1/7	.76	-.05	.22
Integrity ($\alpha = .89$)					
7. [manager name] has a strong sense of justice	4.89 (1.03)	1/7	.28	-.07	.69
8. I never wonder whether [manager name] will stick to his word	5.05 (1.20)	1/7	-.08	.00	.93
9. Sound principles seem to guide [manager name]’s behavior	5.39 (.99)	1/7	-.02	.38	.60
<i>Notes:</i> Each item reflects the random assignment of either the male manager version (Benjamin) or the female manager version (Katherine) of the case vignettes. The items are slightly altered relative to Mayer and Davis’ (1999). While their items refer to “top management,” ours specify a particular manager. α shows Cronbach’s alpha for each sub-dimension. Item factor loadings from a PCA, rotated (oblique). Factor loadings > .6 in bold font. $N = 1,829$					

Table 2 Effects of Treatments on Perception of MTW. OLS Regression

	MTW, Ability 1		MTW, Benevolence 2		MTW, Integrity 3		MTW, Overall 4	
	β	S.E.	β	S.E.	β	S.E.	β	S.E.
T ^{goal}	.154*	.076	.004	.077	.171*	.076	.126†	.074
T ^{commitment}	.223**	.077	.126	.077	.330***	.078	.263**	.077
T ^{participation}	.009	.083	.252**	.078	.116	.076	.152†	.079
T ^{feedback}	.042	.079	.327***	.075	.191*	.076	.225**	.077
T ^{reward}	.093	.083	-.081	.080	.126	.079	.048	.080
R ²	.01		.02		.01		.01	
F-Value	2.32**		6.67***		3.18***		2.75**	
Notes: †<.1; *p < .05; **p < .01; ***p < .001. Robust standard errors. N = 1,829.								

