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Public service motivation and policy implementation attitudes: survey experimental evidence from Street-level Bureaucrats in China

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ABSTRACT

Understanding how public service motivation (PSM) impacts frontline implementation is crucial for effectively delivering services. Drawing on PSM and street-level bureaucracy theories, we examine whether PSM influences street-level bureaucrats' policy implementation attitudes towards discretion versus rule focus. Using a question-order survey experiment with 1,548 social assistance workers in China and OLS regression, we find that activating PSM shifts the emphasis from rules to discretion, with stronger effects under low perceived policy performance. These results highlight PSM's pivotal role in influencing how bureaucrats balance discretion with rule adherence, ultimately shaping the public services citizens receive.

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KEYWORDS Policy implementation; public service motivation; street-level bureaucrats; survey experiment

Introduction

Street-level bureaucrats, such as social workers and teachers, play a critical role in policy implementation by bridging the last mile of public service delivery. While top-down models portray them as faithful executors of predefined rules (Deleon and deLeon 2002; Matland 1995; Van Meter and Van Horn 1975), bottom-up perspectives underscore their substantial discretion in shaping policies during implementation (Deleon and deLeon 2002; Hjern 1982; Lipsky 1980). Often, street-level bureaucrats navigate a delicate balance between strict policy adherence and reliance on discretion to meet client needs. The discretion-rule balance has primarily been examined through structural and institutional lenses (e.g. Destler 2017; Tummers et al. 2015). By contrast, the influence of individual motivations, particularly public service motivation (PSM), remains insufficiently examined (Song et al. 2017; Tao, Liu, and Wen 2024). Understanding how PSM matters is pivotal since street-level bureaucrats directly affect the quality and equity of public services delivered to citizens (Chang and Brewer 2023; Lipsky 1980; Rivera and Knox 2023).

This study investigates how activating PSM may shape street-level bureaucrats' attitudes towards discretionary versus rule-focused approaches in policy implementation. The dimensions of PSM – including compassion, self-sacrifice, commitment to the public interest, and attraction to policymaking – offer a theoretical lens to understand why street-level bureaucrats might deviate from strict rules to address client needs (Schott and Ritz 2018; Weißmüller, De Waele, and van Witteloostuijn 2022). Conversely, when policies are perceived to be functioning effectively, PSM could align with a more rule-focused approach. We focus on perceived policy performance as a key contextual cue, signalling whether existing rules are adequate or demand discretionary adaptation. By linking PSM and perceived policy performance, this framework underscores how motivational factors interact with policy contexts to drive the discretion-rule balance in front-line policy implementation.

Despite its prominence as a motivational construct, PSM research has primarily centred on outcomes like ethical behaviour, job satisfaction, and performance (e.g. Bellé 2013; Christensen and Wright 2018; Jensen and Holten 2023; Perry and Wise 1990; Tu et al. 2024; Yu 2023). However, understanding whether and how PSM matters in frontline policy implementation is crucial. When street-level bureaucrats face tensions between discretion and rule adherence, their motivations can shape how public services are delivered, influencing whether clients receive timely assistance or confront bureaucratic barriers (Rivera and Knox 2023). Building on street-level bureaucracy theory (Chang and Brewer 2023; Lipsky 1980), this study considers PSM a critical motivational force driving how bureaucrats balance discretion and rule adherence, ultimately influencing citizens' policy experiences.

By integrating PSM activation with perceived policy performance, this study offers a critical lens for understanding why and when street-level bureaucrats prioritize discretion over rule adherence. While prior research has examined structural dimensions of discretion (e.g. Destler 2017; Hinterleitner and Wittwer 2023; Tummers et al. 2015), only recent studies have explored PSM's effects on preferences regarding policy instruments (Song et al. 2017), prosocial rule-breaking (Weißmüller, De Waele, and van Witteloostuijn 2022), and rigid rule-following (Tao, Liu, and Wen 2024). Nonetheless, few studies have systematically investigated the roles of PSM and contextual cues related to policy performance. Emphasizing PSM's interaction with performance perceptions extends our understanding of how motivational forces influence frontline decisions beyond structural factors. PSM and contextual cues can jointly shape discretion-rule balance in frontline policy implementation, potentially determining whether citizens experience flexible, client-centred services or rigid, uniform procedures.

This study contributes to the literature in three ways. First, by focusing on how PSM shapes the discretion-rule balance, we join emerging recent studies (Song et al. 2017; Tao, Liu, and Wen 2024) to demonstrate how micro-level motivations can affect frontline policy implementation. Second, it underscores how motivational and contextual factors – specifically, PSM and perceived policy performance – influence street-level bureaucrats' policy implementation attitudes regarding when they may adapt or strictly follow policy rules. Finally, building on earlier experimental studies (Meyer-Sahling, Mikkelsen, and Schuster 2019; Van Roekel and Schott 2022), we adopt a survey experimental approach to enhance causal inferences in PSM research.



Literature review

Two strands of literature are relevant to the present study. One focuses on conceptualizing the policy implementation strategies of street-level bureaucrats, while the other examines the determinants of their policy implementation. First, policy implementation strategies have been framed in various ways. The term 'coping' is frequently used to describe the policy implementation behaviours of street-level bureaucrats. Folkman and Lazarus (1980) define coping as the efforts (both cognitive and behavioural) directed towards managing, enduring, or reducing both external and internal demands. Lipsky (1980) views coping as how street-level bureaucrats counter the pressures from limited resources, ambiguous goals, minimal supervision, and challenging circumstances. Tummers et al. (2015) summarize coping strategies into three categories: moving towards clients, moving away from clients, and moving against clients, each incorporating distinct coping mechanisms. Other scholars propose alternative lenses. Winter (2003) suggests using 'interaction style' as a neutral term instead of 'coping', which may underscore the dysfunctional aspects of bureaucrats. Drawing from autonomy and control as key elements, Van Parys and Struyven (2018) identify three interaction styles that reflect the balance of autonomy, competence, and relational support.

Policy implementation strategies can be viewed as a spectrum, balancing discretion with rule adherence. On the one hand, discretion is a core tenet in understanding the roles of street-level bureaucrats, emphasizing their significant autonomy in policy implementation (Hupe and Hill 2007; Lipsky 1980; Meyers et al. 1998; Riccucci 2005; Zhang et al. 2022). Tummers and Bekkers (2014, 529) define discretion as 'the perceived freedom of street-level bureaucrats in making choices concerning the sort, quantity, and quality of sanctions and rewards available when implementing a policy'. Street-level bureaucrats can exercise discretion to adjust the rules to better address clients' needs or facilitate policy implementation (Tummers et al. 2015; Weissert 1994).

