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Crowding-in or crowding-out: the contribution of self-determination theory to public service motivation

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ABSTRACT

The relationship between monetary rewards and public service motivation (PSM) has been at the centre of public management research for several decades. Yet the role of performance-contingent rewards in motivating individuals to engage in public service behaviour remains largely contested. This conceptual study aims to reconcile inconsistencies in the literature by considering particular conditions under which performance-contingent incentives may effectively sustain PSM. Drawing on self-determination theory, this study offers a detailed map of the factors that can explain the relationship between performance-related rewards and PSM, while also reconciling contradictory research findings to date and making several propositions for empirical research.

KEYWORDS Public service motivation; performance-related pay; pay for performance; motivation crowding; self-determination theory

1. Introduction

Nearly a decade ago, key public management scholars (Andrews and Boyne 2010) reminded us of the discipline's moral purpose: to contribute to 'public good' by improving, through the delivery of public services, the provision of public value to citizens and communities. At the centre of public value provision lie the motivations of employees working in the public sector (Pandey, Wright, and Moynihan 2008; Vandenberg 2008), who are responsible not only for exercising sound professional judgement in their jobs for the benefit of the public but also, increasingly, for meeting externally imposed performance targets that often dictate reward allocations (Hood 1991). With the introduction of the New Public Management (NPM) reforms in the public sector, employees working in public organizations have found themselves increasingly evaluated for their performance on the basis of indicators that are meant to assess not only the efficient and effective delivery of public goods (Greiling 2006) but also clients' satisfaction with the services provided (e.g. through customer satisfaction surveys) (Kelly 2005). Furthermore, under NPM, public sector workers have become increasingly rewarded on the basis of extrinsic – often performance-dependent – incentive schemes that are meant to drive and enhance their performance (Barzelay 2001; Lah and Perry 2008). It is unclear, however, whether such reward systems have a positive or a negative effect on the public service motivation (PSM) of

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these public sector employees. What is at stake here, and the reason why we need clarity on this relationship, is the preservation and enhancement of PSM and, with it, of public value and the public good.

The notion that PSM characterizes public sector employees, and that it is a differentiating characteristic of ‘public’ sector management, has been consistently supported by empirical findings (e.g. Crewson 1997; Shim, Park, and Eom 2017; Vandenaabeele 2007). Defined as an individual’s orientation towards ‘delivering service to people with the purpose of doing good for others and the society’ (e.g. Hondeghem and Perry 2009, 6), PSM involves meaning and purpose as the key drivers of behaviour (Grant 2008). Preserving PSM is thus of utmost importance if public sector employees are to internalize the value of performance-contingent motivators without detriment to public value from the provision of public good. This is the main premise of this paper and it is on this basis that we examine current debates on, and propose a new trajectory in, the study of PSM.

One of the ways in which public management scholars tried to understand public servants’ reaction to performance-contingent rewards was by investigating the relationship between monetary rewards and ‘other-oriented’ forms of motivation (e.g. Burgess and Ratto 2003; Weibel, Rost, and Osterloh 2010; Voorberg et al. 2018). Nevertheless, we argue, this body of research yielded mixed findings about such rewards’ positive and negative effects on PSM (i.e. ‘crowding-in’ and ‘crowding-out’ of PSM, respectively – e.g. Frey and Jegen 2001; Frey and Oberholzer-Gee 1997), and did not take account of key socio-contextual and individual-level factors affecting motivation. Adopting an interdisciplinary perspective and drawing on self-determination theory (Deci and Ryan 1985a), our aim in this paper is to provide a conceptual framework that can, first, help reconcile the inconsistent state of the existing literature on the relationship between performance-contingent pay and PSM; and, secondly, highlight some opportunities for future research which will help us understand the complex dynamics of motivating workers in public sector settings.

To start with, it is important to delineate the conceptual boundaries of the PSM concept against other, related, concepts which we could have also employed to explore the impact of externally administered rewards on public servants’ work motivation, and which have been employed in other studies, and sometimes used interchangeably with PSM. We discuss these in the next section of the paper. This is followed by an outline of empirical inconsistencies which unravel the need for additional conceptual work in reconciling contradictory findings. In the final sections of this paper, we put forward the assumptions of the self-determination theory as lenses which would decisively open the research agenda around newer ways of ‘seeing’ and researching the impact of performance-related rewards on PSM.

2. The place of PSM in the motivational constructs’ landscape

PSM is the core motivational construct in public sector research. It is ‘native’ to public administration and management (Boyd et al. 2018), but it has also found application in other fields (Boyd and Nowell 2017; Nowell et al. 2016). Originally defined as ‘an individual’s predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations’ (Perry and Wise 1990, 368), PSM is accepted to stand for individuals’ public service values regardless of setting (Pandey, Wright, and Moynihan 2008, 91–2) – public, private, organizational, or non-organizational. PSM

has sometimes been considered to be a type of intrinsic motivation for public sector employees (Georgellis and Tabvuma 2010; Kim 2006; Houston 2000), as well as a type of pro-social motivation (e.g. Jensen and Andersen 2015; Perry and Hondeghem 2008). Yet, despite conceptual overlaps between these constructs, there are also important distinctions between them. In this section, we investigate PSM's distinctiveness within the conceptual landscape of motivation research, by comparing and contrasting it with notions which share the same 'other orientation' (Perry, Hondeghem, and Wise 2010).

