Citizens' Public-Sector Attitude Bias from the Perspective of Behavioral Governance: Antecedents and Consequences*

Chen Guoliang¹ Zhang Shuwei^{2,3} Wang Yan³

2026-07-01

ChinaRxiv

Abstract

Against the background of building a people-centered service-oriented government, there exist two types of "satisfaction paradox" in government–citizen interaction, in which citizens' subjective evaluations diverge from the government' s objective performance: anti-public-sector bias, reflected in poor evaluations of "good performance" by the public sector, and pro-public-sector bias, reflected in favorable evaluations of "mediocre performance." The essence of these two paradoxes is Citizens' Attitude Bias toward the Public Sector (CAB-PS), both of which reduce the accuracy of public-sector performance evaluation and hinder citizens and the public sector from collaboratively optimizing public services. To this end, this study systematically examines the antecedents and consequences of CAB-PS from the perspective of behavioral governance. First, drawing on the definition of "bias" in social psychology, it clarifies the connotation of CAB-PS and improves existing measurement instruments. Second, it integrates social-, organizational-, and individual-level factors and tests the effect strength and relative importance of each factor on CAB-PS through a conjoint experiment. Finally, it uses a scenario experiment to analyze the effects and boundary conditions of CAB-PS on citizens' coproduction behavior. By revealing the threefold antecedents and behavioral consequences of CAB-PS, this study can provide theoretical and practical insights for resolving the "satisfaction paradox," improving the effectiveness of public service provision, and advancing the construction of a service-oriented government.

Full Text

Citizens' Public-Sector Attitude Bias from the Perspective of Behavioral Governance: Antecedents and Consequences*

Chen Guoliang1 Zhang Shuwei2,3 Wang Yan3

(1 School of Public Administration, Southwest Jiaotong University, Chengdu 610031)

(2 Center for Chinese Public Administration Research, Sun Yat-sen University, Guangzhou 510006) (3 School of Government, Sun Yat-sen University, Guangzhou 510006)

Abstract Against the background of building a people-centered service-oriented government, two types of "satisfaction paradox" exist in government-citizen interaction in which citizens' subjective evaluations run counter to the government' s objective performance: public-sector "good performance" receives poor evaluations, reflecting anti-public-sector bias, while "mediocre performance" receives favorable evaluations, reflecting pro-public-sector bias. The essence of both paradoxes is citizens' attitude bias toward the public

sector (Citizens' Attitude Bias toward the Public Sector, CAB-PS), which reduces the accuracy of public-sector performance evaluation and hinders citizens and public-sector organizations from collaboratively optimizing public services. Therefore, from the perspective of behavioral governance, this study systematically explores the antecedents and consequences of CAB-PS. First, drawing on the definition of "bias" in social psychology, it clarifies the connotation of CAB-PS and improves existing measurement tools. Second, it integrates factors at the social, organizational, and individual levels, and uses conjoint experiments to test the strength and relative importance of each factor' s influence on CAB-PS. Finally, scenario experiments are adopted to analyze the effects and boundary conditions of CAB-PS on citizens' co-production behavior. By revealing the threefold antecedents and behavioral consequences of CAB-PS, this study can provide theoretical and practical insights for resolving the "satisfaction paradox," enhancing the efficiency of public-service provision, and promoting the construction of a service-oriented government.

Keywords satisfaction paradox; anti-public-sector bias; pro-public-sector bias; influencing factors; co-production

Classification number:

1 Problem Statement

In recent years, two noteworthy "satisfaction paradoxes" have emerged in government–citizen interaction: some public-sector organizations perform well yet encounter negative evaluations from citizens (Chen et al., 2024; Hvidman, 2019; Hvidman & Andersen, 2016; Marvel, 2015, 2016); while other departments show no outstanding performance yet are more favored by citizens (Chen Guoliang, 2024; Zhang Shuwei et al.,

---

Received date: 2026-02-01

* Funding projects: National Natural Science Foundation of China Youth Program (72504232), National Natural Science Foundation of China General Program (72474237), 2024 Sun Yat-sen University Fundamental Research Funds for the Central Universities Innovation Talent Cultivation Program—Youth Top-notch Research Talent Cultivation Project (24wkqb05), and the state-treasury project "The Double-Edged-Sword Effects of Departmental Bias on Citizens' Co-production and Its Mechanisms" (A1420502052601-18).

Corresponding author: Zhang Shuwei, E-mail: zhshuw2@mail.sysu.edu.cn

2022; Baniamin & Jamil, 2023; Casado-Aranda et al., 2023; Cordes & Vogel, 2023; Meier et al., 2022; Witesman et al., 2022). The former is referred to in the literature as "Anti-public Sector Bias (APSB)," the latter as "Pro-public Sector Bias (PPSB)," and the two are collectively termed "Citizens' Attitude

Bias toward the Public Sector (CAB-PS)" (Chen Guoliang, 2024; Chen et al., 2024).

Against the backdrop of China' s efforts to build a service-oriented government that satisfies the people, CAB-PS has given rise to numerous practical challenges. Anti-public sector bias not only leads citizens to hold skeptical attitudes toward government achievements and weakens trust in government, perceptions of legitimacy, compliance behavior, and willingness to pay taxes (Bertram et al., 2024; Hatry, 1999; Hetherington, 2005; Hvidman, 2019; James & Van Ryzin, 2017; James et al., 2020; Tyler, 1990), but may also create difficulties in recruiting talent for the public sector, thereby hindering workforce development (Banerjee et al., 2015; Chetkovich, 2003; Garrett et al., 2006; Kjeldsen & Jacobsen, 2013; Linos, 2018). By contrast, pro-public sector bias may cause public-sector organizations and their members to misjudge their own service performance, thereby misleading the direction of improvement (Chen Guoliang, 2024). Therefore, an in-depth investigation of the antecedents and consequences of CAB-PS is an important issue with both academic value and practical significance.

However, owing to the lack of appropriate analytical perspectives and measurement tools, current research on the influencing factors of CAB-PS remains at the level of conceptual exposition and integration, and systematic testing has yet to be carried out (Zhang Shuwei et al., 2022). The rise of the behavioral-governance perspective provides a new research path for this issue. This perspective applies insights from behavioral science to public-governance contexts; by analyzing the motivations, attitudes, and intentions of governance actors, it predicts and guides the behavior of diverse governance actors, thereby offering new ideas for resolving governance problems (Zhang Shuwei, Wang Yan, Qin Quantong, 2024; Zhang et al., 2025). Based on the behavioral-governance perspective and the practical need to build a service-oriented government that satisfies the people, researchers should not only attend to CAB-PS and its influencing factors, but also examine its impact on the joint improvement of public services by citizens and the public sector. Specifically, a service-oriented government that satisfies the people must provide high-quality public services, and such services cannot be achieved without citizens' deep participation and collaborative optimization. Coproduction, as a new model of public service that encourages citizen participation and improves service quality, is an effective indicator for measuring citizens' participation in public services. By enabling citizens and public-sector organizations to jointly carry out relevant activities, this model both unleashes the vitality of citizen participation in governance and highlights the behavioral-governance emphasis on government–citizen interaction (Wang Xuejun, 2023). At present, the effects of coproduction in terms of instrumental efficacy—such as reducing costs and increasing efficiency, improving quality, and enhancing citizen satisfaction—and normative value—such as cultivating civic responsibility, strengthening community cohesion, and promoting mutual trust between government and citizens—have been widely verified (Wang Lili, Ma Liang, 2023; Landi & Russo, 2020; Lee & Na, 2023; Voorberg et al., 2015). However, whether coproduction is influenced by CAB-PS still lacks empirical support. Existing

studies only suggest that CAB-PS may affect coproduction behavior through an "attitude–behavior" transmission mechanism; for example, anti-public sector bias may weaken citizens' willingness to devote time and resources to public services (James et al., 2020).

Based on this, the present study is grounded in the behavioral-governance perspective and integrates multidisciplinary knowledge from psychology, public management, behavioral science, and related fields,

systematically examines the factors influencing CAB-PS and its effects on cooperative production behavior. First, the study will clarify the conceptual connotations of CAB-PS and develop corresponding measurement tools; second, on the basis of reviewing the existing influencing factors of CAB-PS, it will select typical public-service domains and use conjoint experiments to test the effects of the various factors and their relative importance; finally, through scenario experiments, it will test the influence of CAB-PS on cooperative production behavior and its boundary conditions. The findings will provide new ideas for theory and practice concerning interventions in CAB-PS and the promotion of collaborative production by the public, thereby offering theoretical support and practical insights for resolving the "satisfaction paradox" and building a service-oriented government that satisfies the people.

2 Research Status Analysis

2.1 Related Research on Public-Sector Attitudinal Bias

As a biased attitude held by the public toward public-sector organizations and their members, CAB-PS reflects a systematic divergence between the public' s subjective evaluations and the objective performance of public-sector organizations. From the proposal of anti-public-sector bias (Marvel, 2015) to the growing attention paid to the corresponding pro-public-sector bias, related research has moved from describing and testing a single bias phenomenon to an integrated analysis of the two types of bias, and has preliminarily constructed an overall research framework for CAB-PS (Chen Guoliang, 2024; Zhang Shuwei et al., 2022). Overall, existing research can be reviewed from three aspects: the conceptual definition, measurement, and potential influencing factors of CAB-PS.

2.1.1 Conceptual Definition of Public-Sector Attitudinal Bias As an integrative concept, CAB-PS encompasses both anti-public-sector bias and pro-public-sector bias. However, scholars currently pay more attention to the anti-public-sector bias that makes public-sector organizations "feel doubly aggrieved" in practice, while research on pro-public-sector bias remains relatively scarce and has not yet clearly defined it. In view of this, this study first reviews the concept of anti-public-sector bias, then analogically derives the definition of pro-public-sector bias on the basis of the positive and negative valence view of attitudes, and finally, in combination with the connotation of "bias" in social psychology, proposes a complete concept of CAB-PS.

Since Marvel (2015) first proposed the academic concept of anti-public-sector bias, existing research has defined this construct from three perspectives. The first perspective defines it as a negative (implicit) attitude: that is, when lacking solid evidence of poor performance in public-sector organizations—or even when contrary evidence exists—the public still holds negative (implicit) attitudes toward these organizations and their members (Marvel, 2016). Because this perspective places greater emphasis on the public' s affective experience, domestic scholars have translated it as "anti-public-sector prejudice" (Wu Jiannan, Liu Yao, 2020). The second perspective regards it as a heuristic cognitive bias, namely, negative stereotypes about public-sector organizations and their members formed by the public on the basis of information accessibility (Hvidman, 2019; Hvidman & Andersen, 2016; Meier et al., 2022; Willems, 2020). The third perspective defines it as a negative behavioral tendency, referring specifically to the situation in which, when public-sector organizations and private or nonprofit organizations provide the same services and achieve comparable performance, the public still tends to evaluate public-sector organizations more negatively (Zhang Shuwei et al., 2022; Van den Bekerom & van der Voet, 2021).

