High-Performance Human Resource Practices and Employee Outcomes: The Mediating Role of Public Service Motivation

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Abstract: This article responds to recent calls for research examining the mechanisms through which high-performance human resource practices (HPHRPs) affect employee outcomes. Using the theoretical lens of social exchange and process theories, the authors examine one such mechanism, public service motivation, through which HPHRPs influence employees’ affective commitment and organizational citizenship behaviors in public sector organizations. A sample of professionals in the Egyptian health and higher education sectors was used to test a partial mediation model using structural equation modeling. Findings show that public service motivation partially mediated the relationship between HPHRPs and employees’ affective commitment and organizational citizenship behaviors. Similar results were achieved when the system of HPHRPs was disaggregated to consider the individual effects of five human resource practices.

Practitioner Points

- Managers should endeavor to ensure that sufficient resources are allocated to implement human resource practices.
- Investments in human resource systems may provide employees with the impetus needed to remain motivated when their desire to serve the public, their commitment to the organization, or their willingness to exert discretionary effort at work ebbs.
- Investment in a single human resource practice rather than a collective system may result in undermining certain desired employee outcomes.

Management scholars have long advocated the adoption of strategically driven human resource (HR) activities for improving the functioning of organizations (Perry 1993). More recently, such activities have been referred to as “high-performance” human resource practices (HPHRPs), and they are typically viewed as a group of coherent, interrelated HR practices designed to promote employee motivation and commitment (Kehoe and Wright 2013; Messersmith et al. 2011). Scholars have assembled a convincing body of empirical evidence supporting the HPHRP–performance relationship based on the experiences of both private (Combs et al. 2006; Wright et al. 2005) and public sector organizations (Messersmith et al. 2011). However, limited evidence exists across the sectors on the effects of HPHRPs on more proximal outcomes, namely, employee attitudes and behaviors, as most studies have considered distal organizational outcomes (e.g., financial returns, profitability, and service performance; see Kehoe and Wright 2013). Thus, while human resource management (HRM) commentators acknowledge that superior organizational performance is achieved through the workforce, the mechanisms by which HPHRPs affect employees’ attitudes and behaviors remain poorly understood (Messersmith et al. 2011; Takeuchi, Chen, and Lepak 2009). Our research examines a salient mechanism through which HPHRPs might affect employee outcomes in public sector organizations, namely, public service motivation (PSM).

Perry, Hondeghem, and Wise define PSM as “a particular form of altruism or prosocial motivation that is animated by specific dispositions and values arising from public institutions and [their] missions” (2010, 682). Researchers have noted the organizational antecedents of PSM, such as red tape, leader–member relationships, and coworker or supervisor influence (Camilleri 2007; Moynihan and Pandey 2007; Park and Rainey 2008; Taylor 2008; Wright, Moynihan, and Pandey 2011), along with the employee outcomes of PSM, such as job satisfaction, organizational commitment, and organizational citizenship behaviors (OCBs) (Anderfuhren-Biget et al. 2010; Leisink and Steijn 2009; Naff and Grum 1999; Vandenabeele...
proposed that exchanges are based on organizational (1938) and later developed by March and Simon (1958), who new, having been first discussed more than 70 years ago by Barnard and relationships (2005, 890). The general idea of exchange is not which over time provide for mutually and rewarding transactions and relationships (Cropanzano and Mitchell 2005). According to Cropanzano and Mitchell, “Social exchange comprises actions contingent on the rewarding reactions of others, which over time provide for mutually and rewarding transactions and relationships” (2005, 890). The general idea of exchange is not new, having been first discussed more than 70 years ago by Barnard (1938) and later developed by March and Simon (1958), who proposed that exchanges are based on organizational inducements invoking corresponding employee contributions. In our case, an organization’s investments in HPHRPs are considered the “inducements” or “initiating actions” of the exchange relationship, with employee attitudes and behavioral responses being the “contributing” or “rewarding reactions.” We anticipate that such investments are likely to promote feelings of self-efficacy and encourage alignment of employee and organizational values, as evidenced by a heightened desire to serve the public.

We also draw on Perry’s (2000) process theory, which is often used by public administration scholars to explain the relationship between the organizational environment, PSM, and employee outcomes, including affective commitment and OCBs (Gould-Williams et al. 2014; Kim 2006; Leisink and Steijn 2009). According to process theory, the organizational environment influences PSM through socialization, effective job design, and performance feedback (see also Paarlberg, Perry, and Hondeghem 2008). In turn, PSM is predicted to lead to desirable employee and organizational outcomes. In this way, we anticipate that from both a social exchange theory and a process theory perspective, PSM may mediate the HPHRP–employee outcomes relationship.

Our choice of employee outcomes is based on the following reasoning. First, affective commitment and OCBs are central and prominent responses to positive social exchange relationships. According to Kehoe and Wright (2013), affective commitment reflects the bond between the employee and organization, while OCBs are a logical consequence of such affectivity. Second, OCBs are conventionally considered “discretionary behaviors” that do not form part of the formal employment contract but are a reflection of positive social exchanges. Third, both affective commitment and OCBs have been linked with enhanced organizational performance and thus have implications that extend beyond the individual (Messersmith et al. 2011).

This article is structured as follows. First, we use social exchange theory as our primary theoretical lens to explain the direct association between HPHRPs and employee attitudes and behaviors. Thereafter, we draw on both social exchange theory and process theory to explain why PSM mediates this relationship. Following a description of our methodology, we present structural equation modeling results based on a sample of Egyptian public sector workers, and then we discuss the implications of our findings for both theory and practice.