On the other hand, street-level bureaucrats may adopt rule-focused strategies (Lipsky 1980; Oberfield 2010). As Lipsky (1980, 149) demonstrated, some street-level bureaucrats see rules as a defence 'against the possibility that they might be able to act more as clients would wish'. Additionally, street-level bureaucrats may emphasize rules to manage heavy workloads and improve efficiency (Tummers et al. 2015). Some scholars argue that rule-following originates from bureaucrats who perceive themselves as acting in a neutral and dispassionate role (DeHart-Davis 2007; Maynard-Moody and Musheno 2003). Street-level bureaucrats with a strong rule-following mindset are regarded as emotionally detached from their clients, treating all clients equally (Oberfield 2014).

Second, while many factors influencing frontline policy implementation have been studied (Baviskar and Winter 2017; Brodkin 2012; Destler 2017; Hinterleitner and Wittwer 2022; Keulemans and Van de Walle 2020), the role of PSM remains underexplored. Yet, a few exceptions exist. Song et al. (2017) find that PSM is positively associated with preferences for direct policy instruments over indirect, market-based policy tools. Petersen (2021) finds no evidence that PSM moderates the effect of client ethnicity on caseworkers' sanctioning behaviour. Tao, Liu, and Wen (2024) find that PSM positively correlates with the inclination of frontline financial regulators and healthcare workers to adhere to the rules. Although the findings regarding the impact of PSM remain mixed, these studies provide a solid foundation for our experimental

study of PSM's effect on street-level bureaucrats' attitudes towards policy implementation.

PSM and Policy implementation attitudes: discretion versus rule focuses PSM and the discretion-rule balance

While PSM has been defined differently (Perry and Wise 1990; Rainey and Steinbauer 1999; Vandenabeele 2007), one definition is 'an individual's orientation to delivering service to people with the purpose of doing good for others and society' (Hondeghem and Perry 2009, 6). PSM is usually operationalized in four dimensions: attraction to public policymaking, commitment to the public interest, compassion, and self-sacrifice (e.g. L. B. Andersen and Serritzlew 2012; Kim et al. 2013). We examine how street-level bureaucrats' attitudes towards policy implementation are affected when they are primed with PSM questions designed to activate their existing level of PSM. We are primarily concerned with the context where street-level bureaucrats play a minimal role in policy design or drafting policy rules. Their discretion lies mainly in implementing the policy rules.

The four dimensions of PSM – attraction to public policymaking, commitment to the public interest, compassion, and self-sacrifice – can jointly drive street-level bureaucrats to prioritize discretion over following rigid rules. First, attraction to public policymaking reflects a motivation to improve decision-making to help others and society (L. B. Andersen and Serritzlew 2012). Because street-level bureaucrats have limited room to design policy rules, their opportunity to improve decision-making is to use discretion at the implementation stage (Tummers et al. 2015; Wongpreedee and Sudhipongpracha 2024). Conversely, if they follow pre-defined rules, they could lose the chance to enhance decision-making as they see fit and, thus, the opportunity to realize their PSM. By stimulating prosocial concerns and a drive to enhance policymaking, PSM internalizes motivations for discretion use and flexible problem-solving in policy implementation.

Second, PSM means a commitment to serve the public interest. PSM can motivate street-level bureaucrats to provide meaningful public services or implement policies to serve the relevant society. Commitment to the public interest may have a mixed impact on the discretion-rule balance. On the one hand, they may believe that the rules are in the public's interest and, thus, be more likely to follow them (Lipsky 1980; May and Winter 2009). For instance, Tao, Liu, and Wen (2024, 5) argue that PSM-driven frontline workers are more likely to follow the rules because they consider themselves 'protectors of the public interest'. On the other hand, PSM-oriented bureaucrats may focus less on rules because they tolerate fewer discrepancies between policy design and client needs than those with lower PSM.

Nonetheless, in a context where street-level bureaucrats have limited input into policy design, the commitment to public interest will likely shift the focus from rules to discretion. Differences between policy design and client needs are nearly inevitable, as indicated by the bottom-up model of policy implementation (Deleon and deLeon 2002; Hjern 1982). Street-level bureaucrats may have local knowledge or private information about client needs that higher-level governments may not consider in the policy design. With a willingness to act in the public's best interest, PSM-driven bureaucrats are more likely to use discretion to address these discrepancies.

Third, compassion is a critical dimension of PSM and can lead to more discretion and less focus on rules in policy implementation. It involves a stronger desire to attend to clients' needs, usually low-income or disadvantaged. Because of their compassion, street-level bureaucrats driven by PSM can be more willing to tailor policy rules to meet client's needs. Empirical evidence supports this view. For instance, L. B. Andersen and Serritzlew (2012) find that PSM, particularly compassion, negatively correlates with professionalism as manifested in rule-following behaviour. Knox and Arshed (2023, 6) find that client-centric compassion is a critical motive for frontline workers to emphasize helping clients and 'creating personal bonds, experiences, and interactions with clients'.

Fourth, self-sacrifice, a crucial pillar of PSM, can increase the use of discretion and decrease the focus on rules in policy implementation because it indicates the willingness to suffer a personal loss to serve the public. Using discretion to meet client needs can take more time, effort, or even risks than following rules. Driven by PSM, street-level bureaucrats may 'discount the importance of self-interest and will often make their work harder, more unpleasant, more dangerous, and less officially successful in order to respond to the needs of individuals' (Maynard-Moody and Musheno 2003). Further, selfsacrifice may motivate street-level bureaucrats to refrain from following rules to reduce their workload, such as routinizing or rationing (Tummers et al. 2015).

Moreover, PSM-driven street-level bureaucrats may engage in prosocial rulebreaking behaviour, which means breaking the policy rules for the benefit of others or society at large (Morrison 2006; Schott and Ritz 2018). Scholars find that rule attributes (Piatak, Mohr, and McDonald 2022), co-worker rule violations (Fleming 2020), and ethical climate (Borry and Henderson 2020) contribute to prosocial rulebreaking behaviour. PSM can be a crucial factor. For instance, Weißmüller, De Waele, and van Witteloostuijn (2022) find that PSM positively correlates with prosocial rulebreaking behaviour through less strict application of bureaucratic rules, particularly for clients with positive affect.

Therefore, PSM's core dimensions collectively foster a prosocial mindset that motivates street-level bureaucrats to prioritize discretion over rule-following. Attraction to policymaking underscores a desire to improve policy outcomes, commitment to the public interest motivates aligning outcomes with client welfare, compassion heightens responsiveness to client needs, and self-sacrifice incentivizes extra effort - even when it involves bending or breaking certain rules. Together, these dimensions create a powerful motivational force, suggesting that PSM-oriented streetlevel bureaucrats will not merely follow rules but adapt them to ensure more beneficial results for their clients.

