Are highly public service motivated individuals immune to common causes of unethical behaviour? Calibrating the moderating role of group pressure and competition for economic resources

Ripoll, G. Hernández E. Ballart, X. 2022

Abstract

Previous research has neglected the moderating role of the environment in studying the negative effect of public service motivation (PSM) on unethical behaviour. This article investigates whether this effect prevails under group pressure and competition for economic resources. Moreover, it assesses if these moderating effects can be counterbalanced by activating public values. Using a survey experiment on a sample of citizens in Catalonia (Spain), the results suggest that PSM is vulnerable to group pressure, and that the proposed activation of public values does little to neutralize this effect. The discussion addresses the findings and provides directions for future research.

Keywords

Unethical behaviour, public service motivation, public values, group pressure, competition

Introduction

Despite the importance of ethics in public service, scholars in public management have provided only limited evidence on the catalysts and inhibitors of unethical behaviour (Menzel, 2015; Bellé & Cantarelli, 2017). Because of bringing values to decision situations (Cramwinckel et al., 2013), motivation has been one of the most advanced areas in ethics research. Although individuals who work offering a public service can be moved by different motives (Esteve & Schuster, 2019), there is ample research stressing that, under certain conditions, public service motivation (PSM), or the motivation to look after the public interest, plays a prominent role in promoting ethical[1] outcomes and decreasing unethical ones (e.g. Brewer & Selden, 1998; Kwon, 2014; Wright et al., 2016; Olsen et al., 2019; Gans-Morse et al. 2021).

However, the realization of PSM's full potential is highly contingent on contextual conditions (Vandenabeele et al., 2018). At the very least, this has two implications when studying the relationship between PSM and ethics. First, the context may indirectly impact (un)ethical outcomes through PSM (i.e. PSM may act as a mediator). For example, ethical leadership and basic needs satisfaction indirectly reduce the acceptance of unethical behaviours by eliciting PSM (Wright et al., 2016; Ripoll & Ballart, 2020). Second, the context may, instead, moderate the effect of PSM on (un)ethical outcomes. For example, Schott and Ritz (2019) proposed that the impact of PSM on ethical behaviour might vary depending on the composition (related to value congruence) of work teams. Although the array of contextual determinants of PSM is vast (c.f. Ritz et al., 2016), research on the ethics sub-field has mainly focused on the study of the indirect effects of different antecedents on (un)ethical intentions and judgements by eliciting PSM (c.f. Stazyk & Davis, 2015; Wright et al., 2016; Ripoll, 2022). Apart from the strong focus on measuring indirect effects, these works rely on exploring *positive*

contextual influences that contribute to obtain the desired ethical outcomes. Thus, less is known about contextual *negative* factors (e.g. unethical leadership, group or time pressure, and exposure to peers unethical behaviour) that could mitigate or even reverse the ethical effects of PSM. Highly public service motivated individuals do not operate in a vacuum, and PSM's influence on (un)ethical outcomes can be positively and negatively modulated by forces in and outside the workplace.

Through this paper we contribute to this literature strand by analysing what factors, if any, could make highly public service motivated individuals behave unethically and, by doing this, betray their loyalty towards serving the public interest. In particular, we ask *whether and how negative contextual influences cease the negative impact of PSM on unethical behaviour?* Next to this, previous research demonstrates that PSM activation increases its ethical and prosocial outcomes (Pedersen, 2015; Meyer-Sahling et al., 2019). Hence, we also test if this *positive* contextual factor can block the effect of the *negative* ones. Therefore, our second research question is: *can the activation of public values cancel the moderation effect of negative contextual influences on the relationship between PSM and unethical behaviour?* These interlinked research questions are answered calibrating to what extent competition and group pressure, two well-known determinants of unethical behaviour (c.f. Bellé & Cantarelli, 2017), act as contextual moderators of the negative effect of PSM on unethical behaviour. Moreover, we also inspect whether these moderations prevail once a specific interpretation of the public interest is activated. After theoretically examining these relationships, we provide novel experimental evidence to test the emerged hypotheses.

This study is relevant for three main reasons. First, our research questions focus on individuals with high levels of PSM. Previous research looked at how variations in the level of PSM lead to (un)ethical outcomes (c.f. Brewer & Selden, 1999; Kwon, 2014;

Wright et al., 2016). By contrast, we follow a recent stream in PSM-ethics research which suggests that although higher levels of PSM lead to ethical outcomes, variation among highly public service motivated people can be expected because of differences in individuals' value preferences (Schott & Ritz, 2018; Ripoll & Schott, 2020).

Second, we juxtapose *positive* with *negative* contextual factors in the study of the relationship between PSM and ethics. These elements are brought in using the most recent theoretical approaches, which rest on accounting for individuals' interpretation of the public interest or/and their preferred public values to predict whether PSM leads to (un)ethical outcomes (c.f. Schott & Ritz, 2018; Ripoll, 2019). In addition, we contribute to the on-going efforts in PSM research to activate its power in an ethical-conflicting situation (c.f. Christensen & Wright, 2018).

Third, according to Belle & Cantarelli (2017) most research on unethical behaviour in public administration relies on observational studies. With few exceptions (c.f. Esteve et al., 2016; Ballart & Rico, 2018; Christensen & Wright 2018; Meyer-Sahling et al., 2019), the literature relating PSM and prosocial behaviour (Brewer & Selden, 1998; Houston, 2006; Kim, 2006; Pandey et al., 2008) or PSM and ethical attitudes and behaviour (Choi, 2004; Stazyk & Davis, 2015; Ballart et al., 2016) is also based on self-reported cross-sectional survey data. In this paper we advance the methodology applied to the study of PSM and ethics by using a randomized experiment. This methodological choice is in line with Hassan & Wright (2020) suggestion of applying behavioural tools to the study and development of core public administration theories.

This article is structured as follows. We first provide a theoretical framework exploring the relationship between PSM and ethics, and also calibrating the potential threats to this established relationship. Then, data, methods and research design are presented.

After showing the results, we discuss the main findings and assess their theoretical and practical implications. Finally, we offer a brief conclusion.

Theoretical framework

Unethical behaviour: definition and framework of analysis

We begin from the idea that one can judge whether a behaviour is ethical or not by comparing it to values and norms functioning as yardsticks (Lasthuizen et al., 2011). However, it is important to distinguish between the *content* of a behaviour and the governance *process* followed by this behaviour (Huberts, 2018). The *content* dimension reflects the essence of a behaviour, the ultimate goal that is pursued by doing something. The preferred subject or final orientation of an action is likely to vary from one culture to another, or between individuals socialized under different logics. In the public sphere, one could equate this essence to the pursue of different public values or/and other interests (e.g. developing policy A versus B, or promoting quality versus efficiency).

The *process* dimension refers to behaving with or without committing integrity violations such as bribing, favouritism or manipulation of information (for the complete list c.f. Lasthuizen et al., 2011). In contrast to the *content*, the acceptability of integrity violations aims to approach universal application. In other words, they move beyond individuals' differences and cultures. When applied to the public sphere, the *process* dimension of ethics invites us to consider whether or not integrity violations (e.g. cheating, bribing or manipulating information) are committed to further or harm public values or other interests.

Once ethical and unethical behaviour have been defined, it is important to present a framework of analysis to assess their determinants. Departing from the person-situation

interactionist model (Treviño, 1986), Kish-Gephart et al. (2010) propose that unethical behaviour has three main sets of antecedents. First, there are individual antecedents that make individuals potentially 'good or bad'. For example, cognitive moral development, moral identity, locus of control or other demographic characteristics such as gender or education level predict unethical behaviour. Second, the ethical dilemmas faced by individuals have their own characteristics (e.g. conflicting values) and may vary over time. Hence, case related antecedents reflect characteristics such as closeness to the victim or to a value, anticipated harm, probability of effect or general moral intensity may provoke unethical behaviour. Third, contextual antecedents refer to the general organizational environment surrounding individuals. For instance, ethical climate, organizational culture or codes of conduct have an effect on unethical behaviour.