HPHRPs and Social Exchange

Relationships between employers and employees are predominantly based on social and economic exchanges (Kehoe and Wright 2013). Economic exchanges specify contractual arrangements, such as pay, working hours, and holiday entitlements. These contractual obligations are clearly defined and enforceable through legal sanctions (Gould-Williams 2007). Relationships developed on the basis of economic exchanges are typified by discrete, financially oriented interactions with no explicit expectation that performance will go beyond the terms of the contract (Shore et al. 2006). Social exchanges, on the other hand, involve the development of interdependent relationships in which unspecified bidirectional transactions occur. In other words, “something” desirable is given by the “donor,” and at some future point in time, “something” desirable is returned by the “recipient” (Gould-Williams 2007). Such interdependence is based on “normative rules” of reciprocity (Gouldner 1960), which are the “defining characteristic” of social exchange relationships (Cropanzano and Mitchell 2005, 876). Because of the temporal gap between what is given and what is returned, successful social exchange relationships are characterized by high degrees of loyalty and trust between donor and recipient (Gould-Williams 2007).

Social exchange theory has been used extensively as a framework by both HRM (Kehoe and Wright 2013) and, to a lesser extent, public administration scholars (Gould-Williams 2007; Gould-Williams and Davies 2005) to explain the relationship between HPHRPs and employee outcomes. HPHRPs are typically conceived as a group of carefully designed combinations of HR practices meant to improve performance (Boselie, Dietz, and Boon 2005). The implementation of HPHRPs is premised on the assumption that organizations want to promote workforce commitment by investing in employees (the resource-based or “soft” approach to HRM; see Gould-Williams 2007). This is distinct from the control-based approach to HR management, in which employees are closely monitored and directed (the “hard” approach to HRM).

When organizations invest in HPHRPs, employees are assumed to view this as an expression of the organization’s trust and commitment to them, an appreciation of their work, and a desire to engage in a long-term relationship (Shore and Shore 1995; Sun, Aryee, and Law 2007). For instance, allowing employees to plan their work may signal that the organization trusts them. Personalized training and development programs can signal that organizations value employees, as they are prepared to invest in their careers and future prospects. Opportunities for promotion and job security may similarly signal the organization’s appreciation and recognition of employees’ long-term worth. Therefore, in combination, HPHRPs should promote the view that organizations are desirous of fostering a long-term social rather than a short-term economic exchange relationship with employees (Kehoe and Wright 2013).

Signals sent by organizations through HPHRPs are not always perceived by employees as intended, however. “All HRM practices communicate messages constantly and in unintended ways, . . .
feel compelled to make "further contributions . . . to level the field"
made by the organization in HPHRPs. Accordingly, employees may
will be sufficient to "balance the scales" given the high investments
On the basis of social exchange theory, Kehoe and Wright (2013)
teamwork, training, and effective communication, the social interac-
zation's investment in them and, thus, the state of the social exchange
relationship (see Jiang et al. 2012; Sun, Aryee, and Law 2007).

The Direct Effect of HPHRPs on Employee Outcomes
According to social exchange theory, when employees perceive
HPHRPs as indicative of the organization’s investment in them, they
are likely to respond with positive attitudes (affective commitment)
and behaviors (OCBs). Affective commitment refers to an employee's
emotional attachment to the organization, and it represents one of
Allen and Meyer’s (1990) three dimensions of organizational com-
mitment. Employees who are affectively committed or emotionally
attached to the organization will stay with their organization because
they want to, not because they have to (continuance) or feel they
ought to (normative). In doing so, Kehoe and Wright contend, affec-
tively committed employees will have “a sense of pride at being part
of the organization” (2013, 371). Thus, when employees perceive
HPHRPs as signaling a supportive work environment, they will feel
motivated to work toward organizational goals and thus develop an
affective bond with the organization. In other words, if the organi-
ization is committed to them, they will commit to it (Shore et al.
2006). Similarly, from a process theory perspective, when the work
environment promotes collaboration between employees through
teamwork, training, and effective communication, the social interac-
tions will provide opportunities for employee bonding and increased
identification and commitment to the organization (Perry 2000).

On the basis of social exchange theory, Kehoe and Wright (2013)
suggest it is unlikely that employees’ affective commitment alone
will be sufficient to “balance the scales” given the high investments
made by the organization in HPHRPs. Accordingly, employees may
feel compelled to make “further contributions . . . to level the field”
(Kehoe and Wright 2013, 372) by displaying positive work-related
behaviors, such as OCBs. OCBs have been defined as “individual
behaviors that are discretionary, not directly or explicitly recognized
by the formal reward system and that in the aggregate promote the
effective functioning of the organization” (Organ 1988, 4). As such,
OCBs go beyond task performance by capturing activities that are
not contractually specified and hence epitomize behaviors associ-
ated with positive social exchanges. Public sector studies by Gould-
Williams (2007), Boselie (2010), Gould-Williams et al. (2014), and
Messersmith et al. (2011) support these claims. Thus, we hypoth-
esize the following:

Hypothesis 1: HPHRPs will be positively related to employ-
ees’ (a) affective commitment and (b) OCBs.

The Indirect Effect: The HPHRP–PSM Link
Within the public sector, an additional outcome of the social
exchange relationship is public service motivation, which we predict
will mediate the link between HPHRPs and employee outcomes.
Before discussing this relationship, we first define and demonstrate
how PSM differs conceptually from employee outcomes.