The theoretical logic of the impact of PSM on the discretion-rule balance can apply across various policy contexts where street-level bureaucrats weigh strict rule compliance against situational demands. For example, PSM has been demonstrated to play a crucial role for street-level bureaucrats in policing (Homberg, Vogel, Weiherl 2019) and education (Hansen, Jin Pedersen, and Willems 2024). Like social assistance workers, teachers and police officers who exhibit high PSM may act on their sense of public duty by interpreting rules flexibly. This suggests our theoretical argument should hold in multiple policy contexts. Thus, we propose the following hypothesis:

H1: PSM activation increases street-level bureaucrats' focus on discretion and decreases their focus on rules in policy implementation.

PSM and Perceived policy performance

When we predict PSM-oriented street-level bureaucrats will focus more on discretion and less on rules in general, we assume that discretion is a more effective way to fulfil their PSM. Following rules is less preferred because rules are imposed top-down, leaving little room for street-level bureaucrats to manipulate. This assumption is particularly important for how the PSM dimensions of attraction to policymaking and commitment to public interest may increase discretion use and decrease rule-following.

However, this assumption may not hold unconditionally. While street-level bureaucrats may not change the design of policy rules, they may perceive the policy rules positively or negatively, which can further affect their attitudes towards the discretion-rule balance. We consider perceived policy performance as a conditioning variable that indicates the extent to which street-level bureaucrats hold a positive view of policy rules. Perceived policy performance can be defined as the degree to which subjects believe the policies achieve stated goals (He and Ma 2021; Jung and Kim 2014). A higher level of policy performance perceived by street-level bureaucrats indicates that they consider the policy more effective. As a result, they are more likely to infer that the policy rules matter, approve of the policy rules (Mondak 1993), consider the policy rules legitimate (Wallner 2008), or endorse the policy rules (May and Winter 2009).

As street-level bureaucrats hold a positive view of the policy rules, they are more likely to follow them in the implementation process. Green tape theory indicates that street-level bureaucrats are more likely to follow the rules with attributes of effective rules, such as written rules (Piatak, Mohr, and McDonald 2022), transparent means-end relationships, and well-understood purposes (DeHart-Davis 2009, 2017). When street-level bureaucrats perceive higher policy performance, they may show higher confidence in the means-end relationships and the purposes of the policy rules, thus considering them effective and following them.

Further, when the perceived policy performance is higher, street-level bureaucrats are more likely to consider policy rules as an effective means to realize their PSM. They may believe that rule-following is aligned with meeting the client's needs because the perceived policy performance is high, and the policy rules are useful instruments to serve the public interest. Meanwhile, street-level bureaucrats are less likely to see conflicts between discretion and rules when the perceived policy performance is high. Consequently, there would be a lower need to use discretion to customize the policy rules for clients. Everything else equal, PSM can have a smaller effect on shifting street-level bureaucrats' emphasis from rule-focused to discretion-focused attitudes. Therefore, we test the second hypothesis as follows.

H2: When street-level bureaucrats perceive higher policy performance, PSM activation has a smaller effect on their focus on discretion and a larger impact on their focus on rules.

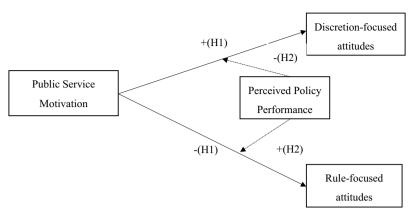


Figure 1. PSM, perceived performance, and policy implementation attitudes. "+" indicates a positive effect, and "-" indicates a negative effect. Solid lines indicate direct effects, and dashed lines indicate moderation effects.

To summarize, Figure 1 illustrates our theoretical framework, indicating that PSM positively influences discretion focus while negatively impacting rule focus (H1). Additionally, perceived policy performance moderates these relationships (H2). The subsequent sections detail our study design and methods for empirically testing these hypotheses.

Data and methods

Subject of study: social assistance workers in China

The subjects of our study are social assistance workers in China. They include social workers, party secretaries or directors of village or neighbourhood committees, and other members of the village or neighbourhood committees. Some are 'specialists', i.e. professional social workers; others are 'generalists' who are members of the village committees in rural China or the neighbourhood committees in urban China. We consider all of them as social assistance workers in this study because they share the common role of implementing the social assistance policy.

The social assistance workers implement multiple social assistance programmes, such as cash transfers to the poor, disaster assistance, and healthcare assistance to the low-income. We focus on the Minimum Living Standard Program (known as *Dibao*), China's most prominent social assistance policy programme. This programme is a means-tested social policy that provides unconditional cash transfers for people below the officially defined minimum living standard. Available to urban and rural residents since 2007, it is centrally designed but locally implemented, with a tension between conforming to a national policy and meeting local needs (Li and Walker 2021). There is substantial variation in the minimum living standards across provinces (Guo, Jingwei He, and Wang 2022) and policy implementation across cities (Solinger and Hu 2012).

The Minimum Living Standard Program requires precise targeting through means testing, ensuring aid reaches eligible recipients (Zhang 2020). Residents must apply, pass a screening test, and receive multiple checks before and after approval. The social assistance workers in rural villages or urban neighbourhoods handle the applications

and make initial screening decisions. They may conduct home visits for incomechecking purposes. They also need to host a public appraisal process for selected recipients in the village or neighbourhood. They then submit the applications to upper-level governments, such as town and county governments, for final approval. Nonetheless, upper-level governments rarely change social assistance workers' decisions.

The social assistance workers are typical street-level bureaucrats (Zhang 2020; Zhang et al. 2022). Their role is primarily confined to implementing social assistance policies designed by the higher-level governments, including the central, provincial, city, county, and town governments. Social assistance workers can exert considerable discretion, such as targeting the policy benefits (Zhang 2020). Due to resource limits, it remains infeasible for higher-level governments to collect the information directly from programme recipients. Instead, social assistance workers dominate the information input stage and act as, to some extent, 'gatekeepers'. Thus, their decisions regarding the discretion-rule balance can significantly affect the services that citizens receive.

