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ARTICLE

Public managers' trust in citizens and their preferences for behavioral policy instruments: evidence from a mixed-methods study

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Abstract

Local public managers increasingly use behavioral policy instruments to influence the behavior of citizens. However, despite their increased reliance on these instruments, there is little evidence on why local public manager would prefer behavioral instruments over classic stick, carrot or sermon-type instruments. We conduct a mixed-methods study, combining a stated-preference survey and two focus groups, to examine whether senior local public managers (directors and deputy directors) in Flanders prefer behavioral policy instruments over classic stick, carrot and sermon-type instruments, and explore whether their trust in citizens (perceptions of citizen's ability, benevolence and integrity) affects these preferences for policy instruments. The results indicate that in some policy areas, such as health, public nuisance and road safety, public managers appear more willing to use behavioral policy instruments than classic sticks and carrots, but not sermons. Furthermore, we find that public managers' trust in citizens does not appear to significantly affect their preferences for policy instruments, but that political and economic motives do play a role in their preferences for behavioral policy instruments. Finally, the results also indicate that the simultaneous use of behavioral and classic policy instruments (packaging) can help mediate the perceived risks of citizens' non-compliance with behavioral policy instruments.

Keywords: behavioral policy instruments; nudging; trust in citizens; preferences; public managers

Introduction

The use of behavioral policy instruments in local-level policymaking is on the rise (Feitsma, 2019; Strassheim & Beck, 2019; Dewies *et al.*, 2022). Local governments increasingly rely on behavioral policy instruments to nudge citizens to, for example, stop littering (Merkelbach *et al.*, 2021), drive safely (Graf, 2019) and pay their fines and taxes on time (John & Blume, 2018; Vainre *et al.*, 2020; Raymaekers &

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Migchelbrink, 2021). Furthermore, smart cities increasingly combine technology and behavioral insights to implement data-driven nudges that encourage healthier and more sustainable life styles (Gandy & Nemorin, 2019; Ranchordás, 2020). However, despite the growing use of behavioral policy instruments at the local level, we know little about whether and why public managers, the people responsible for the design and implementation of these instruments, prefer the use of behavioral policy instruments over classic stick, carrot and sermon-type instruments (Linder & Peters, 1989; George, 2020; Veselý & Petrúšek, 2021). In this study, we examine public managers' preferences for the use of behavioral policy instruments and examine whether these preferences are affected by their perceptions of citizens' ability, benevolence, and integrity, and their general propensity to trust.

According to some authors, public managers' personal characteristics and perceptions affect their preferences for policy instruments (Linder & Peters, 1989; Peters, 2002; Veselý & Petrúšek, 2021). In addition to the effects of macro-level factors such as the politico-administrative tradition and policy style, and meso-level factors such as organizational characteristics, public policy research increasingly focusses on the effects of micro-level factors such as individual characteristics and perceptions to explain why public managers favor some policy instruments over others (Capano & Lippi, 2017; Metz *et al.*, 2018; Veselý & Petrúšek, 2021). According to these studies, preferences for policy instruments are partly determined by contextual factors (institutional arrangements, political constituencies and public opinion) and partly by individual determinants (ideational backgrounds, political responsiveness, career opportunities and perceptions) (Howlett, 2004; Capano & Lippi, 2017). At the same time, up to now, research has mostly failed to systematically incorporate a behavioral perspective on choices for, and acceptance of, policy instruments by public managers and citizens (Capano & Howlett, 2020).

In this study, we address this gap in the literature by examining public managers' preferences for behavioral policy instruments. Previous studies offered several theoretical lenses to examine preferences for policy instruments. The dominant traditional model assumes a rational and coherent link between policy problems and policy solutions in which the most (cost-)effective instruments are preferred to solve policy issues, irrespective of the characteristics of the policy issue or the target population (Linder & Peters, 1989; Bekkers *et al.*, 2017). Alternatively, a public choice perspective connects a policy instrument choice to bureau-political considerations, managers' self-interests and budget-maximizing strategies (Niskanen, 1971; Egeberg, 1995; Pierre & Peters, 2017). Finally, the behavioral perspective focuses more on the effects of individual-level perceptions, heuristics and cognitive biases on preferences and choices for policy instruments (Grimmelikhuijsen *et al.*, 2017; Veselý & Petrúšek, 2021) and strategic decision-making (George, 2020).

According to Veselý and Petrúšek (2021: 166), "the underdevelopment of individual-level conceptualization supported by solid empirical research findings seems to crucially limit the development of any theory that tries to explain how policy instruments are chosen." In this study, we address this concern by focusing on one particular micro-level dimension of policy instrument theory: public managers' trust in citizens. Perceptions about citizens' ability, benevolence and integrity inform public managers' believes in whether citizens are willing and able to display

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appropriate behavior (Moyson *et al.*, 2016) and can help determine whether policy instruments are suitable for addressing policy problems (Linder & Peters, 1989).

This study serves at least two purposes. First, we examine how public managers' preferences for behavioral policy instruments compare to their preferences for classic policy instruments like sticks, carrots and sermons. Second, we examine whether public managers' perceptions about citizens' ability, benevolence and integrity, as well as their general propensity to trust, are related to their preferences for (behavioral) policy instruments. To answer these questions, we formulated the following overarching research question:

> *What is the effect of public managers' trust in citizens on their preferences for behavioral policy instruments in local level policymaking?*

We examine local-level public managers' preferences for behavioral policy instruments, and the effects of trust in citizens on these preferences, using an online cross-sectional stated-preference survey among general directors and adjunct general directors of Flemish municipal administrations. When it comes to local policymakers in Flanders, a considerable body of literature has been developed addressing the relation between politician's policy preferences and performance information (George *et al.*, 2020; Lerusse & Van de Walle, 2021; Desmidt & Meyfroodt, 2021b; Lerusse & Van de Walle, 2022), strategic planning practices (George *et al.*, 2017; Desmidt & Meyfroodt, 2021a), and valuation tools (Huijbregts *et al.*, 2022). Remarkably, although these gears of the policy process, in terms of information, practices and tools, are meant and expected to rationalize local politicians' decision-making patterns, cognitive biases and motivated reasoning still emerge (Battaglio *et al.*, 2019). At the same time, behavioral public administration studies of Flemish local public managers examined, among other things, discriminatory practices (Jilke *et al.*, 2018), performance information use (Lerusse & Van de Walle, 2022) and attitudes toward public participation (Migchelbrink & Van de Walle, 2020). However, this study is the first to examine Flemish public managers' preferences for behavioral policy instruments.