PSM is defined as a person’s predisposition to respond to motives
that are mainly or distinctly grounded in public institutions (Perry
and Wise 1990). It also refers to the beliefs, values, and attitudes that
go beyond self- and organizational interest and motivate individuals
to participate in behaviors that are beneficial to the community or to
society in general (Vandenabeele 2007). These same values are encap-
sulated in the missions of many public organizations. Thus, PSM can
be viewed as a prosocial value that encourages employees to engage
in behaviors that are beneficial to the community.

Conceptually, PSM differs from employee outcomes in “subtle,
but theoretically important ways” (Gould-Williams et al. 2014,
939). Here we focus on three distinctions: its focus, proximity, and
stability. As a concept, PSM captures the degree to which employees
are committed to serving the public or the community at large. As
such, the principal beneficiary of employees’ motivation lies outside
the organization. In contrast, employee outcomes relate directly
to employees’ work or job environment (e.g., job satisfaction,
organizational commitment, organizational citizenship behaviors).
Nevertheless, both PSM and employee outcomes independently
affect organizational performance in the public sector (Kim 2005).

Second, with regard to the proximity of PSM to HPHRPs, we refer
to process theory (Perry 2000). According to Perry, sociohistorical
context (an individual’s education, religious affiliation, and paren-
tal influence) affects the extent to which an individual is public
service motivated. Thus, sociohistorical factors shape an individual’s
PSM before he or she enters the organization. In contrast, affective
commitment and OCBs (along with other employee outcomes)
are shaped and developed within the work context. Therefore,
employee outcomes can only become evident after an employee
enters the organization, whereas PSM is already apparent prior to
entry. Nevertheless, process theory predicts that the same workplace
context that influences employee outcomes may also influence
employees’ PSM.

Third, PSM has been conceptualized as a relatively stable variable
that changes slowly over time (Wright and Grant 2010). Although
there is limited evidence as to whether PSM should be regarded as
trait- or state-like, it appears that as a value, PSM is more stable
than employee outcomes (attitudinal and behavioral responses
such as job satisfaction and OCBs), which may fluctuate daily depending
on employees’ work experiences. For instance, Ilies, Scott, and Judge
describe OCBs as “episodic behavior” in which in-role behaviors are
“punctuated by occasions when people do something that makes a
difference” (2006, 561). Therefore, while employee outcomes largely
reflect situational influences at work, PSM is a more enduring indi-
vidual value that is linked to the well-being of others. Nevertheless,
we acknowledge that employees’ PSM is not impervious to
managerial influences, or beneficiary contact, and thus has state-like characteristics (see Bellé 2013; Grant 2007).

From a social exchange theory perspective, we anticipate that employees reciprocate organizational investments in HPHRPs by becoming more empathetic toward the organization’s mission and more desirous of the organization being successful, as evident in increased PSM. In other words, we propose that investments in HPHRPs will result in the organization’s mission to serve the public becoming more salient to employees as their indebtedness increases.

Likewise, from a process theory perspective, the work environment will influence employees’ PSM through HPHRPs in that training and development programs will not only equip employees with the skills needed to perform tasks, thus increasing their perceptions of self-efficacy, but also provide organizations with opportunities to reinforce desired employee values (PSM), attitudes, and behaviors. Effective communication systems can reinforce the importance of employees’ job roles and provide direction and feedback as they strive to achieve organizational goals. Job security and internal promotion will assist in retaining trained workers whose values, attitudes, and behaviors are consistent with the organization’s mission to serve the community. Although researchers have discussed the potential for HR practices to influence PSM (Giauque, Anderfuhren-Biget, and Varone 2013; Vandenabeele 2011), and Gould-Williams et al. (2014) provide evidence for a component of PSM, civic duty, we empirically test this relationship using a complete measure of PSM.

Hypothesis 2: HPHRP will be positively related to employees’ PSM.

The Indirect Effect: The PSM–Employee Outcomes Link

Process theory predicts that PSM will lead to desirable outcomes when employees can express their prosocial motivations to serve the public at work. This view is consistent with the self-concept (Shamir 1991), which asserts that individuals have multiple identities (e.g., father, teacher, musician, carer) and derive satisfaction from engaging in roles that are consistent with such identities. When individuals primarily define themselves as givers, they will seek to maintain their prosocial identities as one of the “most important motives, values, and guiding principles in life” (Grant, Dutton, and Rosso 2007; 37). For instance, Gould-Williams et al. (2014) and Vandenabeele (2009) allude to the importance of the self-concept when they assert that PSM will be associated with positive attitudes and behaviors if organizations provide opportunities for employees to engage in meaningful public service. This can be achieved through employees’ direct contact with service beneficiaries or by receiving positive feedback relating to their role in the service delivery chain.

If we assume that public sector organizations are more likely to provide work that is consistent with the prosocial identities of public service employees, then employees’ self-identities are reinforced. They will then be desirous of displaying attitudes and behaviors of benefit to the organization, as evidenced by their affective commitment and displays of OCBs (Gould-Williams et al. 2014; Kim 2006, 2012; Leisink and Steijn 2009). HPHRPs are likely to promote such an environment as managers permit employees to engage in autonomous work design, as well as listen to and communicate relevant issues with employees. Therefore, we anticipate that HPHRPs will also have an indirect effect (through PSM) on employee outcomes as employees’ attitudes and behaviors will be consistent with their self-concepts. On the basis of process theory, we propose the following two hypotheses:

Hypothesis 3: PSM will be positively related to employees’ (a) affective commitment and (b) OCBs.