Experimental design

While there has been a surge in experimental research related to PSM (Chung, Rhee, and Liu 2024), only a handful of studies have manipulated PSM (Bellé 2013; Christensen and Wright 2018; Meyer-Sahling, Mikkelsen, and Schuster 2019; Pedersen 2015; Van Roekel and Schott 2022). Scholars have adopted two approaches to PSM experiments, including cultivation and activation. PSM cultivation involves activities or self-persuasion to increase respondents' PSM (Bellé 2013; Christensen and Wright 2018). PSM activation focuses on the engagement or priming of respondents' existing PSM. Scholars have shown that low-intensity treatment can activate PSM (Meyer-Sahling, Mikkelsen, and Schuster 2019; Pedersen 2015; Van Roekel and Schott 2022).

Meyer-Sahling, Mikkelsen, and Schuster (2019) and Van Roekel and Schott (2022) use a question-order experiment to manipulate the activation of PSM. Specifically, after being randomly assigned to treatment and group groups, the treatment group is asked a battery of PSM questions before the outcome questions; the control group is asked the same PSM questions after the outcome questions. The experiment is built upon the insight that 'Asking about public service motivation can render salient - and thus activate - public service motivation' (Meyer-Sahling, Mikkelsen, and Schuster 2019, 449). According to social identity theory, individuals have multiple identities, and the treatment can induce them to weigh one identity over others in a given situation (Meyer-Sahling, Mikkelsen, and Schuster 2019). The PSM questions can activate the public service identities of street-level bureaucrats. The questions can prime the treatment group respondents, but not the control group respondents, to consider the PSM issues when answering the subsequent questions on outcomes of interest. Similar question-order experiments have been used to study citizen satisfaction in public administration (S. C. Andersen and Hjortskov 2016; Van de Walle and Van Ryzin 2011).

Inspired by these studies (Meyer-Sahling, Mikkelsen, and Schuster 2019; Van Roekel and Schott 2022), we designed a question-order experiment on PSM activation. Prior research has confirmed PSM as an applicable construct for social workers in China (Liu 2009; Liu, Zhang, and Lv 2014). A key experimental step involves



randomizing PSM activation on a sample of social assistance workers. We randomly assigned the sample into treatment and control groups by county or urban district.² We asked for background information on the social assistance workers, such as gender, age, educational attainment, and marital status. Next, we asked the treatment group, but not the control group, various questions on public service motivation (PSM). We then asked both groups about their attitudes towards policy implementation strategies. Lastly, we asked the control group the same PSM questions as the treatment group.

The experiment was implemented as a part of the Local Social Assistance Worker Survey, a nationwide survey by the Research Institute of Social Welfare and Social Progress in Beijing, China.³ Our question-order experiment, including the randomization step, was embedded into the study at the design stage. The Research Institute implemented the survey between July 2022 and September 2022, delivered through face-to-face field trips by multiple teams of trained survey personnel. The survey covers six provinces, including two from Eastern China, two from Central China, and two from Western China. Within each province, the Research Institute used multistage sampling to choose villages in the rural area and neighbourhood committees in the urban area. Once a village or neighbourhood committee is sampled, it is asked to recommend one social assistance worker to participate in the Local Social Assistance Worker Survey. The respondents eligible for the survey must currently hold a formal job position in the village or neighbourhood committee and be responsible for implementing social assistance policy at the time of survey distribution.

The Research Institute aimed to cover 3,000 participants in their survey.⁵ The survey continued until responses from 2,987 participants were successfully collected, including 408 at the county or urban district level, 1,031 at the town or the subdistrict office level, and 1,548 at the village or neighbourhood committee level. The experimental data were collected from the 1,548 social assistance workers from villages and neighbourhood committees. The treatment group comprises 796 social assistance workers from 318 counties or urban districts, while the control group comprises 752 workers from 299 counties or urban districts. Of the 1,548 social assistance workers who completed the survey experiment, 49% were female (SD = 0.5), with an average age of 43.7 years (SD = 9.9). They have an average of 7years of social assistance work experience (SD = 7.01).

While no national database exists for direct comparison, the final sample may not fully represent all social assistance workers in China. Since each sampled village or neighbourhood committee self-nominated participants for the survey, this process can introduce selection bias. Additionally, some participants from less accessible villages or neighbourhood committees may have been underrepresented due to logistical constraints. We recommend caution when generalizing our findings; nonetheless, the survey experiment upholds the internal validity of our results from a sample of social assistance workers across six provinces in China.

Variables and measurements

To measure the social assistance workers' policy implementation attitudes, we asked eight questions about the degree to which they consider a particular policy implementation strategy important in their work. Attitudinal measurements have been widely used in policy implementation and PSM literature (e.g. Meyer-Sahling, Mikkelsen, and Schuster 2019; Song et al. 2017; Tao, Liu, and Wen 2024; Thomann, van Engen, and

Tummers 2018). We develop these items based on the literature on policy implementation strategies (Jilke and Tummers 2018; Lipsky 1980; Tummers et al. 2015) and the local context of social assistance policy in China (Li and Walker 2021; Zhang 2020). The discretion-focused strategies target various ways social assistance workers may use their discretion, including rule-bending, rule-breaking, instrumental action, and using personal resources. The rule-focused strategies cover how social assistance workers may follow the policy rules, including routinizing, rationing, rigid rule-following, and using empathy to build support. While these questions measure the perceived importance of discretion-focused and rule-focused strategies, they do not directly capture actual policy implementation behaviours. Consequently, they indicate how they intend to approach policy implementation and serve as an initial indicator of how street-level bureaucrats may act in real-world settings.

All answers are measured on a five-point Likert scale, including 'very important', 'somewhat important', 'neutral', 'somewhat unimportant', and 'very unimportant'. All the questions are coded as a variable ranging from 1 to 5 to indicate the level of importance from low to high. Table 1 shows the eight survey items on policy implementation attitudes. It also reports the results of exploratory factor analysis because our measurements of the discretion and rule focuses are not guided by a known theory or data structure and, thus, exploratory. We generated two factor scores as the dependent variables. We name Factor 1 'discretion-focused' and Factor 2 'rulefocused'. The Cronbach's alpha is 0.616 and 0.699, respectively. While these alpha values are not high, they fall within the range of Cronbach's alpha reported in previous studies (DeHart-Davis and Pandey 2005; Vigoda-Gadot 2007).

We modified Kim et al. (2013), 16-item PSM scale to fit the context of our sample. They noted that 'the exact meaning and scaling of PSM dimensions are likely to differ across cultures and languages' (Kim et al. 2013, 79), and various modified versions of their scale have been used in PSM studies in Korea and the U.S (Park 2014). Korea

Table 1. Measuring policy implementation attitude: discretion-focused vs. Rule-focused.