The above three definitions are each developed from a single dimension based on cognition, affect, or behavioral tendency; although, to a certain extent, they have enriched

scholarly understanding of anti-public-sector bias, but it has also fragmented scholars' interpretations of its connotations and left the field without an integrative perspective.

From the perspective of social psychology, the "bias" in CAB-PS is, in essence, a biased attitude that the public forms toward the public sector and its members on the basis of social categorization; it comprises three major components: cognition, affect, and behavioral tendency (Fiske, 2014). The prefix "anti-" indicates the negative orientation of this attitude. By extension, the connotation of pro-public-sector bias can be inferred as a biased positive attitude held by the public toward the public sector and its members.

Drawing on the conceptual meaning of "bias" in social psychology, this study defines CAB-PS as the positive or negative attitudes held by the public toward the public sector and its members under two conditions: monopolistic provision and competitive provision of public services. Specifically, under monopolistic provision of public services, CAB-PS refers to attitudes held by the public that do not match the objective performance of the public sector and its members. Here, the "public sector" specifically refers to territorially administered departments that provide public services to address concrete livelihood issues, such as education bureaus, civil affairs bureaus, and township or subdistrict offices. Under China' s administrative system of "combining vertical and territorial management, with territorial management as the mainstay," such departments, as components of local governments ("territorial blocks"), directly provide monopolistic public services to the public (Xu Dongtao, 2024; Yu Jianxing & Li Lin, 2016). Under competitive provision, where the public sector and non-public

sectors provide the same services, CAB-PS means that even when the objective performance levels of the public sector and non-public sectors are equivalent, the public still holds relatively more positive or negative attitudes toward the public sector (Chen Guoliang, 2024; Chen et al., 2024). Here, the "public sector" specifically refers to local state-owned enterprises—enterprises owned by provincial, municipal, or county-level local governments that compete with private enterprises and nonprofit organizations in competitive segments of an industry, such as Sichuan Energy Development Group Co., Ltd. and Guangzhou Industrial Investment Holding Group Co., Ltd. As economic entities owned by local governments ("territorial blocks"), local state-owned enterprises represent the public sector in this type of competitive service provision (Hu Xiangming, 2001).

2.1.2 Measurement of Public-Sector Attitude Bias

Existing studies mainly examine CAB-PS through two paradigms: direct measurement and indirect measurement, which are based on different experimental design logics. Direct measurement relies on specific between-group or within-group experimental designs. By manipulating the sectoral attributes of service providers—public, private, or nonprofit—it compares between-group or within-group differences in participants' perceived performance or attitudinal evaluations of different providers, thereby determining whether bias exists (Chen Guoliang, 2024; Hvidman, 2019; Hvidman & Andersen, 2016). Indirect measurement, by contrast, draws on classic psychological Implicit Association Test (IAT) or conjoint experiment designs. It indirectly measures attitudinal bias through participants' response latencies or their preferences for choosing sectors under equivalent performance levels (Chen Guoliang, 2024; Chen Guoliang et al., 2023; Chen et al., 2024; Marvel, 2016).

However, both existing types of measurement tools have certain limitations and are difficult to adapt to the diverse scenarios of local public service provision. Specifically, the two designs used in direct measurement each have shortcomings: between-group designs can only test differences in participants' perceived performance across different experimental groups—public, private, and nonprofit —and have difficulty quantifying the degree of bias; within-group designs for measuring sectoral attitudes can quantify the degree of bias through differences in ratings, but they impose a relatively heavy burden on participants and are applicable only to scenarios of competitive public service provision.

More critically, the direct-measurement paradigm is vulnerable to interference from social desirability bias—when the public evaluates public departments represented by the government, they are highly likely, because of political intimidation or motives for social approval, to offer evaluations that are "what they say rather than what they think." By comparison, the indirect-measurement paradigm has technical advantages in identifying the public' s true evaluations of public departments and quantifying the degree of bias, and has therefore become the preferred choice in some CAB-PS studies (Chen et al., 2024; Marvel, 2016). However, the indirect-measurement paradigm likewise has limitations in

its applicable scenarios: it is effective only in contexts where public services are supplied competitively, and cannot cover the locally core scenario in which public departments monopolize supply. Therefore, how to achieve effective measurement of CAB-PS across contexts has become a key question that remains to be answered.

2.1.3 Influencing Factors of Attitudinal Bias Toward Public Departments

Existing studies mainly discuss the factors influencing CAB-PS at three levels: society, organization, and the individual. Specifically, socioeconomic conditions (Berman, 1997; Brewer, 2003; Van de Walle et al., 2008), mainstream culture (Marvel, 2016), media coverage, and political attacks are factors at the societal level (Bok, 2001; Chanley et al., 2000; Druckman & Parkin, 2005; Gabel & Scheve, 2007; Garrett et al., 2006; Ladd & Lenz, 2009); bureaucratic organizational structures (Downs, 1957, 1967; Niskanen, 1971), rigid rules and regulations (Andrews et al., 2011; Boyne, 2002; Meier et al., 2022; Rainey & Bozeman, 2000; Rainey et al., 1976), performance-management systems, and disclosure of performance information are factors at the organizational level (Baekgaard & Serritzlew, 2016; Chen et al., 2024; Hvidman & Andersen, 2014; Hvidman & Andersen, 2016; James & Van Ryzin, 2017); while factors at the individual level mainly include the public' s demographic characteristics (such as education and income levels), level of trust in government, prior beliefs, stereotypes, and expectations (Zhang Shuwei et al., 2022; Del Pino et al., 2016; Hvidman & Andersen, 2016; James et al., 2020; Marvel, 2015, 2016). Overall, existing studies have constructed a three-dimensional analytical framework for the factors influencing CAB-PS from the macro, meso, and micro levels, but most remain conceptual discussions and lack empirical tests of the specific effects of the three categories of factors and their relative importance.

2.2 Research Related to Coproduction

As a new model for the public' s deep participation in improving the quality of public services, coproduction is not only a key path for unleashing citizens' participatory vitality and realizing pluralistic co-governance from the perspective of behavioral governance (Wang Xuejun, 2023), but also the foothold of this study for revealing the governance consequences of the "satisfaction paradox." At present, scholars at home and abroad have conducted extensive discussions on the concept, measurement, influencing factors, and intervention strategies of coproduction, forming abundant research findings. With the rapid development of behavioral public administration and the rise of the behavioral-governance perspective, academic research on coproduction has gradually extended from macro-level institutional design and meso-level organizational optimization to micro-level individual psychological mechanisms (Zhang Shuwei, Li Jing, 2018; Dvir, 2024). This provides a point of theoretical convergence and research space for the present study, which focuses on the micro-level psychological factor of

public attitudinal bias and explores its effects on coproduction behavior and its boundary conditions.

2.2.1 The Concept and Measurement of Coproduction

Coproduction involves collaboration between producers and consumers in productive inputs (Parks et al., 1981), and this model helps

promoting joint efforts by government and the public to improve the quality and efficiency of public services (Ostrom, 1972; Ostrom et al., 1978). As scholarly research on co-production has deepened, the connotations of the concept have continued to be discussed, but no unified definition has yet been formed. Based on different understandings and interpretations of co-production, scholars in China and abroad have proposed many representative definitions (e.g., 李华芳, 2020; 吴金鹏, 2022; Bovaird, 2007; Boyle & Harris, 2009; Nabatchi et al., 2017; Ostrom, 1996; Surva et al., 2016; Whitaker, 1980). Drawing on existing research, this study defines co-production as the various activities jointly carried out by citizens and public organizations that aim to improve the quality and/or quantity of public-service provision.

With regard to the measurement of co-production, existing studies mostly adopt a "behavioral-form"listing method: they first identify the forms of co-production by citizens in a particular public-service field, then select typical types of behavior for measurement, and thereby obtain a co-production index. In practice, this approach can be divided into three types. The first asks participants about their current frequency of participation and constructs an index accordingly (Parrado et al., 2013). The second asks participants whether they have participated in coproduction activities in the past and obtains an index by summing the scores for different activities (Alonso et al., 2019). The third asks participants how much time they plan to devote to co-production activities in the future and calculates an index by aggregating the time invested (Barbera et al., 2025). In addition, some studies cover multiple public-service fields simultaneously, identify citizens' forms of co-production in each field, and construct a more comprehensive co-production index by aggregating scores across fields (Bovaird et al., 2015).

2.2.2 Influencing Factors and Intervention Strategies for Co-production

How to design intervention tools targeting the factors that influence co-production so as to promote citizens' co-production remains an area of ongoing scholarly exploration.

Existing studies mainly discuss the influencing factors of co-production from traditional and micro-level perspectives. The traditional perspective focuses on the social environment of public services and organizational factors: the former includes political, economic, and cultural conditions as well as social capital (Magno & Cassia, 2015; Stougaard, 2021; Zhang et al., 2020); the latter includes organizational characteristics, professionals, and management tools

(Bovaird et al., 2016; Farooqi, 2016; Riccucci et al., 2016). Corresponding intervention strategies mainly concentrate on optimizing institutions, network structures, technologies, participation processes, and communication systems (Jo & Nabatchi, 2020; Lee, 2022; Nabatchi et al., 2017; Palumbo & Manesh, 2021; van Eijk & Steen, 2016). However, the influencing factors involved in these strategies are usually relatively complex and difficult to change. The micro-level perspective focuses on individual factors among citizens, covering individual capabilities, motivations, and demographic characteristics such as gender, age, place of residence, education, and income (Bovaird et al., 2015; Loeffler & Bovaird, 2016; Voorberg et al., 2018). For individually intervenable factors, intervention strategies often use material incentives or coercive punishments (Cudjoe et al., 2020; Lee & Na, 2023), but such strategies often yield only limited results despite considerable effort and can easily arouse public aversion and resistance (Hao et al., 2020; Voorberg et al., 2018). In addition, as a contextual variable affecting co-production, the type of public service—particularly features such as the excludability of benefits and the intensity of public demand—has also been incorporated into research (Alford & Yates, 2016; Pestoff, 2014). Given that existing research has paid relatively insufficient attention to individual micro-level psychological factors, analyzing the relevant mechanisms from a behavioral perspective provides a new line of thinking for promoting co-production and has given rise to behavioral intervention strategies (Dvir, 2024): drawing on the theories and methods of behavioral science, researchers analyze the pathways through which co-production is realized on the basis of understanding individuals' cognitive processes and decision psychology (王学军, 2023; Osborne et al., 2022).

Specifically, this strategy, drawing on insights into individuals' decision-making characteristics and behavioral preferences (such as information framing and descriptive social norms), designs effective and low-cost interventions to guide the public' s co-production behavior (Zhang Shuwei, Liu Xing, & Wang Yan, 2024; Straßheim, 2020; Thaler & Sunstein, 2008; Wang & Zhang, 2024; Wang et al., 2026).