PSM's closest neighbours are prosocial motivation (which also shares the same acronym as PSM) and intrinsic motivation. PSM and prosocial motivation are goal and beneficiaries oriented (e.g. Grant 2008; Potipiroon and Ford 2017), where the goal is not limited to task enjoyment, as is the case with intrinsic motivation. If task enjoyment, hence intrinsic motivation, is present, and process, focused (e.g. Amabile 1993; Grant 2008), PSM and prosocial motivation are both future, and outcome, oriented (Batson 1998; Grant 2007). Empirical research findings confirm these distinctions when they found PSM and prosocial motivation to be fairly stable over time (see Stazyk and Davis 2015; Vogel and Kroll 2016), indicative of their future, eudemonic orientations, as opposed to intrinsic motivation which has been found empirically to be hedonic, hence situational – driven by factors such as, for example, job characteristics (e.g. Amabile 1993; Grant 2008). This can be explained at least partly by the fact that intrinsic motivation serves more egoistic purposes than both PSM and prosocial motivation, prioritizing pleasure derived from a task over utility or contribution to a higher purpose. Indeed, the beneficiary of intrinsic motivation seems to be exclusively the person undertaking the task, whereas the other two 'other oriented' constructs look out for beneficiaries. It is precisely at this point that PSM and prosocial motivation start to diverge: PSM is aimed at the society at large (the citizenry, in other words), whereas prosocial motivation is said to be concerned with particular individuals and groups (Schott et al. 2016). This is why PSM can be associated with publicness and public value in the way in which prosocial motivation cannot.

Boyd et al. (2018) went even further and introduced an additional concept on the public sector motivational constructs' landscape: *sense of community responsibility (SOC-R)*. The authors propose that SOC-R motivates behaviours that are consistent with both an individual's own identity, and the normative way they feel they *should behave* in a given setting or community (Boyd et al. 2018). Therefore, SOC-R combines the sense of responsibility towards the group(s) the individual belongs to with the promise to behave in accordance with that responsibility. The assumption is that the behaviour SOC-R prescribes is one appropriate to the role perceived by the individual in relation to the group. It follows, therefore, that while SOC-R focuses on the individual as part of an organization or a community, and prosocial motivation, on particular individuals and groups, PSM indicates a more general other-regarding attitude. This is what makes PSM particularly applicable to public sector contexts which are driven by public value and citizenry (e.g. Moore 1995; Alford and Hughes 2008).

Yet, while PSM is a longer-term and a more 'other' focused concept than intrinsic motivation, it does involve a greater reliance on intrinsic, rather than extrinsic rewards (e.g. Crewson 1997; Houston 2000; Bullock, Stritch, and Rainey 2015). Nevertheless, as public sector borrows compensation practices from the private sector, the issue of implementing performance-contingent reward management practices with no prejudice to the 'publicness' entailed by the PSM concept which presumably attracts public sector workers to the sector in the first place, remains unresolved. There are two major

streams of thought in that respect: the crowding in and the crowding-out hypotheses. The former claims that extrinsic rewards reinforce PSM, whereas the latter is sceptical of external motivators and claim that they reduce PSM levels. The co-existence of these two perspectives, coupled with the difficulty to reconcile them are telling of the cross-road where PSM research finds itself.

(1) *Crowding-out or crowding-in: the ambiguous relationship between performance-contingent rewards and PSM*

Crowding-in and crowding-out theories of motivation have, at their core, the distinction between intrinsic and extrinsic forms of rewards and motivation. This dichotomy is, to date, the most common approach to distinguishing between different types of rewards and motivation. In broad terms, intrinsic motivation is defined as ‘doing something because it is inherently interesting or enjoyable’ (Ryan and Deci 2000, 55), meaning that intrinsic ‘rewards’ could be understood as the feelings of satisfaction with and enjoyment of the activity itself. Extrinsic rewards, on the other hand, are those valued outcomes that are separate from feelings of satisfaction with the task itself, whether they are provided in the form of tangible rewards such as monetary payments, or in the form of non-tangible rewards such as positive feedback and verbal praise. While the latter have consistently been shown to support intrinsic forms of motivation (e.g. Deci 1971; Vallerand and Reid 1988; Alonso and Lewis 2001), the relationships between financial rewards and PSM are relatively more contested in the literature.