In this study, we analyse the extent to which three contextual influences (i.e. activation of public values, group pressure and competition) moderate the negative effect of PSM (a person-based factor) on unethical behaviour (i.e. *process*) while accounting for the specific characteristics of the dilemmas faced by the individuals (i.e. *content*).

PSM and (un)ethical behaviour

PSM is defined as "an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations" (Perry & Wise, 1990, p.368). After this initial definition, the concept evolved and many new definitions appeared (c.f. Bozeman & Su, 2015). Although differences exist, two common features are shared: PSM emanates in public institutions[2] and it manifests an other-oriented motivation to look after the society at large (Vandenabeele et al., 2018). PSM has usually been conceptualized as a motivation. However, mixing PSM with insights from social psychology and institutional theory, recent research suggests that PSM may be better interpreted as a social identity cultivated in public institutions (c.f. Vandenabeele,

2007; Perry & Vandenabeele, 2008; Meyer et al., 2014; Schott et al., 2015; Bednarczuk, 2018). This implies that through socialization public institutions transmit their institutional logics (c.f. Thornton & Ocasio, 1999) into individuals' self-concepts developing PSM, or the public service identity. This social identity is imbued with a set of public values and norms. Because of the will to maintain self-consistency, highly public service motivated individuals display attitudes and behaviours protecting or promoting the internalized public values (Vandenabeele, 2007).

Since the early works on PSM by Rainey (1982) and Perry and Wise (1990), the literature has linked a high level of PSM with ethical outcomes. At the basis of this relationship there is the idea that PSM and ethics are connected because both go beyond self-interests. Being ethical requires a certain amount of unselfishness both in and out of the public sphere (Frederickson, 1996; Rachels & Rachels, 2015), and public service motivated individuals are able to set aside their personal interests to serve public ones (Horton, 2008). Next to this, since institutional logics also include moral values, public institutions transmit, by means of socialization, ethical frameworks and develop public service *moral* identities (Ripoll, 2019). Within these ethical frameworks, the public interest[3], the normative aspect of PSM (Perry, 1996; Vandenabeele, 2008; Steen & Rutgers, 2011), sets the ethical standards of highly public service motivated individuals (Ripoll, 2019). Hence, since PSM moves individuals to act in a way that is consistent with their internalized public values or public interest, individuals with high levels of PSM are more likely to behave ethically than individuals with lower levels of PSM (c.f. Brewer & Selden, 1998; Wright et al., 2016; Ripoll & Breaugh, 2019; Gans-Morse et al., 2021). Combining this with the *process-content* distinction made by Huberts (2018), we argue that if an integrity violation (i.e. *process*) harms public values (i.e. *content*), then individuals with high levels of PSM will be less likely to commit it.

Hypothesis 1: Individuals with high levels of PSM are less likely to commit an integrity violation that harms public values (behave unethically), compared to those with low levels of PSM.

This argument predicts that highly public service motivated individuals behave ethically. However, this is not always the case and therefore we find it convenient to further refine it based on two considerations. First, although the public interest (and its associated public values) sets the benchmark for assessing what is ethical and what is not, interpretations of the public interest are inherently multiple (Bozeman, 2007). In consequence, moral conflicts between highly public service motivated individuals may appear because the public interest cannot be served at all time for everybody (c.f. Le Grand, 2010; Steen & Rutgers, 2011; Schott & Ritz, 2018). In line with Ripoll & Schott (2020), to understand the importance of multiple public values in the relationship between PSM and (un)ethical behaviour, the distinction between *process* and *content* is useful.

The ultimate pursuit (i.e. *content*) of the actions taken by highly public service motivated individuals is to further or protect public values. As the preferred public values may differ from one individual to another, high PSM individuals may respond differently to the same conflicting situation. This implies that although possessing PSM, ethics still are a matter of perspectives. Moreover, because of having this devotion to a specific interpretation of public interest, individuals with high levels of PSM may differ in their likelihood of committing an integrity violation (i.e. *process*). Thus, for individuals with high PSM, the degree to which an integrity violation furthers or puts at risk a preferred public value determines the likelihood of committing or justifying it. Previous research confirms that PSM protects the preferred interpretation of the public interest and public values both by ethical and unethical means (c.f. Ripoll, 2022; Ripoll

& Schott, 2020). This effect is also supported by Weißmüller et al. (2022), revealing that because of the willingness to attend people in need and therefore contribute to a better society, high PSM individuals have a tendency to engage in prosocial rule-breaking.

Second, since PSM is a specific social identity, to calibrate its ethical consequences one needs to consider not only one's preferred public values but also whether or not these values are activated in a particular situation. The likelihood of applying a moral schema depends on whether it is salient or cognitively accessible (Hardy & Carlo, 2011). A salient social identity can be defined as a "readiness to act out an identity as a consequence of the identity's properties as a cognitive structure or schema" (Stryker & Serpe, 1994, p.17). Social identities are organized in a hierarchy indicating the probability of being activated across different situations (Forehand et al., 2002; Stets & Burke, 2003). Previous theoretical and empirical research stressed that the activation of PSM or its related public values substantially affects its ethical and non-ethical-related outcomes (c.f. Perry and Vandenabeele, 2008; Pedersen, 2015; Schott et al., 2015; Meyer-Sahling et al., 2019; Ripoll, 2019; Nicholson-Crotty et al. 2022).

This leads us to argue that the likelihood of committing an integrity violation (i.e. *process*) that puts in danger an interpretation of the public interest but favours other interpretations, interests or values (i.e. *content*) should be a function of the activation of that specific interpretation (or its related public values). We expect that this activation will make stronger the negative effect of PSM on committing an integrity violation that harms the primed public value. Therefore:

Hypothesis 2: If a specific interpretation of the public interest is activated, individuals with high levels of PSM are less likely to commit an integrity violation in favour of

alternative values, compared to high PSM individuals without being exposed to the activation of this specific interpretation of the public interest.

Contextual elements and unethical behaviour

As our research question indicates, this article adds two external *negative* influences to calibrate the robustness of the negative effect of PSM on unethical behaviour under different contexts. According to Kish-Gephart et al. (2010) there are contextual elements surrounding individuals that predict (un)ethical behaviour and might, in turn, moderate the effects of PSM. Recently, Bellé & Cantarelli (2017) set an agenda to study the determinants of unethical behaviour in public administration. Among the ones they propose, we focus on the following two: group pressure and competition. First, group pressure was selected because nowadays individuals usually work in teams, or at least rely on their support to accomplish a task, which implies that individuals are exposed to peers' attitudes and behaviours. In fact, the influence of groups and teamwork on adapting to the environment, problem-solving and delivering public services has been one of the big questions in networks research (c.f. Agranoff & McGuire, 2001). Second, competition was chosen as it reflects a market logic that has been increasingly accepted and integrated within the public sphere thanks to New Public Management reforms. This logic is not only constrained to the public sector, it might indeed be present in every institution offering a public service, even in non-profit organizations (c.f. Eikenberry & Kluver, 2004).

