

# Clarifying the Relationship Between Public Service Motivation and In-Role and Extra-Role Behaviors: The Relative Contributions of Person-Job and Person-Organization Fit

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Nina Mari van Loon<sup>1</sup>, Wouter Vandenberghe<sup>1,2</sup>,  
and Peter Leisink<sup>1</sup>

## Abstract

A core proposition of public service motivation (PSM) theory is that PSM is positively related to individual performance. Some studies, however, suggest that this relationship is mediated by person-job or person-organization fit. This study aims to further clarify the relationship between PSM and performance by, first, studying the mediation role of *both* person-job and person-organization fits and, second, by investigating this mediation for *both* in-role and extra-role behavior. Whereas in-role behavior is aimed at the individual task, extra-role is aimed at helping colleagues. This difference may matter for the role of PSM and fit. To this end, we conducted structural equation modeling with bootstrapping on self-reported survey data from public employees ( $n = 1,031$ ). The analysis showed that person-job, but not person-organization fit, fully mediated the relationship between PSM and in-role behavior. The relationship with extra-role behavior was not mediated. The PSM-performance relationship may thus be more complex than previously envisioned, as both type of performance and person-job fit matter.

## Keywords

public service motivation, person-job fit, person-organization fit, in-role behavior, extra-role behavior.

## Introduction

Public service motivation (PSM), described as the motivation to contribute to society (Perry & Wise, 1990), can drive employees to go above and beyond the call of duty when working on meaningful public services (Brewer, 2008; DiIulio, 1994). Empirical research has found that PSM is positively related to organizational commitment, job satisfaction, job performance (Leisink & Steijn, 2009; Vandenberghe, 2009), extra-role behavior (Gould-Williams, Mostafa, & Bottomley, 2013; Kim, 2006), supervisor ratings (Bright, 2007), and even student grades as a measure of teacher performance (Andersen, Heinesen, & Pedersen, 2014). This has made PSM a promising concept in improving public services (Andersen et al., 2014; Brewer, 2008).

However, it may be premature to conclude that PSM is unconditionally related to higher performance because, placing PSM within institutional theory (Perry & Vandenberghe, 2008), both the individual and the environment play a role in determining behavior. Following person-environment fit theory (Kristof-Brown, Zimmerman, & Johnson, 2005), PSM can be seen as a “need” to contribute to society, which should be given opportunities to be put into practice through the job (i.e., person-job fit), or as a set of personal values that needs to fit with the

organization’s values (i.e., person-organization fit), if the PSM is to lead to better performance.

Although some studies have found direct effects of PSM on performance, others have found that person-environment fit is an important intermediate mechanism (Bright, 2007; Kim, 2006; Leisink & Steijn, 2009). The relationship between PSM and performance thus seems much more nuanced and complex than the original proposition that PSM is positively related to performance (Perry & Wise, 1990). Only one study has simultaneously analyzed the relative importance of person-job and person-organization fits for the relationship between PSM and *job choice*, and this study found that the fit with the job was more important (Christensen & Wright, 2011). On the other hand, Bright (2013) found that PSM was a better predictor of person-organization fit than person-job fit. From the viewpoint of the person-environment fit literature, it is argued that the

<sup>1</sup>Utrecht University, The Netherlands

<sup>2</sup>KU Leuven, Belgium

## Corresponding Author:

Nina Mari van Loon, Utrecht School of Governance, Utrecht University,  
Bijlhouwerstraat 6, 3511 ZC, Utrecht, The Netherlands.  
Email: N.M.vanLoon@uu.nl

relative importance of the P-J and the P-O fits depends on the type of performance outcome being considered, claiming that P-J fit is more important for job-related performance, and P-O fit for organizational performance (Kristof-Brown et al., 2005).

Understanding the relationship between PSM and performance is further complicated by the fact that studies have addressed different measures of performance. There remains a lack of insight into whether the relationships between PSM and the various types of performance can be expected to be similar, and person-job and person-organization fits are important mediators.

The primary objective of this article is to explore the mechanisms of this relationship by, first, simultaneously studying the roles of both person-job and person-organization fits and, second, by studying their mediating role for two self-reported performance outcomes: in-role and extra-role behaviors. Insight into the importance of the two types of fit in the relationship between PSM and different types of performance will help clarify when PSM is a potential force, and when it is not. Using a data set of survey responses from public employees ( $n = 1,031$ ), we tested a set of hypotheses using structural equation modeling (Kline, 2010). Bootstrapping techniques that can more accurately test the significance of a mediator (Preacher & Hayes, 2008; Zhao, Lynch, & Chen, 2010) were used to analyze the significance of the mediation of person-job and person-organization fits.

The structure of this article is as follows. It begins with a theoretical explanation of PSM, performance, the relationship between these concepts and the importance of the person-environment fit. Next, the discussion focuses on the two main points of this article: the relative importance of P-J and P-O fits and the importance of fit for different types of performance. This leads to the development of hypotheses. In the methods section, we then discuss the set-up of our study. Following this, we report on the testing of the hypotheses and present the results. In the final section, the findings and their implications are discussed.

## Theoretical Framework

Literature on human resource management (HRM) in the public sector draws attention to the important role of employees for the performance of organizations (Gould-Williams et al., 2013). PSM in particular has gained attention as critical factor (Andersen et al., 2014; Leisink & Steijn, 2009). However, these employees work in a specific—public—environment which poses constraints on their work. This study therefore focuses on the interaction between the institutional environment, using person-environment fit theory to explain how this environment may matter for performance, and PSM as distinct type of motivation. We discuss the main concept of PSM and its relationship to performance. We then focus on whether this relationship can always be assumed or may be mediated.

## PSM

PSM is seen as part of a broader set of motives that attract and motivate employees to work for the public cause (Perry & Hondeghem, 2008; Wright, 2001). As opposed to more rational choice theories, Perry and Wise (1990) argue that individuals, and especially those working for public organizations, are motivated by more than mere self-interests. Only looking at self-interest does not explain most of what goes on according to them, such as public servants working overtime, or sacrificing themselves to help citizens.

To differentiate PSM from motives to work *in* the public sector, such as job security or pension rights, Perry and Wise (1990) defined PSM as “an individual’s predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations” (p. 368). They described three main underlying motives, being rational (wanting to participate in public service), normative (out of feelings of duty), and affective (out of compassion for others). Later, Vandenaabeele (2007) combined various definitions into one and described PSM as “the belief, the values and attitudes that go beyond self-interest and organizational interest, that concern the interest of a larger political entity and that motivate individuals to act accordingly whenever appropriate” (p. 549). This definition is used here as it refers to how individuals motivated as such act according to what is seen as appropriate (March & Olsen, 1989). PSM can thus be seen as a contextual motivation in which there is interaction with the institutional environment that defines the “appropriate.”