Respondents were presented with three policy objectives and invited to rank-order five alternative policy instruments based on which instrument they most preferred to address these policy objectives. In addition, respondents were also invited to rank several questions designed to measure their perceptions of citizens' ability, benevolence, integrity and general propensity to trust. The association between public managers' trust in citizens and their preferences for policy instruments was estimated using a rank-ordered logistic regression (Allison & Christakis, 1994; Fok *et al.*, 2012). Furthermore, to deepen our understanding of public managers' preferences for policy instruments, as well as the effects of managers' perceptions of citizens' ability, benevolence and integrity, we conducted two subsequent focus groups with seven (deputy) general directors and three staff members.

This study makes at least three contributions to the literature on public policy and the use of behavioral policy instruments. First, previous research on support and preference for the use of behavioral policy instruments focused solely on the perceptions and attitudes of citizens (Hagman *et al.*, 2015; Jung & Mellers, 2016; Reisch &

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Sunstein, 2016; Tannenbaum *et al.*, 2017; Sunstein *et al.*, 2019; John *et al.*, 2022). In this study, we turn our attention to the public professionals responsible for the design and implementation of these instruments. Just like local politicians, public managers play an important role in the design and implementation of local public policies and services. Furthermore, as principal policy advisors to local politicians and as local policy workers, public managers influence and shape all decisions about local policy interventions (Hennau, 2020). Second, most previous studies examining support for behavioral policy instruments used relatively simple dichotomous support/no support survey measures (Sunstein *et al.*, 2018, 2019), which might not be able to accurately measure respondents' true relative preferences for policy instruments. Instead, we requested respondents to rank-order alternative instrument choices, requiring them to make tradeoffs between the relative benefits and drawbacks of each type of instrument. Third, we add to the micro-level behavioral perspective on instrument choice by examining the effects of managers' perceptions of citizens' trustworthiness on their preferences for policy instruments in a policy field that is still largely dominated by instrumental (means-end) and institutional considerations (Colebatch, 2018; Capano & Howlett, 2020; George, 2020).

In the next section, we discuss the literature on public policy instruments and public managers' trust in citizens. We than present the design of our stated-preference survey and the operationalization of the research constructs before continuing to the results of the rank-ordered logistic regression and the two focus groups. In the final two sections of this article, we discuss our results and draw our final conclusions.

Literature review

Sticks, carrots, sermons … and nudges?

Local governments use various types of policy instruments, or combinations thereof (e.g., "packaging") to bring about desired behavioral outcomes among citizens (Howlett, 2004; Feiock & Yi, 2020; Capano & Howlett, 2020). The most well-known typology, both in policy research and practice (Veselý & Petrúšek, 2021), distinguishes between three categories of policy instruments: regulations, incentives and the use of information, better known as the sticks, the carrots and sermons (Bemelmans-Videc *et al.*, 2010; Tummers, 2019). These traditional types of policy instruments assume that people make rational decisions based on the relative costs and benefits of acting appropriately (Howlett, 2018).

Regulations, or sticks, are the classic instruments of government (Lemaire, 2010). Sticks include speeding regulations, waste management rules, construction standards, etc. Rules and regulations stimulate behavioral change by limiting or banning relevant choice options through mandating desired behavior and banning undesired behavior. Sticks are authoritative, and the individuals or groups subjected to sticks are required to act in accordance with what is ordered or face a sanction (Hood, 1984; Bemelmans-Videc *et al.*, 2010). Financial incentives, or carrots, incentivize desirable behavior by handing out or taking away material resources without requiring subjected individuals to act in accordance with the measures involved (Leeuw, 2010). Carrots include subsidies, duties on tabaco and alcohol, and price increases for unhealthy food. Finally, information instruments, or sermons, stimulate behavioral

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change by emphasizing socially desired behavior and providing insights into the consequences of socially undesirable behaviors. Sermons involve the transfer of knowledge, the communication of reasonable arguments and social or moral persuasion (Vedung & Van der Doelen, 2010). Sermon-type instruments include public information campaigns, demonstrations and training programs.

Recently, public administration and behavioral public policy scholars advocated for the inclusion of a fourth type of behaviorally inspired policy instrument: the nudge (Tummers, 2019). Based on the work by Simon (1945, 1955), scholars started to move beyond the rationality assumption behind sticks, carrots and sermons. Instead, as policy instruments, nudges harness people's bounded rationality and seek to stimulate behavioral change through subtle and unobtrusive alterations of people's choice architecture (Thaler & Sunstein, 2008; Hansen, 2016). Characteristically, nudges do not forbid or add rational relevant choice options (like sticks), they do not change the incentive structure of choices (like carrots), nor do they provide additional factual information or rational argumentation (like sermons) (Hansen, 2016). Instead, nudges induce behavioral change by redesigning the information, physical or the social environments in which choices are made (Thaler & Sunstein, 2008; Szaszi *et al.*, 2018). Examples of a nudge are social and descriptive norms in tax letters (Hallsworth *et al.*, 2017), traffic-light labels to promote healthy food choices (Thorndike *et al.*, 2014) and green energy default options for private households (Kaiser *et al.*, 2020).

Hard vs soft policy instruments

Based on whether policy instruments direct or encourage people's appropriate behaviors, sticks, carrots, sermons and nudges can be divided into "hard" and "soft" policy instruments (Hood, 2007; Banerjee *et al.*, 2021). The "hard" policy instruments are those that direct people's behavior through formulated rules and directives, and through financial incentives such as fines, taxes and subsidies. The "hard" policy instruments include sticks and carrots. On the other hand, "soft" policy instruments are those that seek to steer people's behavior by providing additional information or by altering the information environment in which people make choices. These "soft" policy instruments include sermons and, by extensions, nudges (Diepeveen *et al.*, 2013; Banerjee *et al.*, 2021). Several studies already examined public support for these soft policy instruments (Aghion *et al.*, 2010; Oliver & Ubel, 2014; Pitlik & Kouba, 2015; Sunstein *et al.*, 2018; Banerjee *et al.*, 2021), but no such study has been conducted on public managers' support for these instruments (but see Veselý & Petrúšek, 2021).