Group pressure, PSM and unethical behaviour

Individuals are exposed to the behaviours and attitudes of other people. Previous research in behavioural ethics stress that the exposure to other people's unethical behaviour increases individuals' immorality (c.f. Gino et al., 2009; Gino et al., 2013;

Paternoster et al., 2013). This is usually explained combining social norms and social identity literature (c.f. Biccheri, 2005). Cialdini et al. (1990) argue that if individuals are surrounded by other people specifying what is the right thing to do (i.e. *descriptive* norms) or showing approval for a specific action (i.e. *injunctive* norms), they will be more likely to behave in a way consistent with these social norms. The nature of the social context determines whether (if any) *injunctive* or *descriptive* norms affect individuals' ethical behaviour.

Although social norms matter, it is also important to consider the degree of identification with those who establish the norms. According to social identity theory (c.f. Hogg, 2006), individuals comply with social norms, even if they appear unfair, on the need to maintain in-group cohesion. Thus, if social norms are settled by a group with whom an individual is highly identified with, their influence on individuals' attitudes and behaviours will be higher. For example, Gino et al. (2009) found that when the 'others' are in-group members, the influence of *injunctive* social norms on unethical behaviour is substantially larger than when the 'others' are out-group members.

This article aims to test whether job-mates support for specific public values (i.e. *injunctive* social norm) moderates the effect of PSM on unethical behaviour. To hypothesize whether individuals with high levels of PSM will behave ethically under group pressure for specific public values, it is important to consider two elements: the specific public values and loyalty to the group. First, highly public service motivated individuals may experience an excess of loyalty to the group. Schott & Ritz (2018) combines social norms and identity arguments to suggest that PSM may lead to 'groupthink', which implies that individuals seek to align with the overall thoughts or ideas shared by the members of a group. This tendency towards homogeneity prioritizes coherence and harmony among the group over critical evaluation of the values involved

in a conflicting situation (Schott & Ritz, 2018). In consequence, group pressure may indeed activate this propensity to comply with the group beliefs, and therefore move individuals with high levels of PSM to pursue the public values defended by the group.

Second, as the refined argument suggests, ethics-related behaviours and attitudes of highly public service motivated individuals are mainly driven by their interpretation of the public interest (i.e. *content*) and the likelihood of activating PSM or its related public values in a given situation. Thus, it is necessary to devise if the public values pushed by the group are aligned with the ones of high PSM individuals. Different scenarios may appear. On the one hand, the public values activated by the group may not be related to the ones of high PSM individuals. For example, if a high-PSM individual adheres to 'citizen involvement' or this public value is salient, but there is a conflict between 'efficiency' and 'due-process', then the commitment towards 'citizen involvement' becomes irrelevant to solve this conflict. Since PSM may lead to blind loyalty (Schott & Ritz, 2018), we argue that if the public values involved in a situation are not close to high PSM individuals, they will be more likely to express loyalty to the group and act showing coherence with the public values promoted by the group, both by ethical and unethical means.

On the other hand, the public values activated by the group may be related to the ones of high PSM individuals, and therefore a fit or misfit situation may appear. If there is fit between the preferred public values, PSM will promote actions on behalf of these values. This is explained using self-consistency and group loyalty mechanisms (c.f. Wright et al., 2016; Schott & Ritz, 2018; Ripoll & Breaugh, 2019). By contrast, if there is a misfit situation, high PSM individuals are required to balance the public values promoted by the group over their own and decide after making this calculus. Since self-sacrifice is at the basis of PSM (Kim & Vandenabeele, 2010), high PSM individuals

may be more likely to accept a personal lose if this implies a benefit for the society. Thus, we argue that if a specific interpretation of the public interest is activated, PSM gives the needed motivational force to push individuals to behave in line with this public value, even if this implies to be rejected by the group.

In sum, the moderator effect of group pressure for alternative public values in the relationship between PSM and committing an integrity violation in favour of the alternative public values varies depending on whether a specific interpretation of the public interest is previously activated. Therefore:

Hypothesis 3a: If a specific interpretation of the public interest is not activated and group pressure for alternative public values exists, individuals with high levels of PSM are more likely to commit an integrity violation in favour of the alternative values, compared to high PSM individuals without suffering group pressure and not being exposed to the activation of this specific interpretation of the public interest.

Hypothesis 3b: If a specific interpretation of the public interest is activated and group pressure for alternative public values exists, individuals with high levels of PSM are less likely to commit an integrity violation in favour of the alternative values, compared to high PSM individuals suffering group pressure and not being exposed to the activation of this specific interpretation of the public interest.

Competition, PSM and unethical behaviour

Competition refers to a situation in which two or more individuals, groups or organizations, known or unknown, desire to achieve a goal (e.g. resources or recognition) that cannot be shared. Although it has a bright side (c.f. Becker, 1957), research in economics found that competition can lead to unethical behaviour (c.f. Schwieren & Weichselbaumer, 2010; Shleifer, 2004). According to the 'rational cheater

model' if competition is high, it generates a 'winner-take-all society' where many people strive for the same goal, but only a few of them take it (Schwieren & Weichselbaumer, 2010). Hence, it is the competitive reward structure which generates incentives to behave unethically. Similarly, when organizations are in a highly competitive environment, this may lead individuals to behave unethically on behalf of organizational goals (Vaughan, 1999).

Research in psychology also explain the increase of unethical behaviour under competitive pressure. Competition makes salient the importance of personal success and of gaining something that others cannot achieve. This indeed implies a shift of concern. The wellbeing of the group or the community, a key element to behave ethically, no longer matters. By contrast, attention is paid to individuals' wellbeing. Because of being concerned in satisfying their personal needs, individuals may feel less bound to accomplish with ethical standards, and therefore be able to bypass them if required (Schwieren & Weichselbaumer, 2010).

In line with these arguments, the threat of others gaining benefits that could have benefited the group (and/or its members) can justify a dubious act in terms of ethics. Since we focus on the importance of values, we oriented competition towards the strive for economic resources among different organizations. Hence, the basic assumption is that under competitive pressure for increasing organizations' economic resources, individuals will be more likely to orient their actions to achieve this organizational goal (at the expense of other values), even if unethical behaviour is required.

The values reflected by competition for economic resources are linked to a concern for organizational wellbeing. This perspective is inward looking, which is at the odds of a concern in benefiting the society. In fact, PSM basis is a predisposition to self-sacrifice to serve the society (Kim & Vandenabeele, 2010; Kim et al., 2013). Next to this, greed

or external work motivation have been found to correlate negatively with PSM (c.f. Breaugh et al., 2018; Ripoll & Ballart, 2020). Thus, because PSM transcends personal and purely economic interests, competition for economic resources is not likely to eliminate the negative effect of PSM on unethical behaviour. By contrast, we propose that in this competitive environment (compared to a non-competitive one), highly public service motivated individuals are less likely to behave unethically (i.e. *process*) because this act is oriented to increase organizational economic resources, diminishing the contribution to the society (i.e. *content*). Moreover, if a specific interpretation of the public interest is activated, this incremental effect will be even stronger. Therefore:

Hypothesis 4a: If a specific interpretation of the public interest is not activated and competition for economic resources exists, individuals with high levels of PSM are less likely to commit an integrity violation in favour of the economic resources, compared to high PSM individuals in a non-competitive environment and not being exposed to the activation of this specific interpretation of the public interest.

Hypothesis 4b: If a specific interpretation of the public interest is activated and competition for economic resources exists, individuals with high levels of PSM are less likely to commit an integrity violation in favour of the economic resources, compared to high PSM individuals in a competitive environment and not being exposed to the activation of this specific interpretation of the public interest.

The set of hypotheses emerged in this theoretical framework concerning the moderating influences of group pressure, competition and public values activation on the relationship between PSM and unethical behaviour are summarized in the diagram shown in Figure 1.

