

## Chapter 14 - Public Service Motivation and Individual Job Performance

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### Abstract

When pressure on human resource departments to make government more efficient is increasing, it is of great relevance to understand employees' motivation and the fit of an employee and his/her job as they heavily contribute to service performance. Therefore, this chapter discusses the role of public employees' motivation and its relationship to individual performance. More specifically, we look into this relationship by focusing on public service motivation (PSM), a stream of research developed during the last three decades stressing the service orientation of public employees' identity. We theoretically reflect how the relationship between PSM and individual performance is dependent on institutions and we provide an overview of the existing empirical evidence concerning this relationship. The literature review discusses a variety of aspects such as direct vs. indirect effects, type of performance used, how performance gets measured, and effect sizes. Finally, we propose several avenues for future research, including methodological strategies.

*Keywords: Public service motivation (PSM), public sector motivation, public employee, public service identity, performance, public service performance, individual performance, job performance, human resource management*

## 14.1 Introduction

Research on human resources management and the performance of public organizations has received relatively little attention thus far (Paauwe *et al.* 2013; Knies *et al.* 2018). Compared to private sector organizations, information about the overall performance of public organizations is rather inadequate due to the heterogeneity of government organizations, challenges in measuring productivity, and the fact that exogenous factors heavily influence financial performance. However, the new public management reforms increased the pressure on human resource departments in government to change strategies, structures, and cultures in order to make government more efficient and effective as well as more closely aligned with performance-oriented private sector HR strategies (Lægreid and Wise 2015). At the center of government, in public administration, the individual and their contribution to service for society are at the heart of the “public performance engine.” At this micro-level of the organization, it is important to understand employees’ motivation and the fit of an employee and his/her job as these factors contribute to service performance as well as to employee outcomes such as satisfaction, citizenship behaviors or organizational commitment (Sayed *et al.* 2015).

There are several practical reasons for the relevance of motivation and specifically PSM in public service performance. First, with an average of around 20 percent of total employment in the OECD countries, public employment plays a substantial role in the economies around the globe. It is inconceivable that an unmotivated and unqualified public workforce would substantially contribute to effective government functions such as, for instance, firefighting, policing, air traffic control, judicial or tax administration. Second, international reforms of public HRM show a move from career towards position-based HR systems, with the decentralization of certain HR practices (e. g. performance-related pay, flexible working time), and increasing performance monitoring (Van der Meer, Frits M. *et al.* 2015; Brewer and Kellough 2016). Thus, the expectations within the psychological contract between public employer and employee are shifting away from offering job security for individuals’ loyalty towards offering employability for individuals’ motivation and performance. Third, the majority of government organizations reflect typical service organizations that are HR-intensive. The HR costs can easily climb up to more than 50 percent of the total expenses of a public organization. Thus, knowledge about how to incentivize and manage individuals’ motivation to increase employee performance is highly relevant for public managers. Fourth, increased individual job performance through public service motivation (PSM) may provide benefits for the organization as a whole (Brewer 2008). Also, the effectiveness of extrinsic

incentives in a public sector context are highly contested (Miller and Whitford 2007; Perry *et al.* 2009). Lastly, demographic change increases labor market competition and makes it more and more difficult for public organizations to retain high-performing individuals through monetary rewards alone. Therefore, public employers need to develop HR strategies that facilitate the careful recruitment, promotion, and retention of high-performing individuals not driven primarily by extrinsic motives. It is assumed that PSM is a major facet of the motivational structure of such individuals (Perry and Wise 1990).

Therefore, this chapter discusses the role of public employees' motivation and its relationship to individual performance. Individual performance is related to organizational performance, but the strength of this relationship is unclear because many other variables arguably have an impact (Brewer 2010). More specifically, we look into the relationship between individual motivation and performance by focusing on PSM, drawing on a stream of research developed over the last three decades stressing the service orientation of public employees' identity. We discuss the relevance of the topic and explain the most important questions that need to be addressed. Section 14.4 provides an overview of the existing empirical evidence concerning the relationship between PSM and individual performance. Section 14.5 offers reflections on meta-science as a specific set of methodological strategies for future research on the relationship between PSM and job performance. Finally, we summarize the findings of our literature review and propose some future research avenues.

## **14.2 Open Questions around the PSM-Job Performance Link**

In their seminal article, Perry and Wise (1990) claimed that PSM is positively related to individual performance. A synthesis over the past thirty years of PSM research showed that a majority of empirical studies report a positive relationship between those two variables (Ritz and Petrovsky 2014; Ritz *et al.* 2016). Thus, most research assumes that PSM is highly relevant to the performance of individuals. Nevertheless, there remain many open questions around the PSM–performance link. First, and of particular interest, is the clarification of *direct and indirect links* between PSM and individual performance. Against the backdrop of institutional theory, the fit between employee and environment can act as a mediator or moderator (Bright 2007; Vandenabeele 2007; Van Loon 2015). However, when looking at this relationship from the theory of motivation, a direct link between PSM and individuals' performance can also be

