Article

How Governance Tools Facilitate Citizen Co-Production Behavior in Urban Community Micro-Regeneration: Evidence from Shanghai

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Abstract: Citizen participation and input in urban community micro-regeneration is a co-production behavior that is conducive to improving citizens’ sense of belonging, thereby promoting community governance. In the context of low co-production levels amongst citizens, how the government adopts mobilization instruments is an important challenge. This paper investigates whether governance tools can facilitate citizen co-production behavior in an urban community micro-regeneration setting using a structural equation modeling method and the stimulus organism response theory. Based on a survey of citizens who participated in community micro-regeneration co-production in Shanghai, this paper demonstrates the significant positive effects associated with information- and incentive-based tools in citizen in-role and extra-role co-production behavior; however, the effect degree was shown to differ. Moreover, the level of perceived benefits is a significant mediating variable between governance tools and in-role co-production behavior. In this study, we constructed and verified a novel and valuable theoretical perspective with which to explore urban regeneration. It was concluded that policymakers should follow the governance principle of classified development and tool matching for citizen co-production behavior in urban community micro-regeneration.

Keywords: urban community micro-regeneration; citizen co-production; governance tools; perceived benefits

1. Introduction

Urban regeneration is a significant concern in urban studies worldwide due to growing urbanization [1]. With the transformation from urban regeneration to sustainable development in China, large-scale physical demolition and construction have been criticized, and existing community micro-regeneration is the new emerging trend of urbanization [2,3]. As a form of urban regeneration, community micro-regeneration mainly refers to small-scale renovation and maintenance projects oriented toward citizens’ needs. This may include projects like the renovation of community gardens or green spaces. The community micro-regeneration model not only focuses on optimizing the community’s physical environment, such as expanding the scale of community public spaces, but also on accumulating social capital, thereby promoting community development [4,5]. Community regeneration has long been considered a form of government-provided public service. However, existing research shows that policymakers must pay more attention to the various actions of multiple stakeholders, especially the role of public participation, which is the key factor in the success of community regeneration governance [6–8].

In the continuous process of community micro-regeneration, residents not only suggest and discuss regeneration planning but also directly invest their own resources to produce and maintain regeneration outcomes. These characteristics of public service user...
participation in service delivery are consistent with the theory of co-production. Public service co-production refers to the process in which citizens (consumer producers) and professional service agents (regular producers) participate in the production and delivery of public services. This requires citizens to contribute time, resources, or other additional inputs [9–12]. Community micro-regeneration is a typical co-production process that is participated in by both governments and residents. The existing studies on community micro-regeneration co-production mainly focus on the formation mechanism, which illustrates the interaction between the government and citizens; however, little attention has been paid to citizen co-production behavior and its determinant factors.

Citizen co-production behaviors not only supplement the limited public sector resources but also have a positive effect on value co-creation and social governance due to the trust and reciprocity that arise from the co-production process [13]. Chinese policy implementers promote deep public participation in community regeneration and provide regeneration services through a community-based co-production strategy [1,14]. However, according to our field investigation, we found that citizens, as limited rational actors, tended to maximize immediate benefits to themselves and free-ride of the actions of others [10], and they are not very motivated to participate in the community micro-regeneration co-production in reality. This manifested as ‘indifference’ or ‘only consciousness but no action’. Given the increasing importance of citizen co-production behaviors, governments are increasingly seeking to facilitate citizen co-production of community micro-regeneration services through the use of new appropriate governance tools that allow governments to influence multiple actors [15–18].

How can governance tools motivate citizens to input more resources into the production of community micro-regeneration services? Exploring this valuable perspective will help the government apply targeted measures to encourage residents to participate in community micro-regeneration co-production in an orderly and beneficial manner and to improve the performance of community micro-regeneration governance. However, the existing co-production empirical literature that addresses this question has three limitations. First, the majority of studies focus on the effectiveness of two governance tools, i.e., providing materials and information, while neglecting other diverse tools and their classifications [19–21]. Second, theoretical research demonstrates how government tools may motivate citizen co-production by heightening their motivation and capacity, but large sample studies are lacking [15]. Third, existing studies examine the differential effects of organizational factors on different forms of co-production behavior (individual and collective), but few focus on citizen co-production with other attributes [22,23].

Thus, it is important to investigate how governance tools can facilitate citizen co-production in community micro-regeneration. Based on the theoretical discussions and fieldwork, we adopted the stimulus organism response model, paying specific attention to the influence of governance tools on citizen in-role and extra-role co-production behavior, as mediated by the effect of their perceived benefits. We theoretically contend that government tools can help to more clearly calculate citizen cost–benefit decisions in terms of their co-production. The more citizens that are influenced by governance tools, the more likely they are to make their co-production decisions based on the benefits they perceive. To empirically validate our theoretical proposition, in this study, we conducted a questionnaire survey in Shanghai, China. We consider China to be a fascinating example as regards analyzing the effects of governance tools because the Chinese government usually mobilizes citizens to develop citizens’ “volunteer spirit” based on a top-down approach [17,24]. Most community co-production in China is state-led and imposed on urban municipalities by higher-level authorities, with state power playing a very active role in initiating, funding, and facilitating the process [25,26]. Furthermore, we specifically conducted the survey in Shanghai, which is a typical community micro-regeneration co-production governance scenario that is well known to the public and has been repeatedly highlighted in the media.

The rest of this article is divided into five sections. In the first section, a brief overview of the research literature on citizen co-production and its application to the community
micro-regeneration domain is given. The second section elaborates the research framework and key hypotheses based on the theoretical discussions and field investigation. The third section describes our research method, including the survey area, the data collection procedure, and the variable measurements. In the fourth section, these hypotheses are tested using the SEM model, and the empirical results are presented. The final section discusses the main theoretical and practical implications of urban regeneration and public service co-production and suggests directions for future research.

2. Literature Review

The co-production model in public service delivery has become an important strategy for service innovation and has received increasing attention in academia as the late 1970s [27,28]. Co-production refers to “a relationship between a paid employee of an organization and (groups of) individual citizens that requires a direct and active contribution from these citizens to the work of the organization” [29]. Co-production is distinguished from collaborative governance, public–private partnerships, or other forms of cooperation, with special attention being paid to the role of citizens as consumer producers and the interdependence between public organizations and citizens.

Urban community regeneration is an important form of grassroots governance, which requires the comprehensive development of social life and citizens. Co-production can stimulate the enthusiasm for public participation, activate the spirit of community autonomy, and enhance the endogenous driving force of community regeneration governance. Previous studies on the co-production of community micro-regeneration mainly focus on the mechanism with which to form co-production. Community regeneration co-production is affected by individual, structural, catalytic, and incentive factors. The internal factors represented by citizen co-production can only play a role under an external influence, which is dominated by government guidance [30,31]. Existing studies note the importance of guiding and mobilizing residents to be actively participating producers, but the research on citizen co-production behavior and its influencing factors are insufficient.