2.3 Review of Existing Research

Current research at home and abroad on CAB-PS and co-production has reached a certain scale and has formed a theoretical foundation and preliminary evidence that can be drawn upon, but it still has shortcomings in three respects. First, the influencing factors of CAB-PS lack systematic integration and empirical testing. Although some studies have attempted to integrate the influencing factors of CAB-PS from the perspective of information processing (Zhang Shuwei et al., 2022), they remain at the level of theoretical deduction. Therefore, based on the perspective of behavioral governance, this study systematically integrates the influencing factors of CAB-PS at the macro, meso, and micro levels and conducts empirical tests.

Second, the effect of CAB-PS on co-production behavior has not yet been empir-

ically tested. CAB-PS not only poses challenges to public-sector management practices, but also contains opportunities for improving service performance (Chen Guoliang, 2024); its impact on co-production cannot be generalized. Anti-public-sector bias may inhibit co-production, whereas pro-public-sector bias may promote co-production (James et al., 2020). This study will specifically analyze, theorize, and test the effect of CAB-PS on co-production and its boundary conditions.

Third, there is a lack of indirect measurement tools for CAB-PS with strong adaptability. Existing direct measurement tools have limitations such as difficulty in quantifying bias, heavy participant burden, restricted conditions of application, and susceptibility to social desirability bias (Chen Guoliang, 2024), and cannot be used in contexts where public departments monopolize service provision. In comparison, although indirect measurement tools have technical advantages in design flexibility and measurement precision, most rely on the classic IAT technique (Chen et al., 2024; Marvel, 2016), and they likewise face applicability problems in contexts where public departments monopolize service provision. To this end, based on the Single Category Implicit Association Test (SC-IAT) technique, this study will develop an indirect measurement tool that combines flexibility with reliability and validity, so as to fill the gap in CAB-PS measurement tools for contexts in which public departments monopolize service provision.

3 Research Design

3.1 Research Objectives and Research Framework

Based on the preceding review and evaluation of the current state of research on CAB-PS and co-production, this study sets out three research objectives. First, grounded in the realities of public service provision in China, it clarifies the conceptual connotations of CAB-PS and develops a scientifically valid indirect measurement tool, thereby providing technical support for carrying out more comprehensive empirical research on CAB-PS. Second, using a conjoint experimental method, it examines the effects of factors at the social, organizational, and individual levels on CAB-PS and compares the relative importance of these factors, thereby deepening understanding of CAB-PS and offering ideas for effective intervention. Third, using scenario experiments, it tests the causal effect of CAB-PS on co-production behavior and its boundary conditions, so as to enrich relevant theories on co-production interventions and provide support for the construction of a service-oriented government and public serv—

provide a theoretical basis for reforming the diversified supply of services. Accordingly, this study constructs an overall research framework comprising three sub-studies (as shown in Figure 1). It should be noted that the public departments involved in Study 1 refer to territorial administrative departments that provide public services to address specific livelihood issues (the monopolistic supply scenario); the public departments involved in Study 2 refer to

local state-owned enterprises owned by provincial, municipal, or county-level local governments and competing with private enterprises and nonprofit organizations (the competitive supply scenario); and the public departments involved in Study 3 include both territorial administrative departments and local state-owned enterprises.

Figure 1. Research framework diagram

Diagram text:

- Study 2: dashed-arrow path
- Study 1: dotted-arrow path
- Study 3: solid-arrow path
- **Society**
  - Social capital
  - Media coverage
    → Social information processing theory → **CAB-PS**
- **Organization**
  - Organizational reputation
  - Red tape
    → Signaling theory → **CAB-PS**
- **Individual**
  - Prior beliefs
  - Departmental expectations
    → Motivated reasoning theory; expectancy-disconfirmation theory → **CAB-PS**
- **Measurement-tool development (SC-IAT)**
  → **CAB-PS**
- **CAB-PS**
  - Pro-public-sector bias
  - Anti-public-sector bias
- **Monopolistic supply scenario**
  - Service-department characteristic: responsiveness (high vs. low)
  - Service-recipient characteristic: trust in government (high vs. low)
- **Competitive supply scenario**
  - Service-department characteristic: autonomy (high vs. low)
  - Service-recipient characteristic: sense of efficacy (high vs. low)

- **CAB-PS** → Theory of planned behavior → **Co-production**

Figure 1. Research framework diagram

3.2 Study 1: Development of a Single-Category Implicit Association Test for Public-Sector Attitude Bias and Examination of Its Reliability and Validity

The Implicit Association Test (IAT) is a technique developed by Greenwald et al. (1998) for indirectly measuring individuals' implicit attitudes or social cognition, and it has been widely applied in psychological research (Wen Fangfang and Zuo Bin, 2007). However, the traditional IAT technique must rely on complementary pairs of concepts and attributes for measurement; the implicit attitudes it measures are relative attitudes rather than absolute implicit attitudes toward a target object (Greenwald & Farnham, 2000), and thus it cannot be used to measure CAB-PS in scenarios where public departments monopolize service provision. The Single-Category Implicit Association Test (SC-IAT), by contrast, is designed specifically to measure implicit attitudes toward a single target object and can effectively remedy this limitation (Karpinski & Steinman, 2006). Accordingly, drawing on the SC-IAT proposed by Karpinski and Steinman (2006), this study will develop a measurement tool: using the public' s reaction times in categorizing and matching physical stimuli related to public departments (such as departmental logos or images) with negative and positive word groups as objective indicators, it will indirectly measure CAB-PS. To ensure the reliability and accuracy of the measurement tool developed, this study will select samples of ordinary members of the public from different industries to conduct multiple rounds of reliability and validity testing, and will compare this tool with existing indirect and direct measurement tools in order to verify its measurement performance and advantages.

3.3 Study 2: The Threefold Influencing Factors of Public-Sector Attitude Bias and Their Relative Importance

Existing studies have grouped the influencing factors of CAB-PS into three levels: society, organization, and individual (Chen Guoliang, 2024; Zhang Shuwei et al., 2022). At the social level, economic, cultural, and political factors constitute the macro-level factors shaping the public' s attitudinal tendencies toward public departments.

environment; at the organizational level, factors such as the organizational structure, rules, and management systems of public departments are meso-level institutional conditions that affect the public' s attitudes toward public departments; at the individual level, the demographic characteristics, beliefs, expectations, or other cognitive factors of service recipients constitute the micro-level physiological and psychological causes of CAB-PS. Although these three categories of influencing factors are all reasonable and explanatory, they still lack direct em-

pirical testing, and the relative importance among the various factors remains unclear. In view of this, based on the realities of public service provision in China, this study integrates Social Information Processing Theory, Signaling Theory, Motivated Reasoning Theory, and Expectancy Disconfirmation Theory, and uses a conjoint experimental method to test the threefold influence of externally perceived factors (social and organizational) and internal factors (individual cognition) on CAB-PS, thereby comparing the relative importance of the different categories of factors.

3.3.1 Social factors: social capital and media coverage

(1) Social capital and CAB-PS. The social capital referred to in this study is the social resources possessed by the group of actors constituted by public departments and their members (Zhao Yandong & Luo Jiade, 2005). Social Information Processing Theory suggests that the formation of individual attitudes depends on the processing and interpretation of external social information cues (Salancik & Pfeffer, 1978). In the process by which the public' s attitudes toward public departments are formed, social capital provides key information about whether public departments have the capacity and resources to meet public needs, thereby affecting the public' s evaluative tendencies toward public departments (Brewer, 2003; Van de Walle et al., 2008). Specifically, if a service-providing department is perceived as having relatively high social capital, individuals will interpret this as a guarantee of service quality and thus develop a positive attitude toward it; conversely, if the perceived social capital is low, individuals will question its service quality and develop a negative attitude. Therefore, even when different departments provide the same service content and their overall objective performance is comparable, individuals will still make rational choices and evaluations according to the level of social capital—that is, they will look more favorably upon service-providing departments with high social capital (such as tertiary Grade-A hospitals and Double First-Class universities), while maintaining a relatively cautious attitude toward departments with low social capital (such as community hospitals and ordinary colleges and universities).

(2) Media coverage and CAB-PS. As important social information cues, media reports influence public attitudes toward public departments through specific role frames (such as heroes, villains, or victims) (Zhang Shuwei & Feng Shuaiyao, 2024; Cappella & Jamieson, 1996; Chanley et al., 2000; Druckman & Parkin, 2005; Iyengar & Kinder, 1987; Jacoby, 2000; Ladd & Lenz, 2009). According to Social Information Processing Theory, the formation of public attitudes toward public departments depends on the processing and interpretation of external information, and different role frames activate distinctly different evaluative tendencies. Specifically, the "hero" role in media coverage links public departments with positive social values such as dedication and responsibility, which may trigger pub-

lic identification and respect and thereby produce pro-public-department bias. By contrast, the "villain" role in media coverage, through a negative association mechanism, connects public departments with negative characteristics such as negligence, inefficiency, or corruption (Cappella & Jamieson, 1996; Chanley et al., 2000), directly eliciting negative emotions and producing anti-public-department bias. As for the "victim" role, media emphasis on departmental predicaments (such as resource scarcity and pressure from public opinion) may arouse public sympathy, but it is also accompanied by implicit attributions of insufficient departmental capacity. This emotional sympathy conflicts with cognitive doubt, making it difficult for the public to form a clear attitude. Based on this, this study proposes the following:

the following propositions:

Proposition 1: When the overall objective performance of public-service-providing departments is comparable, the public will display a pro-public-department bias toward public departments with high social capital, and an anti-public-department bias toward public departments with low social capital.

Proposition 2: When the overall objective performance of public-service-providing departments is comparable, the public will display a pro-public-department bias toward public departments reported by the media as "hero" roles, an anti-public-department bias toward public departments reported as "villain" roles, and no significant attitudinal bias toward public departments reported as "victim" roles.

3.3.2 Organizational Factors: Organizational Reputation and Red Tape

(1) Organizational reputation and CAB-PS. Organizational reputation is a symbolic belief held by social audiences regarding an organization' s capabilities, roles, and responsibilities (Carpenter, 2012). Signaling theory points out that, under conditions of information asymmetry, information senders transmit signals about their latent characteristics—such as capability and reliability—to the outside world, thereby helping information receivers make judgments (Spence, 1973, 2002). When there is no significant difference in the objective performance levels of various service-providing departments, it is difficult for the public to evaluate service quality directly through performance, and thus they enter a decision-making situation characterized by information asymmetry. At this point, organizational reputation becomes one of the key signals by which the public judges the service capacity of each department, and the capability signals it conveys will influence public attitudes (Rindova & Martins, 2012). Specifically, a good reputation for a public department brings a series of positive effects, such as attracting clients, improving performance, increasing return on assets, promoting recruitment effectiveness, forming competitive advantages,

and enhancing social influence (Fombrun & Van Riel, 1997; Nakra, 2000). Through market feedback and social diffusion, these positive results form collectively perceived knowledge that the public can recognize, thereby leading the public to attribute the department' s service effectiveness to its intrinsic organizational capacity rather than to accidental factors. This cognitive pattern will prompt the public to adopt heuristic judgments, generate systematic positive evaluations of highly reputed public departments, and form a pro-public-department bias. Conversely, public departments with low reputations will be affected by the stigma effect, and the public will attribute their service deficiencies to inadequate organizational capacity (Christie et al., 2022), thereby producing an anti-public-department bias.