There are different ways of classifying the provision of financial rewards, with some people being rewarded for their role regardless of their performance (also known as ‘task-noncontingent rewards’ such as benefits and base salaries), and others receiving rewards that are contingent on engagement with- or completion of certain tasks (these are also known as ‘task-contingent rewards’ such as piece-rate systems). In addition, a third category refers to rewards which are provided for attaining a certain standard of performance (also known as ‘performance-contingent rewards’ such as performance bonuses and performance-related pay). As indicated previously, the premise of using performance-related pay schemes in the public sector is that they will lead to improvements in the productivity, efficiency and overall performance of the sector, and increase the provision of public value to citizens and communities. The body of evidence about their effectiveness, however, remains ambiguous, despite concentrated efforts to resolve it.

2.1. Mixed findings on the motivational impact of performance-contingent rewards

There are several studies suggesting that extrinsic interventions, particularly performance-related ones, can lead to a negative, ‘crowding out’ effect on PSM – with severe negative consequences regarding task performance (Eberts, Hollenbeck, and Stone 2002; Bellé 2015), and employee satisfaction and turnover intentions (Cho and Perry 2012). To give just a few examples, Wynia (2009) suggests that performance-contingent rewards for healthcare professionals are most likely to ‘backfire’ as they tend to undermine employees’ internal motivation ‘such as professionalism or pride in the quality of work one achieves’ (p.885). Arguably, if the work contributes to the provision of public services, this argument can extend to PSM. In a review of theoretical and empirical studies regarding the effectiveness of pay for performance

(PFP) in the public sector in England, France, and the US, Forest (2008) similarly concludes that performance-related practices, can, in the long term, lead to negative effects on civil servants' public service motives, due to implicit limitations in the performance appraisal process (e.g. performance in the public sector is generally difficult to measure in a meaningful way), as well as the perceptions of control that such rewards can elicit.

More recently, Qian and He (2018) revealed that the extensive use of performance bonuses for a sample of clinical physicians in China resulted not only in motivation crowding out but also in a lower quality of services provided. In addition, Georgellis, Iossa, and Tabvuma (2011) brought evidence in support of the crowding-out hypothesis by showing that high extrinsic rewards in the UK public sector tend to reduce the propensity of intrinsically motivated individuals to accept public sector employment. While Georgellis Iossa and Tabvuma (Georgellis, Iossa, and Tabvuma 2011) did not examine PFP per se, they were still able to show that even rewards which are less controlling in nature (e.g. real wages) can have a detrimental impact on the individuals' motivation to join the public sector. While PSM was not the focus of Georgellis' study, these findings reinforce the claims of Perry, Engbers, and Jun (2009) that performance-related rewards are often incompatible with public institutional roles as well as the 'more powerful motivations that lead many people to pursue public service in the first place' (p.45).

Despite the crowding-out hypothesis being pretty compelling, in the light of much of the extant literature, there are also scholars who present evidence of motivation crowding-in or, at least, of the compatibility between performance-contingent rewards and positive motivation outcomes. Alonso and Lewis (2001), for example, showed that federal employees expecting performance rewards such as merit pay attained higher performance ratings, regardless of whether employees were motivated by the desire to serve the public or whether they cared more about monetary rewards. As such, there was 'no evidence that the link between material rewards and performance mattered any less to those with high PSM' (p.363). In a similar vein, Stazyk (2013) found that performance-related pay is associated with greater job satisfaction for employees working in public administration, particularly for those with higher PSM. In other words, performance-related pay and PSM are not necessarily incompatible with one another and 'may work in tandem – at least in some cases – to motivate employees' (Stazyk 2013, 265).

More recently, Voorberg et al. (2018) found that, while financial rewards are not an effective mechanism for stimulating coproduction of public services, they do not necessarily crowd out motivation for prosocial acts, again indicating that the undermining effects of performance rewards are not as pervasive as initially understood. Furthermore, in contrast with the study by Qian and He (2018) introduced previously, Hennig-Schmidt Selten and Wiesen (Hennig-Schmidt, Selten, and Wiesen 2011) revealed that physicians provide significantly more services under a fee-for-service scheme than under a general wage system, and that this increase in service provision does not necessarily undermine the quality of care, but is rather beneficial especially for patients with a high need of medical services.

2.2. Public service motivation: quo vadis?

The ambiguity of the empirical findings in the extant PSM literature suggests that the external context itself does not provide an adequate explanation for the current mixed findings. Specifically, evidence in favour of *both* a positive and a negative effect of extrinsic rewards on motivation has been reported in various sectors of employment, from healthcare (Hennig-Schmidt, Selten, and Wiesen 2011; Qian and He 2018; Wynia 2009) to core public administration (Forest 2008; Stazyk 2013). In addition, the national context seems to be equally ill-suited to explain these differential effects, with previous research being conducted in Anglo-Saxon countries (Georgellis, Iossa, and Tabvuma 2011; Alonso and Lewis 2001), as well as Germany (Hennig-Schmidt, Selten, and Wiesen 2011), the Netherlands (Voorberg et al. 2018) and China (Qian and He 2018). Likewise, methodological considerations seem to provide equally little explanation for the divergent findings, as prior studies were mainly conducted through quantitative research designs, whether in the form of experimental studies (e.g. Voorberg et al. 2018), cross-sectional large-scale surveys (e.g. Stazyk 2013), or longitudinal research (e.g. Georgellis, Iossa, and Tabvuma 2011).