Items	Factor 1	Factor 2	Uniqueness
Discretion-focused (Cronbach's alpha= 0.616)			
1. To the extent permitted by the policy, the rules are flexibly adjusted to meet the needs of the poor.	0.653	0.201	0.533
To the extent permitted by the policy, some rules and procedures are appropriately simplified to meet the needs of the poor.	0.657	0.175	0.537
3. To the extent permitted by the policy, promote the establishment of new measures to effectively serve the poor in the long run.	0.692	0.043	0.519
To the extent permitted by the policy, use personal relationships and resources to advance work and solve problems.	0.307	0.079	0.899
Rule-focused (Cronbach's alpha= 0.699)			
Establish a standardized handling process to respond to the demands of poor people's livelihoods.	0.351	0.582	0.538
Strengthen the obligation of the poor receiving social assistance to reduce the attractiveness of social assistance.	0.352	0.482	0.644
Act in strict accordance with policies and regulations and reject unreasonable demands.	-0.097	0.623	0.603
8. Listen to the poor people "pour out their grievances" and repeatedly explain the policy to them to gain understanding.	0.255	0.561	0.621

The question is, "To what degree do you think these approaches are important in addressing local policy implementation issues?" Answers are coded as 1=very unimportant, 2=somewhat unimportant, 3=neutral, 4=somewhat important, and 5=very important.

(Shim and Hee Park 2019), and Israel (Vinarski-Peretz and Kidron, 2024). First, to accommodate survey length constraints, we omitted 3 items with the lowest factor loadings in each dimension of the original PSM scale (Kim et al. 2013), which also have low relevance to the roles of the social assistance workers in China. Second, based on Perry (1996), we modified the wording for 3 of the 13 remaining questions to better speak to the social assistance workers. We retained at least three items for each dimension:⁸ attraction to public policymaking (3 items), commitment to the public interest (3 items), compassion (4 items), and self-sacrifice (3 items). Each survey item was presented to the respondent as a statement, followed by a question about their level of agreement on a five-factor Likert scale. All the questions are coded as a variable ranging from 1 to 5 to indicate the level of agreement from low to high. Table 2 presents the 13 survey items for the PSM construct.⁹

We conducted confirmatory factor analysis and reliability checks for the modified PSM scale, as reported in Table 2. The measures of fit indicate that the model fits the data well: The goodness of fit test shows LR = 228.92, with p < 0.001; the comparative fit index (CFI) is 0.97, and the root mean square error of approximation (RMSEA) is 0.06. Next, we test the scale reliability for the PSM construct and its four dimensions. The Cronbach's alpha is 0.912 for all 13 items, 0.743 for attraction to public policymaking, 0.823 for commitment to public interest, 0.868 for compassion, and 0.813 for self-sacrifice, all of which are approximately above acceptable benchmarks. Finally, as in Kim et al. (2013), we test the inter-factor correlations among the four dimensions, which range from 0.66 to 0.934. Despite space constraints requiring the omission of 3 items, these results suggest that the modified PSM scale effectively captures the construct in this context.

To measure the moderator variable of perceived policy performance, we asked three questions regarding the perceptions of social assistance policy before the treatment assignment. These questions capture the subjective assessment of the progress of social assistance, its overall effectiveness, and the progress of social assistance team building in their village or neighbourhood in recent years. Table A1 shows the wording of the three questions, variable coding, and exploratory factor analysis results. The three questions are loaded on a single factor: perceived policy performance. The Cronbach's alpha is 0.742.

Before the treatment assignment, we asked a battery of background questions, including gender, age, education, marital status, residence status, working experience, and professional development. Table 3 summarizes the variable definitions and descriptive statistics. 10 We conducted a balance test for the pre-treatment background variables to check if the randomized assignment was properly executed. Table A2 in the appendix shows that only 2 of 28 background variables, or two dummies for provinces, reach statistical significance at the p < 0.1 level, which may fall within the range of a Type I error. This indicates that the treatment and control groups are balanced, and the randomization was appropriately implemented.

Throughout the data analysis, we employ OLS regression with robust standard errors clustered at the county or urban district level (Cameron and Miller 2015; White 1980), where our randomized treatment assignment occurred. We choose OLS regression because of the continuous factor-score outcomes and the straightforward interpretation of treatment effects. The dependent variables, discretion-focused and rule-focused, are predicted factor scores derived from the factor analysis. The key independent variable, PSM treatment, is a dummy



Table 2. Measuring public service motivation.

	Path coefficient	Cronbach's alpha
Pane A Items		
Attraction to public policymaking		
1. I admire people who initiate activities to aid my community.	1.000	0.743
2. Public service is very important to me.	1.590	
3. It is very important to contribute to the public interest of the people.	1.421	
Commitment to public interest		
4. I think equal opportunities for people are very important.	1.000	0.823
5. I consider public service my civic duty.	1.157	
I think it is very important that people can rely on high- quality public services.	1.0601	
Compassion		
7. I feel sympathetic to the plight of the underprivileged.	1.000	0.868
8. I get very upset when I see other people being treated unfairly.	1.001	
9. I empathize with other people who face difficulties.	1.035	
10. Considering the welfare of others is very important. Self-sacrifice	1.005	
11. Serving the people would give me a good feeling even if no one paid me for it.	1.000	0.813
12. I would like to see government cadres do things that are beneficial to the interests of the people, even if doing these things will cause some losses to my personal interests.	0.582	
13. I am willing to make sacrifices for the good of society. Panel B Measures of fit	0.940	
Goodness of fit test: LR = 228.924, Prob[chi2(59) > LR]<0.001 RMSEA= 0.060, 90% CI= (0.0521, 0.0685)		
RMSR= 0.013 CFI= 0.970		
1. Attraction to public policymaking	2. Commitment to public interest	3. Compassion

	Attraction to public policymaking	2. Commitment to public interest	3. Compassion
Panel C Inter-factor correlations			
1.Attraction to public policymaking			
Commitment to public interest	0.934		
3. Compassion	0.769	0.775	
4. Self-sacrifice	0.667	0.660	0.672

Note: The question is, "To what degree do you agree with the following statements?" The answers are coded as 1=strongly disagree, 2=somewhat disagree, 3=neutral, 4=somewhat agree, and 5=strongly agree. Cronbach's alpha=0.912 for all 13 items.

variable indicating whether the PSM questions were asked to the respondents. Given the experimental design, including control variables is unnecessary for obtaining unbiased estimates but can enhance efficiency (Angrist and Pischke 2009). We estimate the model with and without the inclusion of control variables to demonstrate the robustness of our findings. We first include the PSM treatment variable to test the main effect in H1. We then add the moderator variable, perceived policy performance, to test the moderating effect in H2.



Table 3. Descriptive statistics.