(2) Red tape and CAB-PS. Red tape refers to rules, regulations, and procedures that are currently effective and must be followed within an organization, but whose contribution to stakeholders' achievement of goals or values is lower than the costs incurred in complying with and implementing them (Bozeman, 2012). According to signaling theory, red tape, as an institutional friction cost, transmits signals about organizational efficiency. A low level of red tape transmits a signal of "high efficiency," implying that the service-providing department possesses the ability to rapidly optimize resource allocation and respond to interest claims (Andrews et al., 2011; Boyne, 2002; Meier et al., 2022; Rainey & Bozeman, 2000; Rainey et al., 1976). When the objective performance levels of various service-providing departments are comparable, this efficiency signal will, through horizontal social comparison, enhance the public' s evaluation of the department. Conversely, a high level of red tape transmits a signal of "low efficiency" ; its excessive compliance requirements not only increase the public' s compliance costs (Keiser & Miller, 2020; Pandey, 2023), but also transmit negative information about organizational rigidity through rule redundancy, triggering negative evaluations of service departments among the public (Hvidman & Andersen, 2016). Accordingly, this study proposes the following proposition:

Proposition 3: When the overall objective performance of public-service-providing departments is comparable, the public' s evaluation of public departments with higher organizational reputation [[continues on next page]].

exhibit a pro-public-sector bias, and toward public-sector departments with lower organizational reputation they exhibit an anti-public-sector bias.

Proposition 4: When the overall objective performance of each public service provider is comparable, the public will exhibit a pro-public-sector bias toward public-sector departments with lower levels of red tape, and an anti-public-sector bias toward public-sector departments with higher levels of red tape.

3.3.3 Individual Factors: Prior Beliefs and Departmental Expectations

(1) Prior beliefs and CAB-PS. Prior beliefs are cognitive presets formed by individuals, before receiving new information or evidence, on the basis of existing knowledge, experience, or cultural background (Kunda, 1990). In this study, prior beliefs specifically refer to the public' s cognitive presets regarding "which type of department—distinguishing among public, private, and nonprofit departments—is more appropriate for providing public services." Motivated reasoning theory emphasizes that, when forming attitudinal evaluations, individuals systematically prefer and accept information that is consistent with their preexisting beliefs and values, while ignoring or disparaging information that conflicts with those beliefs (Kunda, 1990; Taber & Lodge, 2006). When the overall objective performance of different public service providers is comparable, the public cannot form differentiated evaluations through performance comparisons; prior beliefs will therefore become the core basis for interpreting service information and forming attitudes toward departments (Ma Liang, 2018, 2020; Baekgaard & Settitzlew, 2016; Flynn et al., 2017; Jerit & Zhao, 2020). If prior beliefs favor public-sector departments, the public will actively capture positive information about public-sector departments while ignoring or disparaging negative information, thereby forming positive evaluations that do not match objective performance—that is, a pro-public-sector bias. If prior beliefs favor non-public-sector departments, the public will amplify negative information about public-sector departments and weaken their positive information, thereby forming negative evaluations that do not match objective performance—that is, an anti-public-sector bias.

(2) Departmental expectations and CAB-PS. Departmental expectations are individuals' subjective probabilistic judgments about the specific outcomes that may be brought about by the services or behaviors of public service providers (Oliver, 1980). Expectancy-disconfirmation theory points out that individuals' satisfaction with services depends on the difference between their service expectations and the actually perceived quality of service: when actual performance exceeds expectations, a satisfactory evaluation is formed; when actual performance falls short of expectations, a dissatisfactory evaluation is formed (Oliver, 1980; Van Ryzin, 2004, 2006, 2013). When the objective performance of different service providers is comparable, the public' s level of service expectations for a given department will directly determine the direction of the gap between expectations and performance, becoming a key factor in what type of attitudinal bias is generated. Specifically, if the public' s service expectations for public-sector departments are significantly higher than those for other departments, while the actual performance of public-sector departments does not differ significantly from that of other departments, this will trigger negative expectancy disconfirmation and thus produce negative evaluations

that do not match objective performance—that is, an anti-public-sector bias. Conversely, if the public' s service expectations for public-sector departments are lower than those for other departments, but the actual performance of public-sector departments is not lower than that of other departments, positive expectancy disconfirmation will occur, producing positive evaluations that do not match objective performance—that is, a pro-public-sector bias. Based on this, this study proposes the following propositions:

Proposition 5: When the overall objective performance of different public service providers is comparable, if the public holds positive prior beliefs about public-sector departments, it will exhibit a pro-public-sector bias; conversely, it will exhibit an anti-public-sector bias.

Proposition 6: When the overall objective performance of different public service providers is comparable, if the public' s expectations for public-sector departments are lower than those for other departments, it will exhibit a pro-public-sector bias; conversely, it will exhibit an anti-public-sector bias.

3.3.4 Comparison of Three Categories of Factors in Public-Sector Attitude Bias

To compare the relative explanatory power of social, organizational, and individual factors for CAB-PS, this study establishes comparison criteria along three dimensions. First is universality: whether an influencing factor can cover the entire population and explain the formation patterns of CAB-PS among different individuals, rather than acting only on specific groups. Second is stability: whether the effect of an influencing factor is persistent and difficult to change through short-term informational interventions. Third is cross-scenario explanatory breadth: whether an influencing factor can simultaneously fit both monopoly-supply and competitive-supply scenarios, thereby explaining the formation of CAB-PS across different domains. In light of the real context of public-service provision in China and the theoretical foundations discussed above, this study analyzes the relative explanatory power of the three categories of factors as follows.

First, at the social level, social capital and media coverage are macro-level factors influencing CAB-PS, and they exhibit the strongest explanatory power across all three comparison dimensions. In terms of universality, social capital is the overall representation of the connections between public departments and social networks, while media coverage is the core channel through which citizens obtain information about public departments; both influence or shape the attitudes of the entire public toward public departments (Brewer, 2003; Druckman & Parkin, 2005; Iyengar & Kinder, 1987; Ladd & Lenz, 2009; Van de Walle et al., 2008). In terms of stability, the accumulation and depletion of social capital is a long-term process, and the collective cognition of the public shaped by media coverage through role framing also forms stable stereotypes;

both are difficult to alter through short-term performance information interventions. This is highly consistent with the sociocultural driving logic underlying the formation of implicit attitudes (Arkes & Tetlock, 2004; Karpinski & Hilton, 2001; Olson & Fazio, 2004; Rudman, 2004). In terms of cross-scenario explanatory breadth, the influence of social capital and media coverage exists broadly in both monopoly-supply and competitive-supply scenarios, making them cross-contextual contingent factors. Therefore, compared with organizational and individual factors, social factors constitute the underlying environmental variables shaping the public' s collective attitudes, and their influence on CAB-PS is foundational and global.

Second, at the organizational level, organizational reputation and red tape are meso-level factors influencing CAB-PS. Their explanatory power is weaker than that of social factors but stronger than that of individual factors. In terms of universality, organizational reputation and red tape are key signals transmitted by public departments to the public, and may influence all service recipients or potential clients of a given department (Guo Jinyuan et al., 2021; Li Hongxia & Chen Sicheng, 2025; Borst, 2018; Brewer & Walker, 2010; Van Loon et al., 2016), but they usually struggle to generate global effects across departments and domains. In terms of stability, although both organizational reputation and red tape develop through a process over time, they can also be adjusted through organizational behavior; thus, their stability is weaker than the long-term influence of social factors. In terms of cross-scenario explanatory breadth, their influence on public attitudes mainly applies to service settings in which the public has direct contact with public departments. Among these, people' s contact with local state-owned enterprises—such as paying water and electricity bills and facility maintenance, i.e., competitive supply—is usually more frequent than their contact with local administrative departments—such as handling affairs at education bureaus or tax bureaus, i.e., monopoly supply—so their cross-contextual explanatory power differs. Overall, although organizational factors can directly influence the public' s attitudinal evaluations of specific departments, they fall short of social factors in both universality and stability.

Finally, at the individual level, prior beliefs and departmental expectations are micro-level factors influencing CAB-PS, and they have the weakest relative explanatory power among the three categories. In terms of universality, prior beliefs and departmental expectations display relatively strong individual heterogeneity and can explain only specific [[unclear: following text is cut off]].

···the formation of overall attitude bias (Andersen & Hjortskov, 2016; Chen et al., 2022; Favero & Kim, 2021; Favero et al., 2025; Hvidman, 2019; James et al., 2020), and there are clear differences in their group coverage as well as in social and organizational factors. In terms of stability, both are forms of individual cognition; they change dynamically with individuals' service experiences, information exposure, and life experiences, are susceptible to short-term informational interventions, and have relatively weak sustained effects on public attitudes. In terms of the scope of explanatory scenarios, the effects of prior be-

liefs and departmental expectations depend heavily on individuals' perceptions of specific services and departments, making it difficult for them to explain the overall pattern of CAB-PS across service scenarios. Accordingly, this study proposes the following proposition:

Proposition 7: Among the three categories of factors influencing CAB-PS, social factors (social capital and media coverage) have the strongest effect on CAB-PS; organizational factors (organizational reputation and complex red tape) have the next strongest effect; and individual factors (prior beliefs and departmental expectations) have the weakest effect.

3.4 Study 3: The Effect of Public-Sector Attitude Bias on Public Co-production Behavior

After an in-depth examination of the multiple influencing factors of CAB-PS and their relative importance, Study 3 focuses on how CAB-PS specifically affects public co-production behavior. In light of the current situation in China, where monopolistic supply and competitive supply of public services coexist, this study will specifically analyze and test the effects and boundary conditions of CAB-PS on public co-production behavior. The overall framework of Study 3 is shown in Figure 2.

Figure 2. Framework of the Effect of CAB-PS on Co-production Behavior

Main elements shown in the framework:

- **CAB-PS**
  - Pro-public-sector bias
  - Anti-public-sector bias
- **Monopolistic supply scenario**
  - Service-department characteristic: responsiveness (high vs. low)
  - Service-recipient characteristic: trust in government (high vs. low)
- **Competitive supply scenario**
  - Service-department characteristic: autonomy (high vs. low)
  - Service-recipient characteristic: sense of efficacy (high vs. low)
- **Theory of Planned Behavior**
- **Co-production**

The figure indicates positive and negative pathways among CAB-PS, the Theory of Planned Behavior, supply scenarios, and co-production.