Hypothesis 4: PSM will mediate the relationship between HPHRPs and employees’ (a) affective commitment and (b) OCBs.

Method

Research Setting

Our sample included academics, administrators, physicians, nurses, and pharmacists from public sector organizations in Egypt. Access to organizations was obtained through personal contacts of a research team member in the area. Data were then collected from a convenience sample of employees within each organization. To reduce social desirability response bias, pen-and-paper questionnaires were distributed during January 2012 by a member of the research team to individuals on a face-to-face basis during working hours. Participants were reassured that all responses would be treated anonymously (Miao et al. 2013). The researcher returned to collect the completed questionnaires the following day and on two other occasions. The English-language questionnaire was back-translated into Arabic and pre-tested with a group of Egyptian health and education professionals (Brislin 1970).

Sample Characteristics

Of the 1,000 questionnaires distributed, 671 were returned, for a 67 percent response rate. Just over half the respondents were male (53.5 percent); 51 percent were ages 20–30, 22 percent were 31–40, and 27 percent were older than 40. With regard to educational background, 31 percent had a doctorate, 21 percent a master’s degree, and 42 percent a bachelor’s degree, while 6 percent had vocational qualifications. In addition, 37 percent of respondents had worked for their employer for less than 5 years, 25 percent between 5 and 10 years, and 38 percent more than 10 years.

Measures

Constructs were measured using multi-item scales derived from existing studies whenever possible (see appendix). All items were measured on Likert scales with the endpoints “strongly disagree” (1) and “strongly agree” (7).

HPHRPs

Twenty items were selected from existing studies to measure our five HPHRPs, which were consistent with social exchange theory.
The practices are generally referred to as “soft” or “developmental” in that their implementation is designed to promote worker well-being and enhanced commitment (Gould-Williams 2007). We were careful to avoid HR practices that emphasize economic rather than social exchanges (such as wages and performance-related pay). Our practices included (1) training and development, (2) job security, (3) autonomous work design, (4) communication, and (5) promotion (Boon et al. 2011; Boselie 2010; Kehoe and Wright 2013; Morgeson and Humphrey 2006). Sample items included, “My organization offers opportunities for training and development” (training); “Employees in this job can be expected to stay with this organization for as long as they wish” (job security); “My organization allows me to plan how I do my work” (autonomous work design); “The communication between me and other employees at work is good” (communication); and “I have good opportunities of being promoted within this organization” (promotion). Cronbach’s alpha for these HPHRP factors ranged between 0.77 and 0.92.

**PSM**
PSM was measured using a 13-item scale comprising four first-order factors developed by Perry (1996) and refined by Giaquque et al. (2011). A pre-test confirmed its suitability for the Egyptian context. Attraction to public policy making (e.g., “I am very interested in politics”), compassion (“It is difficult for me to contain my feelings when I see people in distress”), and commitment to the public interest (“I unselfishly contribute to my society”) were each measured with three items, while self-sacrifice (“I am prepared to make enormous sacrifices for the good of the country”) comprised four items. Cronbach’s alphas ranged from 0.65 to 0.82.

**Affective Commitment**
Affective commitment was measured using an abridged three-item version of Meyer, Allen, and Smith’s (1993) scale. A sample item is “I feel emotionally attached to this organization” (α = 0.89).

**OCBs**
Citizenship was also measured using an abridged three-item version of Lee and Allen’s (2002) scale. A sample item is “I offer ideas to improve the functioning of the organization” (α = 0.77).

**Controls**
Initially, we controlled for the effects of employees’ age, gender, education, and tenure on PSM and outcome variables (OCBs and organizational commitment; see Messersmith et al. 2011; Meyer, Allen, and Smith 1993; Moynihan and Pandey 2007). Our results were highly consistent with and without their inclusion. Consequently, in the interest of precision and parsimony, and consistent with recent recommendations of Williams, Vandenberg, and Edwards (2009), we report the results “control free.”

**Analysis**
Structural equation modeling was undertaken with AMOS18. We followed Anderson and Gerbing’s (1988) two-step approach, first estimating the measurement model before considering the structural model. Although the items were broadly normally distributed, to minimize type I error, models were estimated using maximum likelihood with bootstrapped standard errors based on 1,000 resamplings. Here, the resampled coefficient estimates served as a proxy for the sampling distribution of the population parameters (Im and Workman 2004). Confirmatory factor analysis (CFA) assessed the factor structure, reliability, and validity of the four focal latent variables. Before presenting the overall measurement model and testing for common method bias, separate models established the appropriateness of the two higher-order constructs for HPHRPs and PSM.

**Measurement Validation**
Treating HPHRPs as a more general, superordinate concept that is manifest through individual HR practice subdimensions is justifiable theoretically (Jiang et al. 2012). To determine empirically whether our five HR practices reflected such a higher-order construct, a second-order factor model was estimated. The model exhibited a satisfactory fit ($\chi^2_{165} = 851.255$, $p < .001$; CFI [comparative fit index] = 0.918, RMSEA [root mean square error of approximation] = 0.079, SRMR [standardized root mean square residual] = 0.059). All the standardized first-order loadings were positive, substantial, and statistically significant (not shown), suggesting that each HR practice was well defined, but more importantly, the second-order loadings were associated with the higher factor: training (0.851), promotion (0.858), job security (0.674), communication (0.860), and work design (0.751, $p < .001$).