Citizen co-production emphasizes “the voluntary or involuntary involvement of public service users in any of the design, management, delivery, and evaluation of public services,” requiring citizens to contribute time, resources, personal liberty, and other additional inputs [32,33]. Existing studies recognize the diversity of citizen co-production behavior and refine it through categorization to solve the problems existing in citizen co-production more specifically. Brudney and England identify three types of co-productive activities: individual, group, and collective [28]. Both ‘group’ and ‘collective’ co-production involve citizen joint actions to achieve good-quality service outcomes; therefore, this can be identified as a ‘collective’ co-production behavior instead of an ‘individual’ co-production behavior [22]. Osborne and Strokosch differentiate between consumer co-production, participative co-production, and enhanced co-production [34]. Voorberg, Bekkers, and Tummers divide citizen co-production into co-implementation, co-design, and citizens as initiators [35]. Van Eijk and Steen distinguish four types of citizen co-producers: the semi-professional, the socializer, the network professional, and the aware co-producer [36].

Previous research demonstrates that multiple influencing factors, both on the side of governments and the side of citizens, can affect citizen co-production attitudes and behaviors [22,35]. Organizational factors play an important role in facilitating the initiation and sustainability of citizen co-production behaviors by removing ability constraints, increasing extrinsic motivation, and lowering the co-production threshold [18]. Three significant organization factors can be identified: organization arrangement, which is compatible with citizen co-production; roles and attitudes of professionals; and skillful governance tools [37].

Behavioral public administration research indicates that governments can change citizens’ behaviors top-down using governance tools, which include incentives, mandates and bans, information campaigns, and nudging [38]. There is growing concern about the effectiveness of governance tools that are adopted by public service organizations to
mobilize citizens to co-produce top-down. Theoretically, providing citizens with information, training, education, and resources can enable them to co-produce [15,39]. Empirical research mainly investigates the role of the materials and information provided to citizens, which can be classified as information- and incentive-based governance tools, respectively. Previous studies have replicated several randomized field trial studies to examine the mobilization effects of “providing citizens with information and materials”. One study of immigrant parents of preschool children found that providing materials and information that support children’s language development can increase parents’ co-production efforts measured by how often they read with their child [20]. In a recent study, the study population was adjusted to include all parents of primary school children, and governance tools were narrowed from providing materials and information to providing information only. It was found that the government sending information material containing encouragement and advice to citizens was not sufficient to increase the frequency with which parents read with their children [19]. Andersen, Nielsen, and Thomsen emphasize the advantages of replication studies because outcome measures often change when the target groups change. They extended the study population to include all parents of primary school children, added an extra outcome measure (how often parents help their child with homework), and extended the governance tools to include both materials and information. This study found that governance tools had a positive effect on how often parents help their children with homework but had no statistically significant impact on parents reading with their children [21]. Overall, the effect of governance tools varies with the target group, and providing information and materials is more effective in promoting citizens’ co-production than only providing information [40].

The current research demonstrates that the selection and adoption of government tools are directly related to citizen co-production behaviors. Previous research has largely contributed to our understanding of the relationship between government tools and citizen co-production, but the relationship in the specific context of community micro-regeneration has never been verified. In addition, the extant empirical literature on co-production generally has three limitations. First, most existing studies focus on the influence of providing materials and information, neglecting other tools, such as technology-supported information dissemination and citizen empowerment. We can reasonably expect these diverse governance tools to play differentiated roles in practice. Insight into how governance tools can increase citizen co-production requires the novel extension and categorization of governance tools. Second, previous research pays little attention to the indirect role of government tools, despite the demonstration of the theoretical argument for how government tools can improve citizen co-production behavior by influencing factors on the citizen side, such as their capacity, self-efficacy, and perception [19]. Third, a limited number of studies explore the impact of governance tools on individual and collective co-production, and little is known about the organizational determinants of citizen co-production behavior in reference to different types of motivations.

We tried to fill these research gaps by exploring the effects of government tools on citizen co-production in community micro-regeneration projects. The theoretical discussions and empirical results of this study not only contribute to the co-production research but also provide a new perspective concerning the characteristics and determinants of urban community micro-regeneration.

3. Research Framework and Hypothesis

3.1. Theoretical Framework and Variables

The theoretical model used in this research is based on the theoretical discussions on co-production and a field investigation focused on the practice of urban community micro-regeneration in Shanghai. The research framework herein is based on stimulus organism response (SOR) theory, which posits that there is an external stimulus that causes approaching or avoiding behavioral responses subject to the internal psychological processes of an organism. To study someone’s behavioral response, we must explore how
different stimuli affect their cognitive and emotional state [41,42]. Using the SOR model is helpful and applicable to empirically test the effect of organizational tools on facilitating citizen co-production and influencing individual factors. To this end, studies help fill in research gaps in the existing literature. This study adopted the SOR theory to evaluate the influence of the information- and incentive-based governance tools on citizen in-role and extra-role co-production behavior, as mediated by the effect of their perceived benefits. Figure 1 shows the research model.

In this study, we divided the dependent variable citizen co-production behavior into in-role and extra-role according to behavioral motivation and externality. The concepts of co-creation and co-production are often considered interchangeable in the literature [35]. This typology is consistent with the management literature in terms of distinguishing between in-role and extra-role employee or customer behavior [43]. Citizen in-role co-production behavior (INCB) involves activities that are essential to the successful completion of service production, such as information collection and sharing, human and material resources input, and friendly personal interactions. Extra-role co-production behavior (EXCB) refers to activities beyond the expected contribution and providing richer value, including recommending service co-production, helping other citizens, and being tolerant in the co-production process. In relative terms, the altruistic attributes and positive externalities of extra-role co-production behavior are stronger. Previous studies have demonstrated that the same influential factors affect individual and collective production differently. We can reasonably expect citizen in-role and extra-role co-production behaviors to be affected differently by governance tools.

There are two independent variables: information- and incentive-based governance tools. The governance tools in this article specifically refer to those deployed by professional service sectors to influence the co-production behaviors of citizen actors. In the practice of urban community micro-regeneration co-production, common governance tools can be divided into two types: information-based and incentive-based [44]. With information-based tools (INFTs), the government uses its authoritative position as a node to collect and disseminate positive information about co-production, thus meaning citizens are better informed and understood. Incentive-based tools (INCTs) involve using government resources and power to offer co-production material, knowledge, and action opportunities and optimize the convenience and experience of citizen co-production. Neither type of governance tool is mandatory.