<<< Figure 1 about here >>>

Data, methods and research design

This study draws on a survey experiment designed to overcome the limitations of survey research to establish causal inferences. An online survey was conducted in March-April 2019 among 1512 Catalan citizens. The survey was divided in three different sections. First, respondents answered a set of questions related to sociodemographic characteristics, health status and ideological preferences. Second, respondents faced questions oriented to measure their level of PSM. Third, individuals were presented different experiments and vignettes. The experiment used for this study was preceded by two vignettes (no treatments or random allocation) about corruption in public services, and followed by an experiment on ideological bias when rating the quality of public TV channels.

The sample was recruited through the commercial firm Netquest by means of quota sampling. To increase the external validity of our study, we established quotas for gender, education and age. Hence, the sample is representative of the age and gender distribution of the Catalan population (up to 74 years old). When it comes to education, we established a quota of one third of respondents in each education level (primary, secondary, university). This quota is not fully representative of the Catalan population but it ensures that all education levels are sufficiently represented in our sample. Table 1 provides further details about the sample and shows that the sample closely matches the population of this region.

The mean and median completion time of the survey was 15.8 minutes and 18.64 minutes, respectively. This fits with the expected completion time based on the questionnaire length and piloting conducted. Respondents received an incentive (in the form of tokens from the panel provider for completing the survey), and the survey

included a trap question to screen out inattentive response. These followed the usual practices of the survey provider *Netquest*.

This study is based on a sample of citizens for three different reasons. First, PSM is not constrained to the public sector, in fact it is a universal concept present in public, private and non-profit areas (Andersen et al., 2011), and in formal and informal institutions (Vandenabeele, 2007). Second, PSM is determined not only by intra-organizational factors, but also socio-historical ones such as socialization or life events (Perry, 2000). Third, since PSM operates at the individual psychological level, its nature, antecedents and consequences are similar across different institutional contexts (Gans-Morse et al. 2021). Fourth, the sample combines individuals with different profiles (e.g. working in public, private or non-profit sectors, not working, young and old). This captures a broad range of PSM response types, and answers the call for offering "a better understanding of PSM among citizens" (Perry et al., 2008, p.446).

<<< Table 1 about here >>>

Measurement of PSM

Since Perry (1996) proposed a measure of PSM, many efforts have been done to validate it across different countries and cultures, and to develop new ones (e.g. Brewer & Selden, 1998; Vandenabele, 2008; Houston, 2011; Kim et al., 2013). Despite these efforts, there is not a single way to measure PSM. There are unidimensional or multidimensional measures, but no significant differences have been found in predicting and being predicted between uni- and multidimensional measurement instruments (Wright et al., 2013; Kim, 2017). Given our interest in PSM as a unidimensional concept in this study, to operationalize PSM we draw on the 4-item global measure of PSM (Vandenabeele & Penning de Vries, 2016). Respondents rated their agreement

with four statements (see table 2) on a 7-point Likert scale (1=strongly disagree, 7=strongly agree). These items were presented to the respondents right after the socio-demographic questions, and long before the treatments included in this study. A common factor analysis indicates that a latent variable successfully emerges (Satorra-Bentler scaled $\chi 2$ [df=2] = 3.888, p = 0.143, RMSEA= 0.025, CFI =0.999, TLI = 0.996, and SRMR = 0.007). Based on this, an average was calculated and rescaled to a 0-1 scale. Higher values in this variable indicate higher levels of PSM.

<<< Table 2 about here >>>

Experimental setting

The analysis of the possible moderators of the relationship between PSM and unethical behaviour is based on a 2x3 between-subjects design that aims to manipulate the values of the moderators.

First step: Activation of public values (2)

The first experimental treatment was oriented to activate a specific interpretation of the public interest (i.e. *content*). To do this, we have made two main choices. First, we use more concrete public values to specify how the public interest is realized (Andersen et al., 2013). After reviewing the existing categories of public values (Bozeman, 2007), we decided to pick up the category 'relationship between the public administration and the citizens' because our respondents will be, on average, more familiar with the public values included on it. Within this category we selected the public value *quality*, which fits in the 'user orientation' set. *Quality* was chosen because citizens are used to evaluate the performance of the public services they receive, or at least to assess whether a service satisfy their needs or demands. Moreover, satisfying

user's/costumer's demands is a public value often reported as very important for public servants (c.f., for example, Vangbraek, 2006).

Second, to activate a social identity, or the values linked to this identity, external events are particularly useful if they evoke institutional membership, stress the similarities among the category members or reinforce the differences between this and other categories (c.f. van Knippenberg, 2000; van Dick et al., 2005; Oyersman et al., 2007). These events are usually designed using stimulus cues including symbols, images or words delivered through media or written context (Forehand et al., 2002). Departing from these ideas we activated a specific interpretation of the public interest. Since PSM is ultimately oriented to serve the society (Vandenabeele et al., 2018), we created an external influence that makes individuals aware of the importance of having a high *quality* education in order to promote better societies. The message stresses that societal development (i.e. the ultimate goal of PSM) varies depending on the differences in the quality of education.

Therefore, respondents were first randomly assigned to one of two groups: control group (i.e. no activation of *quality* as a specific interpretation of the public interest) or prime group (i.e. activation). The latter read a short paragraph about the results of a scientific study that highlights the importance of high-quality education for societal progress (see Appendix 1). Respondents assigned to the control group did not read anything and directly moved to the next step in the experimental randomization.

Second step: Ethical dilemma and negative contextual influences (3)

In a second step, the ethical conflict was introduced. Respondents were randomly assigned to three groups that show a slightly different version of the same ethical conflict. The ethical conflict is as follows. Respondents were asked to imagine that they

were the principal of a public secondary school. The vignette informs respondents that, according to an external report, high quality education is provided when the number of students per class is 25 or less. However, this year the high school has received more applications than usual. The vignette then presents a dilemma, the principal can increase the number of students per class from 25 to 32 ignoring the external report. According to Lasthuizen et al. (2011) to ignore a report is an act that fits within the integrity violation 'misuse and manipulation of information'. Thus, from a *process* dimension, it is an unethical act.

While ignoring the report and accepting 32 students would ensure that everyone has access to education and/or boost the revenues the high school receives from government, it would ignore the advice provided by the external report when it comes to the optimal number of students to ensure a high *quality* education. Thus, three different values may conflict in this situation representing the *content* dimension of ethics. On the one hand, there are two public values: high *quality* education and *equity* in the access to education. Equity can also be fitted in the category 'relationship between the public administration and the citizens' (Bozeman, 2007), but it is from a different value set ('equity') compared to *quality*, which is important to assure that conflicting situations appear[4]. On the other hand, to receive more *economic* resources reflects purely extrinsic and material values.

Respondents in the control group just read the information about the ethical conflict. In the group pressure and competition treatment groups, instead, the vignette included an additional sentence that was oriented to include a *negative* contextual influence and make pressure to further a specific value. In the group pressure treatment, respondents were reminded that "most teachers in your school support the increase in the maximum number of students", which reflects a group pressure from peers (*injuctive* social norm,

close identification) to promote the public value *equity*. In the competition treatment, respondents were told that "other schools are competing to recruit more students because of the associated benefits", which reflects a competition pressure to obtain higher *economic* resources. Further information on these treatments, as well as the original text from the vignettes, can be found in Appendix 1.

Apart from being designed to test our theoretical expectations, the conflicting situations were formulated to favour that citizens could easily identify with them. Spain is a country with moderate levels of corruption. However, corruption scandals are salient issues, also in Catalonia. This implies that situations in which a public manager behaves unethically sounds familiar to the respondents. On top of that, the school setting was selected as we assume that almost everybody went to a school or have kids, grandchildren, nephews or nieces that are currently in the school. This implies that they have interacted with this institution, and, perhaps more important, that they are aware of the kind of public services offered by schools, and of some of the dilemmas they face when balancing lack of resources and educational needs.