## Performance in the Public Sector as a Multifaceted Concept

Public employees play a role in the performance of the public service since they co-create the policy or product, such as care or security, on the “work floor” (Lipsky, 1980). Because PSM is an individual predisposition, it will most likely affect individual performance (Perry & Wise, 1990). Consequently, this article focuses on the relationship between PSM and *individual* performance. Often, individual performance is not clearly defined. In this study, individual performance in public service is defined as “the individual’s contribution to achieving the organization’s public mission.” This definition is broad, as what the organization’s mission is can be the focal point of political debate. We have added “public” to emphasize that the organization’s mission may be more limited that the public goals it intends to achieve.

Oftentimes, the mission of a public organization is multifaceted. Boyne (2002), for instance, distinguishes between output, service outcomes, responsiveness, efficiency, and democratic outcomes as together forming the performance of public organizations. Referring to the organization’s *public* mission, we follow Boyne (2002) in stating that performance of public organizations is more than the traditional organizational goals of

efficiency and effectiveness. Moreover, performance is “in the eye of the beholder” as all measures are to some extent subjective and valued differently by various stakeholders (Brewer, 2006). As this makes performance a difficult concept to grasp in public organizations, we focus on the behavior of employees that leads to performance (Gould-Williams et al., 2013).

Employees contribute to the organization’s mission through their behavior, for instance, putting in effort, executing tasks well, exercising their knowledge, and doing their best. They also contribute through helping colleagues. This study focuses on two different “parts” of individual performance: in-role and extra-role behaviors (Williams & Anderson, 1991).

In-role behavior refers to the task-specific role requirements that an individual carries out. What is meant by “appropriate” in-role behavior is highly job dependent: For a surgeon, a requirement could be “follows procedures correctly during surgery,” which is clearly not appropriate in-role behavior for a teacher. Appropriate in-role behavior means that employees perform the tasks expected of them and meeting the standards that have been set (Williams & Anderson, 1991). In public organizations, the role requirements may be multifaceted: A teacher should educate, be responsive, treat students equal and fair, and so on (Boyne, 2002). Moreover, “performing well” is always subjective (Brewer, 2006) as various stakeholders may hold different perceptions of what “well” means. Here, we focus on the perception of the employee of how well he or she performs the formal task requirements.

Only doing one’s own job tasks well is not sufficient for high performance (Motowidlo & Van Scotter, 1994). Helping colleagues is often essential to achieving the organization’s public mission. If, for instance, an established surgeon does not help a new doctor with getting to know the routines at the hospital, this may result in major issues although the surgeon has shown good in-role behavior. Behavior which benefits the organization but is not required or rewarded formally has been described as organizational citizenship behavior, prosocial organizational behavior, or extra-role behavior (Lemmon & Wayne, 2015; Organ & Ryan, 1995; Pandey, Wright, & Moynihan, 2008).

Extra-role behavior contributes to the broader goals of the organization as it “lubricates the social machinery” (Smith, Organ, & Near, 1983, p. 654), making it run smoother and facilitating achievement of the organization’s mission. Behaviors can be helpful to others or to the organization (Kim, 2006; Williams & Anderson, 1991). Studies have shown that extra-role behaviors, and particularly helping behaviors, are positively related to organizational performance (Podsakoff, Ahearne, & MacKenzie, 1997).

### *The relationship Between PSM and Performance*

Perry and Wise (1990) proposed a positive relationship between PSM and performance because individuals with

higher PSM would put in more effort when their goals align with that of the organization. Brewer (2008) added to this stating that a positive relationship can be expected because public service motivated employees identify strongly with their tasks within a public context and are more committed to reaching the public goal.

However, whether public service motivated employees perform better may depend on what type of performance outcome one is focusing on. Using our definition, the assumption is that the mission of the organization under study has societal relevance. Moreover, it assumes that in the eyes of the individual that mission is indeed the most desirable to work on for society.<sup>1</sup> When there is no agreement on the desirable outcome of the organization or this outcome does not comport with the individual’s ideas about contribution to society, it is unclear whether PSM relates to performance. Therefore, the perceptions of individuals regarding the mission and the fit between the individual and organizational values matter (Bright, 2013; Gould-Williams et al., 2013).

Empirical studies have generally found positive associations between PSM and performance measured as general job performance, supervisor ratings, and student grades as an outcome of teacher performance (Andersen et al., 2014; Bellé, 2013; Kim, 2006; Leisink & Steijn, 2009; Vandenabeele, 2009). However, there have also been studies that have either failed or only partly established a relationship between PSM and performance (Alonso & Lewis, 2001; Petrovsky & Ritz, 2014; Ritz, 2009). Some have argued that common method, social desirability, or omitted variable biases may have been behind the mostly positive results (Wright & Grant, 2010). The various setups in the studies and the amalgam of performance conceptualizations make it difficult to draw definitive conclusions. The possibility remains that the relationship with PSM varies between contexts and what performance outcome is studied.

In terms of a relationship between PSM and in-role behavior, empirical research has shown a positive relationship between PSM and both job performance and self-reported supervisor rating, which could indicate that those who are motivated to contribute to society and work for a public service provider perform their tasks better (Bright, 2007; Vandenabeele, 2009). Thus, PSM can be expected to be positively related to executing tasks well when these tasks contribute to society. In this study, we focus on organizations with a public mission, and therefore we can expect the following:

**Hypothesis 1:** PSM is positively related to in-role behavior in public service providers.

PSM can be expected to relate to extra-role behavior in that the latter is seen as behavior that is not strictly necessary to get paid, but for which an employee nevertheless sacrifices energy and time (Smith et al., 1983; Williams &

Anderson, 1991). As such, it relates strongly to going “above and beyond the call of duty” (DiIulio, 1994; Perry & Wise, 1990). However, again, it is assumed that this extra work will contribute to society. Employees with high PSM will in a public context show extra-role behaviors because they are more focused on contributing to society than their self-interest, and they will perceive helping others to do their work as contributing to society (Pandey et al., 2008). Studies have found a strong positive relationship between PSM and helping others in the organization (Gould-Williams et al., 2013; Kim, 2006; Pandey et al., 2008). As we study organizations with a public mission, we therefore expect the following:

**Hypothesis 2:** PSM is positively related to extra-role behavior in public service providers.

Although most studies have found a positive relationship between PSM and performance, some have not (Alonso & Lewis, 2001; Petrovsky & Ritz, 2014). It may be that employees with PSM need to perceive they can actually contribute to society to have a positive effect. Not all environments are able to provide such fit to the same degree for public service motivated employees to perform as even in the public domain organizations and jobs differ in their potential to contribute to society (Wright & Pandey, 2008). The fit with the environment may therefore be an important factor in the relationship between PSM and performance. This aspect is further addressed below.