assumed (Grant 2008). Thus, the PSM–performance link is *context-dependent* (Van Loon *et al.* 2013; Vandenabeele *et al.* 2018). In certain contexts (e.g., task environment characterized by public values, organizations with public ownership and mission), the relationship might be stronger than in other contexts (e.g., private sector work without public purpose). Second, we need to know more about the *types of individual performance* outcomes to which PSM relates. The heterogeneity across studies regarding the conceptualizations of performance is immense. Individual performance is measured for the most part in terms of some sort of job performance (e.g., supervisor ratings of individuals’ job performance, self-assessed performance, subjective willingness to exert effort, number of publications, number of certain tasks fulfilled). However, to date, it has not been possible to accumulate knowledge that would facilitate a better understanding of which dimensions or types of individual performance (e.g., in-role and extra-role performance, performance directed towards individuals or society) are linked primarily to PSM and which are not (Vandenabeele *et al.* 2018). That said, we need at least to differentiate between *subjective and objective measures* of individual performance (Brewer 2006; Ritz and Petrovsky 2014); against the backdrop of the first question, we also need to differentiate between *contextualized and decontextualized measures* of performance. Third, do we actually know *how strong the effect of PSM* on performance is? It is relevant for future research to know more about the relevance of PSM in explaining individual performance. This allows to further investigate how much variance of individual performance is explained by PSM when compared to other types of motivation and correlates such as, for instance, self-determined motivation, commitment, prosocial motivation, job satisfaction, etc. (Ritz *et al.* forthcoming; Breugh *et al.* 2017; Schott *et al.* 2019)?

In the following sections, we will answer these questions by theoretically reflecting upon the PSM–performance relationship and by analyzing 38 empirical studies, which deal with this relationship.

### **14.3 Theoretical Reflections on the Link between PSM and individual Performance**

From a theoretical perspective, the relationship between PSM and individual performance follows two major theoretical approaches, both of which offer well-grounded propositions on the underlying processes:

*Motivation Theories:* Most motivation theories show that different incentives have a distinct impact on employee motivation and performance. Whereas intrinsic motivation is based on

rewards such as the activity itself, the source of extrinsic motivation are external rewards (e.g., money, threat) (Cameron and Pierce 2002). From the perspective of self-determination theory, autonomous extrinsic motivation can be increased in work situations by offering external rewards and, thus, results in more positive attitudinal and behavioral outcomes (Deci and Ryan 1985). PSM can be understood as a eudemonic form of certain outcome- and future-directed employee motives based on identified goals, that act upon external rewards and result in increased autonomous work motivation to perform (Ritz 2009) and to a lesser extent as intrinsic motivation (Vandenabeele and Breugh forthcoming). However, this does not mean that only PSM can activate individuals' performance. Extrinsic, enjoyment-based intrinsic, and prosocial intrinsic motivations complement one another where the behavioral motivation of individuals in a particular situation is concerned (Neumann and Ritz 2015; Andersen *et al.* 2018).

*Institutional Theory and Person-Environment Fit Theory:* The institutional context and the objective, as well as the perceived fit between characteristics such as demands, abilities, needs, supplies, values, and goals of an individual and the work environment, influence the PSM and performance relationship by defining structures and rules through norm- and value-shaping communication and expectations which interact with individuals' attitudes and job performance (Perry 2000; Perry and Vandenabeele 2008; Van Loon 2015). The fit can exist at various levels (e.g., environment, organization, job) and results from recruitment and selection, as well as from socialization and adaptation over time (Kjeldsen and Jacobsen 2013). Thus, theory suggests that the higher the fit between an individual's PSM and the institutional environment, the higher the individual performance resulting from that motivation.

Both lines of theory need to be considered when developing a general framework within which to analyze the relationship between PSM and individual performance. Many different variables come into play and context seems to be of high importance. We begin our reflection with the following function: *Individual Performance = f(individual characteristics, environmental characteristics)*. This function is a substantial improvement compared to earlier formulations like that of Maier (1958), who included motivation and individual ability, but disregarded context. Nevertheless, in our function, PSM serves as only one of the individual characteristics, next to general personality (Barrick and Mount 1991), other forms of motivation and, more importantly, cognitive and other skills (Wright *et al.* 1995; Appelbaum *et al.* 2000; Antonakis 2004). Similarly, 'environmental characteristics' is also a catchphrase for multiple characteristics, which may include resources provided by the environment (Rainey and

Steinbauer 1999), but also characteristics at various institutional levels such as job, co-worker or leadership attributes (Kristof-Brown *et al.* 2005).

However, the advantage of analyzing performance by means of a function with a set of broad variables is that variables can be controlled for or kept constant ('*ceteris paribus*'). This enables direct effects to be distinguished from indirect effects, where the former refers to effects stemming from individual characteristics and the latter to environmental conditions or interaction effects between the individual and a given environment.

With regard to PSM, the *direct effects* influencing performance for the most part derive from the regulation of motivation, as conceived in self-determination theory (SDT). As opposed to earlier motivational theories such as motivator-hygiene theory (Herzberg 1966), the typology of motivations developed in SDT states that motivation can be put on a continuum, rather than a dichotomy (such as intrinsic vs. extrinsic types of motivation). Despite the observation that there are dichotomies, such as the distinction between intrinsic motivation and extrinsic motivation, or - more importantly in SDT - the distinction between controlled or autonomous motivation, motivation is situated on a continuum depending on the degree present (Deci and Ryan 2004). The continuum ranges from amotivation which is not being motivated to self-regulate one's behavior, through external regulation (obtaining a reward or avoiding a punishment), introjection (for reasons of guilt or honor), identification (regulation because it is an important element of one's identity), integration (multiple identities which are aligned) to intrinsic motivation - doing something because you enjoy it. The stronger a motivation is internalized, the more it belongs to the core of oneself, with intrinsic motivation being the prime example of fully internalized motivation. This, in turn, influences outcomes in terms of strength and duration of the effects, for example in terms of performance (Gagné and Deci 2005). Given that PSM is mostly a type of autonomous motivation (identified and to a lesser extent intrinsic; Vandenabeele and Breugh Forthcoming), the outcomes are expected to be relatively long-lasting and stronger. However, in instances in which PSM is regulated along controlled lines (for example, in terms of social desirability (Kim and Kim 2016)), the effect will be expected to be less persistent and strong.