What seems to be the case is that, in order to understand the effect of performance-contingent rewards, a different, individual-focused perspective may be necessary, one that allows an investigation of the factors and processes through which such rewards are experienced by the individual at a *psychological* level. This is the approach we are taking in this paper. Drawing on the assumptions of self-determination theory, one the key frameworks in motivation research developed to describe the effects of social contexts on intrinsic motivation, this study offers a framework that explains the network of factors that impact the relationship between monetary rewards and the motivation for the public good, in the form of PSM.

3. Self-determination theory

Self-determination theory (SDT) explains intrinsic motivation, rather than PSM, but we, like Andrews (2016) and Vandenabeele (2007), argue it can be very useful to a theory of PSM. This is on grounds of partial overlap between the two, as well as the contribution of one to the other, for example, where serving the public is intrinsically motivating for public sector employees. Furthermore, we argue that PSM will be facilitated through the same mechanisms as intrinsic motivation. In fact, a recent addition to the theory (Martela and Riekkki 2018) brings SDT more firmly within the PSM remit, and builds important opportunities for empirical research.

According to SDT, the basic factors underlying intrinsic motivation are the psychological needs for autonomy, competence, and relatedness (Ryan and Deci 2018). In the context of this model, autonomy refers to the idea of ‘acting with a sense of volition and choice’, competence refers to ‘feeling effective in one’s interactions with the social environment’, and relatedness refers to a sense of connection and ‘belongingness to groups, communities, or organizations’ (Deci and Ryan 2002, 7). Yet these basic psychological needs are arguably important not only to intrinsic motivation but to PSM as well. According to Andrews (Andrews 2016, 243), for example, ‘PSM assumes that motivated individuals perform their duties autonomously – i.e. without external coercion – an assumption that is not different from the one seen in SDT’. In addition, Vandenabeele (2014) found evidence for the

role of basic need satisfaction in predicting PSM, albeit suggesting that individual values internalized through socialization will act as additional factors leading to the development of PSM.

If the original theory made reference to three psychological needs, more recently a fourth one has been put forward (Martela and Ryan 2016a; Martela and Riekkii 2018), augmenting the SDT lenses and bringing the theory even closer to explaining PSM processes alongside intrinsic motivation. This fourth psychological need is known as beneficence, which refers to the sense of having a positive prosocial impact (e.g. Martela and Ryan 2016a; Martela and Ryan 2016b; Martela and Riekkii 2018) – thus highly useful when considering PSM. To date, the studies that have considered beneficence have mainly examined its mediating role¹ in the relationship between prosocial behaviour and well-being, thus uncovering the main mechanisms through which benevolent behaviour leads to increased well-being (Martela and Ryan 2016a; Martela and Ryan 2016b). Yet considering the need for beneficence as a contributor to preserving PSM may be an appropriate research avenue for public sector scholars. Indeed, having a subjective sense of making a positive contribution to others could contribute to enhanced PSM, thus reinforcing the desire to achieve a higher purpose through the delivery of public value.

In light of the assumption that autonomy, competence, and relatedness are essential to intrinsic motivation – and, we argue, to PSM as well through the additional psychological need for beneficence – SDT suggests that external interventions which satisfy basic psychological needs tend to *increase* intrinsic motivation, whereas those that impede need satisfaction tend to *decrease* intrinsic motivation (Deci 1975; Deci, Koestner, and Ryan 1999). For example, it has been suggested that, on average, performance-contingent rewards will tend to be experienced as controlling and to undermine the individual's need for autonomy, as they prompt behaviour to be pursued for external reasons (such as receiving the reward) rather than for the self-determined interest in the task itself. In this sense, employees who would normally invest effort in their jobs because they enjoy the work itself and/or identify with the goals of their activities, may, when provided with salient performance-contingent rewards, shift their perspective and adjust their efforts towards obtaining the anticipated rewards. In fact, even though performance-contingent rewards convey information regarding one's competence and effectiveness in various situations (Harackiewicz, Abrahams, and Wageman 1987), the controlling effect is still expected to be stronger, leading to an overall decrease in intrinsic motivation (Deci, Koestner, and Ryan 1999). Furthermore, performance-contingent incentive schemes may also affect intrinsic motivation through decreased relatedness need satisfaction, especially in the case of reward schemes where performance is contingent on individual input. Given that such schemes focus attention on individual rather than group goals, they tend to increase competition in the organization (Deutsch 1985), leading to negative social comparisons, as well as, in some cases, 'behaviours grounded in envy, attrition and (...) sabotage' (Larkin, Pierce, and Gino 2012, 1201). In addition, an argument could be made that beneficence can be equally thwarted in the presence of performance-related rewards, given that prosocial acts are sustained primarily in the absence of such incentives (Ariely, Bracha, and Meier 2009). Research on money priming, for example, shows that simply thinking about money increases individuals' focus on maximizing personal outcomes and decreases their concern for others (DeVoe and Pfeffer 2007; Pfeffer and DeVoe 2009; Vohs, Mead, and Goode 2006).