### *The Importance of Person-Environment Fit*

Perry and Vandenberg (2008) have argued that PSM cannot be seen apart from its context and should be imbedded in institutional theory. Institutional theory emphasizes how institutions form and direct the behavior of individuals (March & Olsen, 1989; Scott, 2001). Institutions can support behavior, for instance, by providing possibilities to have an impact on society, but can also hinder employees in doing what they want to do. PSM is not only influenced and incentivized by institutions, but it also influences those institutions (Perry, 2000; Perry & Vandenberg, 2008; Scott, 2001). As such, there is a constant interaction between the public service motives of an individual and the institutional context. In this, we focus on the internal organizational context. Whether PSM boosts performance will depend on whether the work environment provides opportunities and supports the provision of meaningful public service. Accordingly, aspects of the environment can be seen as *moderators* in the relationship between PSM and performance (Bellé, 2013; Taylor, 2013) and only if there is a *fit* between the individual motives and the institutional environment will this PSM be positively related to performance.

The mechanism how the institutional context matters for the relationship between PSM and performance can be illustrated using person-environment fit theory. Kristof-Brown

et al. (2005, p. 281) defined person-environment fit as “the compatibility between an individual and a work environment that occurs when their characteristics are well matched.” This definition is very broad, and research has used many different person (P) and environment (E) measures (Edwards & Shipp, 2007; Kristof-Brown et al., 2005). For instance, the environment has been studied on the level of the supervisor, the job, the organization, and the vocation (Edwards & Shipp, 2007). Moreover, there are differences between studying a fit in values, a fit in demands and abilities, or in needs and supply.

Central to person-environment fit theory is the idea that an interaction will occur between personal characteristics and elements of the environment, and that this leads to an *objective fit* with the environment. At the same time, the individual has a *perception* of the environment, called *subjective fit*. Finally, individuals’ characteristics lead to a direct perception of their fit—*perceived fit*—with the values and norms or practices (Edwards, Cable, Williamson, Lambert, & Shipp, 2006; Kristof-Brown et al., 2005). This perceived fit can be seen as a *mediating* variable, as it includes aspects of both the institution and the individual (Edwards et al., 2006). Significantly, studies have found that *perceptions* of fit matter more for work outcomes than the *actual* environmental situation because individuals base their reactions to a situation on their perceptions (Kristof, 1996; Kristof-Brown et al., 2005).

Person-job and person-organization fits are seen as the most important in determining behavioral outcomes, and are consequently the most researched types of fit (Kristof-Brown et al., 2005; Lauver & Kristof, 2001; Muchinsky & Monahan, 1987). Many studies have concentrated on how the perceived person-organization or person-job fit *mediate* the relationship between individual characteristics and several types of work outcomes (Cable & DeRue, 2002; Cable & Judge, 1996; Saks & Ashforth, 1997; Vogel & Feldman, 2009).

Within PSM research, most have focused on *perceived* (person-job or person-organization) fit as mediator. Some studies have found that person-organization fit fully mediated the relationship between PSM and supervisor ratings, but others only found partial mediation in the relationship between PSM and organizational citizenship behavior (Bright, 2007; Gould-Williams et al., 2013). With regard to person-job fit, some studies have shown that job characteristics moderate the relationship between PSM and performance (Bellé, 2013) and that having a societal impact potential in combination with high PSM had an effect independent of the effect of PSM on perceived effort (Leisink & Steijn, 2009).

This study focuses on a person’s perceived fit with the job and the organization. PSM can contribute to a perceived fit with a public service environment because the individual perceives the values as congruent or because the tasks providing opportunities to deliver a public service are in line with internal motives (Perry & Wise, 1990; Stritch &

Christensen, 2014). However, individuals who do not perceive their job as fulfilling their need to contribute to society or the organization as supporting public values cannot be expected to perceive a fit and consequently to perform better than other employees (Moynihan & Pandey, 2008; Wright & Pandey, 2008). PSM research including P-J or P-O fits have found both to be relevant, but studies on PSM and person-environment fit have been ambivalent as to their relative importance.

### Which Fits Matter When?

Person-job fit and person-organization fit refer to different levels of the environment and are therefore seen as distinct constructs (Boon, den Hartog, Boselie, & Paauwe, 2011; Kristof, 1996). In considering the relative roles of different fits in performance, Kristof-Brown et al. (2005) concluded that it depends on which type of performance is being studied as to whether P-J or P-O fit matters most. P-O fit is expected to be more important for organizational outcomes such as organizational commitment and extra-role behavior. Kristof-Brown et al.'s meta-analysis showed P-O fit as being moderately correlated with extra-role performance but only weakly correlated with job performance (Kristof-Brown et al., 2005). Conversely, B. J. Hoffman and Woehr (2006) found that P-O fit was more strongly related to task performance than to organizational citizenship behavior. Person-job fit is linked to job-related outcomes such as job satisfaction and task performance because these are on the same level of the environment. A meta-analysis found that person-job fit correlates moderately with task, job and in-role performance, but that it was also related to organizational commitment (Kristof-Brown et al., 2005).

Insights into the *relative* importance of the person-job and person-organization fits are, however, scarce as only a few studies have simultaneously studied multiple types of fit (B. J. Hoffman & Woehr, 2006; Kristof-Brown et al., 2005). As such, findings seem inconclusive at best as to whether the relative roles of these two fits depend on the type of performance being considered. One of the few studies that addressed both fit types considered the mediation and moderation roles of person-job and person-organization fits in the relationship between HRM practices and several work outcomes, including extra-role behavior (Boon et al., 2011). They found, for most outcomes, that P-O and P-J fits had distinct effects but that for extra-role behavior only person-organization fit had a mediating effect. Drawing on person-environment fit theory and using the type of performance as our reference, we would expect P-J fit to be more important for in-role behavior, and P-O fit for extra-role behavior:

**Hypothesis 3a:** Person-job fit will be a more important mediator than person-organization fit in the relationship between PSM and in-role behavior.

**Hypothesis 3b:** Person-organization fit will be a more important mediator than person-job fit in the relationship between PSM and extra-role behavior.

Challenging the ideas from person-environment fit that the outcome of interest determines the type of fit most relevant, studies on PSM have included type of fit based upon what seems most relevant for employees with high PSM. For instance, Bright (2007) and Gould-Williams et al. (2013) focused on person-organization fit because they expected the values of the organization to be important for a public service motivated employee. Bellé (2013) and Leisink and Steijn (2009) focused on the job because they expected that employees with PSM would want to do *work* that contributed to society.

Only one study has specifically set out to “disentangle” the contributions of person-job and person-organization fits in the relationship between PSM and *job choice*, and this concluded that person-job fit was more important than person-organization fit (Christensen & Wright, 2011). These authors argued that it is the type of work (whether it is related to public services) that determines whether a public service motivated individual is drawn to a job, and not the values of the organization. Applying this line of reasoning to the relationship between PSM and performance, it may be that the fit with the job is more important than with the organization because it is the perception as to whether one is able to work for society that drives public service motivated individuals to perform well. Thus, a competing hypothesis can be formulated rivaling Hypothesis 3: When taking the “person” element, that is, PSM, as the reference, we could expect person-job fit to be the more important regardless of the type of performance.