Given our function stated earlier, these effects will largely depend on the environment, which will mitigate or strengthen the outcome of PSM on performance, as the direct effects will be observed in a pure form only when all other factors are controlled for. Therefore, it is important to address the impact of the environment on this relationship. With regard to the *indirect effects*

of PSM on performance, it is mainly institutional theory and person-environment fit theory that informs theoretical reflection on the relationship between PSM and performance.

With institutions being a ‘formal or informal, structural, societal or political phenomenon that transcends the individual level, that is based on more or less common values, has a certain degree of stability and influences behavior (Peters 2000, p. 18)’, institutional theory comprises a broad array of possible guises, either at micro-, meso- or macro-levels of structured interactions. Micro-level institutions have a limited number of members who have substantial direct interaction to create an institutional identity, whereas meso- and macro-level institutions have less direct interaction (Vandenabeele *et al.* 2014). What they have in common is that they have a certain logic of appropriateness of behavior that makes sense within the boundaries of a given institution, making this behavior more likely to occur in that particular setting. According to Perry and Vandenabeele (2008), in an institutional approach to PSM, identity is an important variable. What researchers measure as PSM (Perry 1996; Vandenabeele 2008; Giauque *et al.* 2011; Kim *et al.* 2013), is mostly a set of self-descriptive statements which refer to an individual digestion of societal and public values. These provide a partial answer to the question ‘who am I?’, making them very similar to what actually constitutes an identity – a generalized institutional identity that is based on public service values. In an institutional environment that emphasizes and rewards the values upon which this identity is grounded, these values and the associated identity will be the driving force behind performance.

This insight meshes very well with findings based on person-environment fit theory (Kristof-Brown *et al.* 2005), which states that fit between the individual and their environment fosters motivation in this environment. The observation that there are various levels at which fit occurs only strengthens its ties with institutional theory, since a job, a set of structural relationships within a team or with a supervisor or an organization as a whole – which represent the most commonly found types of person-environment fit – all represent different types of institutions. In particular, the (supplementary) fit based on congruence of goals or values matches with the institutional perspective. The complementary fit perspective – in which an environment supplies what is needed by the individual or when an individual provides abilities demanded by the environment – matches less with this perspective (individual abilities do not refer to values). Only insofar as an identity provides what is needed by an organization (for example that it provides a pool of anticipatory members who already have a matching identity and therefore the institution does not need to provide institutional training; e.g. a school hiring teachers) is a

needs-supplies perspective useful for explaining the relationship between PSM and individual performance.

Analyzing the relationship described above from an institutional perspective means that also what performance is depends on the institutional context. Although there are general conceptions of what performance entails, be it role-based performance (in-role vs. extra-role performance), the value-component of performance is never far away. As mentioned earlier Van Loon (2016) demonstrated that various types of performance are differently related to PSM, depending on the type of organization. After all, the logic of appropriateness determines what is appropriate as performance and what is not. Teachers helping children with personal and non-education related issues may or may not be considered as performance, depending on what is institutionally appropriate. To the extent that performance is focused on providing public service, and to the extent that this is apparent from how performance is conceptualized, the link between PSM and performance will be stronger.

For the purpose of this chapter, we will translate our performance function to make it case-specific in terms of PSM. Therefore, *Individual Performance = f(individual characteristics, environmental characteristics)* would become *Individual public service performance = f(PSM, institutional characteristics)*. In this function, the nature of the institution provides the context in which the process is enacted. Performance is contextualized to what is appropriate for (a specific) institution based on public service values. Similarly, PSM is a contextualized individual characteristic in two ways. First, it refers to the identity that is based on general values of public service. Next to this, it may possibly be an idiosyncratic operationalization of a general identity (Van Loon *et al.* 2013), distinguishing for example between the PSM of teachers vs. policemen vs. nurses or civil servants. All of these categories of public employees provide public service, but they have their own conception of what this actually entails. Depending on the degree of internalization of this PSM or the degree to which it is an autonomous part of their self-conception, there will or will not be a link with performance. Apart from the direct effect, the interaction with the institution and the key values of the institution, the effect will be enhanced or decreased.

#### **14.4 Empirical Evidence**

In a next step, we are reviewing the empirical research of the relationship between PSM and individual performance to assess what is already known about the direct or indirect nature of



the effect, the type of performance that is affected by PSM and how strong the effect is. In doing so, we extend previous reviews by Ritz et al. (2016) as well as Ritz and Petrovsky (2014) and presents an encompassing and systematic review of all relevant studies investigating the relationship published from 1990 to 2017. We included 38 studies on the effect of PSM on individual performance. The reviewed studies are listed in table 1 (see online appendix). The table also details what kind of performance the studies used, how they measured it, if a direct and / or indirect effect of PSM on performance was identified, and how pronounced the effect is.