3.4.1 Public-Sector Attitude Bias and Co-production Behavior

From the perspective of behavioral governance, CAB-PS is not only influenced by factors at multiple levels, but may also further affect the public' s co-production behavior through an "attitude–behavior" pathway. This study

further introduces the Theory of Planned Behavior to explain how CAB-PS, as a biased attitude, is transformed into behavioral consequences that promote or inhibit co-production.

The theory of planned behavior points out that behavioral intention is the most direct proximal factor predicting individual behavior. It is jointly influenced by attitude, subjective norms, and perceived behavioral control: the more positive an individual' s attitude toward the behavioral object, the stronger the perceived normative support, and the higher the perceived behavioral control over implementing the behavior, the stronger the behavioral intention, and ultimately the higher the probability of producing the specific behavior (Duan Wenjing & Jiang Guangrong, 2008; Ajzen, 1991). Depending on their valence, CAB-PS may manifest either as pro-public-sector bias or as anti-public-sector bias; therefore, it is necessary to distinguish between the two and separately test their differential effects on co-production behavior. Specifically, pro-public-sector bias, as a biased positive attitude directed toward public departments and their members, can enhance the public' s trust in, support for, and satisfaction with public departments (James et al., 2020; Marvel, 2015, 2016), thereby encouraging the public to take the initiative to use services provided by public departments and participate in the process of service optimization. By contrast, anti-public-sector bias, as a biased negative attitude, may lead to adverse outcomes such as weakened public trust in government, damage to governmental legitimacy, reduced compliance behavior, and lower willingness to pay taxes (Bertram et al., 2024; Hatry, 1999; Hetherington, 2005; Hvidman, 2019; James & Van Ryzin, 2017; James et al., 2020; Tyler, 1990). These negative effects may suppress the public' s willingness to cooperate, making them unwilling to invest time and effort and to work together with public departments to improve public services. Based on this, the present study proposes the following propositions:

Proposition 8: Pro-public-sector bias will strengthen the public' s co-production behavior.

Proposition 9: Anti-public-sector bias will weaken the public' s co-production behavior.

3.4.2 Monopoly-supply scenario: The moderating role of responsiveness and government trust

In a scenario in which public departments monopolize service supply, regardless of the quality of services provided by public departments, service recipients cannot turn to alternative departments. At this point, two factors may moderate the relationship between CAB-PS and co-production: first, responsiveness; and second, government trust.

(1) The moderating role of responsiveness. In a monopoly-supply scenario, responsiveness specifically refers to the responsiveness of government departments (Ma Deyong & Sun Mengxin, 2014; Meng Tianguang & Li Feng, 2015), that is, the timeliness and accuracy with which governments

at all levels and related departments respond to public needs (Chen Lufang, 2009; Roberts & Kim, 2011). Government responsiveness reflects the public' s ability to influence government behavior and obtain government services (Meng Tianguang & Li Feng, 2015). The higher the responsiveness, the more effectively the public can influence public departments and obtain the services they need.

According to the theory of planned behavior, perceived behavioral control is one of the key factors determining behavioral intention. It reflects an individual' s perception of the difficulty of performing a particular behavior, including both evaluations of one' s own abilities and judgments about external resources, opportunities, and obstacles (Ajzen, 1991). Therefore, high government responsiveness can enhance the public' s perceived behavioral control, making them perceive participation in the supply of public services as easier, thereby promoting co-production. Specifically, for members of the public who hold pro-public-sector bias and are willing to participate in the supply of public services, high responsiveness will further strengthen their co-production behavior; whereas for members of the public who hold anti-public-sector bias, although their initial willingness to co-produce is relatively low, high responsiveness can, by enhancing their perceived behavioral control, offset to some extent the inhibitory effect of negative attitudes, causing the behavioral intentions of this segment of the public to shift from avoidance toward attempted participation, thereby alleviating their tendency to avoid co-production. Accordingly, the present study proposes the following proposition:

Proposition 10a: Compared with low responsiveness, high responsiveness of public agencies can strengthen the positive relationship between pro-public-sector bias and citizens' co-production behavior.

Proposition 10b: Compared with low responsiveness, high responsiveness of public agencies can mitigate the negative relationship between anti-public-sector bias and citizens' co-production behavior.

(2) The moderating role of trust in government. Trust in government refers to citizens' psychological state of being willing to assume risks by entrusting and relying on the government, even when full supervision is impossible, based on positive expectations regarding the government' s goodwill and competence (Zhang Shuwei et al., 2020). According to the theory of planned behavior, trust in government is an important external factor affecting citizens' perceived behavioral control. Specifically, citizens with high trust in government tend to believe that the government is capable of coordinating resources from all parties and fulfilling its commitments to cooperation, and that it will not allow their efforts in participating in cooperation to go to waste. This positive expectation significantly reduces citizens' perception of external obstacles in the process of participating in co-production, which to some extent explains why existing studies have found that trust in government has a stable and positive promoting effect on citizens' cooperative behavior (Zhang Shuwei, 2017; Chanley et al.,

2000; Zhang & Zhou, 2018). By contrast, citizens with low trust in government may worry about low governmental efficiency, constantly changing policies, or even the government' s breach of trust with the people; they may therefore perceive more external obstacles and, in turn, experience lower perceived behavioral control, thereby suppressing their intention to engage in co-production. Based on this, this study proposes the following propositions:

Proposition 11a: Compared with low trust, citizens'high trust in government will strengthen the positive relationship between pro-public-sector bias and citizens' co-production behavior.

Proposition 11b: Compared with low trust, citizens'high trust in government will mitigate the negative relationship between anti-public-sector bias and citizens' co-production behavior.

3.4.3 Competitive Supply Scenario: The Moderating Roles of Autonomy and Self-Efficacy

In a public service supply scenario in which public, private, and nonprofit sectors jointly compete, public agencies no longer hold a monopolistic position. At this point, whether public agencies possess sufficient autonomy, as other sectors do, and whether citizens believe they have the ability to influence the service supply of public agencies may both affect the relationship between CAB-PS and co-production.

(1) The moderating role of autonomy. Autonomy refers to the extent to which an organization can independently select and allocate resources without intervention by political or administrative forces (Wang Lili & Ma Liang, 2021). When public agencies have a high level of autonomy, they can make independent decisions, allocate resources, and act flexibly in service provision in response to citizens' opinions (Wang Lili & Ma Liang, 2021), enabling citizens to perceive more prominent facilitating factors for co-production—that is, higher perceived behavioral control—and thereby increasing their willingness to co-produce. Conversely, when public agencies have a low level of autonomy, they are subject to more rigid constraints in resource allocation and service adjustment, making it difficult for them to respond effectively to citizens' demands for cooperation. Such low autonomy amplifies citizens'perception of the obstacles to co-production, leading them to believe that even investing time and energy would be unlikely to improve services, thereby weakening their willingness to co-produce. Relevant studies provide evidence for the above inference: public agencies with low autonomy are often unwilling to seek cooperative behavior (Wang Lili & Ma Liang, 2021); organizational structures that are decentralized, lower in hierarchy, and possess decision-making autonomy are more conducive to the development of co-production (Verschuere et al., 2012). Accordingly, this

The study proposes the following propositions:

Proposition 12a: Compared with low autonomy, high autonomy of public departments can strengthen the positive relationship between pro-public-department bias and citizens' co-production behavior.

Proposition 12b: Compared with low autonomy, high autonomy of public departments can mitigate the negative relationship between anti-public-department bias and citizens' co-production behavior.

(2) The moderating role of self-efficacy. Self-efficacy refers to an individual' s confidence or belief in the capabilities needed to achieve behavioral goals in a specific domain (Bandura, 1977). Its influence on individual behavior has been confirmed by research: in general, people tend to avoid tasks and situations that exceed their abilities, and are more willing to undertake and carry out things they believe they can accomplish (Wang Caikang et al., 2001; Zhang Dingkun et al., 1999; Zhou Wenxia, Guo Guiping, 2006). In co-production scenarios, self-efficacy likewise affects citizens' judgments about whether they can successfully participate in public service provision. Specifically, citizens with high self-efficacy believe that they are capable of collaborating effectively with public departments, perceive the difficulty of co-production to be lower (i.e., have greater perceived behavioral control), and are therefore more willing to take action. Conversely, citizens with low self-efficacy worry that their own abilities are insufficient and that they will have difficulty meeting the requirements of co-production, thereby reducing their enthusiasm for co-production. Based on the above analysis, this study proposes the following propositions:

Proposition 13a: Compared with low efficacy, citizens' high self-efficacy can strengthen the positive relationship between pro-public-department bias and citizens' co-production behavior.

Proposition 13b: Compared with low efficacy, citizens' high self-efficacy can mitigate the negative relationship between anti-public-department bias and citizens' co-production behavior.

4 Theoretical Construction

Based on the perspective of behavioral governance and on the basis of clarifying the conceptual connotation of CAB-PS, this study addresses the problem of insufficient generalizability in existing measurement instruments by attempting to develop a more flexible and applicable indirect measurement instrument. At the same time, this study comprehensively applies conjoint experimental and scenario experimental methods to empirically test the influencing factors of CAB-PS and its impact on citizens' co-production behavior, thereby offering both theoretical contributions and practical value.

4.1 Theoretical Significance

First, this study further clarifies the conceptual connotation of CAB-PS and develops a measurement instrument with cross-situational validity. The slow progress of existing empirical research is largely due to the lack of suitable measurement tools. In addition, different scholars have different understandings of CAB-PS, making it difficult for existing measurement methods to cover the diverse scenarios of public service provision (Chen Guoliang, 2024; Chen et al., 2024; Marvel, 2016; Hvidman, 2019; Hvidman & Andersen, 2016). This has not only impeded the in-depth development of empirical research in terms of result comparison and knowledge accumulation, but has also limited comparative analysis across cultural contexts. To address the above limitations, especially to fill the gap in measurement tools for scenarios in which public departments provide services independently, this study attempts to combine SC-IAT

technology, develop scientific, flexible measurement instruments with both reliability and validity, and lay a measurement foundation for theoretical and empirical research on CAB-PS.

Second, by integrating social information processing theory, signaling theory, motivated reasoning theory, and expectancy disconfirmation theory, this study systematically reviews and integrates views on the influencing factors of CAB-PS and conducts experimental verification. This not only helps clarify the relative explanatory power of different theories for CAB-PS, but also provides referable theoretical directions for further in-depth exploration of its explanatory mechanisms. In addition, although existing studies on public attitudes have already offered some heuristic insights into the influencing factors of CAB-PS (Zhang Shuwei et al., 2022), they still lack direct empirical evidence. In view of this, this study integrates the influencing factors of CAB-PS into three levels—society (social capital, media coverage), organization (organizational reputation, red tape), and individual (prior beliefs, sector expectations). With the help of conjoint experimental design, it empirically tests these influencing factors and compares their relative importance, thereby providing a richer theoretical perspective for future exploration of the formation mechanisms of CAB-PS and intervention strategies.