With regard to PSM, one item was dropped from the attraction to policy making factor because it loaded weakly (0.22), and another was dropped from the commitment to public interest factor because of serious cross-loading. Thereafter, the second-order measurement model exhibited a good fit ($\chi^2_{69} = 172.323$, $p < .001$; CFI = 0.955, RMSEA = 0.070, SRMR = 0.043). Again, all standardized second-order loadings were substantial and significant: self-sacrifice (0.827), compassion (0.674), commitment to public interest (0.990), and attraction to policy making (0.436, $p < .001$). Thus, PSM was also treated at the more general, abstract, second-order level in the subsequent structural model.

**Overall Measurement Model**
The four focal constructs, comprising two first-order (OCB and affective commitment) and two second-order factors (HPHRPs and PSM), were entered into a CFA to assess their psychometric properties. Results revealed a satisfactory fit ($\chi^2_{161} = 1154.612$, $p < .001$; CFI = 0.913, RMSEA = 0.052, SRMR = 0.062), with all first- and second-order loadings significant ($p < .001$). For each latent variable, composite reliability was greater than 0.70, and average variance extracted exceeded 0.50, indicating that each construct possessed high internal consistency. In addition, all constructs achieved discriminant validity based on Fornell and Larcker’s (1981) approach, as the square root of their average variance extracted estimates exceeded their corresponding interconstruct correlations (see table 1).

**Table 1** Interconstructs and Reliability Estimates

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>1. HPHRPs</td>
<td>0.72  (0.84)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. PSM</td>
<td>0.30**</td>
<td>0.84 (0.76)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. OCBs</td>
<td>0.61</td>
<td>0.62</td>
<td>0.73 (0.77)</td>
<td></td>
</tr>
<tr>
<td>4. Affective commitment</td>
<td>0.55</td>
<td>0.57</td>
<td>0.657</td>
<td>0.83 (0.87)</td>
</tr>
</tbody>
</table>

*Subdiagonal entries are the latent construct intercorrelations. The diagonal shows the square root of the AVE with composite reliability in parentheses.
**All correlations above 0.2 are significant at $p < .001$.**
Common Method Variance
Defined as artificial correlation among the constructs attributable to the measurement method employed (Podsakoff et al. 2003), common method variance can bias survey-based results. As all variables were collected from the same respondents at the same time, the effects of common method variance were assessed using Harman’s test and the more stringent latent method factor approach (see Chang, Van Witteloostuijn, and Eden 2010). In the latter, each item loaded on its theoretical construct and the latent common method factor (Podsakoff et al. 2003). The impact on the intercorrelations (table 1) was negligible; all remained significant. Moreover, the average variance extracted by the common method factor was 0.21, well below the 0.50 threshold that Fornell and Larcker (1981) associated with a substantive construct. Thus, common method bias was not problematic.

Structural Model
To account for the association between OCBs and affective commitment, the assumption of independence between these latent variables’ residual errors was relaxed, and disturbances were allowed to correlate (see Im and Workman 2004). To test the mediating role of PSM, the significance of individual path coefficients first was assessed, and then the combined indirect effect was gauged using Preacher and Hayes’s (2004) bootstrapped variant of the Sobel test. Results are presented treating HPHRPs as a system of practices (second-order factor), followed by practice-by-practice analyses.

The proposed structural model provided an adequate fit to the data ($R^2 = 0.81$, $p < .001$; $CFI = 0.90$, RMSEA = 0.052, SRMR = 0.062). Together, HPHRPs and PSM explained 58.8 percent of the variance ($R^2 = 0.588$) in OCBs and 48.4 percent in affective commitment. In addition, HPHRPs accounted for a modest 8.9 percent of the variance in PSM. As shown in figure 2, HPHRPs had significant positive effects on OCBs ($β = 0.468, p < .001$), affective commitment ($β = 0.410, p < .001$), and PSM ($β = 0.299, p < .001$). Thus, hypotheses 1a, 1b, and 2 were supported, as HPHRP enhanced employee work-related attitudes and desire to serve the public. Likewise, PSM was positively related to both OCBs and affective commitment ($β = 0.487$ and $β = 0.452$, respectively, $p < .001$). Thus, consistent with hypotheses 3a and 3b, PSM was associated with positive work-related attitudes and behaviors. Together, the individual path coefficients provide prima facie evidence that PSM mediated the relationship between HPHRPs and employee outcomes.

Next, mediation tests of the indirect relationship between HPHRPs and each employee outcome were conducted using the Preacher-Hayes (2004) bootstrapped approach. The coefficient associated with the indirect path is labelled $a \times b$, where $a$ is the standardized path coefficient from HPHRPs to PSM and $b$ is the standardized path from PSM to the respective employee outcome (see figure 2). For instance, the indirect effect of HPHRPs through PSM to OCBs was $0.144 \times 0.483$. It was significantly different from zero (Sobel test $= 3.71, p < .001$). Thus, PSM mediated the relationship between HPHRPs and OCBs. Repeating the test for affective commitment ($β = 0.135$, Sobel test $= 3.66, p < .001$) revealed a similar conclusion in support of hypothesis 4. Nevertheless, the direct paths from HPHRPs to employee outcome remained statistically significant after accounting for PSM, indicating that PSM only acted as a partial mediator of this process and, by inference, that other mediators await discovery (see the Discussion section).