Where public managers can enforce the compliance with "hard" policy instruments using sanctions and force, they cannot enforce compliance with "soft" policy instruments. As such, the use of "soft" policy instruments implies a degree of vulnerability from public managers, requiring trust and a belief in the trustworthiness of the people at whom these instruments are directed. The implementation of "soft" policy instruments in general, and behavioral policy instruments in particular, imply that public managers rely on citizens' trustworthiness to act appropriately without active enforcement. In short, it requires public managers to trust citizens.

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Trust and trustworthiness

Public managers' trust in citizens involves giving citizens a more autonomous role in the execution of public policies and a more active role in the administrative process based on their assessment of citizens' trustworthiness (Moyson *et al.*, 2016). As such, trust and trustworthiness are two distinct concepts (Mayer *et al.*, 1995; Grimmelikhuijsen & Knies, 2017; Bauer, 2019). On the one hand, trust is a characteristic of the trustor (the public manager) and refers to the trustor's subjective estimation of the probability that a trustee (the citizen) will display the desired behavior. Trust assumes that public managers are willing to be vulnerable to citizens' actions. It assumes that public managers rely on citizens to display desired behavior without the ability to enforce or monitor that behavior. Consequently, Yang (2005) defines public managers' trust in citizens as "administrators' belief that the citizens who are affected by their work (or whom they are serving), when involved in the administrative (or governing) process, will act in a fashion that is helpful (or beneficial) to administrators' performance (or goal fulfillment)" (p. 276).

On the other hand, trustworthiness refers to the perception of the trustor about the degree to which the trustee can be expected to keep his/her promises and behave in accordance with shared norms and rules (Colquitt *et al.*, 2007; Grimmelikhuijsen & Knies, 2017). According to the organizational trust literature (Mayer *et al.*, 1995), perceived trustworthiness is multidimensional. Most studies on public managers' perceptions of citizens' trustworthiness distinguish between citizens' perceived ability (do citizens know what is expected of them?), perceived benevolence (are citizens willing to commit to the behavior that is expected of them?) and perceived integrity (are citizens honest?) (Vigoda-Gadot *et al.*, 2012; Lee & Yu, 2013; Moyson *et al.*, 2016). According to these studies, managers' assessments of citizens' trustworthiness are primarily informed through past interactions (Yang, 2005; Ivacko *et al.*, 2013; Lee & Yu, 2013), and organizational and individual factors such as managers' general propensity to trust (Vigoda-Gadot *et al.*, 2012; Lee & Yu, 2013).

Hypotheses

Based on these studies, we hypothesize that public managers' trust in citizens affects their willingness to use behavioral policy instruments in local-level policymaking. We argue that public managers' perceptions of citizens' ability, benevolence and integrity are positively related to their willingness to implement behavioral policy instruments to pursue local policy objectives. When public managers trust citizens to act appropriately, there is little need for the direct supervision and control of citizens' behaviors using rules, regulations or incentives (Vigoda-Gadot *et al.*, 2012). Instead, trust in citizens can facilitate cooperation and the willingness to engage with citizens in administrative processes (Uslaner & Brown, 2005; Yang, 2005, 2006; Wang & Van Wart, 2007). Citizens who are perceived to be trustworthy can be trusted to act appropriately using "soft" policy instruments, without the direct command and control provided by "hard" policy instruments.

The first component of perceptions of trustworthiness is the trustor's assessment of the trustee's abilities. Ability refers to the "group of skills, competences, and characteristics that enable a party to have influence within some specific domain" (Mayer

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et al., 1995). Within the context of organizational trust, ability describes a trustor's assessment of whether a trustee has the skills and competences required to act appropriately (Colquitt *et al.*, 2007). According to Yang & Pandey (2011), citizens' competences are associated with public managers' willingness to increase citizens' say in the policy process. The more skills and knowledge of a particular policy or policy process citizens have, the more likely public managers are to participate with them and to award them with a more autonomous role. As such, we expect that public managers are more likely to prefer behavioral policy instruments when they perceive citizens to know what is expected of them and capable of acting appropriately.

H_1 The higher public managers' perception of citizens' ability, the higher their preference for the use of behavioral policy instruments

In contrast to perceptions about citizens' abilities, the second and third components of trustworthiness, benevolence and integrity describe whether a trustor believes that trustees are willing to behave in an appropriate way (Colquitt *et al.*, 2007; Lee & Yu, 2013). Benevolence refers to "the extent to which a trustee is believed to want to do good to the trustor, aside from any egocentric profit motives" (Mayer *et al.*, 1995, p. 718). It refers to the belief that in their actions, citizens are motivated to act cooperatively and seek out the public interest instead of acting individualistically. As such, benevolence is closely related to concepts like loyalty, openness and supportiveness. According to Åström (2020), public managers who do not trust in citizens' benevolence are more likely to take greater control over the policy process. As such, we expect that public managers' perceptions of citizens' benevolence are positively related to their preference for behavioral policy instruments.

On the other hand, integrity involves the "trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable" (Mayer *et al.*, 1995, p. 719) and involves character traits such as honesty, truthfulness and consistency of action. In part, assessments of trustee's integrity are based on their behavior, whether they fulfill their promises and whether they act fairly (Colquitt *et al.*, 2007), but also on whether the values of the trustee are consistent with those of the trustor (Yang, 2006). We expect that public managers who perceive citizens to be honest, forthright and truthful are more likely to rely on citizens' self-regulatory behavior using behavioral policy instruments than other types of policy instruments.