Third step: outcome

Our main outcome of interest captures respondents' willingness to behave unethically. We asked respondents what they would do if they were the high school principal: admit only 25 students per class, or increase the maximum number of students up to 32. If selecting 32 students, the external reports are ignored. Thus, an integrity violation is committed (i.e. *process*) to further *equity* (i.e. *content*) or achieve more *economic* resources (i.e. *content*), against *quality* (i.e. *content*). In our analyses this variable is recoded so that it takes the value 1 for those who engage in the unethical behaviour and the value 0 otherwise.

Fourth step: manipulation check

After measuring our outcome of interest, we conducted a manipulation check asking respondents if in the text they had just read there was another motive, beyond the economic one, that might justify increasing the number of students up to 32. The response options were: "I do not remember any [motive]", "I remember that all other teachers agreed", "I remember that other high-schools are competing to recruit students". 62 percent of respondents passed the manipulation check. In the remaining of this paper, we exclusively focus on these respondents who were effectively treated (i.e. those who passed the manipulation check)[5].

Results

To facilitate the interpretation of the results, we find convenient to present a summary of the experimental conditions (including the *n* and the mean of PSM for each group) and the hypothesized relationship of the predicted probabilities in order to verify each hypothesis (see tables 3 and 4).

<<< Table 3 about here >>>

<<< Table 4 about here >>>

Analyses have been carried out using Stata. Tables A3 and A4 in the appendix offer the descriptive statistics for the variables included in the models. Table 5 presents the results. Because of the dichotomous nature of our dependent variable, we ran a series of logistic regressions to test our hypotheses. In step one (model 1), we examined the effects of *negative* external influences on the likelihood of behaving unethically (without considering whether respondents were exposed to the activation of *quality* or not). The results reveal that the probability to act unethically is 16.5 percent for those being in the control group. Being exposed to competition for *economic* resources

decreases the propensity to act unethically by 2.8 percentage points, but this effect is not statistically significant. By contrast, being exposed to group pressure for *equity* has a positive and statistically significant effect on respondents' likelihood of adopting an unethical decision. In this case, the probability of acting unethically increases by 15.7 percentage points. Therefore, it appears that external influences related to pressure from peers are much more consequential than pressures related to economic competition. The finding for competition is surprising as it counters the results of the meta-review made by Bellé & Cantarelli (2017), which we used as a basis to design this study.

<<< Table 5 about here >>>

In step two (model 2), we analysed if the activation of *quality* moderates the effects of the *negative* external influences. First, activating *quality* weakens the effects of group pressure for *equity*. The probability of unethical behaviour for those individuals exposed to group pressure for *equity* without receiving the activation of *quality* is 34.4 percent. This probability decreases by 4.1 percentage points among those exposed to the activation of *quality*. However, this difference is not statistically significant ($p = 0.437$). Second, the results reveal that the effect of competition for *economic* resources on the probability of acting unethically does not substantively vary depending on the activation of *quality* ($p = 0.647$).

In step three (model 5), PSM was added as a covariate to the logistic regression, as well as the interactions between PSM and the experimental groups. Since we hypothesized heterogeneous effects for PSM, it is necessary to first investigate the distribution of PSM across the treatment groups. Two actions were taken. First, a comparison of the mean of PSM across each treatment group (see table 3) shows that the mean is slightly higher (0.05 points in a 0-1 scale) for respondents of some groups. Second, ANOVA tests suggests that there is slight variance between the groups $F(5, 927)=3.08$ $p=.009$.

Bonferroni multiple-comparison test also confirms significant differences between two group comparisons. However, the Bartlett's test (Prob>chi2=0.211) shows that all groups have the same variance in terms of PSM making between group comparisons valid. We therefore proceeded with the analysis.

Given our interest in testing whether highly public service motivated individuals change their propensity to act unethically depending on public values activation and/or *negative* contextual influences, we performed a moderated multiple logistic regression, and six pairwise comparison tests of the predicted margins (see table 6). Although the effect of PSM remains statistically significant, the three and two-way interaction terms for PSM and the treatments are not statistically significant, which forces us to take the comparison of the predicted probabilities with great caution.

<<< Table 6 about here >>>

First, examining the group with no activation of *quality* and no exposure *negative* external influences, the probability of behaving unethically for individuals with a low[6] PSM is 21 percent. This probability decreases to 10.5 percent for highly public service motivated individuals. The contrast between the two predicted probabilities is statistically significant, and it is in line with hypothesis 1. Second, to test hypothesis 2 we compare the predicted probabilities of acting unethically for individuals with high PSM with and without activation of *quality*, but no exposure to *negative* external influences. Contrary to what was hypothesized, the activation of *quality* increases by 1.7 percentage points the probability of unethical behaviour. However, this small difference is not statistically significant.

Third, when there is no activation of *quality*, the predicted probability of acting unethically for high PSM individuals if there is group pressure for *equity* is 35.1

percent. As hypothesized in H3a, this probability is substantially higher than the one for the same individuals with no activation of *quality* and without suffering group pressures (10.5 percent). The contrast between the two predicted probabilities is statistically significant. Fourth, hypothesis 3b is tested comparing the predicted probabilities of behaving unethically for highly public service motivated individuals suffering group pressure for *equity* with and without activation of *quality*. When there is activation of *quality*, the predicted probability decreases by 6.9 percentage points, which goes in line with hypothesis 3b. However, this difference is not statistically significant.

Fifth, the predicted probability of unethical behaviour for highly public service motivated individuals if there is competition for *economic* resources and no activation of *quality* is 8.3 percent, which is smaller than the one for highly public service motivated individuals without suffering *negative* external influences (10.5). Although this finding was hypothesized in H4a, the difference is not statistically significant. Finally, the predicted probability of unethical behaviour for highly public service motivated individuals if there is competition for *economic* resources and activation of *quality* is 6 percent. This probability increases by 2.3 percentage points if *quality* was not activated. This is in line with hypothesis 4b. However, this contrast is not statistically significant.

Discussion

Previous research studying the negative effect of PSM on unethical behaviour has neglected the moderating role of the environment in moderating this effect. This article investigated whether the power of PSM prevails under group pressure and competition for economic resources. Moreover, it assessed if these moderating effects can be counterbalanced by activating public values. In this section we discuss the findings and limitations of this study.

The experimental design of this study was done to activate both *positive* and *negative* contextual influences that may influence unethical behaviour. The *negative* factors were selected based on the meta-review done by Bellé & Cantarelli (2017). Our results indicate that peer group pressure for a public value (i.e. equity, *content*) advanced by an unethical act (i.e. *process*) increases the probability of committing it. This effect is explained because when showing approval for specific action or values (i.e. *injuctive* norm), individuals tend to behave consistently with this norm (Cialdini et al., 1990). Moreover, in our design, the norm is settled by hypothetical job-mates, which reflects a group of people with whom the manager is highly identified with (c.f. Gino et al., 2009).

On the contrary, competition for economic resources, which reflects a pressure for a material value (i.e. economic gain, *content*) advanced by the integrity violation (i.e. *process*), reduces the probability of behaving unethically, but this effect is not statistically significant. This finding counters what Bellé & Cantarelli (2017) reported, and previous research in economics (c.f. Vaughan, 1999; Schwieren and Weichselbaumer, 2010). To account for this unexpected result, we looked deeper into very recent research inspecting the link between competition and unethical behaviour. When defining and conceptualizing competition one must differentiate between *structural* (opposing goals and having interchangeable or anonymous competitors) and *rivalry* (specific identifiable opponents with an historical record) competition. In fact, competition leads to unethical behaviour when *rivalry* is present (Kilduff et al., 2016). Since our treatment only includes *structural* components, this might explain our result.