This study takes perceived benefits (PBs) as the mediating variable between governance tools and citizen co-production behaviors. Perceived benefit refers to the individuals’ perception of the positive consequences caused by their particular action [45]. Based on the long-term observation of urban community micro-regeneration co-production in China, we found that local government officials usually take measures to increase people’s perceived benefits and decrease their perceived costs, for example, by communicating the co-production benefits of raised housing prices and a clean environment to residents.

Figure 1. The proposed research model.
3.2. Hypothesis Propositions

Governments can adjust and shape residents’ co-production capacity, motivation, and behavior and influence the effectiveness of co-production results by adopting a set of tools. Governance tools refer to the technical means by which the government achieves its policy goals or to various governance resources that can be used, such as authorities and public funding. In the context of urban community micro-regeneration, co-production governance tools influence individual behavioral preferences through non-coercive forces. Information-based tools enhance citizens’ awareness of benefits and the modes of public service co-production by optimizing the content and dissemination of information [46]. For example, local officials publicize the regeneration co-production initiatives through a bulletin board, visit the residents and collect their suggestions door to door, as well as hold community meetings. Incentive-based tools improve the convenience and experiences of co-production activities, thus promoting sustainable co-production among citizens [47]. First, public service organizations provide resource support and educational training to citizens to enhance their capability of co-production. Resource support included providing residents with materials (e.g., plant seedlings, seeds, shovels, and hoes), financial funds, and credits that can be exchanged for daily commodities. Educational training provides residents with professional learning opportunities, enabling them to master the knowledge and skills needed for co-production, including courses about community planning and nursery gardening. Second, public service organizations provide citizens with opportunities and autonomy for co-production and improve citizens’ experience. For example, the residential committee invited several keen resident representatives to form a volunteer coalition. Residents can work together to formulate garden maintenance conventions, hold regular meetings to discuss plans and agendas, and finally carry out various planting activities according to residents’ suggestions. In addition, we propose that the effects of different types of governance tools on citizen co-production behavior are significantly different. Therefore, we hypothesized the following:

Hypothesis 1a (H1a). INFTs have a positive and significant influence on INCB.
Hypothesis 1b (H1b). INFTs have a positive and significant influence on EXCB.
Hypothesis 1c (H1c). INCTs have a positive and significant influence on INCB.
Hypothesis 1d (H1d). INCTs have a positive and significant influence on EXCB.

The reasons for the low level of citizen co-production can be summarized as a lack of motivation, limited channels, and ability constraints. In the practice of community micro-regeneration co-production, we find that residents do not believe that they lack the channels or ability to participate, and the reasons that residents do not participate are usually “community regeneration has nothing to do with them” and “co-production is useless”. From a rational choice perspective, citizens tend to choose to co-produce when they realize the functions of community micro-regeneration and their perceived benefits are greater than their perceived costs [9]. In the initial stage, citizens were unclear about the benefits and the costs involved in participating in co-production. Governance tools can significantly affect people’s cost–benefit judgments. Information-based tools can help citizens better understand the positive consequences of co-producing certain public services. Incentive-based tools equip residents with the relevant knowledge and skills and increase their expected benefits, including sociality rewards, a sense of satisfaction, and capability enhancement [15, 48]. Therefore, we put forward the following hypotheses:

Hypothesis 2a (H2a). INFTs have a positive and significant influence on PBs.
Hypothesis 2b (H2b). INCTs have a positive and significant influence on PBs.

Under the condition of bounded rationality and resource constraints, individuals take their own utility maximization as the starting point and judge the effectiveness of their
co-production behavior choices through cost–benefit analyses. We theoretically contend that service salience, ease of action, and efficacy are related to increases in perceived benefits and decreases in perceived costs. It is expected that individuals who perceive a certain public service to be important enough to actively engage, that the co-production task is simple, or that their co-production action matters to the quality of service will be more likely to cooperate with governments [49–51]. Overall, the governance tools used by public service organizations to promote citizen co-production will improve citizens’ perceptions and motivation and then influence residents’ co-production behavior. This phenomenon is consistent with stimulus–organism response (SOR) theory. Citizens’ perceived benefits play a mediating role between governance tools and their co-production behavior. The following hypotheses were proposed:

Hypothesis 3a (H3a). PBs have a positive and significant influence on INCB.

Hypothesis 3b (H3b). PBs have a positive and significant influence on EXCB.

Hypothesis 4a (H4a). PBs positively mediate the relationship between INFTs and INCB.

Hypothesis 4b (H4b). PBs positively mediate the relationship between INFTs and EXCB.

Hypothesis 4c (H4c). PBs positively mediate the relationship between INCTs and INCB.

Hypothesis 4d (H4d). PBs positively mediate the relationship between INCTs and EXCB.

4. Research Method

Based on the co-production literature and field investigation, we theoretically propose that governance tools have a positive and significant influence on citizen co-production behavior, as mediated by the effect of their perceived benefits. However, we do not yet know the validity of these hypotheses, the extent to which governance tools influence citizen co-production, or the difference in the impact of information- and incentive-based tools on citizen in-role and extra-role co-production behavior. To solve the above problems and deepen the research, we conducted a large-N quantitative analysis based on a cross-sectional questionnaire survey of residents in Shanghai, China. This study employed the partial least squares–structural equation model (PLS-SEM) analytical tool. SEM is a multivariate statistical technique that can capture the content of latent variables and test the causal relationship between variables through an integrated statistical model [52]. PLS-SEM requires neither a large sample size nor a specific assumption on the distribution of the data or even the missing data [53]. PLS-SEM has been widely used in the research of co-production and individual behavior [54,55].

4.1. Study Area

Shanghai was chosen as the survey region for the following two reasons: First, the selection of research objects within one district was seen as preferable. This eliminated the potential influence of economic development, leadership attention, and other factors on the research results [56]. Second, the co-production practice of community micro-regeneration in Shanghai is typical. In recent years, China’s urbanization has transitioned from constructing new buildings to regenerating existing communities, involving small-scale progressive planning and transformation of communities [3]. Community micro-regeneration focuses on building a mechanism for participation and consultation within the community at the micro-level, aiming to cultivate and enhance community awareness and spirit. The Chinese central government developed a ‘National New-Type Urbanization Plan (2014–2020)’, prioritizing public participation. The Shanghai Municipal Government unveiled ‘Implementation Measures of Shanghai Urban Regeneration’ in 2015, which marked the beginning of community micro-regeneration using public participation and social cooperation. The Shanghai government aimed to realize community governance and reshape neighborhood relations through community micro-regeneration projects, so it
implemented measures to promote co-production among citizens of all ages throughout the community micro-regeneration process. Citizens can meaningfully participate and invest resources in the project planning, decision making, construction, and maintenance of community regeneration.