#### *14.4.1 Direct or indirect effect*

In their 2016 review, Ritz *et al.* assessed 26 studies researching the relationship between PSM and individual performance. They concluded that only 15 of the studies reviewed found a positive direct relationship, whereas 11 studies found mixed or no associations (Ritz *et al.* 2016). If we look at the overview in table 1 (see online appendix), we can draw a more positive conclusion. Of the 38 reviewed studies, 23 find supporting evidence for a direct effect, nine find mixed effects, four studies did not find a significant effect, and no study reports a significant negative relationship. In the studies that find mixed evidence, either only a subset of the PSM dimensions is positively related to individual performance (Vandenabeele 2009; Cheng 2015; Palma *et al.* 2017), or PSM affects only some performance indicators (Alonso and Lewis 2001; Van Loon 2016). We nevertheless conclude that the empirical foundation for a direct effect of PSM on individual performance is convincing.

Furthermore, we are interested in establishing whether there are additional indirect effects or if direct effects even vanish if indirect effects are analyzed. Unfortunately, a significant portion of the studies did not test for additional indirect effects. Nevertheless, 18 studies did, providing us with some insights on possible moderators and mediators.

First, we do not see evidence that a direct effect of PSM on individual performance disappears if studies test for mediating or moderating effects. The studies also testing indirect effects do not report more insignificant direct effects than the studies that test only for direct effects.

The most frequently tested indirect effect of PSM on individual performance is a moderating effect of transformational leadership. Four studies investigated whether a transformational leadership style of the supervisor strengthens the effect of PSM on individual performance.

However, the results are inconclusive. Park and Rainey (2008) confirm that the effect of PSM on performance increases when employees are led transformationally. Bellé (2014) confirms this in a field experiment. Caillier (2014), however, does not find a significant moderation effect in his study that is based on a convenience sample. In an even more contradictory finding, Bottomley *et al.* (2016) indicate that PSM reduces the positive effect of transformational leadership on OCB.

Another common assumption in favor of an indirect effect of PSM on individual performance is the fit an employee perceives between themselves and their organization (person–organization fit, PO fit) or their job (person–job fit, PJ fit). It is assumed that PSM has a stronger effect if employees see a fit with their organization and job (moderating effect); that a high level of PSM leads to a better fit with the organization and job, and that a better fit increases individual performance (mediation effect). As with transformational leadership, the empirical evidence is mixed. The two studies (Leisink and Steijn 2009; Koumenta 2015) considering PO fit as a moderator of the PSM–performance relationship find evidence in favor of the effect. The mediation analyses in four additional studies, meanwhile, reveal mixed evidence. While Gould-Williams *et al.* (2015) find support for a partial mediation of PO fit on OCB, Bright (2007), Jin *et al.* (2018), and van Loon *et al.* (2017) find no evidence for a mediation effect of PO fit on individual performance, extra-role performance or OCB. Van Loon *et al.* (2017), however, find a mediating effect of PJ fit on extra-role performance. Two additional articles survey a related indirect effect. They assume that PSM increases organizational commitment, which, in turn, increases individual performance. Again, the evidence for such an indirect effect is mixed. Vandenaabeele (2009) finds such an effect, but Jin *et al.* (2018) cannot confirm it.

In addition to these four indirect effects (transformational leadership, PO fit, PJ fit, organizational commitment), we found eight studies investigating additional indirect effects. However, each effect is investigated only once. The results are displayed in table 1 (see online appendix).

In summary, we conclude that, while the evidence for a direct effect of PSM on individual performance is convincing, we do not see any clear evidence of indirect effects. None of the potential moderators or mediators was found to have an effect in multiple studies without being questioned by other studies.

#### 14.4.2 Type of performance

Most of the studies reviewed do not further specify what kind of performance they are interested in and leave it to the participants or their supervisors to define performance. There are, however, some exceptions. Park and Rainey (2007; Park and Rainey 2008), for example, used the U.S. Merit Principles Survey, which asks participants for a self-assessment of their productivity and quality of work. Quality was also a focus of Levitats and Vigoda-Gadot (2017), who assessed performance using the SERVQUAL instrument. Van Loon et al. (2017) explicitly tested whether PSM affects different types of performance differently. Assessing four types of performance (output, service outcome, responsiveness, and democratic outcome), she found that PSM positively affects all four performance types for “people-changing” organizations but only service outcome and democratic outcome in the case of “people-processing” organizations. This indicates that the effects of PSM depend on the type of performance analyzed and the institutional context. Furthermore, two experimental studies used specific aspects of performance to assess the direct effect of PSM on performance. In a laboratory experiment, Resh *et al.* (2018) used persistence as their performance measure of interest. They found that participants with high self-sacrifices are more persistent at a voluntarily repeated reaction time task than others. Pedersen (2015b) found that PSM increases students’ willingness to spend time on an additional survey and used this time expenditure willingness as a measure of performance.

In four additional studies, the authors focus more specifically on certain types of performance by distinguishing between in-role and extra-role performance. It can be assumed that in-role behavior is what most of the other studies measure when they ask participants about their overall performance. As Van Loon *et al.* (2017) point out, in-role performance refers to the activities that are required for a specific task. In-role performance is high when an employee meets the standards that are associated with their role (Williams and Anderson 1991). As previously pointed out by Katz (1964), it is not sufficient for an organization to be successful if its members do only what is required in their specific role. To be successful, employees have to take on responsibility beyond their role and, for example, help their colleagues or engage in other activities that are beneficial to the organization. This is what is called extra-role behavior or extra-role performance. Overall, three of the four studies confirm a positive direct effect of PSM on extra-role performance (Caillier 2015, 2016; Van Loon *et al.* 2017) while one does not find any such effect (Wright *et al.* 2017).