In the case of PSM, we can thus expect similar results, with PFP leading to decreased basic need satisfaction and through that, to decreased PSM. This is based on the assumption that PSM-driven behaviours cannot be effectively sustained without individuals having the experience of choice in relation to such behaviours (Weinstein and Ryan 2010). In addition, satisfaction with the need for competence may equally reinforce individuals' sense of effectiveness and ability to contribute to the public good, whereas relatedness and beneficence need satisfaction may further strengthen the signal of contributing to 'other-directed' prosocial acts. Yet this is not to say that basic need satisfaction is the sole predictor of PSM, especially in the case where an individual has no motivation for public service to begin with. According to Vandenaebale (Vandenaebale 2014, 167): 'satisfaction of basic psychological needs contributes to the development of PSM, but at the same time, PSM cannot be fully explained as basic needs satisfaction'. Indeed, other institutional factors such as public values promoted through transformational leadership (Vandenaebale 2014) can independently contribute to PSM. As such, the argument we put forward is not that basic need satisfaction will necessarily help create PSM where this is absent, but rather help preserve existing levels of PSM. Furthermore, to the extent that basic needs are unmet – and indeed thwarted by factors such as performance-contingent rewards, we argue that PSM may be undermined.

Yet SDT further expands on these assumptions by recognizing that there are many factors – pertaining both to the external environment and to individual differences – that can 'temper these "on average" effects' (Ryan and Deci 2018, 159). The next step in solving the motivation 'crowding out'/'crowding in' puzzle, therefore, is to identify these key conditions that moderate the relationship between PFP and PSM. The next section puts forward a research agenda that addresses these issues in public sector contexts and effectively places SDT in the driving seat of PSM research.

4. Adopting an SDT perspective in PSM research

Can SDT lend PSM research useful conceptual lenses? It arguably can, by adding nuance to the otherwise simplistic relationship between performance-contingent rewards and PSM, particularly since the addition of the fourth basic psychological need. A number of conceptual papers have already provided the groundwork for integrating SDT and PSM research (see Andrews 2016; Grant 2008; Perry and Vandenaebale 2015; Vandenaebale 2007), suggesting that need satisfaction can indeed be one of the key ways to understand and promote/help preserve PSM and prosocial behaviour, and that particular elements of the organizational environment central to SDT can aid our understanding of the dynamics associated with PSM. Arguably, this has never been truer since Martela's (e.g. Martela and Ryan 2016a; Martela and Ryan 2016b) research into beneficence, with its focus on pro-social impact. Therefore, in the remaining sections of the paper, we utilize the SDT framework to advance several propositions about the motivation crowding phenomenon in public sector settings. [Figure 1](#) provides a diagrammatic representation of these propositions, which are derived from conceptual discussions and empirical findings in the extant literature.

One decisive way forward in PSM research, and one which has the potential to allow it to progress beyond its current cycle of ambiguity, is through consideration of the contextual and person-specific moderating factors in the PSM crowding-in vs. crowding-out conceptual conundrum. The following section reviews the impact of these

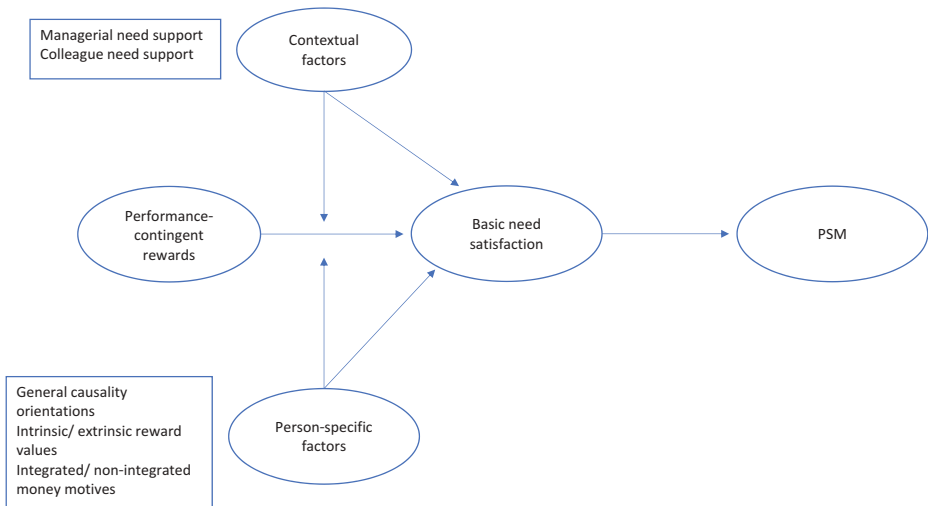


Figure 1. Extrinsic rewards and public service motivation – A Research Agenda.

factors in supporting need satisfaction and considers the potential role of these variables in moderating the motivation crowding-out effect, an area that, we maintain, has been insufficiently explored, especially in relation to PSM.