Robustness Tests
To examine the effect of each individual high-performance HR practice, we repeated the analysis five times, replacing the second-order (HPHRP) factor with a first-order practice factor. Model fits were good (see table 2), but, more importantly, each HR practice was positively related to PSM, which, in turn, was positively related to both organizational commitment and OCBs. Moreover, the Preacher-Hayes Sobel tests indicated that all indirect effects (5 practices x 2 employee outcomes) were significant ($p < .05$). Thus, the individual practices “behaved” consistently, with PSM partially mediating these relations.

Finally, we determined the total effect of each HR practice on each employee outcome. The total effect is simply the sum of the direct and indirect standardized path coefficients $[c' + (a \times b)]$. For instance, the total effect of training on commitment was $0.487 + 0.299 \times 0.483$. It was significantly different from zero ($0.315 + 0.215 \times 0.515$). Examining the results from a practice-by-practice perspective revealed that training (0.487 versus 0.426), promotion (0.426 versus 0.396), and communication (0.606 versus 0.487) had a greater association with OCBs than organizational commitment. Conversely, job security (0.269 versus 0.210) and autonomous work design (0.396 versus 0.292) had a greater association with organizational commitment than OCBs. Examining these results from an outcome-by-outcome perspective revealed that communication was the most important and job security the least important practice for promoting both OCBs and commitment.

Discussion
Overall, our findings are consistent with our hypotheses: employee perceptions of HPHRPs are positively associated with PSM, affective commitment, and OCBs. Furthermore, PSM partially mediates the HPHRP–employee outcome relationship. Thus, according to social exchange theory, when organizations signal their desire to engage in social exchange relationships by investing in systems of HPHRPs, employees respond by becoming more empathetic toward the organization’s mission and reciprocate with attitudes and behaviors of benefit to the organization. In addition, all five HR practices used in our system had positive effects on PSM, organizational commitment, and OCBs. However, the relative association of each HR practice differed across the employee outcomes and PSM (see table 2). This suggests that PSM is both conceptually and empirically different from the employee outcomes.

While prior public sector research has alluded to the importance of HR practices in promoting PSM and employee outcomes
(Giauque, Anderfuhr-Biget, and Varone 2013; Vandenabeele 2011), our study empirically confirms that employees’ perceptions of HR practice affect these outcomes. Our results are consistent with previous research that has examined either organizational antecedents (Camilleri 2007; Moynihan and Pandey 2007; Vandenabeele 2011) or employee outcomes (Kim 2005; Naft and Crum 1999; Vandenabeele 2009) of PSM. Specifically, we demonstrate that after entry, an organization’s HPHRPs can influence employees’ PSM, which, in turn, is associated with desirable employee outcomes. However, the effect size of HPHRPs on PSM is relatively small ($R^2 = 0.08$) but nevertheless consistent with Gould-Williams et al.’s (2014) study of Welsh civil servants. As we have considered just one of many possible “institutional shapers of individual behaviors and beliefs” (Moynihan and Pandey 2007, 41), we anticipate that the effects of HPHRPs in combination with other “institutional shapers” will be more substantial (Perry and Vandenabeele 2008).

Our study, using the full four-component measure of PSM, extends and confirms research reported by Gould-Williams and colleagues (2014) based on a narrower single-component measure, civic duty. Similarly, our system of HR practices is guided by social exchange theory, which emphasizes socialization and adaptation, whereas Gould-Williams et al.’s study was based on recruitment, selection, and attrition criteria (Jiang et al. 2012; Wright and Grant 2010). Nevertheless, despite adopting a different theoretical lens and measures, our conclusions are consistent.

These results have implications for managers who are interested in improving social exchanges in public sector organizations. As investments in HPHRPs are positively associated with PSM and desirable employee outcomes, managers should endeavor to ensure that sufficient resources are allocated to implement HR practices. Further, the costs associated with HR practices not only involve financial investments (e.g., in paying for training programs and effective communication systems) but workforce investments, too (e.g., retaining staff to promote job security and identifying qualified individuals for promotion). Such investments can signal the organization’s long-term commitment to the workforce.

Also, it is possible that managers’ adoption and ongoing investments in HR systems may provide employees with the impetus needed to remain motivated when their desire to serve the public, their commitment to the organization, or their willingness to exert discretionary effort at work ebbs. Meaningful communication may not only reassure employees that their contributions are valued but also reinforce the importance of their job and services offered to the public. Investments in training and development programs should not only equip employees with job-related skills and the confidence to deliver (increase their self-efficacy) but also provide them the competencies needed to fulfill their career aspirations. However, investing in systems of HR practices is likely to pose a substantial challenge to managers in today’s efficiency-driven climate. At the very least, our findings will assist managers in making informed decisions, aware that their investments (or lack of) in HR systems will affect workforce performance in important ways.

Finally, while the overall system of HPHRPs is positively associated with PSM and employee outcomes, individual HR practices had differential effects. For instance, perceptions of job security were an important driver of PSM but had a much reduced effect on affective commitment and OCBs. In contrast, both communication and training and development programs were important drivers of affective commitment and OCBs but not PSM. Therefore, although managers may opt to invest in a single HR practice rather than a collective system, we suggest that such selectivity may unintentionally result in undermining a desired employee outcome.

**Conclusion**

Identifying the mechanisms through which high-performance human resource practices affect employee outcomes has become of central importance to scholars in the HRM field. Our article contributes to this literature by considering a mechanism of relevance to public sector organizations, PSM. Although prior research has evaluated the effects of organizational factors on PSM and, in turn, PSM on employee outcomes, we link the two streams of research together to show that PSM is a motivational mechanism through which HPHRPs influence affective commitment and OCBs.