Eight additional studies studied a construct that is strongly related to extra-role performance: organizational citizenship behavior (OCB). Like extra-role behavior, OCB captures behavior that is beneficial to the organization, but not directly rewarded (Organ 2016). A substantial majority of seven studies finds that PSM increases employees' OCB. Cun (2012) details this finding by analyzing the dimensions of PSM separately. Doing so, they find support only for a positive effect of attraction to public policy making and commitment to public interest while the combined dimension of compassion and self-sacrifice is not related to OCB.

Overall, it is challenging to state whether PSM affects different types of performance in different ways. However, compared to specific performance measures, we see much more variance in the results when the studies do not further specify the kind of performance they are interested in. While we found eleven studies with unspecific performance measures in favor of a direct effect on individual performance, there are also five studies with mixed results and five that did not find any direct effect. In contrast, the results of effects on extra-role performance and OCB are much clearer, with ten studies supporting a direct effect and only one with mixed results and one without any effect.

#### *14.4.3 Measurement of performance*

The most common way to measure performance is to directly ask employees about their self-perception. Overall, 28 of the 38 studies summarized in table 1 (see online appendix) choose this approach. There are, however, two groups of studies that differ from this "standard approach." The first one uses performance data from an external source. In this context, it is quite remarkable that both Schwarz *et al.* (2016) and Wright *et al.* (2017) are the only researchers conducting studies that ask supervisors to assess the performance of their subordinates and combine this performance measure with employees' own assessment of their PSM.<sup>1</sup> They conclude that PSM has a positive direct effect on performance, as indicated by supervisor ratings.

Various Danish researchers made another attempt to make performance measures more valid using external data. They use register data of performance measures and combine them with employees' self-assessed PSM. Andersen and Serritzlew (2012) operationalize the performance of physiotherapists as the proportion of time they spent on difficult cases or types of treatment

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<sup>1</sup> The difficulties associated with the collection of such clustered data might explain its infrequent use (Vogel (2018)).

but find only one of three tested direct effects of commitment to public interest on this performance measure to be significant. Andersen *et al.* (2014), Andersen *et al.* (2015), and Lynggaard *et al.* (2018) focus on school teachers and draw on students' exam marks as a measure of teacher performance. In two studies (Andersen *et al.* 2014; Andersen *et al.* 2015), they find a positive direct effect of PSM on performance. Lynggaard *et al.* (2018), however, do not confirm such an effect. Instead, they argue that the effect of commitment to public interest on performance is contingent on teachers' work autonomy and user capacity.

With the increasing popularity of experimental designs in public administration (Grimmelikhuijsen *et al.* 2017), a stream of research developed on performance effects of PSM that uses such an approach. We found five such studies. The first one to use experiments to assess the effect of PSM on individual performance was Bellé (2013, 2014). In his field experiments with nurses in Italian public hospitals, he observed participants' involvement in a developmental aid project in which they voluntarily assembled surgical kits for shipment to a former war zone. One study (Bellé 2013) used persistence, output, productivity, and vigilance concerning the assembly of surgical kits and the other (Bellé 2014) only the output in the form of the number of assembled kits. The experiments confirm a positive effect of PSM on objective performance (Bellé 2013). Furthermore, PSM strengthens the positive effect of transformational leadership on performance (Bellé 2014). Resh *et al.* (2018) take a different approach. In a laboratory experiment, they used persistence as their performance measure of interest. They find that participants with high levels of self-sacrifice are more persistent at a voluntarily repeated reaction time task than others.

Finally, two articles can be added to our review of experimental approaches to the PSM-performance effect. Both use hypothetical scenarios. Bellé and Cantarelli (2015) asked Italian government employees about their current work effort, randomly assigned them to a vignette describing a task, and a bonus the government pays for that task and subsequently surveyed the participants about the effort they would invest into this task. The experimental manipulation was carried out by altering the amount of bonus promised in the hypothetical scenario. Unfortunately, the study does not report the direct effect of PSM on work effort. However, it shows that the effect of the size of the bonus is not dependent on participants' PSM. Pedersen (2015a) also designed a hypothetical scenario to test performance effects of PSM. He asked students to fill in a survey, assessing—among other things—PSM. At the end of the survey, participants were asked how much time they would be willing to spend on another survey that will be conducted in the future. The reason they might be asked to participate again was varied

between groups. Some found a PSM-related reason, some an extrinsic motivation-related reason, some did not get a reason. Pedersen shows that those with a PSM-reasoning are willing to spend significantly more time on an additional survey than others. He also shows that this effect is even stronger if participants have a high PSM.

#### *14.4.4 Size of effect*

So far, we have only discussed whether there is any effect of PSM on individual performance. We concluded that the evidence is generally in favor of such an effect. Additionally, we wanted to assess how much PSM contributes to individuals' performance. We, therefore, reviewed the literature with regard to the reported effect sizes and summarized the results in table 1 (see online appendix). As the reviewed studies use a variety of different statistical methods, we collected standardized effect sizes or calculated them from the reported statistics if no standardized effects were reported. Afterward, we used common categorizations of effect sizes to give a verbal expression of the size of the effects. The categories are no effect, small effect, medium effect, and large effect. A small effect equals to a correlation of Pearson's  $r = .1$  to  $.3$ , a medium effect to  $r = .3$  to  $.5$  and a large effect to  $.5$  and higher (Cohen 1988). The details of these categories are reported in table 14.1 (see online appendix).