4.1. Contextual moderators

According to SDT, the more autonomy-supportive the *social context* is, the more it facilitates the internalization of extrinsic motivation, and the more it enhances intrinsic motivation (Deci et al. 1994). Autonomy-supportive contexts encourage self-initiation, minimize pressures and controls, and provide individuals with positive feedback on their performance (Deci et al. 1994; Gagné and Deci 2005). Indeed, the concept of managerial autonomy support has received considerable attention, with a large number of research studies, including in the public sector, substantiating its positive impact on autonomous motivation and related outcomes. Otis and Pelletier (2005), for instance, showed that police officers who perceived their supervisors to be highly supportive of their need for autonomy reported higher levels of self-determined work motivation, which was, in turn, associated with higher intentions to remain in the job. Similar findings were found for health professionals (Moreau and Mageau 2012) and public sector teachers (Nie et al. 2015), where managerial need support was associated not only with higher levels of intrinsic motivation but with higher levels of job satisfaction and better psychological health as well. What is more, Moreau and Mageau (2012) found that autonomy support from *colleagues* added to these positive effects, offering an important insight into the value of supportive professional relationships for predicting self-determined motivation, especially considering the collaborative nature of most public sector jobs.

In relation to the impact of autonomy support on PSM specifically, Andrews (2016) suggests that PSM can be sustained through practices such as fostering cooperation, offering choice and opportunities for self-direction, allowing participation in decision-making and providing support for career development, i.e. supportive managerial

practices that are linked to the satisfaction of basic needs. This is consistent with empirical studies such as Vandenabeele (2014)'s finding that transformational leadership styles focused on promoting public values can successfully support PSM, and furthermore, that this relationship is moderated by satisfaction with the needs for autonomy and competence. Similar results have been reported more recently by Jensen and Bro (2018), who showed that transformational leadership is positively related to autonomy, competence, and relatedness need satisfaction, which are then differentially related to both intrinsic motivation and PSM.

Considering the available evidence regarding the role of autonomy support in promoting basic need satisfaction, behaviour internalization, as well as PSM, an argument could be made that supportive social contexts can also help moderate the negative relationship between task-contingent rewards and PSM. The impact of such contextual influences in mitigating the motivation crowding-out effect has indeed been considered in the literature, but in relation to intrinsic motivation, rather than motivation for public service-oriented activities. Ryan, Mims, and Koestner (1983), for example, have shown that task-contingent monetary rewards have less of an undermining effect on intrinsic motivation when administered in a supportive social context (i.e. when they were associated with the provision of positive, informational feedback). More recently, Thibault Landry et al. (2017) have found that rewards with an informational functional significance (i.e. those that are seen as supportive of employees' efforts) are indeed associated with autonomy need satisfaction and self-determined motivation. In contrast, when rewards have a controlling functional significance (e.g. they are seen as a means for managers to coerce employees into meeting organizational requirements), they tend to predict the opposite effect.

Thus, it would appear that public sector work environments characterized by high levels of managerial autonomy support are more likely to foster the satisfaction of basic needs for self-determination. Furthermore, within autonomy-supportive public sector work environments, extrinsic rewards like PFP are likely to be perceived as having an informational (rather than controlling) function, and, as a result, further contribute to the satisfaction of basic needs for autonomy, competence, relatedness and arguably, beneficence. In turn, the satisfaction of these basic needs is predicted to help preserve PSM. Therefore, we suggest the following testable propositions for public sector environments:

P1: Basic need satisfaction (autonomy, competence, relatedness, and beneficence) will mediate the relationship between performance-contingent rewards and public service motivation.

P2: The greater the level of managerial/collegial need support, the less negative the relationship between performance-contingent rewards and basic need satisfaction.

While managerial and collegial support are important social factors that can promote need satisfaction through supportive behaviours, contact with beneficiaries (Bellé 2015) is likely to contribute to that, too. Indeed, in public sector work, beneficiary contact could further increase an employee's sense of competence, relatedness (Steijn and van der Voet 2019), and perhaps even more relevant in this case, the perception of having contributed positively to other people's lives – i.e. beneficence. For example, being able to observe positive change in others as a result of one's public

service activities (e.g. doctors seeing their patients' health improve) can easily foster beneficence, as well as autonomy and competence need satisfaction, by allowing individuals to get a full sense of the effectiveness of their work (Weinstein and Ryan 2010). Relatedness need satisfaction can then similarly be supported through fostering feelings of connection (Weinstein and Ryan 2010; Martela and Ryan 2015) with service beneficiaries. Thus, to the extent that public service employees are able to recognize the impact of their work through beneficiary contact, an argument could be made that the provision of performance-related pay may not always be perceived as negative, and may, in fact, help individuals invest further efforts into their work, reinforcing their public service motivation.