**Hypothesis 4:** Person-job fit will be a more important mediator than person-organization fit in the relationships between PSM and in-role and extra-role behaviors.

The next section now explains how these hypotheses were tested.

## Method

In this section, the data collection, the sample descriptives, the measures used, and the data analysis are discussed.

### Case and Data

This study is based on data collected through a web-based survey among employees in public service organizations. These public organizations were schools, municipalities, police, prisons, and a hospital all from the center region in The Netherlands. The organizations were selected based on their willingness to participate after randomly selecting organizations from this one region. As a result, nine schools all

**Table 1.** Response Rates Per Service Domain.

| Domain       | N     | Response % |
|--------------|-------|------------|
| Schools      | 224   | 40.9       |
| Municipality | 351   | 39.5       |
| Hospital     | 181   | 7.2        |
| Prison       | 103   | 48.9       |
| Police       | 172   | 57.1       |
| Total        | 1,031 | 38.7       |

falling under one school board participated, two municipalities, two prison locations, one police region, and one hospital. Example jobs in these organizations are policy maker, nurse, police officer, teacher, supportive staff, and team leader. Although there are many differences between these employees and their jobs, they are all working on a *public* service and there is no reason to assume that PSM would not matter for supportive staff.

In most of the participating organizations employees were invited to complete a survey by email. However, in the hospital, we could only post the survey on the internal website as opposed to addressing each employee individually. As a result, the response rate in this organization was lower than in the other organizations (see Table 1). The hospital was, however, a much larger organization than the rest regarding the number of employees, evening out the number of respondents per group.

The data were collected between March 2012 and September 2012. Although web-based surveys have many advantages, a significant drawback is the low response rates attributed to this technique (Crawford, Couper, & Lamias, 2001). Several techniques were therefore used to increase response rates that have been tested such as designing the survey to be as user-friendly as possible, including a photograph of the researcher to “personalize” the survey, distributing the email through senior officials in the organizations, giving participants the potential to win a 25 euro voucher, sending two reminders and enabling respondents to remain anonymous. Referring to various motives (a price, identification, and contributing to research) helps to reduce response bias (Couper, 2008). Finally, answering individual questions was optional which has been found to increase the response rate and reduce social bias (Couper, 2008).

After reviewing the data in SPSS v20.0 and removing respondents with complete missing data, a total of 1,031 respondents remained. To check the representativeness of the sample in terms of demographic variables, the gender balance and the average age in the various public domains (education, police, health care, municipalities, and prisons) were compared with available national statistics using chi-square tests.<sup>2</sup> These analyses showed that the samples did not differ substantially from the typical workers in those sectors. The only significant differences were that the average age in the police sample was lower than the national average (but

**Table 2.** Percentage of Respondents Working in the Primary Process, Management, and Supportive Staff.

| Function        | n     | %    |
|-----------------|-------|------|
| Primary process | 694   | 67.3 |
| Management      | 83    | 8.1  |
| Supportive      | 211   | 20.5 |
| Missing         | 43    | 4.2  |
| Total           | 1,031 | 100  |

similar to the region’s average) and that the sample of school employees included slightly more women than the national average would suggest. The average age of the overall sample was 43 years ( $SD = 11.3$ ) and 54% were female, 37.5% male (8.5% nonreport). The average tenure was almost 11 years ( $SD = 9.6$ ) and 152 respondents (14.7%) held supervisory positions. In Table 2, the percentage of primary process, management, and supportive functions can be seen. Most respondents held jobs in the primary process.

### Measures

The concepts used in this study are explained below. Confirmatory factor analysis in Mplus v7 (Muthén & Muthén, 2010–2013) was used to test the fit of the measurements. We used Maximum Likelihood estimation with robust standard errors (MLR), which corrects for nonnormality, because both PSM and performance were skewed (Kline, 2010). As chi-square values do not accurately represent the fit when sample sizes exceed  $n = 200$ , we instead used the comparative fit index (CFI), Tucker–Lewis Index (TLI), and root mean square error of approximation (RMSEA) fit indices (Hu & Bentler, 1999; Kline, 2010).<sup>3</sup> Raykov’s rho ( $\rho$ ) is used to assess reliability based on factor loadings,<sup>4</sup> with values above .70 indicative of a reliable measure (Bacon, Sauer, & Young, 1995; Raykov, 2009). Oftentimes, scales have to be adjusted, removing items from the scale, to assure an adequate fit to the specific sample (Kline, 2010). All the final items and their factor loadings are listed in the appendix.

**PSM.** In the original scale developed by Perry (1996), four dimensions were distinguished: attraction to public policy, commitment to the public interest, compassion, and self-sacrifice. Others have, however, added dimensions (Andersen, Pallesen, & Pedersen, 2011; Vandenabeele, 2008), or revised the original dimensions to aid international comparisons (Kim et al., 2013). Kim et al. (2013) revised the dimension to “attraction to public service,” “commitment to public values,” “compassion,” and “self-sacrifice.” Studies have used global or overall measures of PSM including items of all dimensions but collapsing them (Wright, Christensen, & Pandey, 2013), using items from the Perry or the Kim et al. scale.

In this study, the international instrument developed by Kim et al. (2013) was the basis for measuring PSM. As

elsewhere, a global PSM scale was created (Wright et al., 2013). Two items, seen as core items in each dimension, were included in this global measure. As such, all the items were thus part of a validated scale. Oftentimes, a first model does not accurately fit the data due to the items having low factor loadings (Byrne, 2012). For the PSM scale, one item on self-sacrifice was deleted (“I am prepared to sacrifice my personal interest if that would help society”), after which the model fitted the data well (CFI = .973, TLI = .959, RMSEA = .042). The measure also showed reliability ( $\rho = .757$ ).

**Person-job and person-organization fits.** Person-organization fit was measured by asking about the congruence between personal and organizational values. The four items included in the questionnaire were derived from validated scales (Cable & DeRue, 2002; Cable & Judge, 1996). Person-job fit was measured with five items referring to whether the job offered opportunities to do the work one wanted to do (Saks & Ashforth, 1997; Vogel & Feldman, 2009). A two-dimensional model, with P-O and P-J fits as separate dimensions, provided a good fit to the data (CFI = .969; TLI = .957, RMSEA = .065) and demonstrated reliability (person-organization fit  $\rho = .850$ ; person-job fit  $\rho = .843$ ).

**In-role and extra-role behaviors.** Subjective measures of in-role and extra-role behaviors were used because these allow comparison across domains (Brewer, 2006). Although there is generally held to be a relationship between self and other ratings (Conway & Huffcutt, 1997; C. C. Hoffman, Nathan, & Holden, 1991), there is no consensus on the best way to measure performance. Studies show that subjective and objective measures are related and that management practices show similar effects using both subjective and register performance data, but others view objective data as “the golden standard” (Andrews, Boyne, & Walker, 2011; Bommer, Johnson, Rich, Podsakoff, & Mackenzie, 1995; C. C. Hoffman et al., 1991; Meier & O’Toole, 2013). Self-reported measures could be prone to bias, although studies differ on the actual impact of such bias (Conway & Lance, 2010; Meier & O’Toole, 2013). At the same time, objective measures are criticized for being too narrow and not being available for complex tasks.