Finally, from the perspective of behavioral governance and based on planned behavior theory, this study reveals the effect of CAB-PS on co-production behavior. Co-production emphasizes that the public, as service users, directly participate in the provision of public services (Bovaird, 2007; Brandsen & Honingh, 2016), and its incentive factors are complex and diverse (Jiang Xiaohui, 2019). Existing research has mostly examined the influencing factors of co-production from meso- or macro-level perspectives such as institutions, networks, and models (Yang Bao, Li Wanliang, 2024; Zhang Youlang, Shen Yuhao, 2024), while paying relatively insufficient attention to micro-level psychological mechanisms. However, individual attitudes and cognition are often proximal drivers of behavioral choices (Wu Jinpeng, 2022). Accordingly, taking anti-public-sector

bias and pro-public-sector bias as the entry point, this study reveals the dual pathways through which they inhibit and promote co-production behavior. It not only enriches the behavioral intervention theory of co-production, but also provides academic support for the construction of service-oriented government and the reform of diversified public-service supply.

4.2 Practical Implications

This study has practical value in three respects. First, it helps public managers design low-cost bias intervention strategies and advance the construction of service-oriented government on the basis of public opinion. Because previous studies lacked an in-depth understanding of the influencing factors of CAB-PS, relevant research and practice generally believed that it was difficult to intervene effectively (Hvidman, 2016; Marvel, 2015, 2016). Drawing on the perspective of behavioral governance, this study specifically analyzes and tests the effects of social, organizational, and individual factors related to subjective perceptions on CAB-PS, which can provide points of leverage for public managers to implement precise bias interventions and thereby optimize public-service supply decisions at low cost.

Second, it helps stimulate the public to contribute resources to public-service supply either directly or indirectly. The changes brought about by the traditional government-led service supply model and the New Public Management movement have failed to fully reflect the complex realities of public services in the twenty-first century in terms of design, provision, and management, nor have they fully taken into account service users'functions in production, improvement, and creation (Zhu Chuntao, Yi Ling, 2017). Therefore, understanding and stimulating the public' s agency has become crucial, and exploring the psychological drivers behind it is the necessary path. This study focuses on the boundary conditions under which CAB-PS promotes or inhibits co-production behavior, and can provide managerial experience for stimulating public co-production behavior.

Third, it helps public managers attend to the possible "satisfaction–co-production paradox" and promote its governance. This study suggests that public managers should pay attention to the "satisfaction–co-production paradox" derived from the "satisfaction paradox," namely, the structural mismatch between citizens' willingness or behavior in co-production and the actual needs of public departments (Chen Junjie & Zhang Yongjie, 2020; Marschall, 2004; Parrado et al., 2013). Specifically, citizens are more likely to develop a willingness to co-produce with high-performing public departments with which they are satisfied, yet such departments have relatively low demand for citizens' co-production. By contrast, citizens' willingness to co-produce with poorly performing public departments is lower, while these departments have greater demand for co-production. This indicates that, when promoting citizens' co-production, public managers need to attach importance to information transparency and communication of needs. For example, public managers

may reduce mismatches in willingness to co-produce caused by information asymmetry or evaluation bias by proactively disclosing service shortcomings, clarifying co-production needs, and guiding the public toward rational understanding, thereby obtaining effective support when public departments most need citizens' participation.

References

Chen Guoliang, Zhang Shuwei, & Chen Wenna. (2023). Conjoint experiments in public administration research: Literature review, basic principles, and implementation of results. *Public Administration and Policy Review*, *12*(3), 152–168.

Chen Guoliang. (2024). *Biases in citizens' attitudes toward public departments and their formation mechanisms: An experimental study based on the Chinese context* (Doctoral dissertation). Sun Yat-sen University, Guangzhou.

Chen Junjie, & Zhang Yongjie. (2020). Why do citizens participate in the co-production of public services? An empirical study based on public security services. *Journal of Gansu Administration Institute*, *3*, 90–103.

Chen Lufang. (2009). Local governments should improve their responsiveness to citizens' needs: Reflections on the frequent occurrence of mass incidents in China. *Theoretical Investigation*, *3*, 24–28.

Duan Wenting, & Jiang Guangrong. (2008). A review of the theory of planned behavior. *Advances in Psychological Science*, *2*, 315–320.

Guo Jinyuan, Chen Zhixia, & Yuan Shuai. (2021). Re-examining red tape: Concept, measurement, and its three-dimensional control model. *Public Administration Review*, *3*(1), 91–121.

Hu Xiangming. (2001). On the definition of the public sector and the research scope of public administration: Also on the relationship between public administration and administrative management. *Wuhan University Journal (Social Sciences)*, *5*, 557–562.

Jiang Xiaohui. (2019). The developmental evolution and temporal changes of public service co-production: Value transformation, citizen turn, and tool replacement. *Journal of Gansu Administration Institute*, *4*, 56–66.

Li Hongxia, & Chen Sicheng. (2025). Research on audience-centered organizational reputation of public departments: A threefold perspective of construction, reshaping, and perception. *Public Administration and Policy Review*, *14*(1), 125–139.

Li Huafang. (2020). Co-production: Past, present, and future. *Public Administration and Policy Review*, *9*(1), 10–22.

Ma Deyong, & Sun Mengxin. (2014). Determinants of government credibility

in the new-media era—Transparency, responsiveness, or public-relations techniques? *Journal of Public Management*, *11*(1), 104–113.

Ma Liang. (2018). Does public participation in government performance evaluation work? A multilevel analysis based on selected Chinese cities. *Comparative Economic & Social Systems*, *197*(3), 113–124.

Ma Liang. (2020). Government performance management in the era of big data. *Theoretical Exploration*, *246*(6), 14–22.

Meng Tianguang, & Li Feng. (2015). Political interaction in cyberspace: Citizen demands and government responsiveness—A big-data analysis based on a national online political-inquiry platform. *Journal of Tsinghua University (Philosophy and Social Sciences Edition)*, *30*(3), 17–29.

Wang Caikang, Hu Zhongfeng, & Liu Yong. (2001). A study of the reliability and validity of the General Self-Efficacy Scale. *Applied Psychology*, *1*, 37–40.

Wang Lili, & Ma Liang. (2021). Organizational characteristics, civil servants' attitudes, and willingness to co-provide public services: A survey study of a city in eastern China. *Public Management Review*, *3*(4), 80–104.

Wang Lili, & Ma Liang. (2023). The mechanism by which government–citizen contact affects civil servants'attitudes toward co-production: A mediation model of civil servants' trust in citizens. *Journal of Public Administration*, *16*(2), 25–43.

Wang Xuejun. (2023). Column introduction: Deepening research on co-production in the Chinese context from a behavioral perspective. *Journal of Public Administration*, *16*(2), 1–3.

Wen Fangfang, & Zuo Bin. (2007). Implicit social cognition testing methods for evaluating a single attitude object. *Advances in Psychological Science*, *5*, 828–833.

Wu Jiannan, & Liu Yao. (2020). How do the public perceive performance differences between public and private hospitals?—A comparative study based on a survey experiment. *Journal of Public Administration*, *13*(6), 99–113.

Wu Jinpeng. (2022). Citizen co-production behavior: Literature review, research framework, and future prospects. *Public Management and Policy Review*, *11*(6), 156–168.

Xu Dongtao. (2024). Tiao-kuai relations: A core concept for understanding intergovernmental relations in China. *Governance Studies*, *40*(3), 34–44.

Yang Bao, & Li Wanliang. (2024). Differences in the accessibility of community elderly-care services: An empirical analysis based on an integrated "institution–network–culture" framework. *Chinese Public Administration*, *40*(2), 54–64.

Yu Jianxing, & Li Lin. (2016). The restructuring of contemporary Chinese local intergovernmental relations—A study based on the reform expanding the powers

of county- and township-level governments in Zhejiang Province. *Academic Monthly*, *48*(1), 101–116.

Zhang Dingkun, Fang Liluo, & Ling Wenquan. (1999). The theory of self-efficacy and the current state of research. *Psychological Dynamics*, *1*, 39–43.

Zhang Shuwei, Chen Guoliang, & Zhu Yanhan. (2022). An exploratory explanation of the "satisfaction paradox": Anti-public-sector bias and its mechanisms. *Fudan Public Administration Review*, *2*, 6–30.

Zhang Shuwei, & Feng Shuaiyao. (2024). A micro-level approach to research on the narrative policy framework from the perspective of behavioral public administration—A systematic literature review. *Administrative Tribune*, *31*(5), 50–62.

Zhang Shuwei, & Li Shu. (2018). New explorations in behavioral public administration: Content, methods, and trends. *Journal of Public Administration*, *11*(1), 7–36.

Zhang Shuwei, Liu Xing, & Wang Yan. (2024). The influence of goal framing on residents' willingness to co-produce community safety: The mediating role of risk perception. *Journal of Northwest University (Philosophy and Social Sciences Edition)*, *54*(4), 5–20.

Zhang Shuwei, Song Yiwen, & Zhong Shuang. (2020). The dual-process mechanism of government trust repair from the perspective of behavioral public administration. *Journal of Shanghai University (Social Sciences Edition)*, 37(6), 1–15.

Zhang Shuwei, Wang Yan, & Qin Xiaoxuan. (2024). The road is long and difficult; those who "act" will "govern": The behavioral-governance path for public affairs. *Journal of Guangxi Normal University (Philosophy and Social Sciences Edition)*, 60(1), 50–68.

Zhang Shuwei. (2017). Perceived social fairness, institutional trust, and willingness for public cooperation. *Acta Psychologica Sinica*, 49(6), 794–813.

Zhang Youlang, & Ran Yuhao. (2024). How does multi-actor collaborative governance facilitate the co-production of public services?—An institutional analysis based on the "Cun Chao" tournament in R County. *Governance Studies*, 40(2), 57–72.

Zhao Yandong, & Luo Jiade. (2005). How to measure social capital: A review of empirical research. *Social Sciences Abroad*, 2, 18–24.

Zhou Wenxia, & Guo Jiaping. (2006). Self-efficacy: Concepts, theories, and applications. *Journal of Renmin University of China*, 1, 91–97.

Zhu Chunkui, & Yi Wen. (2017). Research progress and prospects on the co-production of public services. *Journal of Public Administration*, 10(5), 188–201.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.

Alford, J., & Yates, S. (2016). Co-Production of public services in Australia: The roles of government organizations and co-producers. *Australian journal of public administration*, 75(2), 159–175.

Alonso, J. M., Clifton, J., Diaz-Fuentes, D., & Andrews, R. (2019). Factors influencing citizens' co-production of environmental outcomes: A multi-level analysis. *Public Management Review*, 21(11), 1620–1645.