As always, results must be discussed within the boundaries of the study’s limitations, which suggest interesting avenues for future research. First, the research design was cross-sectional, precluding casual inference. For instance, it is possible that employees who are highly committed to the organization are more likely to endorse its mission, goals, and values (encapsulated in PSM), given their attachment to and desire for the organization to succeed. Likewise, it is possible that as employee and organizational values align, perceptions of HPHRPs will be more favorable.
Second, social exchange relations have been analyzed from a static rather than dynamic perspective. Yet HR practices continuously send signals that employees may interpret in idiosyncratic and unintended ways (Bowen and Ostroff 2004). For instance, two employees may have similar perceptions of an individual HR practice (or overall system) today. To one employee, this may constitute an improvement compared with “last quarter,” thereby signaling greater organizational support, while to another, this may be a deterioration, signaling less organizational support. Longitudinal data will enable the unique contribution of levels and changes in HR practice perceptions to be identified and issues of casual inference addressed.

Third, the use of self-reported measures of OCBs, while consistent with other recent public sector studies (e.g., Taylor 2013), may have inadvertently inflated observed correlations. To allay problems of common method bias (Podsakoff et al. 2003) and overreliance on weak post hoc statistical test procedures (Chang, Van Witteloostuijn, and Eden 2010), collecting data from multiple informants, such as supervisory ratings of employees’ OCBs and affective commitment, would be desirable. Nevertheless, PSM and HR practice perceptions would remain same-sourced. Alternatively, employee and managerial perspectives could be contrasted.

Fourth, the relationships between our focal constructs, as presented in figure 1, are premised on the norms of reciprocity. This asserts people will want to reciprocate past good deeds with positive future actions (Angle and Perry 1983). However, the empirical evidence suggests that indebtedness is a highly heterogeneous individual characteristic (Shore and Coyle-Shapiro 2003). When felt obligation is high, individuals are likely to reciprocate strongly in the form of desirable employee outcomes. When felt obligation is lower, responses will be diminished. Research assessing the moderating role of employees’ perceived indebtedness should provide a more complete and nuanced understanding of our model’s theoretical relations.

Fifth, as PSM only partially mediates the HPHRP–employee outcomes relationship, other mediators await discovery. An interesting candidate is prosocial impact, a construct of central relevance to the public sector (Grant 2007). Prosocial impact captures employees’ perceptions of the importance and impact of their work on beneficiaries. From a social exchange theory perspective, as organizations invest in HPHRPs, they may not only signal to their employees the extent to which they are valued but also help them understand how their work benefits others and, in so doing, enhance employee attitudes and behaviors (Grant 2007).

Finally, the generalizability of our findings remains unknown. The data comprised a convenience sample collected from Egyptian higher education and health sector professionals. Nevertheless, our results are consistent with prior studies exploring either antecedents or consequences of PSM in both individualistic and collectivistic cultures (Gould-Williams et al. 2014; Kim 2012; Leisink and Steijn 2009). Thus, we are optimistic that future studies across different cultures and public service settings will confirm these results. In spite of these limitations, we have shown that PSM is a notable mechanism by which HPHRPs are associated with desirable employee outcomes in public sector organizations.