4.2. Data Collection

Raw data were collected via a field questionnaire survey from 25 March to 8 May 2021. Determining sample size requirements for structural equation models (SEMs) is an important research step. Previous studies mainly followed rules of thumb, including (a) a minimum sample size of 100 or 200 and (b) 5 or 10 observations per estimated parameter [57]. For example, in a previous study containing 20 observed variables, the minimum sample size for the model structure was 100, and the recommended minimum sample size was 150 [58]. The unit of analysis in this study was the residents who had participated in community micro-regeneration co-production. To find qualified respondents, we first selected 18 communities that had carried out the community micro-regeneration project and planned to randomly distribute questionnaires to 25 residents in each community. Second, we set two filtering items: “Have you lived in the same community in Shanghai for more than one year?” and “Has the community you live in ever undertaken regeneration?”. Third, questionnaires were distributed and collected face to face to improve the reliability of data collection.

The model of this study contains 23 observed variables and 5 constructed latent variables. With the assistance of local communities, a total of 441 questionnaires were randomly distributed, and 405 questionnaires were considered valid, which is above the minimum sample size of 115 respondents. Table 1 shows the demographic characteristics of the survey respondents. The majority of respondents were between the ages of 51 and 70 (63.7%), suggesting that most residents were retired. This population of respondents has more time and energy to co-produce, which is in line with the practice characteristics and indicates, therefore, that the sample is representative.

Table 1. Demographic characteristics of survey respondents.

| Items         | Index | Frequency | Percentage |
|---------------|-------|-----------|------------|
| Gender        | Male  | 179       | 44.2       |
|               | Female| 226       | 55.8       |
| Age           | Under 30 | 31     | 7.7        |
|               | 31–40    | 51      | 12.6       |
|               | 41–50    | 54      | 13.3       |
|               | 51–60    | 125     | 30.9       |
|               | 61–70    | 133     | 32.8       |
|               | 71 and above | 11 | 2.7        |
| Education     | Primary school | 15     | 3.7        |
|               | Junior high school | 72  | 17.8       |
|               | High school       | 150   | 37.0       |
|               | Bachelor’s         | 125   | 30.9       |
|               | Post-graduate      | 43    | 10.6       |
| Employment    | Work or study      | 153   | 37.8       |
|               | Retired            | 218   | 53.8       |
|               | Stay-at-home parent | 31  | 7.7        |
|               | Others              | 3     | 0.7        |
| Marriage      | Married             | 348   | 85.9       |
|               | Unmarried           | 57    | 14.1%      |
4.3. Measures

All the variables were assessed using measurement scales adapted from previous studies and modified according to the field survey data. A five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used to measure all variables. The citizen co-production behavior scales were based on Wu’s conceptualization, and we adapted the items developed by Yi and Gong [43,59]. In-role co-production behavior (INCB) was measured using six items: INCB1—I have searched for information on community micro-regeneration activities; INCB2—I have provided suggestions to professional officials; INCB3—I have devoted some time to community micro-regeneration activities; INCB4—I have input some material resources, e.g., funding, tools; INCB5—I was kind to the professional officials; INCB6—I have followed the officials’ directives or orders. Extra-role co-production behavior (EXCB) was measured using six items: EXCB1—I recommended community micro-regeneration activities to other residents; EXCB2—I encouraged other residents to participate in community micro-regeneration activities; EXCB3—I help other residents if they seem to have problems; EXCB4—I give advice to other residents; EXCB5—if a service is not delivered as expected, I would be willing to put up with it; EXCB6—if I have to wait longer than I normally expected to receive the service, I would be willing to adapt.

The governance tools scales were based on the studies of Zhou and the field investigation data [60]. Information-based tools (INFTs) were measured using four items: INFT1—Used bulletin boards and posters to release information; INFT2—Visited the residents and collected their suggestions door to door; INFT3—Used network channels to release information; INFT4—Held hearing meetings or coordinating meetings. Incentive-based tools (INCTs) were measured using four items: INCT1—Provided financial support and equipment for resident participation; INCT2—Provided residents with knowledge, education, and technical guidance; INCT3—Carried out collective activities such as charity donation; INCT4—Respected residents’ autonomy and creativity, and encouraged them to carry out activities spontaneously. The perceived benefit (PB) scales were adapted from Zhao [61] and included three items: PB1—Participating in community micro-regeneration activities can improve my quality of life; PB2—Participating in community micro-regeneration activities is beneficial; PB3—I get more out of it than the time and effort it takes.

To verify the clarity of the measurement scales and ensure the validity and reliability of the survey instruments, we first conducted a Qualitative Pre-Test Interview with three researchers, three residents, and two professional officials. Second, statistical pre-testing was conducted with 208 questionnaires. The exploratory factor analysis showed that the conceptual constructs conformed to the theoretical expectation.

5. Empirical Results

SPSS version 23 and AMOS version 23 software were employed to evaluate the measurement model, the structural model, and the mediation effect.

5.1. Measurement Reliability and Validity

We applied Harman’s single-factor test to analyze the common method variance problem. We utilized unrotated conduct exploratory factor analysis (EFA) for all the measurement items and calculated their total variance extraction value. The statistical result of the first principal component’s total variance was 47.959%, indicating no problems as regards single source bias. The reliability and validity of the measurement model were assessed using confirmatory factor analysis (CFA), and the statistical results are shown in Table 2. The Cronbach’s alpha results of each variable were greater than 0.8, indicating that item measurements were reliable and exhibited a high level of internal consistency. The goodness-of-fit results of the CFA model ($\chi^2$/DF = 1.640; RMSEA = 0.040; GFI = 0.927; CFI = 0.979; IFI = 0.979; AGFI = 0.909) suggested that the measurement model exhibited construct validity. This study tested the convergent validity using the standard estimate of each item (SE), composite reliability (CR), and average variance extracted (AVE). All three
statistics met the recommended threshold criteria, as the SE values were above 0.7, the CR values were above 0.7, and the AVEs were greater than 0.5.