H_2 The higher public managers' assessment of citizens' benevolence, the higher their preference for the use of behavioral policy instruments

H_3 The higher public managers' assessment of citizens' integrity, the higher their preference for the use of behavioral policy instruments

At the same time, public managers are often unable to obtain first-hand cognitive information about the trustworthiness of citizens and must rely on organizational and personal factors to inform their trust in citizens (Mayer *et al.*, 1995; Lee & Yu, 2013; Moyson *et al.*, 2016). One personal factor informing a trustor's trust in a trustee is his/her general propensity to trust. General propensity to trust, or dispositional trust

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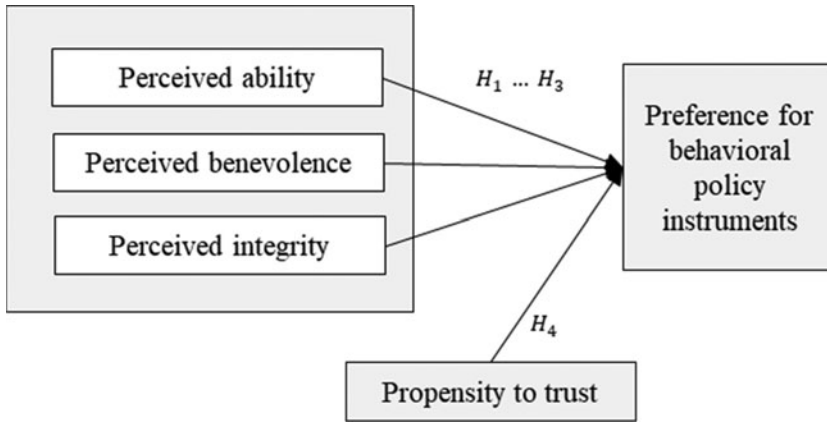


Figure 1. Conceptual model.

(Rotter, 1971; Yang, 2006), can be defined as trustor's general willingness to trust others (Colquitt *et al.*, 2007). This affect-type trust is not based on cognition-based reasoning, but on the trustor's own character traits and value system developed through experience and interactions over time. As such, general propensity to trust tends to be relatively stable across specific situations and can be maintained even if the trustor is able to obtain information about the specific trustworthiness of individual trustees (Lee & Yu, 2013). In line with our expectations on the effects of citizens' perceived trustworthiness, we expect that public managers' general propensity to trust is positively associated with their preference for behavioral policy instruments (Figure 1).

H_4 The higher local public managers' general propensity to trust, the higher their preference for the use of nudging instruments

Method

The hypotheses were tested using an online cross-sectional stated-preference survey and two online focus groups with senior local-level public managers. Participants were invited to rank-order five types of policy instruments (a stick, a carrot, a sermon and two nudges) for three local-level policy objectives based on what they perceived to be the most suitable instrument to achieve the objective at hand. Instead of inviting respondents to indicate their most preferred policy instrument, or rank the suitability of each instrument independently, we requested respondents to provide a full ranking of all instrument alternatives simultaneously. Inviting respondents to rank-order choice alternatives requires them to assess instrument suitability comparatively, making the choice rankings less permissive and more ecologically valid. Furthermore, the increase of information based on the alternative rankings of choice alternatives increases the efficiency and precision of statistical inferences (Allison & Christakis, 1994; Fok *et al.*, 2012).

Because the suitability of policy instruments is context-dependent (Howlett & Ramesh, 1993; Capano & Lippi, 2017), we invited respondents to repeat their ranking

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across three policy cases. The first case involved public personnel's healthy eating habits. Respondents were presented with the objective of improving their personnel's healthy eating habits in the municipal offices' restaurants. The second case involved public discontent due to dog droppings in the public space. Respondents were presented with the objective of increasing dog owners' habit of cleaning up after their dog. The third policy issue involved speeding in school zones, in which respondents were presented with the objective of reducing speeding in the vicinity of primary schools. The policy cases constitute typical local-level policy challenges in which all types of policy instruments could play a role and were derived from real-life local policy cases (Wrapson *et al.*, 2006; Lewis *et al.*, 2009; Hagmann *et al.*, 2018; Kolodko & Read, 2018).

Respondents were then presented with five policy instrument choice alternatives, designed to determine respondents' relative preferences for policy instruments per case. The first group of choice options consisted of stick-type policy instruments: the removal of unhealthy food from the personnel restaurant, increased police oversight in the public space and additional speeding controls in school zones. The second group of choice options consisted of carrot-type instruments and involved a 20% increase in the price of unhealthy food, the free provision of dog waste bags and an increase of administrative sanctions for speeding. The third group of choice options consisted of sermon-type policy instrument in the form of information campaigns to inform public personnel about the disadvantages of unhealthy eating, dog owners about the nuisance of dog droppings and car drivers about the risks of speeding in a school zone.

The fourth and fifth groups of choice options consisted of behavioral policy instruments in the form of nudges. The first nudge options consisted of classic nudges like placing unhealthy food on a less visible place, placing highly visible and user-friendly dog dropping garbage bins at the effected locations, and the modification of road surface markings. The second nudge-type instrument options consisted of more advanced nudges like organizing a healthy once-a-week standard menu, appealing to dog owners' sense of responsibility through window posters and a digital speeding display using direct feedback in the form of emoticons. A complete list of the instrument alternatives per policy case is presented in Supplementary Appendix 1.

Measures

Public managers' relative preferences for policy instruments were the dependent variable in this study. Preferences were measured through the rank-ordering of instruments in each of the three cases described above and based on the instrument-type public managers found most suitable to achieve the policy objective. The rank-ordering exercise produced unique instrument rankings per respondent ranging from most preferred option (1) to the least preferred option (5).

The independent variables consisted of respondents' assessments of citizens' perceived ability, benevolence, and integrity, and their general propensity to trust. Measures of respondents' assessment of citizens' ability, benevolence and integrity were based on Yang's (2005) *Administrators' trust in citizens* instrument extended with items from other studies (Vigoda-Gadot *et al.*, 2012; Migchelbrink & Van de

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Walle, 2021). We optimized the fit of the measurement instrument using explorative factor analysis (Kline, 2016). Respondents were invited to reflect on their own and their organization's experiences and interactions with citizens. Perceptions about citizens' ability were measured using the items *when citizens interact with you and your municipality* and *citizens know what is expected of them*. Respondents' perceptions of citizens' benevolence were measured using the items *when citizens interact with you and your municipality, they don't understand what your job entails* and *when citizens interact with you and your municipality, they have little interest in the complexities and nuances of your job* (Cronbach's $\alpha = 0.64$). Finally, perceptions of citizens' integrity were measured using the items *when citizens interact with you and your municipality, citizens predominantly pursue their own self-interest* and *when regulations are ambiguous, they always try to take advantage of them* (Cronbach's $\alpha = 0.68$). Respondents provided their perceptions of citizens' trustworthiness on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). The items for perceptions about benevolence and integrity were recoded into two equally weighted compound variables.

Respondents' general propensity to trust was measured using the question *generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?* (European Values Study, 2018; European Social Survey, 2019). Answers ranged from 1 (you can't be too careful) to 7 (most people can be trusted).