Andersen, S. C., & M. Hjortskov. (2016). Cognitive biases in performance evaluations. *Journal of Public Administration Research and Theory*, 26(4), 647–662.

Andrews, R., Boyne, G. A., & Walker, R. M. (2011). Dimensions of publicness and organizational performance: A review of the evidence. *Journal of Public Administration Research and Theory*, 21(Suppl.3), i301–i319.

Arkes, H. R., & Tetlock, P. E. (2004). Attributions of implicit prejudice, or "would Jesse Jackson 'fail' the implicit association test?" *Psychological Inquiry*, 15(4), 257–278.

Baekgaard, M., & Serritzlew, S. (2016). Interpreting performance information: Motivated reasoning or unbiased comprehension. *Public Administration Review*, 76(1), 73–82.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215.

Banerjee, R., Baul, T., & Rosenblat, T. (2015). On self-selection of the corrupt into the public sector. *Economics Letters*, 127, 43–46.

Baniamin, H. M., & Jamil, I. (2023). Role of anti-/pro-public sector bias in shaping perceived performance and fairness: An experimental exploration in South Asia. *Contemporary South Asia*, 31(4), 615–632.

Barbera, C., Nabatchi, T., Sancino, A., & Sicilia, M. (2025). Monetary and symbolic rewards: Do they matter for fostering co-commissioning and co-delivery of public services? *Public Management Review*, 27(1), 1–28.

Berman, E. M. (1997). Dealing with cynical citizens. *Public Administration Review*, 57(2), 105–112.

Bertram, I., Bouwman, R., & Tummers, L. (2024). Getting what you expect: How civil servant stereotypes affect citizen satisfaction and perceived performance. *Public Administration*, 102(4), 1468–1491.

Bok, D. (2001). *The trouble with government*. Harvard University Press.

Borst, R. T. (2018). Comparing work engagement in people-changing and people-processing service providers: A mediation model with red tape, auton-

omy, dimensions of PSM, and performance. *Public Personnel Management*, 47(3), 287–313.

Bovaird, T. (2007). Beyond engagement and participation: User and community coproduction of public services. *Public Administration Review*, 67(5), 846–860.

Bovaird, T., Stoker, G., Jones, T., Pinilla Roncancio, M., & Loeffler, E. (2016). Activating collective co-production of public services: Influencing citizens to participate in complex governance mechanisms in the UK. *International Review of Administrative Sciences*, 82(1), 47–68.

Bovaird, T., Van Ryzin, G. G., Loeffler, E., & Parrado, S. (2015). Activating citizens to participate in collective co-production of public services. *Journal of Social Policy*, 44(1), 1–23.

Boyle, D., & Harris, M. (2009). *The challenge of co-production: How equal partnerships between professionals and the public are crucial to improving public services*. Nesta.

Boyne, G. A. (2002). Public and private management: What' s the difference? *Journal of Management Studies*, 39(1), 97–122.

Bozeman, B. (2012). Multidimensional red tape: A theory coda. *International Public Management Journal*, 15(3), 245–265.

Brandsen, T. & Honingh, M. (2016). Distinguishing different types of coproduction: A conceptual analysis based on the classical definitions. *Public Administration Review*, 76(3), 427–435.

Brewer, G. A. (2003). Building social capital: Civic attitudes and behavior of public servants. *Journal of Public Administration Research and Theory*, 13(1), 5–25.

Brewer, G. A., & Walker, R. M. (2010). The impact of red tape on governmental performance: An empirical analysis. *Journal of Public Administration Research and Theory*, 20(1), 233–257.

Cappella, J. N., & Jamieson, K. H. (1996). News frames, political cynicism, and media cynicism. *The Annals of the American Academy of Political and Social Science*, 546, 71–84.

Carpenter, D. P., & Krause, G. A. (2012). Reputation and public administration. *Public Administration Review*, 72(1), 26–32.

Casado-Aranda, L-A., de la Higuera-Molina, E. J., Sánchez-Fernández, J., & Zafra-Gómez, J. L. (2023). Neural bases of sector bias in perceptions of public versus private-sector service performance. *Political Behavior*, 45(4), 1883–1909.

Chanley, V. A., Rudolph, T. J., & Rahn, W. M. (2000). The origins and consequences of public trust in government: A time series analysis. *The Public Opinion Quarterly*, 64(3), 239–256.

Chen, G., Zhang, S., Chen, W., Li, Q., & Liang, P. (2024). A replication of "unconscious bias in citizens' evaluations of public sector performance" . *Public Administration*, 102(4), 1745–1764.

Chen, W., Dong, B., Hsieh, C., et al. (2022). A replication of "an experimental test of the expectancy-disconfirmation theory of citizen satisfaction" . *Public Administration*, 100(3), 778–791.

Chetkovich, C. (2003). What' s in a sector? The shifting career plans of public policy students. *Public Administration Review*, 63(6), 660–674.

Christie, S. Chahine, T., Curry, L. A. Cherlin, E., & Linnander, E. (2022). The evolution of trust within a global health partnership with the private sector: An inductive framework. *International Journal of Health Policy and Management*, 11(7), 1140–1147.

Cordes, J., & Vogel, R. (2023). Comparing employer attractiveness of public sector organizations to nonprofit and private sector organizations: An experimental study in Germany and the U.S. *Review of Public Personnel Administration*, 43(2), 260–287.

Cudjoe, D., Yuan, Q., & Han, M. S. (2020). An assessment of the influence of awareness of benefits and perceived difficulties on waste sorting intention in Beijing. *Journal of Cleaner Production*, 272, Article e123084. https://doi.org/10.1016/j.jclepro.2020.123084

Del Pino, E., Calzada, I., & Díaz-Pulido, J. M. (2016). Conceptualizing and explaining bureaucraphobia: Contours, scope, and determinants. *Public Administration Review*, 76(5), 725–736.

Downs, A. (1957). *An economic theory of democracy.* Harper.

Downs, A. (1967). *Inside bureaucracy.* Little, Brown.

Druckman, J. N., & Parkin, M. (2005). The impact of media bias: How editorial slant affects voters. *Journal of Politics*, 67(4), 1030–1049.

Dvir, R. (2024). Nudging citizens co-production: Assessing multiple behavioral strategies. *Policy Sciences*, 57(4), 719–743.

Farooqi, S. A. (2016). Co-production: What makes co-production work? Evidence from Pakistan. *International Journal of Public Sector Management*, 29(4), 381–395.

Favero, N., & Kim, M. (2021). Everything is relative: How citizens form and use expectations in evaluating services. *Journal of Public Administration Research and Theory*, 31(3), 561–577.

Favero, N., Walker, R. M., & Zhang, J. (2025). A dynamic study of citizen satisfaction: Replicating and extending Van Ryzin' s "testing the expectancy disconfirmation model of citizen satisfaction with local government."*Public Management Review*, 27(6), 1588–1606.

Fiske, S. T. (2014). *Social beings: core motives in social psychology* (3rd ed.). Wiley.

Flynn, D. J., Nyhan, B., & Reifler, J. (2017). The nature and origins of misperceptions: Understanding false and unsupported beliefs about politics. *Political Psychology*, 38(Suppl.1), 127–150.

Fombrun, C., & van Riel, C. (1997). The reputational landscape. *Corporate Reputation Review*, 1(2), 5–13.

Gabel, M., & Scheve, K. (2007). Estimating the Effect of Elite Communications on Public Opinion Using Instrumental Variables. *American Journal of Political Science*, 51(4), 1013–1028.

Garrett, R. S., Thurber, J. A., Fritschler, A. L., & Rosenbloom, D. H. (2006). Assessing the impact of bureaucracy bashing by electoral campaigns. *Public Administration Review*, 66(2), 228–240.

Greenwald, A. G., & Farnham, S. D. (2000). Using the Implicit Association Test to measure self-esteem and self-concept. *Journal of Personality and Social Psychology*, 79(6), 1022–1038.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, 74(6), 1464–1480.

Hao, M., Zhang, D., & Morse, S. (2020). Waste separation behaviour of college students under a mandatory policy in China: A case study of Zhengzhou City. *International Journal of Environmental Research and Public Health*, 17(21), 1–22.

Hatry, H. P. (1999). *Performance measurement: Getting results.* Urban Institute Press.

Hetherington, M. J. (2005). *Why trust matters: Declining political trust and the demise of American liberalism.* Princeton University Press.

Hvidman, U. (2019). Citizens' evaluations of the public sector: Evidence from two large scale experiments. *Journal of Public Administration Research and Theory*, 29(2), 255–267.

Hvidman, U., & Andersen, S. C. (2014). The impact of performance management in public and private organizations. *Journal of Public Administration Research and Theory*, 24(1), 35–58.

Hvidman, U., & Andersen, S. C. (2016). Perceptions of public and private performance: Evidence from a survey

experiment. *Public Administration Review, 76*(1), 111–120.

Iyengar, S., & Kinder, D. (1987). *News that matters: Television and American opinion.* University of Chicago Press.

Jacoby, W. G. (2000). Issue framing and public opinion on government spending. *American Journal of Political Science, 44*(4), 750–767.

James, O., & Van Ryzin, G. G. (2017). Incredibly good performance: An experimental study of source and level effects on the credibility of government. *American Review of Public Administration, 47*(1), 23–35.

James, O., Moynihan, D. P., Olsen, A. L., & Van Ryzin, G. G. (2020). *Behavioral public performance: How people make sense of government metrics*. Cambridge University Press.

Jerit, J., & Zhao, Y. (2020). Political misinformation. *Annual Review of Political Science, 23*, 77–94.

Jo, S., & Nabatchi, T. (2020). Different processes, different outcomes? Assessing the individual - level impacts of public participation. *Public Administration Review, 81*(1), 137–151.

Karpinski, A. & Steinman, R. B. (2006). The Single Category Implicit Association Test as a measure of implicit social cognition. *Journal of Personality and Social Psychology, 91*(1), 16–32.

Karpinski, A., & Hilton, J. L. (2001). Attitudes and the Implicit Association Test. *Journal of Personality and Social Psychology, 81*(5), 774–788.

Keiser, L. R., & Miller S. M. (2020). Does administrative burden influence public support for government programs? *Public Administration Review, 80*(1), 137–150.

Kjeldsen, A. M., & Jacobsen, C. B. (2013). Public service motivation and employment sector: Attraction or socialization? *Journal of Public Administration Research and Theory, 23*(4), 899–926.

Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin, 108*(3), 480–498.

Ladd, J. M., & Lenz, G. S. (2009). Exploiting a rare communication shift to document the persuasive power of the news media. *American Journal of Political Science, 52*(2), 394–410.

Landi, S., & Russo, S. (2020). Co-production 'thinking' and performance implications in the case of separate waste collection. *Public Management Review, 24*(2), 301–325.

Lee, H. (2022). Public service delivery on mobile apps: Factors of diversification and coproduction. *International Journal of Public Administration, 47*(3), 159–171.