But should management consider the visibility of PFP to further enhance their effectiveness in such cases? There are some commentators to suggest that they should. Bellé (2015), for example, revealed that performance-related pay for public sector nurses had a larger effect on task performance when the rewards were kept *secret* than when they were *disclosed*. Furthermore, the negative interaction between PFP and visibility was stronger among participants who were exposed to direct beneficiary contact (Bellé 2015). In other words, there is evidence to suggest that, for employees who need to 'show' their care for others and display a certain level of altruism in their work, being able to demonstrate these attributes in the absence of external incentives – or at least in the absence of incentives visible to others – may actually be more important than receiving tangible rewards for their contribution (Bellé 2015; Bénabou and Tirole 2006; Ariely, Bracha, and Meier 2009). Yet such rewards can still be positively and significantly related to performance when left undisclosed to others (Bellé 2015), implying that the relationship between PFP, PSM, and performance may indeed be more complex than previously understood. As such, we offer the following proposition for future empirical research:

P3: The greater the level of beneficiary contact, the less negative the relationship between performance-contingent rewards and basic need satisfaction, particularly when such rewards are kept secret, rather than disclosed.

4.2. Person-specific moderators

Future research should also examine the role of specific *individual* predispositions in facilitating basic need satisfaction and behaviour internalization in the presence of PFP. For example, one of the assertions of SDT is that certain motivational predispositions, known as general causality orientations, can also determine the degree of integration of external interventions. Divided into autonomy, controlled, and impersonal orientations, these are understood as relatively enduring aspects of individual personality (Deci and Ryan 1985b), not unlike PSM (Stazyk and Davis 2015; Vogel and Kroll 2016). Existing studies focused mainly on autonomy and controlled orientations, given that impersonal orientations indicate lack of motivation for action, which arguably holds little relevance to motivational research (Lam and Gurland 2008; Hagger and Chatzisarantis 2011). According to SDT, individuals that are predominantly autonomy-oriented seek to engage in actions and behaviours out of choice and self-determination, and are likely to exhibit higher levels of intrinsic motivation (Deci and Ryan 1985b). A controlled orientation, in contrast, is characterized as a tendency

to experience actions as controlled by external events, indicating that individuals with this type of predisposition will be more motivated by rewards, deadlines, and other external incentives (Hagger and Chatzisarantis 2011).

Extant research suggests that autonomy causality orientations have a direct and positive relationship with psychological needs satisfaction and self-determined motivation, whereas the opposite is true for controlled causality orientations. Gagné (2003), for example, found both autonomy orientations and autonomy support to predict engagement in prosocial behaviour, with autonomy orientations having an overall stronger effect. In the organizational literature, Baard, Deci, and Ryan (2004) further substantiate these findings, by showing that autonomy causality orientations and perceptions of managerial autonomy support are independent predictors of work-related need satisfaction, which in turn facilitates psychological adjustment and positive performance evaluations. Controlled causality orientations, in contrast, have been found to be negatively linked with self-determined work motivation, and unrelated to outcomes such as job satisfaction and organizational commitment (Lam and Gurland 2008).

Extending this stream of literature to public sector settings, to empirically examine whether autonomy and controlled causality orientations moderate the relationship between performance-contingent rewards and basic need satisfaction, and whether, through that, they further affect PSM, is an interesting future research avenue. At present, the only available evidence in this regard is a study by Hagger and Chatzisarantis (2011), who examined the role of autonomy and controlled orientations in moderating the impact of performance-contingent rewards on the time spent on an interesting experimental task. What they discovered was that, compared to controlled orientations, autonomy orientations may offer a degree of 'protection' from the undermining effect of rewards on intrinsic forms of motivation; however, the experimental nature of this research limits its applicability to the domain of public service and prosocial motivation.

We suggest, therefore, that public sector employees with an autonomy-causality orientation are more likely to experience the satisfaction of their basic needs for autonomy, competence, relatedness and beneficence than employees with a controlled- or impersonal-causality orientation. What is more, an autonomy-causality orientation in public sector employees is likely to compensate for the 'average' negative effect of performance-contingent rewards on the satisfaction of basic needs.

P4: For employees with an autonomy-causality orientation, there will be a less negative relationship between performance-contingent rewards and basic need satisfaction, compared to employees with a controlled- or an impersonal-causality orientation.

In addition to general causality orientations, Deci, Olafsen, and Ryan (2017) further point out that intrinsic vs extrinsic aspirations and goals can also affect basic need satisfaction and internalization. Hofer and Busch (2011), for example, found that individuals scoring high in achievement motives displayed higher levels of job satisfaction when their *competence* needs were met, whereas those scoring high in affiliation motives displayed greater satisfaction with their relationships when their *relatedness* needs were met. There is no research at the moment on how these individual goals and aspirations link with beneficence needs.