While the discussion continues, most researchers agree that each concept of performance measures a different aspect of performance, and is thus always limited. In the public domain, there is no single measure that can accurately represent individual performance as there are multiple stakeholders and multiple goals to live up to (Brewer, 2006). Our measure represents the self-perceptions of employees, who are important internal stakeholders, and shows how they think they behave.

In-role and extra-role behaviors were measured using items from the validated scale developed by Williams and Anderson (1991). Limitations on survey length meant that only three questions on in-role and three on extra-role

behavior could be included and we selected those considered most appropriate for our context. The confirmatory factor analysis showed that the measures of in-role and extra-role behavior fitted well once one extra-role item (I pass along work related information to my colleagues) had been deleted (CFI = .993, TLI = .982, RMSEA = .036). The measures were also reliable (in-role  $\rho = .716$ ; extra-role  $\rho = .769$ ).<sup>5</sup>

**Control variables.** All the analyses were carried out while controlling for gender, age, and supervisory position as these variables may influence the performance of an employee (Bright, 2007).

## Data Analysis

After testing each construct separately, a full measurement model including all the constructs was tested. The fit was adequate (CFI = .940, TLI = .930, RMSEA = .041 (.036-.045)), but the modification indices (Byrne, 2012) indicated that it could be improved by deleting one reversed item from the P-O fit scale. After removal of this item the fit was improved (CFI = .954; TLI = .940, RMSEA = .036 [.031-.041]). Following this removal, risk of common method bias was tested by loading all the items onto a single dimension. This model had a significantly worse fit (CFI = .453, TLI = .389, RMSEA = .120).

Next, regression paths were added. We tested three full structural equation models, each with and without the control variables. The first model tested the relationship between PSM and in-role and extra-role behaviors. In the second model, person-job and person-organization fits were added as full mediators. The final model tested partial mediation in allowing for both direct and indirect relationships between PSM and in-role and extra-role behaviors (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). To determine the significance of the indirect path coefficients, a Sobel test with nonparametric bootstrapping (1,000 replications) was conducted (Preacher & Hayes, 2008). Here, we switched to Maximum Likelihood (ML) estimation because bootstrapping automatically includes inequality of parameters in the analysis (Muthén & Muthén, 2013). The paths are seen as significant if the 95% confidence interval does not include zero (Preacher & Hayes, 2008).

## Results

The correlations between the tested variables are shown in Table 3. PSM is significantly correlated to perceptions of both person-job and person-organization fits and to in-role and extra-role behaviors. Both fit perceptions are significantly correlated to in-role behavior but, surprisingly, not to extra-role behavior. Furthermore, of the control variables, only gender is correlated with in-role behavior. Using a different parameterization in which instead of a factor score the mean on the factor is calculated (Todd, Slegers, & Card,

**Table 3.** Correlation Table (n = 1,031).

|               | 1       | 2       | 3       | 4       | 5     | 6        | 7       | 8 |
|---------------|---------|---------|---------|---------|-------|----------|---------|---|
| 1. PSM        | —       |         |         |         |       |          |         |   |
| 2. P-O fit    | .267*** | —       |         |         |       |          |         |   |
| 3. P-J fit    | .253*** | .565*** | —       |         |       |          |         |   |
| 4. In-role    | .148*** | .115*   | .224*** | —       |       |          |         |   |
| 5. Extra-role | .213*** | .079    | .060    | .611*** | —     |          |         |   |
| 6. Gender     | .130*** | .037    | .007    | .093*   | -.009 | —        |         |   |
| 7. Age        | .090*   | .073*   | .111*** | .048    | -.052 | -.084**  | —       |   |
| 8. Sup.pos.   | .031    | .086*   | .135*** | .053    | .047  | -.152*** | .138*** | — |

Note. PSM = public service motivation; Sup.pos = supervisory position.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p \leq .001$ .

2006), the means of the factor scores were computed. The respondents have an average PSM of 3.86, score higher on P-J fit (3.71) than P-O fit (3.52) and higher on in-role behavior (4.19) than extra-role (4.10).

### The Relationship Between PSM and In-Role and Extra-Role Behavior

Our first model tested the relationship between PSM and in-role and extra-role behaviors. Overall, this model fitted well with the control variables included (CFI = .937, TLI = .921, RMSEA = .041,  $n = 926$ ). It fitted even better without controlling for gender, age and supervisory position (CFI = .964, TLI = .953, RMSEA = .036,  $n = 1,031$ ).<sup>6</sup> The model including controls explains 2.4% of the variation in in-role behavior and 5.5% in extra-role behavior. Looking at the individual paths in this model, PSM is significantly related to in-role behavior ( $\beta = .122$ ,  $p < .05$ ), supporting Hypothesis 1, and extra-role behavior ( $\beta = .214$ ,  $p < .001$ ), supporting Hypothesis 2. The relationships are shown in Figure 1.

### Mediation By Person-Job and Person-Organization Fits

Our first mediation model tested whether person-organization and person-job fits fully mediated the relationships between PSM and in-role and extra-role behaviors. The overall model fitted the data well (CFI = .932, TLI = .921, RMSEA = .043,  $n = 926$ ).<sup>7</sup> The variables explained 7% of the variance in person-organization fit, 6.1% in person-job fit, 5.8% in in-role behavior but only 1.4% in extra-role behavior. Figure 2 shows the path results for this model.

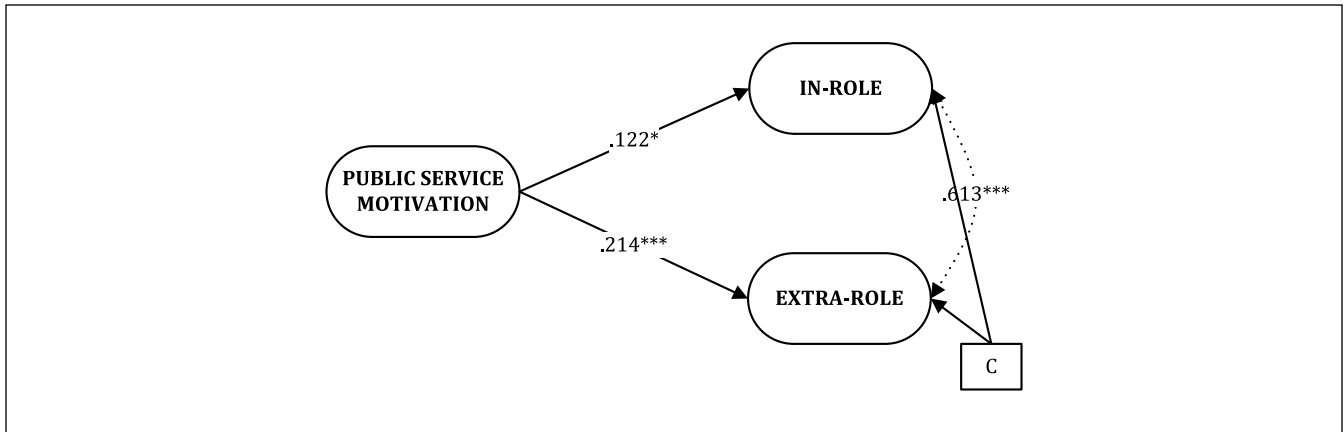
The figure shows that PSM is positively related with both person-organization and person-job fits. That is, employees with higher levels of PSM perceive greater congruence with their organization's values and perceive that they are doing what they want to be doing through the job. Furthermore, it appears that only person-job fit is significantly related to in-role behavior. Neither P-O nor P-J fit is significantly related