According to our analyses, activating the public value (i.e. quality, *content*) harmed by the unethical behaviour does not substantively alter the effect of *negative* external influences on the probability of acting unethically. However, this *positive* factor seems

to have the predicted effect in lowering the impact of group pressure for *equity*. Therefore, we do not discard that promoting high standards and communicating them effectively to professionals can be a useful tool to prevent unethical behaviour. The results of our experiment do not fully support this type of action but we believe that more research is needed to discuss the efficacy of moral reminders and, by extension, codes of conduct (Svara, 2014). The way messages are communicated, their frequency and immediacy are characteristics that need to be taken into account since they may influence the results.

In what concerns the role that PSM plays in these relationships, our results reveal that interaction terms were not statistically significant. However, the pairwise comparison test of the predicted margins brought in interesting results. Our study confirms that individuals with a higher level of PSM are less likely to commit an integrity violation that harms public values when they are not affected by external influences (H1). This is in line with previous studies (cf. Wright et al., 2016; Ripoll & Breaugh, 2019) stressing the importance of PSM promoting ethical responses. However, the interest of this study was to assess whether this relationship prevails in different settings.

First, contrary to what was hypothesized, for highly public service motivated individuals, the activation of *quality* increases the probability of committing an integrity violation that harms this public value but favours other values, compared to those without receiving this *positive* influence. Although this finding is not statistically significant, one explanation might be that the prime fails to activate *quality*, or that this public value is activated but not brought into the ethical conflict situation because having pre-arranged preferences for other values or simple because the conflict is not perceived. Alternatively, it could be that for some individuals to increase *equity* in the access to education also means to increase its *quality*. Difficulties in priming PSM and

reporting significant effects on ethical outcomes were also found by Christensen & Wright (2018).

Second, our results provide support for one of the dark sides of PSM. We find that high PSM individuals suffering group pressure in favour of *equity* have a higher probability of behaving unethically to further this public value, compared to those without suffering this pressure. This finding is explained because high PSM individuals may express an excess of loyalty to the group, which move them to comply with group norms and beliefs (Schott & Ritz, 2018). However, as stressed in the theoretical section, the specific public values (or interpretation of the public interest) involved in each situation may determine the response given by these individuals. In this sense, our evidence suggests that for highly public service motivated individuals, the activation of *quality* slightly decreases the effect of group pressure for *equity* on unethical behaviour. Although this might support that high PSM individuals are ready to self-sacrifice to pursue the internalized public values even if being rejected by a group (Kim & Vandenabeele, 2010; Ripoll, 2019), the result is not statistically significant.

Third, our analyses show that highly public service motivated individuals exposed to competition for *economic* resources are less likely of acting unethically, compared to those who do not suffer competition pressures. Moreover, once *quality* is activated the probability of unethical behaviour decreases even more. Albeit these effects are not statistically significant, it is worth mentioning that they go in the hypothesized direction. Hence, with great caution we suggest that PSM may indeed transcend personal or purely economic interests, and that it therefore does not drive unethical behaviours oriented to satisfy material needs.

As a survey experiment, this study improves internal validity compared with a simple observational study. However, it also has several limitations that open avenues for further research.

First, the treatment for competition only includes *structural* components, while excludes *rivalry*. As this has been shown to be important to increase unethical behaviour (Kilduff et al., 2016), further research should take this into account. Second, the activation of *quality* offers very small and non-significant results reducing the impact of *negative* external influences and increasing the commitment to behave ethically, neither for the general sample nor for highly public service motivated individuals. To prime PSM or its related values researchers need to take more persuasive instruments, use different public values and, perhaps more importantly, estimate individuals' preferences in advance.

Third, we cannot be sure of whether study participants actually read and understood all the experimental materials or whether they just rushed through the questionnaire. For example, it could be that the conflicting values in the ethical dilemmas were not salient enough to influence behaviour. Future research should make clear which values are in conflict and control the understanding of respondents including additional checks throughout the survey.

Fourth, our experimental vignettes are hypothetical. This is for good reason since it rules out that individuals might be pre-treated in any way (Morton and Williams, 2010). In fact, recent studies indicate how the choices citizens make when confronted with hypothetical vignettes are similar to those that they would do in the real-world (Hainmueller et al., 2015). However, one might have doubts about the choices people make in our specific experimental setup, where respondents were confronted with a hypothetical dilemma in a public school that required them to adopt the role of school principal. This experimental design is inspired by the sacrificial moral dilemmas that are

commonly used in social psychology and other fields (c.f. Edmonds, 2014). The most famous of these dilemmas is the *trolley dilemma*, which requires participants to decide whether or not to pull a lever to deviate a runaway trolley that hurdles towards four people, but deviating it implies that another person (a bystander) would be killed instead. In any case, what is relevant for our purposes is that even this highly artificial and fictitious scenarios have been frequently used to assess how citizens react when confronted with an ethical dilemma (c.f. Conway et al., 2018). While citizens might never encounter such a situation, these dilemmas give us valuable information about their underlying attitudes and ethical principles (e.g. Capraro et al., 2018; Everett et al., 2016; Kelman and Kreps, 2014; Moore et al., 2008; Uhlmann et al., 2013). Hence, we would argue that the dilemma that we present to respondents, which is much more realistic than those used in the cited literature, is a good way of analysing how they react to ethical dilemmas in the context of public service and administration.

Fifth, this study examines how group pressure and competition influence the relationship between PSM and unethical behaviour. Consequently, further research is encouraged to assess the moderator effects of other contextual (e.g. separation of careers between bureaucrats and politicians), ethical dilemma (e.g. general moral intensity) or individual (e.g. cognitive moral development) antecedents of unethical behaviour (Kish-Gephart et al., 2010; Bellé & Cantarelli, 2017). Sixth, the analyses of the mean of PSM across each experimental groups reveal that there are slight imbalances, neutralized by having similar variances. Forthcoming studies should pay more attention to the sampling strategy, probably blocking randomization depending on the levels of PSM. This will allow researchers to rule out the possibility of sample bias, and therefore draw stronger conclusions. Finally, as explained in the introduction, this article is, to the best of our knowledge, the first effort to activate, at the same time, *positive* and *negative*

contextual influences and see how this moderates the negative relationship between PSM and unethical behaviour. Therefore, future research is encouraged not only to challenge the theoretical claims presented in this article, but also to find new (clever) ways to test them.

Conclusion

This article contributes to the literature investigating the relationship between PSM and unethical behaviour. Previous research has examined the importance of having high levels of PSM (compared to low PSM, or other work motivations) to predict (un)ethical outcomes, and the role played by the environment in promoting PSM and, indirectly, ethics. However, less was known about how the environment may moderate the commitment of highly public service motivated to behave ethically when required. Therefore, this research empirically investigated how both *positive* and *negative* external influences affect the ethical responses given by individuals with high levels of PSM. Moreover, in contrast to most previous studies relying on cross sectional survey data, this article is a step ahead in methodological terms in the study of the effects of the motivation to serve the public interest on unethical behaviour. Our results provide initial evidence indicating that highly public service motivated individuals can be affected by a *negative* contextual influence, and that this effect may be harder to counteract than expected. Hence, also for promoting ethical outcomes, PSM full potential is realized depending on contextual conditions.