Finally, we included four control variables to control for respondents' age (in years), gender (male, female and non-preference), the size of the municipality in the number of inhabitants (*1000) and previous experiences with using behavioral policy instruments. We control for demographic characteristics to reduce noise and improve precision. Furthermore, we control for municipal size to exclude the effects of administrative capacity, as larger municipalities often have more administrative capacity to experiment with different policy instruments, and for previous experiences with behavioral policy instruments to control for differences in experiences with nudging instruments. Age, gender and previous experiences with behavioral policy instruments were sampled in the survey, and data on the number of inhabitants per municipality were obtained from the Belgian statistical office Statbel (2021). We excluded respondents' level of education because all but one of our respondents had obtained a university degree (bachelor or higher).

Sampling

We focused on the most senior local-level public managers in Flanders, the general directors and deputy general directors. The general director is the chief administrative official responsible for the preparation, implementation and evaluation of all municipal policies, as well as for the internal management of the municipal bureaucracy. As chief administrative official, the general director is present at all municipal council meetings and plays an important advisory role for both the municipal council and the college of the mayor and the aldermen. This general institutional context is basically identical across the 300 Flemish municipalities (Ackaert, 2005; Decree on the Local Government, 2017). As such, the general directors and the deputy general directors are well suited to provide insights into why public managers, and by extension

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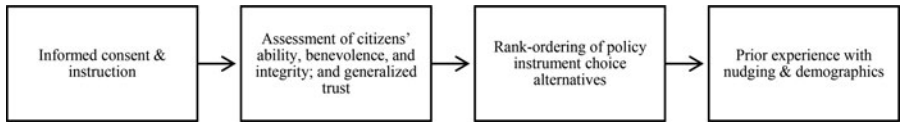


Figure 2. Survey process outline.

municipalities, prefer one policy instrument over another. The total sampling frame, obtained via the interest group organization for senior-level public managers in Flanders (Excello.net, 2021), contained $n = 380$ general directors and deputy general directors. Online survey invitations were sent to all members of the sampling frame.

The survey was fielded using Qualtrics (2005). At the start of the survey, respondents were required to provide their informed consent on participating in the study before they could receive the final instructions and fill out the questionnaire. In the second part, respondents were invited to provide their assessment of citizens' ability, benevolence and integrity in their city or municipality. Respondents were also asked to indicate their own level of generalized trust. In the third part of the survey, respondents were invited to provide a full ranking of their preferences for policy instruments in each of the three cases. The order in which the choice alternatives and policy cases were presented was randomized. In the third part of the survey, respondents were invited to respond to several items related to their prior experiences with nudging, as well as their demographic details. See Figure 2 for an overview of the survey process. The survey took about 10 minutes to complete. Before fielding, the survey was extensively pretested among $n = 15$ PhD students.

Finally, we minimized the risks of common source bias by complementing our quantitative survey data with results from qualitative focus groups. This mixed-methods approach allowed us to cross-validate the findings from the stated-preference survey with the focus group discussions, while simultaneously clarifying and deepening our understanding of the survey results (George & Pandey, 2017).

Estimation procedure

We used a rank-ordered logit (ROL) model to estimate the effects of respondents' perceptions of citizens' ability, benevolence, integrity, as well as their own generalized trust on their ranked preferences for policy instruments (Allison & Christakis, 1994; Fok *et al.*, 2012). The ROL model allowed us to take the full ranking of choice alternatives into account, increasing statistical precision and power, and can, after data transformation, be estimated as an ordinary multinomial logistic regression. In essence, the ROL model consists of a series of multinomial regressions: one for the most preferred alternative, another for the second-most preferred alternative over all items except the most preferred alternative and so on until all choice alternatives have been modeled (Fok *et al.*, 2012). The ROL model requires observations to be ordered in the long format, so that the ranking of choice alternative for each respondent forms a separate observation [e.g., $n(5 + 4+3 + 2)$]. Following Croissant (2020), we estimated our ROL model using a multinomial logistic regression using the mlogit

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package (v1.1-1; Croissant, 2020) in the statistical environment R (R Core Team, 2020).

Focus groups

To deepen our understanding of the survey results, we further conducted two online post-survey focus groups. Focus group discussions are an efficient qualitative technique for data collection on personal and collective experiences and expressions (Hennink & Leavy, 2014; Ryan *et al.*, 2014). We invited participants to interact and reflect on the effects of trust, and their perceptions of citizens' abilities, benevolence and integrity, on their preferences for policy instruments. As respondents discuss and interact, the motives and rationales behind their preferences become manifest, thereby providing a valuable addition to the survey results (Linstone *et al.*, 2002).

We sent an invitation to participate in the focus group to all respondents who wanted to be kept informed about the progress of the study ($n = 89$). In total, six general directors, two deputy general directors and two general director staff members, delegated by their general director, participated in the focus groups. The participants were well distributed across the region and represented six local communities and four municipalities. Discussions were hosted online and took about 70 minutes each.

During the focus groups, we followed a semi-open design that allowed participants to reflect on their own experiences with nudging and to explore collective experiences. After completion of the focus groups, the discussions were transcribed verbatim and coded based on identifying remarks that described policy instrument preferences in relation to respondents' trust in citizens (Hennink & Leavy, 2014).

Results

The survey was fielded between 2 February and 24 February 2021. Non-respondents were sent up to two reminder emails inviting them to participate in the survey, spaced 1 week apart. In total, we received $n = 174$ completed surveys, equaling an effective response rate of 46%. The final sample consisted of $n = 104$ male and $n = 69$ female general directors and deputy general directors, the mean age was 52 years, all but one had at least a university degree (bachelor or master) and 21% of the sampled municipalities (e.g., $n = 38$ respondents) indicated to have at least some prior experience with nudging. The descriptive statics are presented in Table 1.

Rank-ordered preferences

Figure 3 displays respondents' relative preferences for policy instruments for each policy case in odds ratios relative to the control category (e.g., carrot-type instruments). For the three cases included in this study, respondents were least likely to prefer the use of carrot-type instruments (see Supplementary Appendix 2). Furthermore, they appeared to prefer soft policy instruments over hard policy instruments when dealing with these policy issues.