**Table 2.** Descriptive statistics and reliability and validity statistics.

| Variables                                | Items     | Standard Estimate | Mean Value | S.D. | Cronbach’s α | CR  | AVE  |
|------------------------------------------|-----------|-------------------|------------|------|---------------|-----|------|
| In-role co-production behavior (INCB)    | INCB1     | 0.771 ***         | 3.39       | 0.800| 0.886         | 0.895| 0.588|
|                                           | INCB2     | 0.755 ***         |            |      |               |     |      |
|                                           | INCB3     | 0.724 ***         |            |      |               |     |      |
|                                           | INCB4     | 0.722 ***         |            |      |               |     |      |
|                                           | INCB5     | 0.755 ***         |            |      |               |     |      |
|                                           | INCB6     | 0.863 ***         |            |      |               |     |      |
| Extra-role co-production behavior (EXCB) | EXCB1     | 0.836 ***         | 3.33       | 0.812| 0.902         | 0.911| 0.632|
|                                           | EXCB2     | 0.767 ***         |            |      |               |     |      |
|                                           | EXCB3     | 0.720 ***         |            |      |               |     |      |
|                                           | EXCB4     | 0.802 ***         |            |      |               |     |      |
|                                           | EXCB5     | 0.809 ***         |            |      |               |     |      |
|                                           | EXCB6     | 0.802 ***         |            |      |               |     |      |
| Information-based tools (INFTs)          | INFT1     | 0.804 ***         | 3.28       | 0.866| 0.881         | 0.885| 0.661|
|                                           | INFT2     | 0.882 ***         |            |      |               |     |      |
|                                           | INFT3     | 0.903 ***         |            |      |               |     |      |
|                                           | INFT4     | 0.637 ***         |            |      |               |     |      |
| Incentive-based tools (INCTs)            | INCT1     | 0.826 ***         | 3.40       | 0.875| 0.886         | 0.888| 0.666|
|                                           | INCT2     | 0.879 ***         |            |      |               |     |      |
|                                           | INCT3     | 0.844 ***         |            |      |               |     |      |
|                                           | INCT4     | 0.704 ***         |            |      |               |     |      |
| Perceived benefits (PBs)                 | PB1       | 0.950 ***         | 3.48       | 0.940| 0.926         | 0.928| 0.812|
|                                           | PB2       | 0.898 ***         |            |      |               |     |      |
|                                           | PB3       | 0.852 ***         |            |      |               |     |      |

Note: *** represents $p < 0.001$.

The Fornell–Larcker ratio was used to determine the discriminant validity of the constructs. As reported in Table 3, the square root of AVE was greater than the correlation between the latent variables, indicating that each variable is unique and sufficiently different from the other variables in the measurement model. All the results indicate that our questionnaire met the requirements of reliability and validity.

**Table 3.** Discriminant validity test result.

|          | INCB | EXCB | INFT | INCT | PB  |
|----------|------|------|------|------|-----|
| INCB     | 0.767|      |      |      |     |
| EXCB     | 0.735*** | 0.795|      |      |     |
| INFT     | 0.680*** | 0.576*** | 0.813|      |     |
| INCT     | 0.620*** | 0.649*** | 0.741*** | 0.816|     |
| PB       | 0.555*** | 0.433*** | 0.585*** | 0.555*** | 0.901|

Note: The data on the diagonal are the square root of the AVE of this factor. The data on the non-diagonal are the Pierce correlation coefficient. *** represents $p < 0.001$.

5.2. Descriptive Analysis

As Table 2 shows, the mean values of in-role co-production behavior and extra-role co-production behavior were 3.39 and 3.33, respectively. The statistical results indicate that the level of resident co-production behavior in the community micro-regeneration domain was middling, and the level of in-role co-production behavior, which represented individual self-interest, was higher than the level of extra-role co-production behavior, which represented individual altruism. The mean values of information- and incentive-based tools were 3.28 and 3.40, which indicate that residents have a higher perception of incentive-based governance tools.
Table 4 presents the correlation between citizen co-production behavior and independent variables by using SPSS 23. The results show that information-based tools, incentive-based tools, and perceived benefits are significantly positively related to in-role and extra-role co-production behavior. The correlation matrix confirms that Hypotheses 1a, 1b, 1c, 1d, 3a, and 3b were preliminarily verified.

Table 4. Correlation matrix.

|       | INCB | EXCB | INFT  | INCT | PB  |
|-------|------|------|-------|------|-----|
| INCB  | 1    |      |       |      |     |
| EXCB  | 1    | 0.623** | 0.506** | 1    |     |
| INFT  | 0.569** | 0.597** | 0.653** | 1    |     |
| INCT  | 0.521** | 0.406** | 0.538** | 0.512** | 1  |

Note: ** represents \( p < 0.01 \).

5.3. Structural Model Evaluation

The hypothesis was tested using path analysis, applying the maximum likelihood method. All the indices (\( \chi^2 / df = 2.019; \) RMSEA = 0.05; GFI = 0.911; CFI = 0.966; IFI = 0.966; AGFI = 0.889) suggested that the structural model had adequate goodness-of-fit for the data.

Figure 2 shows the values and significance of the path coefficients. The standardized and unstandardized estimate of the SEM model are shown in Appendix A. First, the paths H1a, H1b, H1c, and H1d were supported. Information-based tools had positive and significant impacts on in-role co-production behavior (\( \beta = 0.397; p < 0.001 \)) and extra-role co-production behavior (\( \beta = 0.209; p < 0.01 \)) in urban community micro-regeneration. Incentive-based tools had positive and significant impacts on in-role co-production behavior (\( \beta = 0.244; p < 0.001 \)) and extra-role co-production behavior (\( \beta = 0.481; p < 0.001 \)). Incentive-based tools exhibited the strongest effect on extra-role co-production behavior. Second, the results indicate a positive effect related to information- (\( \beta = 0.383; p < 0.001 \)) and incentive-based tools (\( \beta = 0.272; p < 0.001 \)) on citizen perceived benefits, thereby supporting both H2a and H2b. Third, citizens’ perceived benefits had significantly positive effects on in-role co-production behavior (\( \beta = 0.188; p < 0.001 \)); however, they did not significantly affect extra-role co-production behavior (\( \beta = 0.049 \)). In summary, the considered types of governance tools did not have equally strong effects on citizen co-production behavior in the urban community micro-regeneration domain. Relatively speaking, information-based tools exhibited better results for in-role co-production behavior, while incentive-based tools exhibited better results for extra-role co-production behavior in urban community micro-regeneration.

Figure 2. Results of path coefficients. Note: ** represents \( p < 0.01 \); *** represents \( p < 0.001 \).