Variables	Measurements	N	Mean	SD	Min	Max
PSM treatment Discretion-	Treatment=1, Control=0 Factor score	1,548 1,548	0.514 0	0.500 0.844	0 -3.757	1 1.487
focused						
Rule-focused	Factor score	1,548	0		-3.919	1.400
Perceived policy performance	Factor score	1,548	0	0.830	-3.496	0.636
Female	Female=1, male=0	1,548		0.500	0	1
Age	What is your age?		43.672		21	71
Education (Middle school or below)	Yes=1, No=0	1,548	0.102	0.303	0	1
Education (High school or equivalent)	Yes=1, No=0	1,548	0.317	0.465	0	1
Education	Yes=1, No=0	1,548	0.380	0.486	0	1
(Associate degree)	163 1,110 0	1,5 10	0.500	0.100	Ü	•
Education	Yes=1, No=0	1,548	0.201	0.401	0	1
(Bachelor and above)		.,.				·
Married	Yes=1, No=0	1,548	0.920	0.272	0	1
Residence	Do you live in this village (neighborhood)? Yes=1, No=0	1,548	0.760	0.427	0	1
Working years	How many years have you worked in social assistance?	1,548	7.002	7.035	0	42
Title (Party secretary or director)	Yes=1, No=0 if they are the party secretary or director of the village committees or neighborhood committees	1,548	0.293	0.455	0	1
Title (Other members of	Yes=1, No=0 if they are other members of the village committees or neighborhood	1,548	0.518	0.500	0	1
committee) Title (Others outside	committees Yes=1, No=0 if they are not members of the village committees or neighborhood	1,548	0.189	0.391	0	1
committee) Self-reported competency	committees How well do you think you are qualified for the current job? (1=Poor, 2=Fair, 3=Very well, 4=Perfectly well)	1,548	3.655	0.562	1	4
Professional certificate	Have you obtained a professional social worker qualification certificate? (Yes=1, No=0)	1,548	0.174	0.379	0	1
Top-down evaluation	Do you have performance evaluations of social assistance work by higher-level governments? (Yes=1, No=0)	1,548	0.884	0.320	0	1
Peer evaluation	Do you have performance evaluations of social assistance work by peers? (Yes=1, No=0)	1,548	0.476	0.500	0	1
Client evaluation	Do you have performance evaluations of social assistance work by clients? (Yes=1, No=0)	1,548	0.625	0.484	0	1
City rank (First tier)	Yes=1, No=0	1,547	0.069	0.254	0	1
City rank (Second tier)	Yes=1, No=0	1,547	0.141	0.348	0	1
City rank (Third tier)	Yes=1, No=0	1,547	0.275	0.447	0	1
City rank (Fourth tier)	Yes=1, No=0	1,547	0.361	0.480	0	1
City rank (Fifth tier)	Yes=1, No=0	1,547	0.154	0.362	0	1
Province one	Province dummy	1,548	0.174	0.380	0	1
Province two	Province dummy	1,548 1,548	0.161	0.368 0.370	0	1

(Continued)



Table 3. (Continued).

Variables	Measurements	N	Mean	SD	Min	Max
Province four	Province dummy	1,548	0.174	0.380	0	1
Province five	Province dummy	1,548	0.178	0.383	0	1
Province six	Province dummy	1,548	0.147	0.355	0	1

Results

Main results

Table 4 shows the main results. Columns (1) and (2) show the model without control variables; columns (3) and (4) add control variables. The outcome variables are discretion-focused in columns (1) and (3) and rule-focused in columns (2) and (4). Overall, the results with and without the control variables show a similar pattern and magnitude of effects. The results with control variables are preferred because the effects are more precisely estimated (Angrist and Pischke 2009).

Column (3) of Table 4 shows that PSM treatment has a positive and statistically significant effect (p < 0.01) on discretion-focused. The effect size is 0.709, indicating that the PSM treatment causes an increase in the dependent variable by 0.709, about 84% of one standard deviation (0.844). This indicates that PSM activation increases the perceived importance of discretion-focused policy implementation strategies, consistent with H1.

Column (4) shows that PSM treatment has a negative and statistically significant effect (p < 0.01) on rule-focused. The size of the effect is 0.613. This suggests that the PSM treatment causes a decrease of 0.613 on the scale of the dependent variable, about 77% of one standard deviation (0.795). This finding supports H1, which posits a negative effect of PSM activation on rule-focused policy implementation attitudes. Figure 2 graphs the point estimates based on Table 4 to visualize the main effects.

Next, we estimate the model with the interactive effects between PSM treatment and perceived policy performance¹¹ to test Hypothesis 2 concerning the moderating effect of perceived policy performance. Table 5 shows the selected results. 12 Columns (1) and (2) show the effects on two dependent variables, discretion-focused and rule-focused. As column (1) shows, the interaction term shows a negative and statistically significant effect (p < 0.05) on discretion-focused. In column (2), the interaction term fails to reach statistical significance for rule-focused.

To visualize the moderating effect, based on results in column (1) of Table 5, we graph the average marginal effect of PSM treatment on discretion-focused by perceived policy performance in Figure 3. As the social assistance workers perceive a higher level of policy performance, the PSM treatment has a decreasing effect on the perceived importance of discretion-focused strategies. This is partly consistent with H2, indicating that PSM activation has a smaller effect on discretion focus when street-level bureaucrats perceive higher policy performance.

Robustness checks

We conducted several robustness checks. First, we use average standardized values to measure the discretion and rule focuses, which do not rely on the



Table 4. Impact of PSM treatment on policy implementation attitudes.