to extra-role behavior. A Sobel test indicates that the indirect relationship from PSM through P-J fit to in-role behavior is significantly different from zero ( $\beta = .059$ ,  $p < .01$ ).

The second, partial mediation model (see Figure 3) included both direct and indirect paths from PSM to in-role and extra-role behaviors. This model, including control variables, fits the data adequately (CFI = .935, TLI = .924, RMSEA = .043,  $n = 926$ ).<sup>8</sup> The model explains 6.9% of the variance in P-O fit, 6.1% in P-J fit, 6.3% in in-role behavior, and 5.6% in extra-role behavior. In terms of extra-role behavior, this is substantially more than the full mediation model (+4.2%). Allowing a direct relationship between PSM and in-role and extra-role behaviors reveals a positive and significant direct association between PSM and extra-role behavior. However, there is no corresponding significant direct relationship between PSM and in-role behavior. Testing for indirect effects shows that the relationship of PSM with extra-role behavior is not mediated, whereas its relationship with in-role behavior is, by person-job fit ( $\beta = .055$ ,  $p < .01$ ). Including the control variables shows that women score higher than men on in-role behavior and that older employees show less extra-role behavior.

The results show support for Hypothesis 3a that person-job fit is a more important mediator than person-organization fit in the relationship between PSM and in-role behavior. Contrary to expectations, person-organization fit was not relevant for extra-role behavior, and thus Hypothesis 3b is rejected. Hypothesis 4, which stated that person-job fit would be a more important mediator than person-organization fit for PSM because PSM is about the work that is done, was supported by these results. Subsequent analyses including either person-job fit or person-organization fit, but not both, showed that this finding is not due to confounding effects from a high correlation between P-J and P-O fits. In fact, when running the model without P-J fit, P-O fit was still not significantly related to in-role or extra-role behaviors, and neither did it have a mediating role for PSM. When including only P-J fit, this still only mediated the relationship between PSM and in-role behavior. These findings will be discussed in the final section.

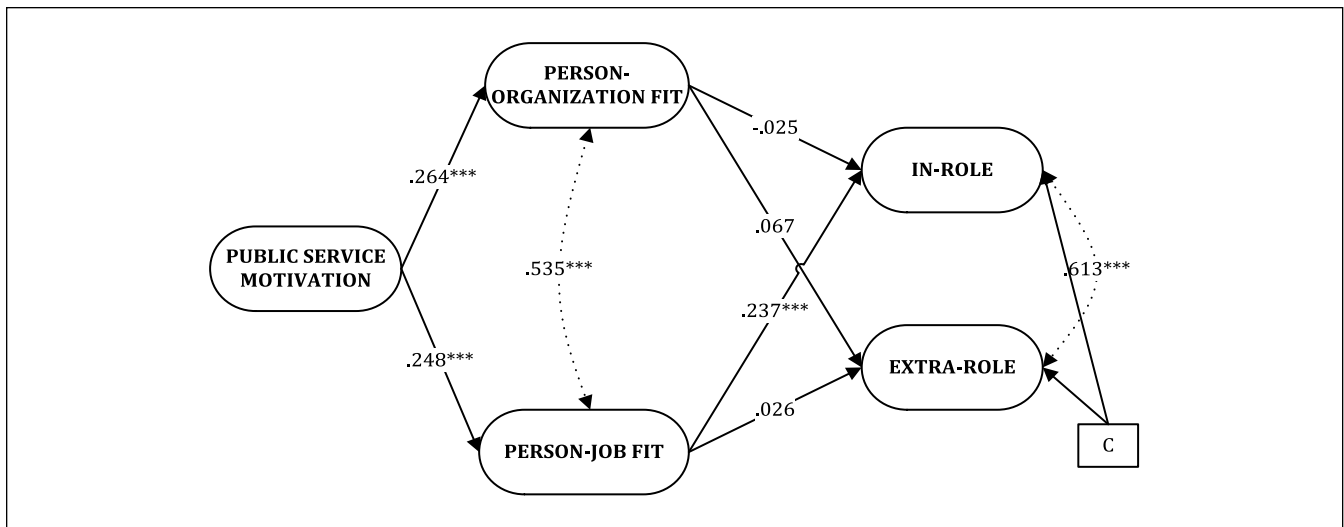




**Figure 1.** Full structural equation model.

Note. c = control variables.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p \leq .001$ .



**Figure 2.** Full structural equation model, full mediation person-organization and person-job fits.

Note. c = control variables.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p \leq .001$ .