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Table 1. Descriptive statistics

Indicator	Mean	SD	Min	Max
"Citizens predominantly pursue their own self-interest" (r.c.)	5.07	1.05	1	7
"When regulations are ambiguous, they always try to take advantage of them" (r.c.)	4.92	1.24	1	7
"Citizens don't understand what your job entails" (r.c.)	5.42	1.08	1	7
"Citizens have little interest in the complexities and nuances of your job" (r.c.)	5.32	1.16	1	7
"Citizens know what is expected of them"	4.36	1.15	1	7
General propensity to trust	5.22	1.1	1	7
Age	51.78	7.57	32	66
Gender (male)	0.6	0.49	0	1
Previous experience with nudging	3.1	1.54	1	7

r.c., reverse coded.

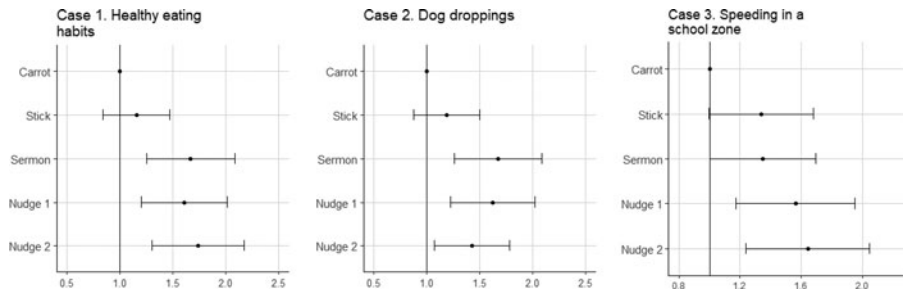


Figure 3. Preferences for policy instruments per case (effects in ratios, reference category is carrot-type instruments).

Respondents were significantly more likely to prefer the use of sermon- and nudge-type instruments ("soft" instruments) to improve employee's healthy eating habits than carrot- or stick-type instruments. Compared to increasing the price of unhealthy food (carrot), respondents were 61% more likely to prefer placing unhealthy food in a less visible place (OR = 1.61, 95% CI [1.20, 2.02]), 67% more likely to prefer an information campaign on the risks of unhealthy eating (OR = 1.67, 95% CI [1.25, 2.09]) and 74% more likely to prefer the introduction of a once a weak healthy standard menu (OR = 1.74, 95% CI [1.31, 2.18]). Respondents did not appear to significantly prefer the removal of unhealthy food from the employees' restaurant over a price increase of unhealthy food (OR = 1.16, 95% CI [0.84, 1.47]).

A similar trend was observed in the case of dog droppings. Again, public managers were more likely to prefer soft policy instruments over hard policy instruments. Compared to providing free dog droppings garbage bags, respondents were 41%

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more likely to appeal to dog owners' sense of responsibility (OR = 1.41, 95% CI [1.07, 1.78]), 62% more likely to introduce highly visible bins of dog droppings (OR = 1.62, 95% CI [1.22, 2.03]) and 67% more likely to introduce an information campaign on the nuisance of dog droppings for citizens (OR = 1.67, 95% CI [1.26, 2.08]). Respondents were not significantly more likely to prefer increased police presence over free dog droppings garbage bags (OR = 1.19, 95% CI [.87, 1.50]).

Finally, respondents were also significantly more likely to prefer the use of non-carrot-type instruments to reduce speeding in school zones. According to our results, respondents were about 34% more likely to prefer additional speeding checks (OR = 1.34, 95% CI [1.00, 1.68]), 35% more likely to prefer an information campaign on the risks of speeding (OR = 1.35, 95% CI [1.01, 1.69), 56% more likely to prefer the modification of road signages (OR = 1.56, 95% CI [1.17, 1.95]) and 64% more likely to prefer the installation of a feedback display using emoticons (OR = 1.64, 95% CI [1.24, 2.05), than they were to increase administrative sanctions for speeding.

The results of the rank-ordered logistic regression are presented in Supplementary Appendices 3 and 4, and graphically displayed as average marginal effects in Figure 4. Overall, we found little statistically significant evidence that public managers' perceptions of citizens' ability, benevolence or integrity affected their preferences for policy instruments (H_1–H_3, not supported). Based on the average marginal effects, there was some evidence to suggest that perceptions about citizens' ability were negative associated with respondents' preference for the placement of highly visible dog droppings garbage bins, but no other significant associations with preferences for nudge-type instruments were observed.

Similarly, we found no evidence suggesting that public managers' general propensity to trust was related to their preferences for behavioral policy instruments (H_4 not supported). What is more, we found no evidence that public managers' general propensity to trust was related to their preferences for any of the policy instruments included in this study.

Regarding the control variables, there was some evidence suggesting that female public managers were more likely to prefer the use of nudge-type instruments in some cases (the introduction of a once-a-weak healthy standard menu and the installation of a feedback display using emoticons), but these findings were not consistent across policy domains or behavioral policy instruments. We found no evidence, suggesting that respondents' age or the size of their municipality was associated to their preferences for policy instruments. Finally, there is some statistically non-significant evidence indicating experience with nudging increases managers' preferences for the use of behavioral policy instruments and, more interestingly, reducing their preferences for stick and carrot-type instruments.

Focus groups

The focus groups confirmed the results of the survey and provided further evidence on public managers' motives for the use (or nonuse) of behavioral policy instruments. None of the participants stated that trust in citizens played a role in their choices for policy instruments. Their default attitudes toward citizens appeared to be one of trust. "The first thing is … and I believe that should be our point of departure whichever

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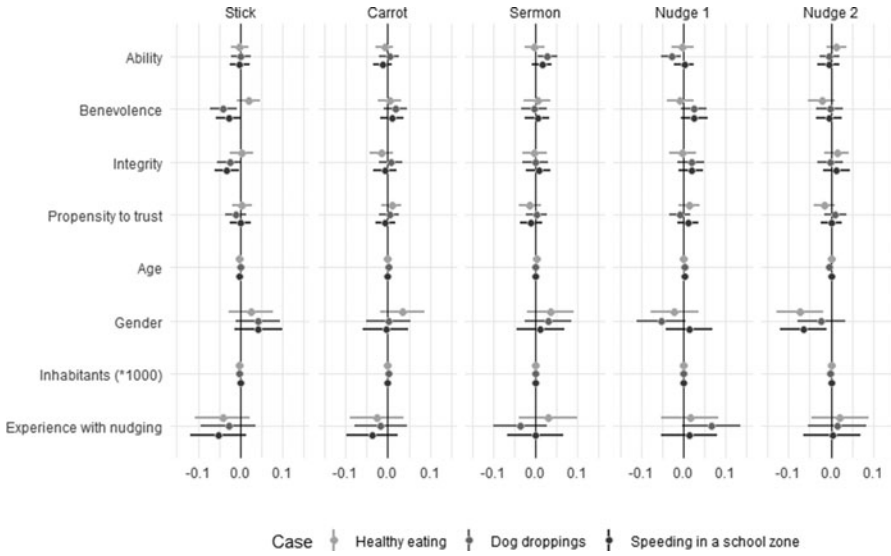