Variables	(1) Discretion-focused	(2) Rule-focused	(3) Discretion-focused	(4) Rule-focused
PSM treatment	0.704***	-0.617***	0.709***	-0.613***
- 1	(0.037)	(0.041)	(0.037)	(0.040)
Female			-0.062 (0.047)	0.011
Age			(0.047) -0.002	(0.047) -0.002
gc			(0.003)	(0.003)
Education (High school or equivalent)			0.007	0.124
			(0.072)	(0.075)
Education (Associate degree)			-0.059	0.117
Education (Bachelor and above)			(0.073)	(0.084)
Education (Bachelor and above)			-0.070 (0.088)	0.099 (0.095)
Married			-0.085	-0.106*
			(0.063)	(0.058)
Residence			0.101**	0.077
			(0.051)	(0.049)
Working years			-0.000	-0.000
T:41- (O41			(0.003)	(0.003)
Title (Other members of committee)			-0.062 (0.049)	-0.002 (0.051)
Title (Others outside committee)			-0.033	-0.042
The (others outside committee)			(0.066)	(0.070)
Self-reported competency			0.186***	0.150***
, ,			(0.043)	(0.038)
Professional certificate			0.103*	0.042
- 1			(0.054)	(0.052)
Top-down evaluation			0.048	0.165**
Peer evaluation			(0.055) 0.005	(0.068) 0.011
reer evaluation			(0.040)	(0.041)
Client evaluation			0.067	0.057
			(0.044)	(0.038)
City rank (Second tier)			0.210*	0.139*
			(0.113)	(0.078)
City rank (Third tier)			0.074	0.067
City raph (Faunth tion)			(0.102)	(0.082)
City rank (Fourth tier)			0.128 (0.105)	0.121 (0.085)
City rank (Fifth tier)			0.089	0.050
city raint (cities ties)			(0.117)	(0.098)
Province two			-0.063	-0.090
			(0.089)	(0.069)
Province three			0.208**	0.152*
Durada as farm			(0.095)	(0.085)
Province four			-0.055 (0.088)	-0.026 (0.076)
Province five			-0.031	0.136
			(0.107)	(0.087)
Province six			0.163*	0.034
			(0.092)	(0.089)
Constant	-0.363***	0.317***	-1.110***	-0.533**
Observations	(0.033)	(0.029)	(0.239)	(0.212)
Observations P-squared	1,547 0.174	1,547 0.151	1,547 0.231	1,547 0.192
R-squared			0.231	0.192

Robust standard errors in parentheses, ***p<0.01, **p<0.05, *p<0.1.

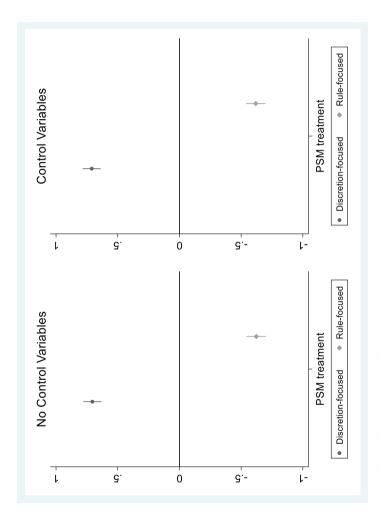


Figure 2. Effects of PSM treatment on policy implementation attitudes.

Table 5. Testing	the moderating	affact of	nerceived n	olicy nor	formanco.	calactad r	ωcultc

	(1)	(2)
Variables	Discretion-focused	Rule-focused
PSM treatment	0.716***	-0.605***
	(0.036)	(0.040)
Perceived policy performance	0.190***	0.164***
	(0.038)	(0.036)
PSM treatment* Perceived policy performance	-0.115**	-0.043
	(0.045)	(0.046)
Control variables	Yes	Yes
Observations	1,547	1,547
R-squared	0.249	0.211

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Average Marginal Effects on Discretion-focused Strategies with 95% CIs

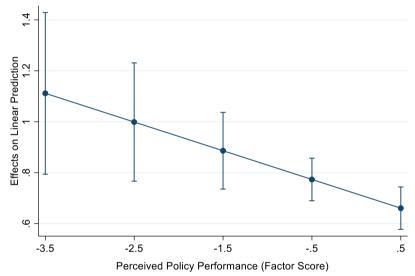


Figure 3. Marginal effects of PSM treatment on discretion-focused strategies by perceived policy performance.

factor loadings and preserve the variation in the eight questions. We report the results in Tables A5 and A6 in the appendix, which show a consistent pattern with the factor score approach. Second, instead of the factor score, we use the three questions to proxy perceived policy performance separately. As shown in Appendix Table A7, two of the three proxies show the same pattern of findings as the factor score results in Table 5. Third, we test the robustness of the results with alternative models. Because the PSM treatment is randomized at the county (urban district) level, an alternative to the main model is to estimate the effects of PSM treatment by averaging all the variables at the county (urban district) level. Table A8 in the appendix reports the results, similar to the main results in Table 4.

Fourth, one desirable goal is to check the PSM treatment effect heterogeneity by the existing PSM level. Previous studies show mixed findings on whether the effects of PSM activation increase or decrease with the existing level of PSM (Meyer-Sahling,

Mikkelsen, and Schuster 2019; Van Roekel and Schott 2022). As reported in Table A9 in the appendix, the effects of PSM treatment become larger as we move from the group of low PSM scores to high PSM scores. This suggests that PSM activation has a larger effect on the subjects in the treatment group who show a higher existing level of PSM, echoing the findings of Meyer-Sahling, Mikkelsen, and Schuster (2019). Finally, we probe the social desirability bias as a threat to the internal validity of our results. Following Meyer-Sahling, Mikkelsen, and Schuster (2019), we asked to what degree the social assistance workers received constructive criticism in the past year. If social desirability bias is at work, we should expect the PSM treatment to affect this outcome, which is unrelated to policy implementation attitudes. Table A10 shows that the PSM treatment has no statistically significant effect on the outcome of constructive criticism, which alleviates the concern of social desirability bias.

Discussion

Implications for theory and practice

Our findings have important implications. First, we show that PSM activation causes more focus on discretion and less on rules. This underscores the crucial role of PSM in shaping how street-level bureaucrats approach policy implementation, providing a micro-level foundation for the bottom-up model of policy implementation (Deleon and deLeon 2002; Hjern 1982; Lipsky 1980). Further, the finding is consistent with the prosocial rule-breaking literature that finds a positive impact of PSM (Weißmüller, De Waele, and van Witteloostuijn 2022). This enhances understanding of the determinants of prosocial rule-breaking behaviour of street-level bureaucrats (Fleming 2020; Borry and Henderson 2020; Piatak et al. 2022). Nevertheless, the discretion focus is not normatively superior to the rule focus. The literature has linked PSM with (un)ethical behaviours of street-level bureaucrats (Schott and Ritz 2018; Weißmüller, De Waele, and van Witteloostuijn 2022). Driven by PSM, using more discretion and following fewer rules in policy implementation might have a 'dark side' (Schott and Ritz 2018) if it leads to unequal or inequitable outcomes for clients. Future research might explore how clients are affected by differential policy implementation by street-level bureaucrats with high or low PSM.

Second, we propose perceived policy performance as a conditioning variable for the relationship between PSM and policy implementation attitudes. The moderating role of perceived policy performance is consistent with the green tape theory that suggests street-level bureaucrats are more likely to follow effective policy rules (DeHart-Davis 2009, 2017; Piatak, Mohr, and McDonald 2022). While our empirical finding is partly consistent with this proposition, the moderating effect cannot be interpreted as causal. Future research may use a factorial experimental design to randomize both PSM and perceived policy performance to provide a stronger test.