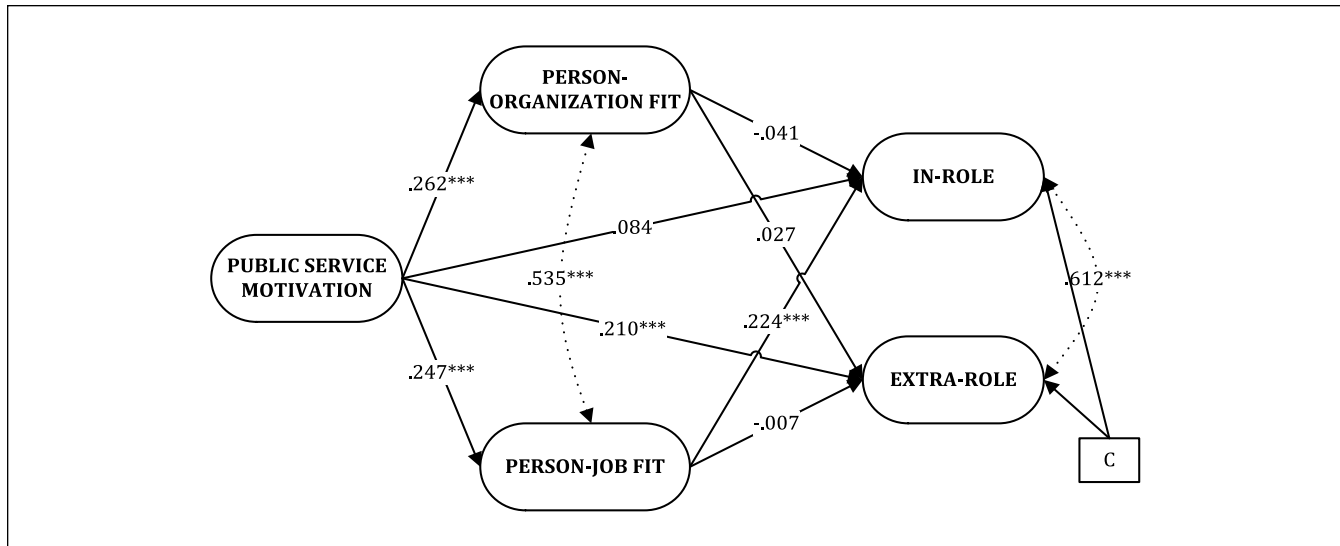
## Discussion and Conclusion

In this study, we have shown that PSM is positively related to extra-role behavior and indirectly to in-role behavior: two behaviors that are important for organizational performance (Brewer & Selden, 2000; Podsakoff et al., 1997). The variance in perceived performance explained by PSM was limited but not insubstantial given that many other variables determine individual performance (Fox & Bizman, 1988; C. C. Hoffman et al., 1991). The results also illustrate that the relationship between PSM and performance is more complex than originally envisioned by Perry and Wise (1990).

This study has contributed to the literature by studying person-job and person-organization fits simultaneously and showing that PSM is *directly* related to helping others on the job. PSM is only related to fulfilling in-role requirements

through its contribution to person-job fit. Here, we have built upon previous studies that have included person-environment fit as an explanation for the relationship between PSM and performance (Bright, 2007, 2013; Kim, 2012; Leisink & Steijn, 2009). Moreover, it seems that PSM is an important predictor of extra-role behaviors which supports previous findings (Bright, 2013; Gould-Williams et al., 2013).

PSM studies in the past have mostly looked at general performance, or equated different types of performance, whereas this study indicates that the mechanisms through which PSM relates to different types of performance can diverge. For instance, Alonso and Lewis (2001) did not find an effect of PSM on supervisor rating which may be because they did not take into account whether employees perceived a fit with the organization. In comparison, Bright (2007), who included person-organization fit, did find an indirect



**Figure 3.** Full structural equation model, partial mediation P-O and P-J fits.

Note. c = control variables.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p \leq .001$ .

relationship with (self-reported) supervisor ratings. It may be that P-O fit is an important factor in supervisor ratings and, as found here, that person-job fit influences in-role behavior.

PSM was directly related to extra-role behavior, and thus fit may play a role in PSM's relationship with some, but not all, types of performance. For instance, PSM has been related to whistle-blowing behavior (Brewer & Selden, 1998), and it is very likely that those who blow the whistle do not perceive a fit with the organization. As another example, a public service motivated nurse may feel a misfit with the job because there is no time to talk to patients but still be very willing to give up hours after work to help colleagues. It could also be that other types of fit, such as person-team, are very important in determining extra-role behavior. Perhaps perceiving a match with colleagues is quite important for individuals to show helping behavior toward them.

Regarding the relative importance of person-job and person-organization fits in the relationship between PSM and performance, we have shed light on which type of fit matters most. Our finding that only person-job fit matters in the relationship between PSM and in-role behavior corresponds to results from studies on the relevance of P-J and P-O fits in the relationship between PSM and job choice (Christensen & Wright, 2011; Kjeldsen & Jacobsen, 2012). It may be that P-O fit is less important because public service motivated employees care about the *tasks* they are doing more than the organization for which they do it (Kjeldsen & Jacobsen, 2012). For a public service motivated teacher, it may matter more whether he or she can educate students than what the specific mission of the school is. As suggested by B. J. Hoffman and Woehr (2006), it is possible that the mediating effects of P-O fit found in some studies were confounded

because respondents were thinking about their job. Another explanation which comports with the fit literature is that person-job fit is more related to in-role behavior than person-organization fit (Kristof-Brown et al., 2005). The findings in this article illustrate that to know which fits matter, both P-J and P-O should be included.

We have contributed to the person-environment fit literature by simultaneously analyzing the relative importance of person-job and person-organization fits for two types of performance. This responds to the call for greater insight into how different types of fit relate to each other (B. J. Hoffman & Woehr, 2006; Kristof-Brown et al., 2005). Within the person-environment fit theory, it is assumed that the relative importance of P-O and P-J fits depends on the type of performance being considered (Kristof-Brown et al., 2005). Although we found that person-job fit was related to in-role behavior, we failed to find a relationship between person-organization fit and extra-role behavior.

This unexpected result questions whether the relevance of a fit is determined by the type of performance being considered, or whether it depends on the personal elements considered. Only a few studies have been able to include both job and organization fit when studying outcomes, and this makes it difficult to draw any firm conclusions on which type of fit matters most for which types of performance (B. J. Hoffman & Woehr, 2006; Kristof-Brown et al., 2005). This study highlights that more research that includes both types of fit is necessary to generate accurate insights into the relevance of P-J and P-O fits.

Perhaps surprisingly, the models fitted better without the control variables. Not all respondents entered details on their supervisory position or otherwise, or on their gender, so the model including control variables was calculated on

a reduced sample, and this may explain this unexpected outcome. Moreover, women reported higher in-role behavior than men. We are not sure how to explain that the women performed better on in-role performance, and this may be something future research could dive into. Age was negatively related to extra-role behavior: those who were older helped their colleagues less. Although more experienced workers could be seen as being more able to help others, it may be that older employees are more often supervisors who have to help their subordinates but are not focused on helping fellow managers. Age was indeed correlated with supervisory position, and it may be that the latter explains much of this relationship.

The results should be seen in the light of this study's limitations. First, this study is based on self-reported data, which is at risk of common method or social desirability bias (Meier & O'Toole, 2013), although some argue these dangers are overestimated (Conway & Lance, 2010; Spector, 2006). Nevertheless, they form a limitation of this study. The risk of bias was minimized by ensuring anonymity and providing the option not to answer the performance questions so respondents did not feel forced to provide a desirable answer (Couper, 2008). The likelihood of common method bias was also reduced by placing the items on motivation, fit and performance in different sections of the survey (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Although self-reported performance reflects only one aspect of performance, it is important because it shows how employees think they are doing (Brewer, 2006).

The use of only cross-sectional data limits us to saying that relationships were found between PSM and performance, without being able to say what causes what. PSM could be influencing performance or vice versa, or both effects may exist simultaneously. However, the following causal path is defensible because theory and empirical results both suggest that PSM influences performance (Andersen et al., 2014; Perry & Wise, 1990): PSM leads to a certain degree of perceived person-environment fit (Stritch & Christensen, 2014), and this fit influences performance (Kristof-Brown et al., 2005). Both relationships, from PSM to performance and vice versa, probably exist.