While it is generally agreed that public sector employees value intrinsic rewards to a greater extent compared to extrinsic attributes (Crewson 1997; Georgellis, Iossa, and

Tabvuma 2011; Vandenabeele 2007; Bullok, Stritch, and Rainey 2015), there are still studies to suggest that these intrinsic values are not necessarily incompatible with extrinsic monetary motives. In fact, in a study by Liu and Tang (2011) on a sample of public sector professionals in China, individuals with high 'love of money' were found to have a significantly stronger relationship between PSM and job satisfaction than those without. While this appears to support the motivation crowding-in effect, evidence in this sense is still very limited. Could it be that individuals who value extrinsic rewards while still having an orientation to deliver public services will *not* be subject to the motivation crowding-out effect? This assumption, at a first glance, seems rather inconsistent given the links between PSM and altruistic, rather than extrinsic, values (Perry, Hondeghem, and Wise 2010). However, a recent SDT study by Thibault Landry et al. (2016) showed that self-integrated motives for making money (including taking pride in one's achievements, being able to donate to charity, and receiving fair compensation for work) led to higher need satisfaction and well-being, whereas non-integrated motives for making money (including being able to spend money on impulse, overcoming self-doubt, and social comparisons) predicted the opposite effect. This therefore shows that a more nuanced understanding of the reasons behind individuals' earning motives can offer a way forward in terms of explaining the undermining effect. The above discussion leads to our final proposition for empirical research:

P5: For public sector employees with intrinsic aspirations/integrated earning motives, there will be a less negative relationship between performance-contingent rewards and the basic needs for autonomy, competence, relatedness, and beneficence, compared to employees with extrinsic aspirations/non-integrated earning motives.

To sum up, while there is strong support for the assumption that both socio-contextual factors and person-specific predispositions affect motivation of an intrinsic nature, the extant literature fails to provide us with an in-depth understating of the conditions in which performance-contingent rewards have a positive impact on prosocial and public service motivation. In particular, we are currently missing an in-depth account of the factors that can either mediate or moderate the crowding-out effect of prosocial and public service motivation. To address this knowledge gap, [Figure 1](#) provides a diagrammatic representation of the research agenda for future empirical studies.

5. Conclusions

Understanding the effect of performance-related rewards on public sector workers' motivation and performance has gained momentum, given the prominence of such incentive schemes in the new public sector landscape, coupled with increasing policy interest in sustainable and meaningful work. Previous research on the relationship between extrinsic monetary rewards and different forms of motivation in public sector settings has produced inconclusive results, and it is not clear whether, and under which circumstances, extrinsic rewards like PFP undermine ('crowd out') or reinforce ('crowd in') public sector motivation. This paper puts forward the proposition that, to untangle this conundrum and reconcile previous empirical findings, there is a need to adopt an interdisciplinary perspective that will allow for an understanding of the processes and factors that moderate and/or mediate the relationship between these

motivational drivers. Drawing on self-determination theory (SDT), we argue that extrinsic rewards are internalized through the satisfaction of basic psychological needs for autonomy, competence, relatedness, and beneficence. We then put forward five propositions for empirical research, emphasizing the effect of contextual and individual factors on the satisfaction of the four basic needs and, through that, on public sector employees' PSM levels.

This paper's contribution to theory is twofold: first, the introduction of the revised SDT theory as powerful lenses through which the phenomena of prosocial and public sector motivation can be better understood and more effectively examined; secondly, the advancement of a detailed research agenda which highlights the need to investigate the interaction between a number of contextual and psychological variables identified by SDT as critical for the understanding of the motivational impact of contingent rewards on public sector workers. Future research should first look to establish, through cross-sectional empirical work across different levels and cultures in the public sector, the existence of the mediating effect of basic needs satisfaction on the relationship between performance-contingent rewards and public service motivation. Furthermore, the role of contextual and idiosyncratic factors that may moderate the relationship between performance-contingent rewards and public service motivation should be examined. The effect of context has already entered PSM research agendas (see, for example, Perry 2000; Paarlberg and Lavigna 2010; Moynihan and Pandey 2007; Wright, Moynihan, and Pandey 2012), but special attention needs to be paid to the effect of the social factors identified in this paper, such as managerial/collegial support and beneficiary contact. Equally, the moderating effect of individual-level variables (such as the individual's general causality orientation, their intrinsic/extrinsic reward values, etc.) on the PFP – PSM relationship, should be emphasized in future PSM research. Such endeavours should go then beyond cross-sectional studies and make use of experimental research designs, which can provide evidence of causality, rather than mere association, between the variables they identify. Then, the need for beneficence should be further explored in PSM research, so as to determine whether the sense of having a positive impact on others is indeed a driver of PSM, or whether it is PSM that could, on its own, foster satisfaction with the need for beneficence. In addition, case study research in different organizational and cultural settings should be conducted to inductively throw light on factors whose role in the dynamic between rewards and PSM is not currently well understood. For example, examining the role of the need for beneficence in specific public sector contexts, and exploring whether beneficiary contact could also have unintended consequences (Taylor 2014) in relation to PSM, would appear to be worthwhile research avenues. Similarly, exploring the influence of other, not currently examined, organizational variables (e.g. organizational culture) on the relationship between extrinsic rewards and basic needs satisfaction can offer important insights in further understanding the concept of public service motivation.

Note

1. In addition to the role of autonomy, competence, and relatedness.

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