Of the reviewed studies, six report effect sizes have to be categorized as no effect. Five studies find a mix of no and small effects, fifteen studies find small effects, and one a mix of small and medium effects. Six studies find medium effects and two additional studies find large effects.

Considering that many studies test more than one effect, we can further differentiate. Of the 71 tested effects, 23 have to be categorized as no effect. 34 additional effects can be categorized as small effects. Thirteen effects are of medium size, and three are large.

Overall, the direct effects of PSM on individual performance have to be considered as relatively small. This is, however, not particularly surprising, as performance is a highly complex construct and it cannot be assumed that a single factor explains a large portion of the variance between employees.

#### *14.4.5 Summary of empirical evidence*

So, what do we learn from the literature on the effect of PSM on individual performance - keeping in mind our theoretical function, which is *individual institutional public service*

*performance = f(PSM, institutional environmental characteristics)*? If we simply count all reviewed studies that support a positive effect of PSM, we can conclude that 25 studies are in favor of a direct or indirect effect and six studies partially support it. Whereas 36 studies analyze a direct relationship, 22 studies confirm the positive link between PSM and individual performance. Only six studies do not find any direct effect.

18 studies investigate the indirect link and include contextual effects. As PSM is a kind of generalized institutional identity that is based on public service values, an environment that emphasizes and rewards these values will interact with individuals' motives and drive performance. In our overview of empirical studies, a couple of moderators and mediators seem to be relevant: transformational leadership, person-organization fit, person-job fit, mission valence, public service orientation of the organization, type of organization (people-processing versus people-changing), work autonomy, emotional intelligence, and user capacity. Most of these concepts represent value-loaded phenomena and add some supportive evidence that the logic of appropriateness of behaviors guided by institutional values at the macro-level (e.g., mission valence), meso-level (e.g., organizational orientation), and micro-level (e.g., supervisor) drive individual performance. However, either these moderators have been tested only once, or the evidence for their effect is inconclusive (transformational leadership, person-organization fit).

Against the backdrop of our second question about the type of performance measures, we ought not simply to treat all studies as equal evidence for the PSM-performance relationship but also take their rigor and design into account. The majority of empirical work on this subject is based on public employees' self-assessment of their performance. Although researchers have tried to improve the validity of such measures by asking about specific elements of performance, supervisor ratings, or performance compared to team members, subjective performance is problematic. Extensive psychological research shows that people are limited in their ability to assess their behavior correctly and often over-estimate positive aspects like performance. Andersen *et al.* (2015) demonstrate that public employees overestimate their performance and that the effects of explanatory variables are much stronger when they come from the same data source (i.e., self-assessment). This is also the case for PSM. Therefore, we have to assume that studies using operationalizations of performance other than self-assessment provide a more accurate test of the PSM-performance relationship. We found nine such studies published over the last six years. They either use register data like students' exam marks, supervisor assessments, or objective measures in an experimental context (e.g., number of assembled

surgical kits, persistence in reaction time task). Five of those studies find support for a positive direct effect of PSM on performance, while three do not confirm such effect.<sup>2</sup> The body of evidence, therefore, seems to be slightly in favor of a PSM-performance effect. However, five to three is not a very convincing outcome.

Interestingly, among the studies using an objective measure of performance, especially those that use a limited assessment of PSM are the ones that do not confirm a positive effect of PSM on individual performance. Two of them (Andersen and Serritzlew 2012; Lynggaard *et al.* 2018) study only commitment to public interest and one (Wright *et al.* 2017) a combination of commitment to public interest and compassion. This brings us to the question of whether it is PSM in its full combination of four dimensions that has a positive effect on performance or whether specific dimensions drive this effect (see also Brewer 2010). The body of evidence we currently have does not allow for any conclusion on this question. We reviewed 17 studies that used all four PSM dimensions. 12 neglected attraction to public policy making. Two studies used only two dimensions and five only a single dimension (mainly commitment to public interest). Only three studies tested the effects of the PSM dimensions separately. Even the limited number of three studies separately analyzing the effect of the PSM dimension come to different conclusions. Cheng (2015) found a positive effect of attraction to public policy making and compassion. Cun (2012) only confirms the effect of attraction to public policy-making but finds an additional effect of commitment to public interest. Finally, Palma *et al.* (2017) report a positive effect of commitment to public interest and self-sacrifice. Hence, further research is required on the effects of the respective PSM dimensions. This could also be carried out by reanalyzing the data of studies that already have been published.

However, it should be noted that the variety of PSM measures used to test whether PSM affects individual performance is quite staggering. We found 25 different measures of PSM in a set of 37 studies. Only six item sets were used more than once. In four of those six cases, this can be observed because the same authors published multiple studies or multiple studies were based on the same dataset. Without an extensive assessment of the validity of all these different measures of PSM, it is difficult to conclude whether measurement issues play a role in the mixed evidence on the PSM-performance relationship. We assume that the variety of PSM measures reflects the length and - therefore - limitation of the two validated PSM measures (Perry 1996; Kim *et al.* 2013). As such, we strongly recommend the development of a

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<sup>2</sup> One study (Bellé 2014) does not report the direct effect of PSM on performance.



comprehensive and validated measurement scale for PSM (Vandenabeele and Penning de Vries 2016).