Despite these limitations, this study contributes to knowledge on the relationship between PSM and performance in three main ways: first, by showing that the relationship between PSM and performance varies depending on whether one is looking at in-role or extra-role behavior; second, by identifying person-job fit as an important mediator in the relationship between PSM and in-role behavior; third, by showing that the P-O fit has little influence.

Future research could address the possibility that PSM is not similarly related to all types of performance, and that a fit with the job may matter for some behaviors, but not others. For instance, what happens during reorganization when

organizational goals and job characteristics are changed? And what happens when there are conflicts regarding the mission and values of the organization? Future studies could also address some of the limitations of this study: for instance, by using longitudinal data, investigating different types of performance (Boyne, 2002), or by replicating this study in different contexts to test the robustness of the findings. We studied these relationships in a single country, and thus we cannot be sure that the results can be generalized to other countries. It may be that country level institutional context matter, which can only be studied through country-comparison. However, the effect sizes found are very similar to those in other studies in different countries (Bright, 2007; Gould-Williams et al., 2013) and thus our results may be fairly generalizable. It may be that, when distinguishing between behaviors, organizational logics matter in the relationship between PSM and behavior. In particular, P-O fit warrants extra attention because its mediating role identified in this study differed from previous studies (Bright, 2007; Gould-Williams et al., 2013). Finally, studying specific aspects of the environment, such as red tape, goal ambiguity, or societal impact, to test the importance of subjective and objective fits, as opposed to our focus on perceived fit, could generate further insight into under what specific job or organizational conditions PSM is or is not related to performance. Most notably, this study has looked at general perceptions of job-fit, whereas it would be interesting to compare the various jobs these employees held on specific job characteristics such as autonomy and societal impact.

The results of this study are relevant for public organizations that want to enhance their performance because it provides insights into the situations in which PSM relates to higher performance. Public organizations could benefit from considering PSM in the selection or socialization of their employees, by discussing motivation and expectations during job interviews (Paarlberg, Perry, & Hondeghem, 2008). However, a positive outcome depends on an organization offering working conditions in which employees perceive a fit between their PSM and the job (by being able to contribute to society), because it is through this fit that PSM relates to higher in-role behavior.

For public organizations under financial stress, in which employees need to reduce costs and often have to say "no" to citizens applying for support, the new big challenge in maintaining in-role performance may be in providing sufficient evidence of the job being important for society. On a brighter note, public service motivated employees showed higher levels of extra-role behavior (activities for which they are not rewarded) regardless of the fit of their PSM with the job or the organization, and this may form a buffer for organizations under financial stress that have to increasingly rely on such extra efforts to maintain the quality of their services.

## Appendix

### Items, Factor Loadings, Standard Errors, and Reliability

**Table A1.** Items, Standardized Factor Loadings (Std. fl), Standard Errors (SE), and Cronbach's Alpha.

| Construct and items  | Std. fl | SE    |
|--|---------|-------|
| Public service motivation, $\alpha = .743$   |         |       |
| 1. I think it is important to be part of activities aimed at solving social problems.                          | 0.531   | 0.034 |
| 2. It is important to me to contribute to the common good.   | 0.598   | 0.028 |
| 3. I think equal opportunities for citizens are very important.  | 0.474   | 0.035 |
| 4. It is important that citizens can rely on the provision of accessible public services.                      | 0.520   | 0.029 |
| 5. Considering the welfare of others is very important to me.  | 0.536   | 0.033 |
| 6. I empathize with other people who face difficulties.  | 0.611   | 0.028 |
| 7. I would agree to a good plan to make life better for the poor, even if it costs me money.                   | 0.576   | 0.030 |
| Person-organization fit, $\alpha = .827$   |         |       |
| 1. There is a match between what I think is important in my work and what my organization thinks is important. | 0.795   | 0.022 |
| 2. My values match or fit the values of this organization.   | 0.807   | 0.018 |
| 3. What this organization stands for is very important to me.  | 0.761   | 0.023 |
| Person-job fit, $\alpha = .828$  |         |       |
| 1. The attributes that I look for in a job are fulfilled very well by my job.                                  | 0.805   | 0.017 |
| 2. My job does not enable me to do the work I would like to do (rev).  | 0.692   | 0.031 |
| 3. My job provides me with the opportunity to work on goals that I personally see as important.                | 0.679   | 0.027 |
| 4. If I think about what I would like to achieve, I sometimes doubt whether I chose the right job (rev).       | 0.690   | 0.024 |
| 5. There is a good match between my personal interests and the kind of work that I do.                         | 0.672   | 0.027 |
| In-role behavior, $\alpha = .764$  |         |       |
| 1. I consistently meet the formal performance requirements of my job.  | 0.692   | 0.034 |
| 2. I conscientiously perform the tasks that are expected of me.  | 0.787   | 0.029 |
| 3. I always execute essential duties of my job well.   | 0.680   | 0.032 |
| Extra-role behavior, $\alpha = .714$   |         |       |
| 1. I help colleagues if they have a too high work pressure.  | 0.734   | 0.035 |
| 2. I help new colleagues even if it is not expected of me.   | 0.756   | 0.034 |

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### Notes

1. We thank an anonymous reviewer for this remark.
2. Population age was on average 43 in schools and 44.1 in sample, 46 in municipalities and 45.8 in sample, health care 43.5 and 42.5 in sample, 43.4 for the police national, 39.5 regional and 39.3 in sample. No information was available on the prison employees. The population percentage of women in schools was 51.8, in the sample 58.8; for municipalities 47.1, in the sample 51.1; in hospitals 83%, in the sample 87.6; and in the police 36%, in the sample 31.2.

3. For comparative fit index (CFI) and Tucker–Lewis Index (TLI), cutoff values of .90 and above are seen as indicating acceptable fit, and above .95 an excellent fit. Root mean square error of approximation (RMSEA) values below .10 indicate an acceptable fit, and below .08 an excellent one.
4. As Cronbach's alpha is, despite certain issues with it, still the standard measure of reliability, these are also reported in the appendix.
5. All the constructs also demonstrated convergent validity—as all the factor loadings were statistically significant—and discriminant validity—as correlations were not close to unity (see Table 1).
6. This is due to the slightly different samples as 105 respondents did not fill in control variable questions. Testing the models on the reduced sample of respondents with full information on the control variables showed better fit and did not change any of the results.
7. Again, the model fitted better without the control variables (CFI = .948, TLI = .939, RMSEA = .042,  $n = 1,031$ ).
8. Again the model fitted better without the control variables (CFI = .951, TLI = .942, RMSEA = .041,  $n = 1,031$ ).

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### Author Biographies

**Nina Mari van Loon** is a researcher at Utrecht University. In her research she focuses on the relationship between public service motivation and performance, red tape and public management.

**Wouter Vandenabeele** is an assistant professor at Utrecht University and also at the Katholieke Universiteit Leuven. He focuses on HRM in the public sector and particularly on public service motivation.

**Peter Leisink** is a professor of Public Administration and Organizational Science at Utrecht University. His research interests cover various HRM domains in the public sector including public service motivation and people management.