5.4. Mediator Effect Evaluation

We employed both 95% bias-corrected and percentile bootstrapped confidence intervals (\( n = 5000 \)) to examine whether the mediation effect was significant. If the results of CI did not contain 0, they were considered statistically significant. Table 5 shows the
mediating effect of perceived benefits. The mediation analysis showed a significant indirect effect ($\beta = 0.072$) and a significant direct effect ($\beta = 0.397$) related to information-based tools on in-role co-production behavior. Thus, the positive effect of information-based tools on citizen in-role co-production behavior is mediated by the perceived benefits, and Hypothesis 4a was supported. Similarly, the INCT→PB→INCB effect is crucial for explaining variations in the level of in-role co-production behavior, and Hypothesis 4c was supported. In the influence pathway of both information- and incentive-based tools in reference to extra-role co-production behavior, the indirect effect of perceived benefits was not significant, and Hypotheses 4b,d were rejected. In general, the mediating effect of perceived benefits was shown to be positive and significant between governance tools and in-role co-production behavior but not significant between governance tools and extra-role co-production behavior. In addition, the indirect effect of perceived benefits accounted for 15.35% of the total effect of INFT→INCB and 17.29% of the total effect of INCT→INCB. The results indicate that citizen co-production behavior is more directly driven by governance tools. The mediation effect of perceived benefits decreased with a decrease in the positive externalities of co-production behavior.

Table 5. Mediating effects of perceived benefits.

|                | Estimate | Boot SE | p Value | Bias-Corrected 95% CI | Percentile 95% CI |
|----------------|----------|---------|---------|-----------------------|------------------|
|                |          |         |         | Lower     | Upper     | Lower     | Upper     |
| INFT→INCB      |          |         |         | 0.072     | 0.028     | 0.0101    | 0.025     | 0.139     | 0.022     | 0.133     |
| Indirect Effect|          |         |         |           |           |           |           |           |           |           |
| Total Effect   |          |         |         | 0.469     | 0.087     | 0.0000    | 0.293     | 0.634     | 0.292     | 0.634     |
| INFT→EXCB      |          |         |         | 0.019     | 0.024     | 0.4285    | −0.025    | 0.072     | −0.026    | 0.07      |
| Indirect Effect|          |         |         |           |           |           |           |           |           |           |
| Total Effect   |          |         |         | 0.228     | 0.087     | 0.0088    | 0.048     | 0.391     | 0.051     | 0.395     |
| INCT→INCB      |          |         |         | 0.051     | 0.023     | 0.0266    | 0.015     | 0.106     | 0.014     | 0.102     |
| Indirect Effect|          |         |         |           |           |           |           |           |           |           |
| Total Effect   |          |         |         | 0.295     | 0.084     | 0.0004    | 0.135     | 0.467     | 0.13      | 0.463     |
| INCT→EXCB      |          |         |         | 0.013     | 0.017     | 0.4445    | −0.019    | 0.051     | −0.021    | 0.049     |
| Indirect Effect|          |         |         |           |           |           |           |           |           |           |
| Total Effect   |          |         |         | 0.494     | 0.084     | 0.0000    | 0.335     | 0.669     | 0.332     | 0.666     |

6. Discussions
6.1. The Differentiated Effects of Governance Tools on Citizen Co-Production Behavior

The empirical results demonstrate that information-based tools had a higher degree of influence on in-role co-production behavior ($\beta = 0.397$) than extra-role co-production behavior ($\beta = 0.209$), while incentive-based tools had a higher degree of influence on extra-role co-production behavior ($\beta = 0.481$) than in-role co-production behavior ($\beta = 0.244$). Citizens’ perceived benefits only had a significant direct effect on in-role co-production behavior and had mediated effects between both information- and incentive-based tools and their in-role co-production behavior. There are two reasons for this phenomenon.

One is that citizen in-role and extra-role co-production behaviors have different attributes and follow different behavioral patterns. The in-role co-production behavior has stronger egoistic attributes. Citizens could make a cost–benefit calculation based on rele-
vant information and then make in-role co-production decisions if their perceived benefits are greater than the perceived costs. Extra-role co-production behavior has strong altruistic attributes and positive externalities, requiring public service organizations to provide more resources, guidance, and opportunities to increase willingness to co-produce. This perspective of analyzing the characteristics of different typologies of citizen co-production is consistent with previous research efforts to clarify the definition and measurement of the “co-production” concept [62]. There are two widely accepted and applied classification methods in previous studies. Brudney and England identify three co-production patterns according to the number of co-production actors: individual, group, and collective [28]. Bovaird identified four stages or phases of the co-production process: co-commissioning, co-designing, co-delivery, and co-assessment [63]. Nabatchi, Sancino, and Sicilia merged the above two sides to create a $3 \times 4$ typology of co-production, which enabled government managers to select the type they needed [12]. Previous studies have theoretically argued that different types of co-production are affected by different antecedents and motivations [63] and empirically validated the different effect sizes of the same drivers on individual and collective co-production [22]. Our findings also confirmed that the external mobilization factors of different typologies of citizen co-production were different. Future research can further explore the co-production construct and its various dimensions to create better terminological clarity.

On the other hand, this is related to the advantages and limitations of the different types of governance tools. The provision of information is the basic condition for citizens to participate in co-production. Only by establishing an open information system can citizens acquire sufficient information and lower the cost of information to increase their excitement for co-production [64]. Through varied communication content and forms, information-based governance tools can influence more people and deepen their understanding of co-production. The limitation of information-based governance tools is that they cannot provide citizens with a true co-production experience, and there is minimal inter-citizen interaction, making it difficult to encourage extra-role co-production behavior. The incentives provide the enhancement condition for citizens to participate in co-production while also requiring public service organizations to invest additional resources. The advantage of incentive-based governance tools is that they can play a directional induction role and promote citizens’ repeated co-production actions. Their limitation is that they can only affect the citizens who have begun to participate in co-production but cannot influence more citizens effectively. Previous empirical studies have mainly focused on the role of the materials and information provided to citizens and found that providing both information and materials is more effective in facilitating citizen co-production than only providing information [19–21]. In addition, previous research has found that information-based nudging strategies are insufficiently strong to have a reliable effect, but the encouraging effect on collective co-production is higher than that on individual co-production [23]. Our results, in part, extend previous findings that the governance tools implemented must be quite strong to succeed. This work encourages future research that explores how different types of governance tools can achieve specific theoretical and managerial goals.

6.2. Theoretical Implications

Our study offers several theoretical contributions to bridge the research gaps in the extant urban regeneration and co-production literature. First, our research adopted the co-production theory to explore the characteristics and influential factors of urban community micro-regeneration, and it is the first attempt to test and validate citizen co-production behavior in community micro-regeneration quantitatively. The goal of community micro-regeneration is to improve the community living environment and to develop community social capital [4,5]. Previous community micro-regeneration studies demonstrated the importance of citizen participation approaches to successful project implementation but also pointed out that citizen engagement focuses on receiving relevant information instead of direct involvement [14,65]. Co-production is the joint production of services by govern-
ment officials and lay citizens, emphasizing the direct input of citizen participation and the interaction between the government and citizens [9,29]. Community micro-regeneration co-production is conducive to nurturing residents’ public awareness and skills, strengthening community social capital and public spirit, and realizing good community governance [31]. Co-production theory provides a valuable perspective for citizen participation and sustainable development in urban regeneration.