Although we sampled the general population, some practical applications emerge due to the nature of the topic studied. First, high PSM individuals are more likely to display ethical behaviours than low PSM individuals when no external influences exist. However, this article illustrates that individuals, also those highly public service motivated, are surrounded by a context that affects their likelihood to behave or judge

ethically. In this sense, it seems that when group pressure for alternative public values exist, people is more likely to behave unethically. High PSM individuals are also really vulnerable to this external influence as their commitment to behave ethically turns into commitment to behave unethically. Moreover, the role of activation of public values in preventing the effects of group pressure is, if at all, limited for everyone. Therefore, PSM does not compensate the lack of an adequate environment. Awaiting for more research clarifying and extending the relationships studied in this paper, we make three recommendations for public managers or theorists: to not overestimate the power of PSM, to design and examine the environment surrounding employees (also those with high PSM), and to balance the effects of group pressure creating heterogeneous (in terms of values attachment) work groups and promoting critical thinking.

Notes

1. In this study, ethical and moral are synonyms.

2. Following previous works in PSM (c.f. Vandenabeele 2007, Ripoll 2019) we refer to both formal and informal public institutions, using Peters (2000) definition of institution.

3. The public interest is defined as "in a particular context, the public interest refers to the outcomes best serving the long-run survival and well-being of a social collective construed as a 'public'" (Bozeman, 2007, p. 12). This view is suited to the study of PSM and ethics as it may be understood as an ideal that guides attitudes and behaviours, and it is pluralistic.

4. Public values can be related in a variety of ways (Jørgensen & Bozeman, 2007). Two values may be in harmony in a situation, and in conflict in another.

5. Violation of randomization might occur when researchers analyse experimental research designs without those who failed the manipulation check (c.f. Aronow et al., 2019). Therefore, we repeated our analyses for the entire sample. Overall the results are very similar. The main differences of the sample without those who failed the manipulation check are that the significance of the contrast to test hypothesis 1 becomes non-significant, and that the groups with a higher mean of PSM vary compared to the reduced sample. Please see appendix 2 for the complete results.

6. High or low levels of PSM were identified as follows: high = percentile 90, low = percentile 10. To check the robustness of our analyses we repeated the pairwise comparison tests of the predicted margins for different specifications (e.g. high = percentile 95, low = percentile 5, high = maximum, low = minimum). The results (available upon request) remain largely unaffected.

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Ethics requirements

This study adheres to the legal requirements of Spain (country in which the data is recollected) and the Ministry of Economy and Competitiveness (the funding agency). In particular, to develop this study there is no legal requirement to ask the approval of the ethics committees of our universities. Nonetheless, we made an oral consultation to the ethics committee of the Autonomous University of Barcelona and they also stressed that there was no ne need to formally ask for approval.

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Appendix 1

Survey experiment (English)

Prime before vignettes

High quality education is essential to develop better societies

According to a recently published scientific article reviewing 40 years of research, societies will be developed when everyone will have access to high quality education. For example, outstanding secondary schools and universities will be crucial in developing leaders with the skills and values needed to promote the change to better societies.

Control vignette

Imagine you are the director of a secondary public school. In line with external reports, the maximum number of students per class to ensure high quality is 25. However, this year your school has received far more applications than usual. A bigger number of students will positively impact the annual funding received by the government. You can justify a maximum number of students per class from 25 to 32 ignoring the external quality reports.

Social influences vignette

Imagine you are the director of a secondary public school. In line with external reports, the maximum number of students per class to ensure high quality is 25. However, this year your school has received far more applications than usual. A bigger number of students will positively impact the annual funding received by the government. You can justify a maximum number of students per class from 25 to 32 ignoring the external quality reports. Remember that most teachers in your school support the increase in the maximum number of students.

Competition vignette

Imagine you are the director of a secondary public school. In line with external reports, the maximum number of students per class to ensure high quality is 25. However, this year your school has received far more applications than usual. A bigger number of students will positively impact the annual funding received by the government. You can justify a maximum number of students per class from 25 to 32 ignoring the external quality reports. Remember that other schools are competing to recruit more students because of the associated benefits.

Unethical behaviour

Being the director of this public school, what would you do?

- Accept a maximum of 25 students per class
- Accept a maximum of 32 students per class

Survey experiment (Spanish, original)

Prime before vignettes

La educación de calidad es esencial para construir sociedades más avanzadas

Según un artículo científico recientemente publicado revisando 40 años de investigación, las sociedades avanzarán cuando una educación de gran calidad esté al alcance de todos. Por ejemplo, institutos de educación secundaria y universidades de excelencia serán vitales para el desarrollo de líderes con los valores y habilidades necesarias para incentivar el cambio hacia sociedades más avanzadas

Control vignette

Imagina que eres el/la director/a de un instituto público de educación secundaria. De acuerdo con informes externos, se ofrece una educación de alta calidad si el total de alumnos por aula es igual o inferior a 25. Sin embargo, este año tu instituto ha recibido muchas más solicitudes de matrícula comparado con lo que suele ser habitual. Un mayor número de estudiantes repercutirá positivamente en la subvención anual que recibes del gobierno. Puedes justificar un número máximo de estudiantes por clase de 25 a 32 ignorando los informes externos sobre la calidad.

Social influences vignette

Imagina que eres el/la director/a de un instituto público de educación secundaria. De acuerdo con informes externos, se ofrece una educación de alta calidad si el total de alumnos por aula es igual o inferior a 25. Sin embargo, este año tu instituto ha recibido muchas más solicitudes de matrícula comparado con lo que suele ser habitual. Un mayor número de estudiantes repercutirá positivamente en la subvención anual que recibes del gobierno. Puedes justificar un número máximo de estudiantes por clase de 25 a 32 ignorando los informes externos sobre la calidad. Recuerda que la mayoría del cuerpo docente de tu instituto apoya ampliar el número máximo de estudiantes.

Competition vignette

Imagina que eres el/la director/a de un instituto público de educación secundaria. De acuerdo con informes externos, se ofrece una educación de alta calidad si el total de alumnos por aula es igual o inferior a 25. Sin embargo, este año tu instituto ha recibido muchas más solicitudes de matrícula comparado con lo que suele ser habitual. Un mayor número de estudiantes repercutirá positivamente en la subvención anual que recibes del gobierno. Puedes justificar un número máximo de estudiantes por clase de 25 a 32 ignorando los informes externos sobre la calidad. Recuerda que, debido a los beneficios asociados al incremento del número de alumnos, otros institutos están compitiendo para reclutarlos.

Unethical behaviour

Como director o directora de este instituto, ¿qué harías?

- Aceptar un máximo de 25 estudiantes por aula
- Aceptar un máximo de 32 estudiantes por aula

Appendix 2

Table A1 - Logistic regressions for the entire sample, unethical behaviour as dependent variable

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Group pressure for equity	1.305*	1.522**		1.547**	0.765
	(0.190)	(0.318)		(0.324)	(0.560)
Competition for economic resources	0.665***	0.671*		0.676*	0.454
	(0.107)	(0.159)		(0.160)	(0.367)
Quality activation		1.248		1.297	1.338
		(0.267)		(0.278)	(1.062)
PSM			0.486**	0.442***	0.336
			(0.153)	(0.141)	(0.257)
Group pressure for equity*Quality activation		0.740		0.708	0.840
		(0.216)		(0.207)	(0.901)
Competition for economic resources*Quality activation		0.980		0.919	2.536
		(0.318)		(0.299)	(2.889)
Group pressure for equity*PSM					2.847
					(3.000)
Competition for economic resources*PSM					1.835
					(2.153)
Quality activation*PSM					0.976
					(1.104)
Group pressure for equity*Quality activation*PSM					0.767
					(1.168)
Competition for economic resources*Quality activation*PSM					0.191
					(0.318)
Constant	0.199***	0.260***	0.463***	0.446***	0.533
	(0.031)	(0.040)	(0.101)	(0.116)	(0.276)
Observations	1512	1512	1512	1512	1512