Third, although our sample comprises social assistance workers, we emphasize that PSM's core dimensions are not unique to this policy area. Still, caution is warranted before generalizing across different policy areas. Certain policy domains - such as law enforcement with rigid rules or highly technical regulatory fields - may afford less room for PSM-driven discretion or treat deviations from the rules as unacceptable. In these settings, strict adherence could be considered essential to legitimacy and safety, potentially diminishing PSM's influence on discretion use. For example, Tao, Liu, and



Wen (2024) find that PSM positively correlates with frontline financial regulators' and healthcare workers' willingness to enforce rules. This underscores the importance of contextual factors in understanding how PSM impacts frontline policy implementation.

Fourth, partly driven by China's context, we assume street-level bureaucrats lack a role in policy design but enjoy discretion in policy implementation. This assumption sets a boundary for our theory and limits the generalizability of our findings. Social assistance workers in China faced particularly rigid top-down control since the 2016 Targeted Poverty Alleviation campaign (Li and Walker 2021). Using a sample collected in 2022, it is remarkable that we find a positive impact of PSM activation on discretion focus and a negative effect on rule focus. This suggests that PSM can incentivize social assistance workers towards greater use of discretion against the broader political environment for rigid rule adherence. Nevertheless, street-level bureaucrats may not experience the same tension between rules and discretion in systems with more participatory or decentralized structures, potentially altering the mechanisms through which PSM influences policy implementation.

Finally, for managerial implications, our findings indicate that public organizations may match the PSM of street-level bureaucrats with the need for discretion or rule focus in policy implementation. While the street-level bureaucrats with high PSM fit policy implementation roles in which the organizations value discretion, those with low PSM can better fit positions with a rule focus. This alignment can be more valuable when street-level bureaucrats perceive lower policy performance. Further, while policymakers can potentially harness PSM to encourage proactive problem-solving, they must also monitor for inconsistent rule applications that may compromise equity.

Limitations and future research

Our study has several limitations that open new avenues for future research. First, we focus on the attitudes of street-level bureaucrats towards two categories of policy implementation strategies: discretion-focused and rule-focused. Our measurement of these factors is exploratory; future research can assess the external validity of the findings by using alternative scales. For instance, triangulating our factor-score approach with different scales - such as coping (Tummers et al. 2015) or interaction styles (Winter 2003) - could strengthen the evidence regarding how PSM influences policy implementation outcomes. Additionally, while we measure perceived policy performance with three items, future research can expand the empirical testing with more robust measurements.

Second, we examine how PSM affects street-level bureaucrats' attitudes towards policy implementation strategies, as opposed to their actual implementation behaviours. To the extent that attitudes can predict behaviours, our findings may provide early indicators of how these bureaucrats might stray from formal rules. However, future research could use observational or administrative data to verify whether attitudes related to high discretion, driven by PSM, result in real-world policy adaptations. For example, analysing performance records, conducting case audits, or making direct observations could determine whether PSM-oriented street-level bureaucrats with high discretion-focused attitudes deviate from formal policy guidelines.

Ultimately, while our experimental design provides valuable causal insights into attitudinal effects, its cross-sectional nature restricts our understanding of how these



effects evolve over time. Longitudinal studies could track changes in PSM and policy implementation outcomes, offering insight into the durability of these effects. Additionally, comparative research across various policy sectors can uncover whether PSM similarly enhances discretion or reduces rule focus in contexts with unique organizational mandates or professional norms.

Conclusion

We examine how public service motivation (PSM) shapes the attitudes of street-level bureaucrats towards policy implementation. We propose that those with stronger PSM will prioritize discretion over rule-focused strategies. Our findings show that activating PSM leads social assistance workers in China to place greater importance on discretion-focused strategies and less on rule-focused strategies. The effect of activating PSM on the perceived importance of discretion-focused strategies decreases when they perceive higher policy performance. These findings highlight PSM as a critical motivational base and perceived policy performance as a key contextual factor in understanding how street-level bureaucrats approach policy implementation. We call for future research to extend this study with alternative measurements, policy areas, and empirical designs.

Notes

- 1. In one robustness check, we re-estimate the main model by the job title of social assistance workers. The results are available upon request, showing that PSM treatment's impact is similar for these three groups.
- 2. In China, counties and urban districts have the same administrative rank. The difference is that a city in the urban area governs the urban district, while a county is an independent government entity in the rural area.
- 3. The Research Institute of Social Welfare and Social Progress in Beijing has followed appropriate ethics standards and informed consent procedures per the regulations and laws in China. The survey was approved by the Ministry of Civil Affairs of the People's Republic of China, Beijing, China.
- 4. We rerun the main model for the subjects in the eastern, central, and western areas. The effects of PSM treatment remain unchanged across China's regions. The results are reported in Table
- 5. Unfortunately, it is not feasible to compare this sample to similar surveys to assess the representativeness because of a lack of such survey data on social assistance workers in China.
- 6. The other 13 participants cannot be reached due to geographic barriers or COVID-19 control measures.
- 7. The Cronbach's alpha for the 'discretion-based' factor increases to 0.67 if we drop item 4: 'To the extent permitted by the policy, use personal relationships and resources to advance work and solve problems'. We conducted a robustness check using the remaining three items. The main results remain unchanged and are available upon request.
- 8. We translated our 13 PSM questions from English into Chinese. Our questionnaires in Chinese and their English translations are reported in Appendix 1 and 2. The three omitted questions include: 'It is important to contribute to activities that tackle social problems' (attraction to public policymaking); 'It is fundamental that the interests of future generations are taken into account when developing public policies' (commitment to public interest); and 'I believe in putting civic duty before self' (self-sacrifice).
- 9. We aim to demonstrate that the PSM questions measure the PSM concept as intended. In the main data analysis, the key variable of interest is PSM activation, a dummy variable indicating treatment assignment. We use one single factor of PSM score in the subsequent robustness checks.



- 10. We have 1 missing value for the variable City Rank, so the analytic sample size is 1,547.
- 11. We rerun the model using the three questions measuring perceived policy performance instead of the factor score. The results remain robust and are available upon request.
- 12. The full results are presented in Table A4 in the appendix.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Explanation of ethics approvals and informed consent

Our survey experiment was part of a national survey conducted in 2022 by the Research Institute of Social Welfare and Social Progress in Beijing, China. As Note 3 on page 26 explains, 'The Research Institute of Social Welfare and Social Progress in Beijing has followed appropriate ethics standards and informed consent procedures per the regulations and laws in China. The survey was approved by the Ministry of Civil Affairs of the People's Republic of China, Beijing, China'.

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