References


### Questionnaire Items and Statistics

#### Constructs and Items

<table>
<thead>
<tr>
<th>Constructs and Items</th>
<th>Mean</th>
<th>SD</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Performance Human Resource Practices</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Training and development</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;My organization offers opportunities for training and development.&quot;</td>
<td>3.642</td>
<td>2.000</td>
<td>0.810</td>
</tr>
<tr>
<td>&quot;In my opinion, the number of training programs provided for employees by my organization is sufficient.&quot;</td>
<td>3.150</td>
<td>1.806</td>
<td>0.833</td>
</tr>
<tr>
<td>&quot;When my job involves new tasks, I am properly trained.&quot;</td>
<td>3.323</td>
<td>1.818</td>
<td>0.869</td>
</tr>
<tr>
<td>&quot;My organization provides excellent opportunities for personal skills development.&quot;</td>
<td>3.178</td>
<td>1.844</td>
<td>0.839</td>
</tr>
<tr>
<td><strong>Job security</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Employees in this job can be expected to stay with this organization for as long as they wish.&quot;</td>
<td>4.813</td>
<td>1.774</td>
<td>0.713</td>
</tr>
<tr>
<td>&quot;Job security is almost guaranteed to employees in this organization.&quot;</td>
<td>4.637</td>
<td>1.956</td>
<td>0.818</td>
</tr>
<tr>
<td>&quot;If the organization was facing economic problems, employees would be the last to get downsized.&quot;</td>
<td>4.730</td>
<td>1.803</td>
<td>0.582</td>
</tr>
<tr>
<td>&quot;I am certain of keeping my job.&quot;</td>
<td>5.166</td>
<td>1.717</td>
<td>0.653</td>
</tr>
<tr>
<td><strong>Work design</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;My organization allows me to plan how I do my work.&quot;</td>
<td>3.308</td>
<td>1.918</td>
<td>0.729</td>
</tr>
<tr>
<td>&quot;My organization allows me to make a lot of job decisions on my own.&quot;</td>
<td>3.311</td>
<td>1.936</td>
<td>0.913</td>
</tr>
<tr>
<td>&quot;My organization allows me to decide on my own how to do my work.&quot;</td>
<td>3.358</td>
<td>1.967</td>
<td>0.849</td>
</tr>
<tr>
<td>&quot;My organization gives me considerable opportunity for independence and freedom in how I do the work.&quot;</td>
<td>4.068</td>
<td>1.942</td>
<td>0.631</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;The communication between me and other employees at work is good.&quot;</td>
<td>3.566</td>
<td>1.815</td>
<td>0.775</td>
</tr>
<tr>
<td>&quot;Management keeps me well informed of how well the organization is doing.&quot;</td>
<td>5.490</td>
<td>1.250</td>
<td>0.629</td>
</tr>
<tr>
<td>&quot;The communication between me and the managers/supervisors at work is good.&quot;</td>
<td>5.108</td>
<td>1.562</td>
<td>0.716</td>
</tr>
<tr>
<td>&quot;Employees in my organization regularly receive formal communication regarding company goals and objectives.&quot;</td>
<td>3.877</td>
<td>1.760</td>
<td>0.659</td>
</tr>
<tr>
<td><strong>Promotion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I have good opportunities of being promoted within this organization.&quot;</td>
<td>4.406</td>
<td>1.966</td>
<td>0.604</td>
</tr>
<tr>
<td>&quot;The promotion process used by my organization is fair for all employees.&quot;</td>
<td>4.003</td>
<td>1.990</td>
<td>0.753</td>
</tr>
<tr>
<td>&quot;Employees who desire promotion in this organization have more than one potential position they could be promoted to.&quot;</td>
<td>3.526</td>
<td>1.824</td>
<td>0.741</td>
</tr>
<tr>
<td>&quot;Qualified employees in this job have the opportunity to be promoted to positions of greater pay and/or responsibility within the organization.&quot;</td>
<td>3.792</td>
<td>1.869</td>
<td>0.719</td>
</tr>
<tr>
<td><strong>Public Service Motivation</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Attraction to public policy making</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>&quot;I am very interested in politics.&quot;</td>
<td>5.147</td>
<td>1.541</td>
<td>0.967</td>
</tr>
<tr>
<td>&quot;I like to discuss political issues with others.&quot;</td>
<td>5.189</td>
<td>1.537</td>
<td>0.872</td>
</tr>
<tr>
<td>&quot;I don’t care much for politicians.&quot; (Reverse-coded)*</td>
<td>4.712</td>
<td>1.831</td>
<td>—</td>
</tr>
<tr>
<td><strong>Commitment to public interest</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I unselfishly contribute to my society.&quot;</td>
<td>5.928</td>
<td>0.945</td>
<td>0.823</td>
</tr>
<tr>
<td>&quot;I would prefer seeing public officials do what is best for the society even if it harmed my interest.&quot;</td>
<td>5.717</td>
<td>1.328</td>
<td>0.765</td>
</tr>
<tr>
<td>&quot;I am very interested in what is happening in my society.&quot;</td>
<td>6.076</td>
<td>0.977</td>
<td>—</td>
</tr>
<tr>
<td><strong>Compassion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;It is difficult for me to contain my feelings when I see people in distress.&quot;</td>
<td>5.776</td>
<td>1.295</td>
<td>0.634</td>
</tr>
<tr>
<td>&quot;I am often moved by the plight of the underprivileged.&quot;</td>
<td>6.244</td>
<td>0.833</td>
<td>0.844</td>
</tr>
<tr>
<td>&quot;I am often reminded by daily events about how dependent we are on one another.&quot;</td>
<td>5.864</td>
<td>1.016</td>
<td>0.559</td>
</tr>
<tr>
<td><strong>Self-sacrifice</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I am prepared to make enormous sacrifices for the good of the society.&quot;</td>
<td>5.761</td>
<td>1.124</td>
<td>0.768</td>
</tr>
<tr>
<td>&quot;Serving citizens would give me a good feeling even if no one paid me for it.&quot;</td>
<td>6.035</td>
<td>1.120</td>
<td>0.698</td>
</tr>
<tr>
<td>&quot;It is definitely more important to me to do good deeds than doing well financially.&quot;</td>
<td>5.925</td>
<td>1.168</td>
<td>0.676</td>
</tr>
<tr>
<td>&quot;Making a difference in society means more to me than personal achievements.&quot;</td>
<td>5.807</td>
<td>1.231</td>
<td>0.803</td>
</tr>
<tr>
<td><strong>Organizational Commitment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I feel emotionally attached to this organization.&quot;</td>
<td>4.824</td>
<td>1.767</td>
<td>0.774</td>
</tr>
<tr>
<td>&quot;I really feel as if this organization's problems are my own.&quot;</td>
<td>4.801</td>
<td>1.946</td>
<td>0.852</td>
</tr>
<tr>
<td>&quot;I feel a strong sense of belonging to my organization.&quot;</td>
<td>4.773</td>
<td>1.895</td>
<td>0.848</td>
</tr>
<tr>
<td><strong>OCBs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I offer ideas to improve the functioning of the organization.&quot;</td>
<td>4.891</td>
<td>1.703</td>
<td>0.759</td>
</tr>
<tr>
<td>&quot;I defend the organization when other employees criticize it.&quot;</td>
<td>4.935</td>
<td>1.637</td>
<td>0.762</td>
</tr>
<tr>
<td>&quot;I demonstrate concern about the image of the organization.&quot;</td>
<td>5.909</td>
<td>1.332</td>
<td>0.668</td>
</tr>
</tbody>
</table>

*These items were deleted from the final analysis.*