Second, in this study, we constructed and verified a conceptual framework concerning the effect of governance tools and the mediating effect of perceived benefits on citizen co-production behavior by adopting the SOR model and provided a novel and comprehensive perspective for citizen co-production research. Our research framework conforms to the unique context of Chinese grassroots practice; that is, the provision of public services in China is mostly state-led, and Chinese citizens are generally willing to participate based on the government’s arrangements [26,66]. With the development of civil public consciousness, Chinese local governments have acted as a facilitator, encouraging resident engagement by providing adequate support and agendas [24,67]. This is a new perspective and application in the interesting top-down co-production field. In addition, our framework involves the types, roles, and effects of governance tools. Previous empirical studies have either focused on the impact of different governance tools on a single dimension of co-production or explored the impact of the same antecedent on different dimensions of co-production [19,22]. Our study combines the two thoughts, divides co-production governance tools into information- and incentive-based tools, and divides citizen co-production into in-role and extra-role behavior. We empirically test the impact of different types of governance tools on different patterns of co-production by employing the SEM analytical method, which can expand the theoretical space of co-production. In different social situations, co-production will have different forms, which affects the accuracy and operability of the research questions [68]. Our research supports future research exploring the differences in citizen co-production in different social scenarios.

6.3. Managerial Implications

This study also provides several important practical insights for public administrators to promote community micro-regeneration governance. First, when designing and implementing co-production governance tools, we should follow the governance principle of classified development and tool matching for citizen co-production behavior. The adoption of governance tools by public service organizations to guide citizen co-production behavior is a form of external intervention. The selection and application of co-production governance tools are complicated, and the prerequisite for their effective application is to apply them to an appropriate co-production scenario. When mobilizing and managing citizen co-production behavior in community micro-regeneration, we should not simply pursue the quantity of governance tools but also execute differentiation management. Co-production performance can be effectively promoted when the governance tools are matched with the governance situation. Mismatches waste resources and make it difficult to accomplish tasks or achieve governance goals. Second, we should respect the self-interested motivation of citizens in terms of participating in community micro-regeneration co-production. The ‘rational man’ hypothesis is closer to the social reality than the ‘moral man’ hypothesis, which provides an important perspective for studying collective behavior and social governance through the design of incentive and restraint systems [69]. The empirical results show that citizens will actively engage in in-role co-production based on their internal needs and determined benefits. Practitioners must respect citizens’ interests rather than requiring citizens to co-produce out of moral pressure and external forces to improve the sustainability and effectiveness of citizen co-production. We further posit that egoism is the basis for citizens to participate in the governance of public affairs. Citizens should be guided to consider the interests of others and social welfare and realize the integration of egoism and altruism based on respecting egoism. When designing the institutional framework, public service organizations should first protect the rights of individuals to
fully express their pursuit of self-interests and second promote mutually beneficial actions on the premise of abiding by rules.

7. Conclusions and Future Research

This paper explored whether information- and incentive-based governance tools facilitate the in-role and extra-role co-production behavior of citizens and whether governance tools are mediated by the perceived benefits based on the case of urban community micro-regeneration services. We further empirically investigated our key theoretical hypotheses by employing data from a questionnaire survey with 405 respondents in Shanghai. The analysis results show that Hypotheses 1, 2, 3, 4a, and 4c were supported, but Hypotheses 4b,d were rejected. Citizen co-production behavior in community micro-regeneration is at a medium level, and it is affected by governance tools in a significant, direct, and positive manner. While information-based tools have a stronger positive effect on in-role co-production behavior, incentive-based tools have a stronger effect on extra-role co-production behavior. The mediation effect of perceived benefits is positive and significant between governance tools and in-role co-production behavior, but there is no significant effect between governance tools and extra-role co-production behavior. The differences in the degree of impact are related to the attributes of citizen co-production behaviors and governance tools. Exploring the characteristics of different typologies of citizen co-production and their key drivers in different social situations are critical to promoting the development of co-production theory.

It is important to be aware that our research has several limitations. First, the research utilized a cross-sectional survey in Shanghai, and the sample size was limited. Whether the analysis results apply to other regions needs further exploration. Second, the validated model represents the effects of information- and incentive-based tools on citizen co-production, but we did not control for all possible antecedent variables. For future co-production studies, additional potential conditional and process variables could be included and examined; for example, the different locations of the communities, person-organization fit, or the perceived insider status could be explored as explanatory or mediation variables. Second, a longitudinal study with several years of data is strongly recommended to test our hypotheses by exploring temporal variations. Third, as a result of the specific conditions in the urban community micro-regeneration service domain in Shanghai, the empirical results should be replicated in other regions or other service areas to ensure external validity.

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Appendix A

![Standardized estimate of the SEM model](image1)

Figure A1. Standardized estimate of the SEM model.

![Unstandardized estimate of the SEM model](image2)

Figure A2. Unstandardized estimate of the SEM model.

References

1. Hui, E.C.; Liang, C.; Yip, T.L. Impact of semi-obnoxious facilities and urban renewal strategy on subdivided units. *Appl. Geogr.* 2018, *91*, 144–155. [CrossRef]

2. Liu, G.; Fu, X.Y.; Han, Q.Y.; Huang, R.P.; Zhuang, T.Z. Research on the collaborative governance of urban regeneration based on a Bayesian network: The case of Chongqing. *Land Use Policy* 2021, 105640. [CrossRef]

3. Hui, E.C.; Chen, T.; Lang, W.; Ou, Y. Urban community regeneration and community vitality revitalization through participatory planning in China. *Cities* 2021, *110*, 103072. [CrossRef]

4. Mouratidis, K.; Poortinga, W. Built environment, urban vitality and social cohesion: Do vibrant neighborhoods foster strong communities? *Landsc. Urban Plan.* 2020, 204, 103951. [CrossRef]

5. Cao, Y.; Tang, X. Evaluating the Effectiveness of Community Public Open Space Renewal: A Case Study of the Ruijin Community, Shanghai. *Land* 2022, 11, 476. [CrossRef]