Table A1 Sample Characteristics, Full Sample and by Experiment Groups

	Full Sample	Control (C ⁰)	T _{goal}	T _{commit} ment	T _{participat} ion	T _{feedback}	T _{reward}	<i>p</i> > F
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Female	.58 (.49)	.56 (.50)	.59 (.49)	.59 (.49)	.56 (.50)	.56 (.50)	.60 (.49)	.84
Race: White	.77 (.42)	.74 (.44)	.76 (.43)	.80 (.40)	.73 (.45)	.79 (.40)	.79 (.41)	.21
—: Black	.10 (.30)	.12 (.33)	.08 (.27)	.08 (.27)	.11 (.32)	.10 (.30)	.08 (.28)	.38
—: Hispanic	.05 (.22)	.05 (.22)	.04 (.19)	.04 (.19)	.08 (.27)	.04 (.19)	.06 (.23)	.09
—: Asian	.04 (.20)	.05 (.22)	.07 (.26)	.04 (.19)	.04 (.19)	.04 (.19)	.04 (.19)	.29
—: Other	.04 (.20)	.04 (.19)	.05 (.21)	.05 (.22)	.04 (.20)	.03 (.18)	.03 (.18)	.84
Age	36.34 (11.94)	36.50 (11.96)	36.82 (11.85)	36.16 (12.16)	35.92 (12.25)	37.18 (12.51)	35.39 (10.74)	.48
Education: Some high school	.01 (.10)	.01 (.10)	.01 (.12)	.01 (.10)	.00 (.06)	.01 (.09)	.01 (.10)	.84
—: High school	.09 (.29)	.10 (.30)	.06 (.25)	.10 (.30)	.07 (.26)	.10 (.30)	.11 (.31)	.39
—: Some college	.29 (.45)	.27 (.44)	.30 (.46)	.29 (.45)	.29 (.46)	.31 (.46)	.26 (.44)	.76
—: Undergraduate	.42 (.49)	.39 (.49)	.44 (.50)	.43 (.50)	.44 (.50)	.43 (.50)	.43 (.50)	.88
—: Some graduate	.05 (.21)	.05 (.22)	.04 (.20)	.06 (.23)	.04 (.21)	.04 (.19)	.05 (.21)	.90
—: Postgraduate	.14 (.35)	.18 (.38)	.14 (.35)	.12 (.33)	.14 (.35)	.12 (.32)	.15 (.35)	.28
Employment status: Student	.06 (.24)	.05 (.22)	.06 (.24)	.06 (.24)	.06 (.24)	.06 (.23)	.06 (.25)	.96
—: Unemployed	.13 (.34)	.15 (.36)	.14 (.35)	.12 (.32)	.12 (.32)	.15 (.36)	.11 (.32)	.47
—: Employed, org.	.64 (.48)	.66 (.47)	.62 (.49)	.63 (.48)	.66 (.47)	.62 (.49)	.66 (.48)	.70
—: Employed, self	.14 (.34)	.11 (.32)	.15 (.36)	.16 (.37)	.11 (.31)	.14 (.35)	.15 (.36)	.31
—: Other	.03 (.17)	.02 (.14)	.03 (.16)	.03 (.18)	.05 (.22)	.03 (.18)	.01 (.12)	.13
Mom, education (undergraduate or higher)	.43 (.49)	.44 (.50)	.45 (.50)	.42 (.49)	.37 (.48)	.40 (.49)	.48 (.49)	.13
Dad, education (undergraduate or higher)	.42 (.49)	.45 (.50)	.45 (.50)	.41 (.49)	.36 (.48)	.42 (.49)	.45 (.50)	.23
Annual household income: < \$30,000	.28 (.45)	.29 (.45)	.27 (.44)	.25 (.43)	.28 (.45)	.28 (.45)	.32 (.47)	.52
—: \$30,000-59,999	.36 (.48)	.34 (.47)	.39 (.49)	.37 (.48)	.34 (.47)	.37 (.48)	.34 (.47)	.68
—: \$60,000-89,000	.19 (.40)	.18 (.39)	.18 (.39)	.23 (.42)	.20 (.40)	.17 (.37)	.21 (.41)	.44
—: \$90,000+	.17 (.37)	.19 (.39)	.16 (.37)	.15 (.36)	.18 (.39)	.18 (.38)	.14 (.34)	.42
GSS1	.48 (.50)	.49 (.50)	.47 (.50)	.46 (.50)	.49 (.50)	.45 (.50)	.50 (.50)	.68
GSS2	.59 (.49)	.55 (.50)	.62 (.49)	.60 (.49)	.62 (.49)	.56 (.50)	.59 (.49)	.42
GSS3	.54 (.50)	.53 (.50)	.58 (.50)	.55 (.50)	.57 (.50)	.48 (.50)	.54 (.50)	.22
Case manager name (female)	.48 (.50)	.48 (.50)	.51 (.50)	.43 (.50)	.47 (.50)	.50 (.50)	.48 (.50)	.52
MTW, ability	0 (1)	-.08 (1.00)	.07 (.86)	.14 (.94)	-.08 (1.06)	-.04 (1.03)	.01 (1.07)	.04
MTW, benevolence	0 (1)	-.11 (.93)	-.11 (.94)	.02 (1.00)	.14 (1.01)	.22 (1.00)	-.19 (1.06)	.00
MTW, integrity	0 (1)	-.15 (.92)	.02 (.04)	.18 (1.03)	-.04 (.98)	.04 (1.04)	-.03 (1.05)	.00
MTW, overall measure	0 (1)	-.14 (.92)	-.01 (.88)	.13 (1.00)	.02 (1.04)	.09 (1.06)	-.09 (1.06)	.01
<i>N</i>	1,829	330	271	301	295	336	296	

Notes: Column “*p* > F” shows the results of ANOVA tests for differences in means across the six experiment groups. The three GSS items we use are “Trust/167A,” “Trusty/167B,” and “Fair/166.” Bonferroni–Dunn tests for all pairwise constellations of groups yield identical results.