Lee, S., & Na, C. (2023). Why citizens engage in co-production: A theoretical framework and experimental evidence. *Public Performance & Management Review, 47*(2), 419–448.

Linos, E. (2018). More than public service: A field experiment on job advertisements and diversity in the police.

Journal of Public Administration Research and Theory, 28(1), 67–85.

Loeffler, E., & Bovaird, T. (2016). User and community co-production of public services: What does the evidence tell us?. *International Journal of Public Administration*, 39(13), 1006–1019.

Magno, F., & Cassia, F. (2015). Public administrators'engagement in services co-creation: Factors that foster and hinder organisational learning about citizens. *Total Quality Management & Business Excellence*, 26(11-12), 1161–1172.

Marschall, M. J. (2004). Citizen participation and the neighborhood context: A new look at the coproduction of local public goods. *Political Research Quarterly*, 57(2), 231–244.

Marvel, J. D. (2015). Public opinion and public sector performance: Are individuals' beliefs about performance evidence-based or the product of anti-public sector bias? *International Public Management Journal*, 18(2), 209–227.

Marvel, J. D. (2016). Unconscious bias in citizens' evaluations of public sector performance. *Journal of Public Administration Research and Theory*, 26(1), 143–158.

Meier, K. J., Song, M., Davis, J., & Amirkhanyan, A. (2022). Sector bias and the credibility of performance information: An experimental study of elder care provision. *Public Administration Review*, 82(1), 69–82.

Nabatchi, T., Sicilia, M., & Sancino, A. (2017). Varieties of participation in public services: The who, when, and what of coproduction. *Public Administration Review*, 77(5), 766–776.

Nakra, P. (2000). Corporate reputation management: "CRM" with a strategic twist? *Public Relations Quarterly*, 45(2), 35–42.

Niskanen, W. A. (1971). *Bureaucracy and representative government*. Aldine.

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460–469.

Olson, M. A., & Fazio, R. H. (2004). Reducing the influence of extrapersonal associations on the Implicit Association Test: Personalizing the IAT. *Journal of personality and social psychology*, 86(5), 653–667.

Osborne, S. P., Powell, M., Cui, T., & Strokosch, K. (2022). Value creation in the public service ecosystem: An integrative framework. *Public Administration Review*, 82(4), 634–645.

Ostrom, E. (1972). Metropolitan reform: Propositions derived from two traditions. *Social Science Quarterly*, 53(3), 474–493.

Ostrom, E. (1996). Crossing the great divide: Coproduction, synergy, and development. *World Development*, 24(6), 1073–1087.

Ostrom, E., Parks, R. B., Whitaker, G. P., & Percy, S. L. (1978). The public service production process: A framework for analyzing police services. *Policy Studies Journal, 7*(Suppl.1), 381–389.

Palumbo, R., & Manesh, M. F. (2021). Travelling along the public service co-production road: A bibliometric analysis and interpretive review. *Public Management Review, 25*(7), 1348–1384.

Pandey, S. K. (2023). Elevating subjective individual experience in public policy and public administration: Reflections on red tape, administrative burden, and sludge. *Public Administration Review, 83*(5), 1072–1082.

Parks, R. B., Baker, P. C., Kiser, L. L., et al. (1981). Consumers as coproducers of public services: Some economic and institutional considerations. *Policy Studies Journal, 9*(7), 1001–1011.

Parrado, S., Van Ryzin, G. G., Bovaird, T., et al. (2013). Correlates of co-production: Evidence from a five-nation survey of citizens. *International Public Management Journal, 16*(1), 85–112.

Pestoff, V. (2014). Collective action and the sustainability of co-production. *Public Management Review, 16*(3), 383–401.

Rainey, H. G., & Bozeman B. (2000). Comparing public and private organizations: Empirical research and the power of the a priori. *Journal of Public Administration Research and Theory, 10*(2), 447–469.

Rainey, H. G., Backoff, R. W., & Levine, C. H. (1976). Comparing public and private organizations. *Public Administration Review, 36*(2), 233–244.

Riccucci, N. M., Van Ryzin G. G., & Li, H. (2016). Representative bureaucracy and the willingness to coproduce: An experimental study. *Public Administration Review, 76*(1), 121–130.

Rindova, V., & Martins, L. L. (2012). Show me the money: A multidimensional perspective on reputation as an intangible asset. In T. G. Pollock & M. L. Barnett (Eds.), *The Oxford handbook of corporate reputation.* (pp. 16–33). Oxford University Press.

Roberts, A., & Kim, B.-Y. (2011). Policy responsiveness in post-communist Europe: Public preferences and economic reforms. *British Journal of Political Science, 41*(4), 819–839.

Rudman, L. A. (2004). Sources of implicit attitudes. *Current Directions in Psychological Science, 13*(2), 79–82.

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly, 23*(2), 224–253.

Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics, 87*(3), 355–374.

Spence, M. (2002). Signaling in retrospect and the informational structure of markets. *The American Economic Review, 92*(3), 434–459.

Stougaard, M. S. (2021). Co-producing public welfare services with vulnerable citizens: A case study of a

danish-somali women' s association co-producing crime prevention with the local authorities. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 32(6), 1389–1407.

Straßheim, H. (2020). The rise and spread of behavioral public policy: An opportunity for critical research and self-reflection. *International Review of Public Policy*, 2(1), 115–128.

Surva, L., Tõnurist, P., & Lember, V. (2016). Co-production in a network setting: Providing an alternative to the national probation service. *International Journal of Public Administration*, 39(13), 1031–1043.

Taber, C. S., & Lodge, M. (2006). Motivated skepticism in the evaluation of political beliefs. *American Journal of Political Science*, 50(3), 755–769.

Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.

Tyler, T. R. (1990). *Why people obey the law*. Yale University Press.

Van de Walle, S., Van Roosbroek, S., & Bouckaert, G. (2008). Trust in the public sector: Is there any evidence for a long-term decline? *International Review of Administrative Sciences*, 74(1), 45–62.

Van den Bekerom, P., & van der Voet, J. (2021). Disentangling the perceived performance effects of publicness and bureaucratic structure: A survey-experiment. *Journal of Behavioral Public Administration*, 4(2). https://doi.org/10.30636/jbpa.42.171

Van Eijk, C., & Steen, T. (2016). Why engage in co-production of public services? Mixing theory and empirical evidence. *International Review of Administrative Sciences*, 82(1), 28–46.

van Loon, N. M., Leisink, P. L. M., Knies, E., & Brewer, G. A. (2016). Red tape: Developing and validating a new job-centered measure. *Public Administration Review*, 76(4), 662–673.

Van Ryzin, G. G. (2004). Expectations, performance, and citizen satisfaction with urban services. *Journal of Policy Analysis and Management*, 23(3), 433–448.

Van Ryzin, G. G. (2006). Testing the expectancy disconfirmation model of citizen satisfaction with local government. *Journal of Public Administration Research and Theory*, 16(4), 599–611.

Van Ryzin, G. G. (2013). An experimental test of the expectancy-disconfirmation theory of citizen satisfaction. *Journal of Policy Analysis and Management*, 32(3), 597–614.

Verschuere, B., Brandsen, T., & Pestoff, V. (2012). Co-production: The state of the art in research and the future agenda. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 23(4), 1083–1101.

Voorberg, W., Bekkers, V., & Tummers, L. G. (2015). A systematic review of co-creation and co-production: Embarking on the social innovation journey. *Public Management Review*, 17(9), 1333–1357.

Voorberg, W., Jilke, S., Tummers, L. G., & Bekkers, V. (2018). Financial rewards do not stimulate coproduction: Evidence from two experiments. *Public Administration Review, 78*(6), 864–873.

Wang, Y., & Zhang, J. (2024). Promoting citizens' willingness to participate in coproduction in public service through information frames. *Public Administration, 102*(2), 479–499.

Wang, Y., Zhang, S., & Zhang, J. (2026). The impact of descriptive social norms on coproduction: How communication frames matter. *Public Management Review, 28*(3), 678–704.

Whitaker, G. P. (1980). Coproduction: Citizen participation in service delivery. *Public Administration Review, 40*(3), 240–246.

Willems, J. (2020). Public servant stereotypes: It is not (at) all about being lazy, greedy and corrupt. *Public Administration, 98*(4), 807–823.

Witesman, E. M., Silvia, C., & Child, C. (2022). The enduring role of sector: Citizen preferences in mixed markets. *Journal of Public Administration Research and Theory, 32*(4), 765–780.

Zhang, S., Zhang, Z., Li, S., & Huang, Y. (2025). Nudging and boosting reasonable use of public products: Two experiments from China. *Behavioural Public Policy*. Advance online publication. https://doi.org/10.1017/bpp.2025.10008

Zhang, S., & Zhou, J. (2018). Social justice and public cooperation intention: Mediating role of political trust and moderating effect of outcome dependence. *Frontiers in Psychology, 9*, e01381. https://doi.org/10.3389/fpsyg.2018.01381

Zhang, Y., Liu, X., & Vedlitz, A. (2020). How social capital shapes citizen willingness to co-invest in public service: The case of flood control. *Public Administration, 98*(3), 696–712.

Citizens' attitude bias toward the public sector from a behavioral governance perspective: Antecedents and consequence

CHEN Guoliang1, ZHANG Shuwei2,3, WANG Yan3

(1 School of Public Administration, Southwest Jiaotong University, Chengdu 610031, China)

(2 Center for Chinese Public Administration Research, Sun Yat-sen University, Guangzhou 510006, China)

(3 School of Government, Sun Yat-sen University, Guangzhou 510006, China)

Abstract: In the context of building a people-centered, service-oriented government, two types of "satisfaction paradox" emerge in government-citizen interactions, manifesting a divergence between citizens' subjective perceptions and objective performance. These include the anti-public-sector bias, reflected when excellent performance receives negative evaluations, and the pro-public-sector bias, reflected when mediocre performance receives positive evaluations. Both types of paradoxes stem from citizens' attitude bias toward the public sector (CAB-PS), which undermines the accuracy of public-sector performance assessment and hinders collaborative efforts between citizens and the public sector to improve public services. Therefore, we systematically examine the antecedents and consequences of CAB-PS from a behavioral governance perspective. First, drawing on the concept of "bias" in social psychology, we clarify the connotation of CAB-PS and improve existing measurement tools. Second, we integrate factors at the social, organizational, and individual levels and use a conjoint experiment to examine the magnitude of their effects on CAB-PS as well as their relative importance. Finally, through scenario-based experiments, we analyze the effects and boundary conditions of CAB-PS on citizens' coproduction behavior. By revealing the three types of antecedents and the behavioral consequence of CAB-PS, we provide theoretical and practical implications for resolving the satisfaction paradox, improving the effectiveness of public service delivery, and advancing the development of a service-oriented government.

Keywords: satisfaction paradox, anti-public sector bias, pro-public sector bias, influencing factors, coproduction

Note: Figure translations are in progress. See original paper for figures.