To summarize, one can conclude that there is ample evidence for some positive relationship between PSM and performance. However, this is by no means a perfect relationship.

#### **14.5 Methodological Strategies for Improving Future Research**

Despite the substantial attention in terms of time, energy, and other resources that have been devoted to the study of the relationship between PSM and individual performance, the scientific evidence is not entirely convincing. Although our literature review shows that the majority of empirical findings point to a positive relationship, the relationship between the two core concepts has not been compellingly or undeniably demonstrated. To assess the causal value of our function, a number of strategies should be pursued. Below, we will elaborate on a few of the methodological approaches we think may contribute to better development of the causal analysis. Evidently, this is first and foremost oriented towards the field of PSM and performance. However, the strategies outlined below may also serve to facilitate improved causal analysis in other fields.

First, an important strategy is to fully appreciate the formulation as a performance function. Earlier, we stated that one advantage of this function is that parts of it can be investigated under the *ceteris paribus* assumption. However, this means that when carrying out this kind of research, one needs to live up to this assumption, by actually controlling for all other things. Given that the majority of studies, in particular the earlier studies, rely on cross-sectional data, one should control for all other possible factors in order to assess an effect. This fictional requirement stamps all these studies with the label ‘plausible at best’. To test for causality, the gold standard is the experimental design. This has recently also been advocated by scholars identifying ‘behavioral public administration’ (Grimmelikhuijsen *et al.* 2017) as a strategy to further the field of public administration as a science. In such well-conducted experiments, everything apart from the treatment would be controlled for so that differences in outcomes can be attributed only to the treatment. Transposing this to our domain, this would require PSM to be manipulated randomly in order to keep other influences constant. Despite some studies claiming to have manipulated PSM (Christensen and Wright 2018; Bellé 2013 would be the prime example of such a study) or remembered employees of their associated impact (Vogel and Willems 2020), one can readily question experiments ability to actually manipulate PSM,

given its multiple assumed antecedents (Perry 1997; Vandenabeele 2011) and its relative observed stability over time (Vogel and Kroll 2016). Moreover, not all settings lend themselves to experimental designs, ethically or for other reasons. In such cases, all other – observational – techniques that do not address the issue of endogeneity – due to common method bias or other causes – are useless for testing causality (Antonakis *et al.* 2010). Therefore, a valid non-experimental alternative would be a two-stage-least-squares (2SLS) approach, in which instrumental variables are identified to correct for the endogeneity. Such an instrumental variable is not correlated to the dependent variable in the model, but to the independent. When using the instrumental variable approach of 2SLS, these instrumental variables are used to provide a proxy estimate of the independent variable that is not affected by endogeneity (as it is uncorrelated to the dependent variable). Any correlation between this proxy estimate and the dependent variables is, therefore, a ‘true’ correlation. Combining this with the well-argued time order in which cause clearly precedes effect (for example by means of longitudinal data) changes the label on such studies from ‘plausible at best’ to ‘likely causal.’

However, one should also be aware of the phrase ‘well-conducted experiment’ and extend it to ‘well-conducted research.’ Epidemiological work by Ioannidis (2005) states that in all likelihood half of the studies conducted, if not more, are false due to the way in which science operates (the problem is that we do not know which half is false). This has been illustrated by the ‘replication project’ (OSC 2015) in which only 37% of 99 studies conducted were replicated. An experiment is therefore not a guarantee for true knowledge. To account for this, we need meta-science strategies to counter this effect. The most common strategy would be meta-analysis, in which the results of multiple studies are combined to assess an actual relationship, mitigating possible outliers (Ringquist 2013). This would even facilitate the discovery of possible moderators that have not been included in the actual studies. The Achilles heel of any such approach is, however, the number of studies available. Another strategy would be actual replication of studies by means of new data (Walker *et al.* 2018), collected in a different study, preferably multiple independent studies (so-called ManyLabs approach (Klein *et al.* 2014)). However, this would require a concerted effort by multiple teams to devote their scarce resources to a project that would create limited individual exposure. In such an effort, rewards for participating researchers should be well-designed in order to fit within the general institution of science.

A final strategy to increase the validity of the findings concerns the more fine-grained analysis in which the direct effect is explained by mediating mechanisms. This would, for example, be

a causal chain in which PSM influences perceived person-environment fit, in turn influencing performance. Further to what was said earlier about the use of non-experimental data to test for causal effects, mediation has its own problems that are not solved by applying experimental approaches (Bullock *et al.* 2010). Just as independent variables should be manipulated, so should mediators. More importantly, however, when developing models with multiple mediators (for example, when replacing person-environment fit with person-organization and person-job fit), it should be argued how manipulations would affect only one of the mediators. Bullock and colleagues (2010) put forward a number of solutions; however, given that the subtitle of the paper is ‘don’t expect an easy answer,’ this complicates the research substantially.