Figure 4. Results in average marginal effects.

policy instrument we are planning to use … we should always trust the people" (participant 10). "It is not about trusting citizens, but about trusting the policy instruments themselves, about the design and the effectiveness of the instrument" (participant 4).

Similarly, the participants stated that their perceptions of citizens' ability, benevolence and integrity did not play a role in their choices for policy instruments. Though respondents argued that the knowledge and competences of citizens should not be underestimated, they also argued that behavioral policy instruments are interesting, especially because they are supposed to be intuitively actionable. "For most of those [behavioral policy instruments], [citizens] don't need a lot knowledge" (participant 6). Furthermore, respondents did not relate their perceptions of citizens' benevolence with their preferences for specific policy instruments. Instead, they argued that citizens' benevolence was dependent on how they experienced policy instruments and on whether they perceived those policy instruments to be beneficial. "People don't have a baseline benevolence, [benevolence] is attuned to what is coming their way" (participant 1). Another participant argued "People also… their benevolence towards certain rules and instruments also depends on whether they perceive them as beneficial to them" (participant 3).

Finally, the participants argued that most citizens act with integrity and that policies should not be based on the behaviors of the minority that does not. One participant commented "There is always a percentage of citizens that acts dishonestly, there is always a percentage of citizens that does not act with integrity, but you should not pay too much attention to them when designing your policies and choosing your policy instruments" (participant 10). Another respondent added "I agree […] that most people act with integrity and you should not base your policies

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on the five percent … too much of our regulatory system is based on that five percent, we should focus on the 95% that is willing and that does act with integrity" (participant 5).

Instead, participants argued that the risks of citizens' undesirable behaviors could be mitigated using the packaging of various policy instruments. This way, public managers can use behavioral policy instruments to achieve policy objectives in combination with sticks, carrots or sermons. Instruments can be used simultaneously (using nudges and subsidies) or sequentially (nudging first, sanctions later). One respondent argued that behavioral policy instruments like nudging could help prevent the illegal dumping of private construction waste, but that if these instruments failed, the police should still be used to sanction the perpetrator. In fact, the use of singular behavioral policy instruments appeared to be a rarity. Instead, behavioral policy instruments were practically always implemented as part of a larger package of relevant instruments. One participant stated: "Personally, I think it is always a story of combining policy instruments, in different phases and degrees" (respondent 5). While another added "A government should think about how it can in a first phase nudge people toward the desired behavior. If it turns out this behavioral change is not sufficient or that most people still do not comply, one can always turn to carrots and sticks" (respondent 10).

Finally, respondents indicated that their relative preferences for behavioral policy instruments were primarily motivated by political and cost considerations. Behavioral policy instruments provide a low-cost way to pursue new and existing policy objectives. These instruments allow governments to pursue new policy objectives "without the need to make additional costs, without the need to make additional heavy investments, and indeed, without the need for a substantial budget" (participant 8). At the same time, the use of behavioral policy instruments was also seen as politically prudent and electorally advantageous. Respondents stated that elected officials preferred behavioral instruments when more obtrusive policy instruments might cause political backlash. At the same time, participants stated that the use of behavioral policy instruments was fashionable and could increase local politicians' media exposure. One participant argued "but it is also something they can use to get into the news, those politicians […] those issues are usually highly visible and that is … some photographs and straight into the newspaper" (participant 6).

Discussion

In this study, we examined senior local public managers' relative preference for the use of behavioral policy instruments as compared to classic stick, carrot and sermon-type instruments in three different local policy cases, as well as the effects of perceptions of citizens' trustworthiness on these preferences. The results of our study showed that public managers' preferences for policy instruments varied significantly across policy cases, with "soft" policy instruments being preferred over "hard" policy instruments. At the same time, the results also indicated that local public managers' preferences for behavioral policy instruments were not significantly associated to their perceptions of citizens' ability, benevolence and integrity. Evidence from focus groups

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confirmed our findings and showed that, instead of managers' trust in citizens, their perceptions of instrumental benefits and costs informed their willingness to use those instruments.

The results of our ROL regression indicated that public managers are relatively willing to use behavioral policy instruments, particularly in comparison to the use of financial and material incentives. These results confirm earlier studies on the relative acceptance of the use of behavioral policy instruments (Reisch & Sunstein, 2016; Sunstein *et al.*, 2018, 2019; Banerjee *et al.*, 2021), but now from the perspective of senior public managers. Behavioral policy instruments are relatively low cost (Benartzi *et al.*, 2017) and can be used to pursue policy objective without the political costs of additional regulations, bans and oversight. Furthermore, the use of behavioral policy instruments can be attractive to political superiors. Not only does it allow elected officials to pursue policy objectives at low costs and without implementing restrictions or new regulations, but it also provides the opportunity for positive press coverage.

At the same time, the results also indicated that public managers' relative preferences for the use of behavioral policy instruments were unrelated to their trust in citizens. The analysis indicated that public managers' perceptions of citizens' ability, benevolence and integrity were unrelated to their preference for the use of behavioral policy instruments, or any of the other instruments. Furthermore, these results indicated that public managers' general propensity to trust was unrelated to their preferences for behavioral policy instruments. In fact, we found no evidence that local managers' trust in citizens affects preferences for policy instruments at all. The results did not confirm our hypotheses and are contrasted by welfare state research, indicating that people with high interpersonal trust favor less strict regulation than people who generally mistrust others (Aghion *et al.*, 2010; Pitlik & Kouba, 2015).