Control group is the baseline category for *negative* contextual influences. Odds ratio are shown. Standard errors in parentheses,*** p≤0.01, ** p≤0.05, * p≤0.1

Table A2 - Pairwise comparison tests of the predicted probabilities of unethical behaviour for different experimental conditions and PSM levels

Hypothesis	Name of predicted probability	Predicted probability of unethical behaviour	Contrast	Standard error	z	p > |z|	Confidence interval (90%)
H1	k	0.158***	-0.086	0.059	-1.47	0.141	-0.201 – 0.029
	l	0.245***					
H2	e	0.197***	0.039	0.056	0.69	0.488	-0.071 – 0.148
	k	0.158***					
H3a	g	0.281***	0.123	0.061	2.00	0.046	0.002 – 0.244
	k	0.158***					
H3b	a	0.250***	-0.031	0.067	-0.47	0.642	-0.163 – 0.100
	g	0.281***					
H4a	i	0.132***	-0.026	0.052	-0.50	0.620	-0.128 – 0.076
	k	0.158***					
H4b	c	0.094***	-0.039	0.046	-0.83	0.405	-0.130 – 0.052
	i	0.132***					

Estimates based on model 5 in table A1. Low PSM = percentile 10, High PSM = percentile 90.
*** p≤0.01

Table A3 – Descriptive statistics for the continuous variable included in the models

Variable	Mean	SD	Min	Max	Skewness	Kurtosis
PSM (success in manipulation check)	0.680	0.195	0	1	-0.471	3.254
PSM (full sample)	0.682	0.195	0	1	-0.451	3.265

Table A4 – Descriptive statistics for the categorical variables included in the models

Variable	Category	Frequency	Percent	Cumulative Percent
Unethical behaviour (success in manipulation check)	Ethical (select 25)	1177	77.84	77.84
	Unethical (select 32)	335	22.16	100.00
Unethical behaviour (full sample)	Ethical (select 25)	737	78.99	78.99
	Unethical (select 32)	196	21.01	100.00
Prime: quality activation (success in manipulation check)	No activation	476	51.02	51.02
	Activation	457	48.98	100.00
Prime: quality activation (full sample)	No activation	755	49.93	49.93
	Activation	757	50.07	100.00
Vignettes (success in manipulation check)	Control	362	38.80	38.80
	Group pressure for equity	309	33.12	71.92
	Competition for economic resources	262	28.08	100.00
Vignettes (full sample)	Control	505	33.40	33.40
	Group pressure for equity	508	33.60	67.00
	Competition for economic resources	499	33.00	100.00

Tables

Table 1 - Socio-demographic characteristics

n = 1512	%
Gender	
Female	50.26
Age	
18-24	11.38
25-34	15.15
35-44	22.42
45-54	20.30
55-64	17.79
65-74	12.96
Level of studies	
Up to Primary Education	33.2
Secondary Education	34.13
University Education	32.67
Work status	
Working	61.11
Housework	4.3
Pensioners	18.25
Unemployed	8.4
Student	6.35
Other	1.59
Work sector	
Public	18.58
Private	41.14
Third	1.39
.	38.89

Table 2 - Confirmatory factor analysis for PSM

Public Service Motivation, α = 0.883 ρ = 0.885	**SFL**	**S-B SE**
1. I am very motivated to contribute to society *1. Estoy muy motivado/a para contribuir a la sociedad*	0.787***	0.017
2. I find it very motivating to contribute to society *2. Me parece muy motivador contribuir a la sociedad*	0.862***	0.013
3. Making a difference in society, no matter how small, is very important to me *3. Crear una mejora en la sociedad, sin importar lo pequeña que sea, es muy importante para mí*	0.821***	0.014
4. Defending the public interest is very important to me *4. Defender el interés general es muy importante para mí*	0.770***	0.018

Table 3 - Summary of experimental conditions, groups, predicted probabilities and PSM distribution

Activation of public values	Contextual influences	*n*	Mean PSM (sd)	PSM levels	Name of predicted probabilities
Activation of quality	Group pressure for equity	152	0.644 (0.206)	High PSM	a
				Low PSM	b
	Competition for economic resources	129	0.657 (0.204)	High PSM	c
				Low PSM	d
	Control	176	0.713 (0.175)	High PSM	e
				Low PSM	f
No activation of quality	Group pressure for equity	157	0.670 (0.203)	High PSM	g
				Low PSM	h
	Competition for economic resources	133	0.708 (0.181)	High PSM	i
				Low PSM	j
	Control	186	0.677 (0.198)	High PSM	k
				Low PSM	l

Table 4 - Hypotheses summary: hypothesized relationships between predicted probabilities

Hypothesis number	Comparison of predicted probabilities	Hypothesized relationship
1	k vs. l	k < l
2	e vs. k	e < k
3a	g vs. k	g > k
3b	a vs. g	a < g
4a	i vs. k	i < k
4b	c vs. i	c < i

Table 5 - Logistic regressions, unethical behaviour as dependent variable

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Group pressure for equity	2.408***	2.726***		2.846***	0.862
	(0.449)	(0.711)		(0.747)	(0.825)
Competition for economic resources	0.802	0.762		0.754	0.701
	(0.183)	(0.249)		(0.248)	(0.736)
Quality activation		1.068		1.115	1.062
		(0.302)		(0.317)	(1.108)
PSM			0.393**	0.339***	0.197*
			(0.159)	(0.143)	(0.199)
Group pressure for equity*Quality activation		0.775		0.700	1.059
		(0.289)		(0.264)	(1.459)
Competition for economic resources*Quality activation		1.103		1.029	2.269
		(0.504)		(0.473)	(3.422)
Group pressure for equity*PSM					5.726
					(7.859)
Competition for economic resources*PSM					1.112
					(1.765)
Quality activation*PSM					1.111
					(1.684)
Group pressure for equity*Quality activation*PSM					0.569
					(1.125)
Competition for economic resources*Quality activation*PSM					0.247
					(0.566)
Constant	0.199***	0.192***	0.497**	0.394***	0.558
	(0.028)	(0.038)	(0.139)	(0.134)	(0.374)
Observations	933	933	933	933	933

Control group is the baseline category for *negative* contextual influences. Odds ratio are shown. Standard errors in parentheses,*** p≤0.01, ** p≤0.05, * p≤0.1

Table 6 - Pairwise comparison tests of the predicted probabilities of unethical behaviour for different experimental conditions and PSM levels

Hypothesis	Name of predicted probability	Predicted probability of unethical behaviour	Contrast	Standard error	z	p > |z|	Confidence interval (90%)
H1	k	0.105***	-0.104	0.062	-1.68	0.092	-0.226 – 0.017
	l	0.210***					
H2	e	0.122***	0.016	0.054	0.30	0.762	-0.089 – 0.121
	k	0.105***					
H3a	g	0.351***	0.245	0.074	3.29	0.001	0.099 – 0.391
	k	0.105***					
H3b	a	0.281***	-0.069	0.091	-0.76	0.449	-0.249 – 0.110
	g	0.351***					
H4a	i	0.083**	-0.022	0.052	-0.42	0.676	-0.123 – 0.080
	k	0.105***					
H4b	c	0.060**	-0.024	0.048	-0.49	0.621	-0.118 – 0.070
	i	0.083**					

Estimates based on model 5 in table 5. Low PSM = percentile 10, High PSM = percentile 90.
*** p≤0.01, **p≤0.05

Figure

Figure 1 – Graphical representation of the hypotheses