## 14.6 Conclusion

The performance of public organizations is essential for the legitimacy of a state. However, as Andersen et al. show in chapter 2 of this book, public service performance is multifaceted and relates to various stakeholder perspectives on which public value has to be achieved and which public values should be prioritized. In this chapter, we focus on the motivation of individual employees as a contribution to individual public service performance and, therefore, exclude many other factors contributing to the performance of public organizations, including non-directly performance-related variables such as, for instance, turnover and absenteeism. However, the equation we used for our literature review (individual public service performance =  $f(\text{PSM}, \text{institutional characteristics})$ ) reflects how the link between individuals’ motivation and individual performance is dependent on institutions. For instance, public values are one of the fundamental building blocks of public institutions and, thus, institutions matter in regard to performance outcomes of public service motivated individuals (see also chapter 4). This is supported by the two theoretical lenses (motivation theory, institutional theory) we used for the explanation of the underlying processes.

Our literature review reveals that the majority of empirical findings point to a positive relationship between public service motivation and individual performance. The evidence is based on research designs that analyze direct and indirect relationships using a variety of interacting variables, types of performance variables, and methodological strategies, such as surveys or experiments. However, the variety of study designs, data used, and performance types studied raise questions regarding the generalization of these findings. Nevertheless, the

literature review sheds more light on one of the three fundamental claims about public service motivation raised by Perry and Wise in their seminal article in 1990.

*First*, we learn that the relationship is highly context-dependent. Person–organization fit, mission valence, and transformational leadership are relevant intervening variables. Value congruence between an organization, its supervisors, and the individual employee exemplifies how institutional characteristics filter down to organizational actors. Leadership behavior, which supports such a complementary fit between the organizational environment and the individual, further strengthens performance outcomes of public service motivation. Future research needs to clarify whether complementary fit alone acts as a moderating variable or if public service motivation is also needed as a supply for the organization (supplementary fit). In addition, research differentiating between various types of fit and different performance outcomes is scarce and more knowledge is required in order better to understand the role played by context when it comes to explaining individual performance through public service motivation. For instance, more knowledge is needed about the influence of structural disaggregation, outsourcing, and agencification on the relationship between PSM and individual performance. This also includes the analysis of environmental fit measuring changes in institutional context over time, as well as institutional (publicness) differences between sectors, nations, policy fields, and organizations and the effects thereof on performance outcomes (see also chapter 4). Empirical studies point to transformational leadership as a moderator; at the same time, we also find studies using public service motivation as a moderator of the leadership-performance link. Both perspectives can be theoretically explained. However, future research needs to further investigate what exactly context characterized by public service motivation means and what role it plays in an organizational environment. Furthermore, our knowledge is very limited concerning the specifications of non-public environments interacting with the public service motivation-performance relationship.

*Second*, when looking at the type of performance measures used in empirical research, our literature review allows us to conclude that institutional context matters. Differences were found in research analyzing the relationships between public service motivation and various performance measures in different contexts. Furthermore, we also find contradictory findings between studies investigating the same type of performance (e.g., extra-role behavior) in different contexts. However, with the exception of experimental studies and the study by Van Loon (2015) there is a lack of studies using contextualized measures of performance. Task performance in one policy field may differ from that in another when examining the concrete

public values determining performance in a specific context. Thus, we encourage researchers to move away from using rather general HR survey measures for analyzing performance effects of public service motivation. We suggest instead investing more time in the contextualization of performance variables. Furthermore, while positive findings of experimental studies on the link between public service motivation and individual performance are very consistent, empirical studies using external sources of performance, like supervisor ratings or registered data, show rather mixed results. Against the backdrop of supervisory ratings, which are a widespread element of public personnel policies linking performance with contingent pay, the underlying processes and impacts of such performance appraisals and its pay effects in relation to public service motivation need to be analyzed in more depth. Against the backdrop of a high variety of performance measures we also need to question the relevance of the public service motivation-individual performance link because relationships of PSM with other non-directly performance-related variables like, for instance, turnover and absenteeism, could be of greater relevance when individual performance does not scale up to organizational performance. Thus, future research should also look at performance outcomes from a broader and more comparative perspective.

*Third and lastly*, we were interested in the strength of the relationship between public service motivation and individual performance. So far, we can conclude that the strength of correlations and effects measured is rather small. Giving due consideration to the fact that most models are not fully specified and empirical studies largely neglect correlates of public service motivation as explanatory variables, we can definitely conclude that individuals' performance depends to a larger extent on other factors (e.g., other types of motivations, personality characteristics, cognitive and other skills) – some of which may be more important than PSM. Except for experimental studies, our knowledge is very limited when it comes to the relevance of public service motivation in comparison to other motivational and attitudinal variables predicting or relating to individual performance. For instance, job satisfaction is an antecedent of individual performance and is closely related to PSM (Homburg *et al.* 2015). However, from a content perspective, the two constructs are distinct and have different implications for leading employees in practice. Therefore, it is of great interest to find out about what type of correlates (e.g. micro-level variables like controlled and self-determined motivation; meso-level variables like organizational commitment; macro-level variables like societal value orientation) are more or less in competition with public service motivation and specific types of individual performance (see for instance Breugh *et al.* 2017). Future research will need to unravel those

relationships in order to better assess the role played by public service motivation. With an increase of experimental studies, it will be worth systematically comparing results from experimental studies to the results from the majority of non-experimental studies to gauge the distortion caused by model specification error in the latter set of studies.

#### **ONLINE APPENDIX: Table 14.1**

See:

[http://www.kpm.unibe.ch/contact/personen/geschaeftsleitung/prof\\_dr\\_ritz\\_adrian/index\\_eng.html](http://www.kpm.unibe.ch/contact/personen/geschaeftsleitung/prof_dr_ritz_adrian/index_eng.html)

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