The results of the focus groups offered at least three alternative explanations for the (lack of a) relationship between public managers' trust in citizens and their relative preferences for the use of behavioral policy instruments. First, public managers' preferences for behavioral policy instruments appear to be informed by their assessments of the instrumental use of those instruments, not by their personal perceptions of citizens. As such, this study finds support for classic comparative public policy research, indicating that public managers use instrumental motives and cost considerations when choosing policy instruments (Hood, 2007; Capano & Lippi, 2017; Veselý, 2021).

Second, local public managers appear relatively trusting of their citizens and refuse to let "bad apples" dictate their policy choices. This finding suggests that even if public managers have doubts about the ability, benevolence and integrity of citizens, they will not let these doubts guide their policy choices. As such, this finding also offers support to earlier studies, suggesting that public managers are relatively trusting of citizens, perhaps even more so than citizens are of public managers (Moyson *et al.*, 2016; Van de Walle & Lahat, 2017; Åström, 2020).

Third, and most importantly for the objective of this study, behavioral policy instruments are not implemented in isolation but are part of a larger package including other types of instruments (Davidai & Shafir, 2020). For example, using feedback

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speeding displays to discourage speeding does not mean that police controls stop. Similarly, introducing a once-a-week healthy standard menu does not mean that the prices for unhealthy food remain the same. Public managers can use the various instruments in the package to mediate the risks of undesirable behaviors such as the use of additional police oversight or financial incentives.

This study offers several contributions to the existing literature on public policy and the use of behavioral policy instruments. First, this study indicates that public managers support and prefer the use of behavioral policy instruments. Earlier studies examining support for behavioral policy instruments did so exclusively from the perspective of citizens (e.g., Reisch & Sunstein, 2016; Sunstein *et al.*, 2018). Building on these studies, we show that the professionals responsible for designing and implementing these instruments also appear willing to implement them. Second, we assessed public managers' support for the use of behavioral policy instruments, but in relation to other relevant policy instruments. This way, we go beyond the standard binary questions (yes/no: support/no support) and offer a more ecologically valid and realistic measure of individual preferences and opinions about the use of behavioral policy instruments (Gideon, 2012; Davidai & Shafir, 2020; Banerjee *et al.*, 2021). Third, we identified several factors informing administrative support for the use of behavioral policy instruments. We found that public managers' support for the use of behavioral policy instruments is predominantly affected by political and cost considerations. The ability to pursue policy objectives at low cost and without the introduction of new rules and regulations offers an incentive for local administrations to introduce and increase the use of behavioral policy instruments, especially for those administrations that are under fiscal squeeze or do not have large budgets to start with. Finally, our study contributes to the data diversification of behavioral public policy research beyond the mainstream experimental studies (Van de Walle & Lahat, 2017; Moynihan, 2018; Schmidt & Stenger, 2021), and the mitigation of sources of behavioral brittleness in behavioral public policy research by incorporating the decision-making and policy context, as well as systemic factors such as administrative preferences into the study of behavioral policy instruments (Schmidt & Stenger, 2021).

At the same time, the results of this study should be interpreted in light of at least three limitations. First, we examined local public managers' preferences for behavioral policy instruments using three specific hypothetical policy cases and three sets of specific, practice-based, policy instruments. Preferences for policy instruments are contextualized and dependent on the policy issue and instrument at hand (Bemelmans-Videc *et al.*, 2010; Capano & Lippi, 2017; Veselý, 2021). The use of behavioral policy instruments might be preferential in one case but not in another, or the use of these instruments might differ depending on the location they are to be implemented in. We cannot guarantee that results obtained in this study translate to contexts using other policy cases, policy instruments, or respondents. Furthermore, future studies could examine public managers' generalized preferences for policy instruments and examine which determinants explain managers' general preferences for one policy instrument over another irrespective of policy context.

Second, respondents' rank-ordering behavior could affect the results of the analysis. Respondents can be unable to perform the ranking exercise accurately. Often,

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respondents have a clear understanding of their most preferred option but might not be able to distinguish between less-preferred choice alternatives. Furthermore, even if respondents know their preferences exactly, they might find the ranking exercise too complicated or time-consuming (Hausman & Ruud, 1987; Fok *et al.*, 2012). Sub-optimal ranking behavior can bias the parameter estimates of the ROL model. At the same time, the results of the rank-ordered logistic regression were robust against alternative estimation procedures, for example, a series of multinomial logistic regression analyses.

Third, measuring public managers' trust in citizens is complicated. Not only are public managers' perceptions about citizens' ability, benevolence and integrity context and topic dependent (Colquitt *et al.*, 2007; Moyson *et al.*, 2016; Raaphorst & Van de Walle, 2018), there are also various instruments available to measure these attitudes (see Vigoda-Gadot *et al.*, 2012; Lee *et al.*, 2013). Our measure of public managers' trust in citizens, based on Yang's (2005) *Administrator's trust in citizens* scale, provides adequate fit to the data but can be further improved upon. It is possible that other trust in citizens' measurement instruments could affect the results. Replication of this research, preferably using various measurements instruments, could help further cement the robustness of our findings.

Conclusion

Local governments are increasingly reliant on behavioral policy instruments to nudge the behaviors of their citizens. In this study, we examined public managers' preferences for behavioral policy instruments relative to their preferences for classic stick, carrot and sermon-type instruments. Furthermore, we examined whether public managers' perceptions of citizens' ability, benevolence and integrity affected these preferences. The results, based on an online survey and two focus groups, indicate that public managers are positive about the use of behavioral policy instruments, especially if this implies that they can save budget and do not have to institute new rules and regulations. At the same time, these results also indicate that managers' perceptions about citizens' ability, benevolence and integrity do not affect their preferences for (behavioral) policy instruments. Instead, managers appear to base their attitudes toward behavioral policy instruments on political and cost considerations.

As the local use of behavioral policy instruments increases, so does our need to understand their design and implementation. Most interestingly for practitioners, behavioral policy instruments offer a cost-effective way to pursue local policy objectives. Using behavioral policy instruments in conjuncture with other, more traditional, types of policy instruments, allows for the mitigation of the risks of non-compliance toward enforcements and incentivization. As such, we think it is unlikely that nudges will become popular stand-alone local policy instruments, but that they can provide a welcome and important addition to local public managers' toolbox.

Supplementary material. To view supplementary material for this article, please visit https://doi.org/10.1017/bpp.2022.21.

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