6. Maruani, T.; Amit-Cohen, I. Open space planning models: A review of approaches and methods. *Landsc. Urban Plan.* 2007, *81*, 1–13. [CrossRef]
39. Percy, S.L. Citizen Participation in the Coproduction of Urban Services. *Urban Aff. Q.* 1984, 19, 431–446. [CrossRef]
40. Andersen, S.C.; Nielsen, H.S. Reading Intervention with a Growth Mindset Approach Improves Children’s Skills. *Proc. Natl. Acad. Sci. USA* 2016, 113, 12111–12113. [CrossRef]
41. Mehrabian, A.; Russell, J.A. *An Approach to Environmental Psychology;* MIT Press: Cambridge, MA, USA, 1974.
42. Chen, S.C.; Chung, K.C.; Tsai, M.Y. How to Achieve Sustainable Development of Mobile Payment through Customer Satisfaction—The SOR Model. *Sustainability* 2019, 11, 6314. [CrossRef]
43. Yi, Y.; Gong, T. Customer Value Co-Creation Behavior: Scale Development and Validation. *J. Bus. Res.* 2013, 66, 1279–1284. [CrossRef]
44. Moseley, A.; James, O. Central State Steering of Local Collaboration: Assessing the Impact of Tools of Meta-governance in Homelessness Services in England. *Public Organ. Rev.* 2008, 8, 117–136. [CrossRef]
45. Nguyen, M.; Khoa, B. Perceived Mental Benefit in Electronic Commerce: Development and Validation. *Sustainability* 2019, 11, 6587. [CrossRef]
46. Terman, J.N.; Kassekert, A.; Feiock, R.C.; Yang, K. Walking in the Shadow of Pressman and Wildavsky: Expanding Fiscal Federalism and Goal Congruence Theories to Single-Shot Games. *Rev. Policy Res.* 2016, 33, 124–139. [CrossRef]
47. Rodriguez, C.; Langley, A.; Beland, F.; Denis, J.L. Governance, Power, and Mandated Collaboration in an Interorganizational Network. *Adm. Soc.* 2007, 39, 150–193. [CrossRef]
48. Voorberg, W.; Jilke, S.; Tummers, L.; Bekkers, V. Financial Rewards Do Not Stimulate Coproduction: Evidence from Two Experiments. *Public Adm. Rev.* 2018, 78, 864–873. [CrossRef]
49. Van Eijk, C.J.A.; Steen, T.P.S. Why Engage in Co-Production of Public Services? Mixing Theory and Empirical Evidence. *Int. Rev. Adm. Sci.* 2016, 82, 28–46. [CrossRef]
50. Pestoff, V. Collective Action and the Sustainability of Co-Production. *Public Manag. Rev.* 2014, 16, 383–401. [CrossRef]
51. Parrado, S.; Van Ryzin, G.G.; Bovaird, T.; Löffler, E. Correlates of Co-production: Evidence from a Five-Nation Survey of Citizens. *Int. Public Manag. J.* 2013, 16, 85–112. [CrossRef]
52. Cui, Y.; Lan, H.; Zhang, X.; He, Y. Confirmatory Analysis of the Effect of Socioeconomic Factors on Ecosystem Service Value Variation Based on the Structural Equation Model—A Case Study in Sichuan Province. *Land* 2022, 11, 483. [CrossRef]
53. Hair, J.F.; Hult, G.T.; Ringle, C.; Sarstedt, M. A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM); Sage Publications Inc.: Thousand Oaks, CA, USA, 2013.
54. Namisango, F.; Kang, K.; Beydoun, G. How the structures provided by social media enable collaborative outcomes: A study of service co-creation in nonprofits. *Inf. Syst. Front. 2022*, 24, 517–535. [CrossRef]
55. Kwon, A.-M.; Namkung, Y. The Impact of the Perceived Values of Social Network Services (SNSs) on Brand Attitude and Value-Co-Creation Behavior in the Coffee Industry. *Sustainability* 2022, 14, 5425. [CrossRef]
56. Dvir, T.; Eden, D.; Avolio, B.J. Impact of Transformational Leadership on Follower Development and Performance: A Field Experiment. *Acad. Manag. J.* 2002, 45, 735–744.
57. Wolf, E.J.; Harrington, K.M.; Clark, S.I.; Miller, M.W. Sample Size Requirements for Structural Equation Models: An Evaluation of Power, Bias, and Solution Propriety. *Educ. Psychol. Meas.* 2013, 76, 913–934. [CrossRef]
58. Abab, S.A.; Wajjira, F.S.; Negash, T.T. Factors Influencing the Formalization of Rural Land Transactions in Ethiopia: A Theory of Process Mechanism and Innovation Strategy of Public Service Co-Production: Taking Public Library Service as Example. *Proc. Natl. Acad. Sci. USA* 2016, 113, 12111–12113. [CrossRef]
59. Wu, J.P. How to Achieve Sustainable Development of Mobile Payment through Customer Satisfaction—The SOR Model. *Sustainability* 2019, 11, 6314. [CrossRef]
60. Zhou, L.Y. How does Hierarchical Intervention Affect Collaborative Governance in China? A Case Study of Environmental Impact. *J. Technol. Econ. Policy Res.* 2007, 82, 28–46. [CrossRef]
61. Zhao, X.Y. Impact of customer-oriented organizational socialization on customers’ value co-creation behaviors. *J. Technol. Econ. Policy Res.* 2019, 11, 37–790. [CrossRef]
62. Brudney, J.L.; Cheng, Y. Defining and Measuring Coproduction: Deriving Lessons from Practicing Local Government Managers. *Public Adm. Rev.* 2002, 67, 846–860. [CrossRef]
63. Bovaird, T. Beyond Engagement and Participation: User and Community Coproduction of Public Services. *Public Adm. Rev.* 2007, 67, 846–860. [CrossRef]
64. Acciai, C.; Capano, G. Policy instruments at work: A meta-analysis of their applications. *Public Adm. 2021*, 99, 118–136. [CrossRef]
65. Huang, T.; Qian, Q.K.; Visscher, H.J.; Elsinga, M.G.; Wu, W. The role of stakeholders and their participation network in decision-making of urban renewal in China: The case of Chongqing. *Cities* 2019, 92, 47–58.
66. Chen, W.; Cheshmezangi, A.; Mangi, E.; Heath, T.; Ye, C.; Wang, L. An Analysis of Residents’ Social Profiles Influencing Their Participation in Community Micro-Regeneration Projects in China: A Case Study of Yingtai Community, Guangzhou. *Land* 2022, 11, 790. [CrossRef]
67. Pandeya, G.P.; Shrestha, S.K. Does Citizen Participation Improve Local Planning? An Empirical Analysis of Stakeholders Perceptions in Nepal. *J. South Asian Dev.* 2019, 11, 276–304. [CrossRef]
68. Zambrano-Gutierrez, J.; Rutherford, A.; Nicholson-Crotty, S. Types of Coproduction and Differential Effects on Organizational Performance: Evidence from the New York City School System. *Public Adm. 2017*, 95, 776–790. [CrossRef]
69. Wang, Y.H.; Wu, J.P. Criticism of the critique of rational man hypothesis. *J. Chongqing Univ. Soc. Sci. Ed.* 2015, 21, 193–199.