



Article An Analysis of Residents' Social Profiles Influencing Their Participation in Community Micro-Regeneration Projects in China: A Case Study of Yongtai Community, Guangzhou

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Abstract: Urban regeneration has become one of the most effective ways to develop urban areas that have declined. Compared with other types of urban regeneration, community micro-regeneration is characterised by scattered stakeholders. Existing studies on public participation in community micro-regeneration mainly focus on revealing the interaction between different stakeholders with less attention to the main users' social profiles in their participation process. This paper explores residents' social profiles influencing their participation in community micro-regeneration projects in China. An evaluation framework for residents' participation in community micro-regeneration projects is designed through literature research, the Delphi technique, and an analytic hierarchy process (AHP) based on the case study of Yongtai community, Guangzhou. Relative residents' social profiles with the data from the questionnaire and literature research are further verified by stepwise linear regression. The results show that residents' participation is still in the stage of tokenism with high-level passive information receipt but low-level enthusiasm for interactive activities. The older (i.e., 65-years of age and above) and middle-income groups (i.e., between 3000 and 14,999 CNY/Month) are positively associated with their participation in the Yongtai community micro-regeneration project. These findings can provide references for managers to distribute social resources.

Keywords: residents' social profiles; public participation; community micro-regeneration projects; urban regeneration; China

1. Introduction

As the world fully enters an era of planetary urbanisation, China's urban development becomes increasingly important as it plays a unique role in global development [1,2]. The urban area has increased rapidly with large areas of farmland converted to urban use, named in-situ urbanisation [3]. The primary reason for this can be dated back to the Cultural Revolution in the mid1960s to the mid1970s when the peasant lifestyle was championed [4]. Chinese authorities restricted urbanisation through the household registration system known as Hukou, which limited access to city jobs, housing, and social benefits. Reform and Opening Up in 1978 signalled a change of direction, allowing market forces to drive economic growth. Furthermore, a series of market reforms in urban housing, land, and fiscal systems since the late 1990s have given rise to a new wave of urbanisation in China, characterised by land-centred urban expansion [5]. Since then, some 600 million people moved from the countryside to the cities, resulting in 16 cities with a population of over 10 million, and the urbanisation rate jumped from 17.9% in 1978 to 64.7% in 2021, an



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Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). astonishing 1% each year. However, with the rapid growth of the urbanisation rate, the drawbacks in the process of urbanisation began to emerge. For example, contradictions between the demands of rapid urban development and the living environment for different stakeholders, and strictly limited construction were intensifying [6]. Considerable social conflict and tensions between local governments and people arose due to the rapid urbanisation and urban sprawl [7,8]. Based on these, urban regeneration became one of the most effective ways to develop neglected older areas in recent decades.

Urban regeneration is defined as façade improvement, functional renovation, and neglected space demolition and involves multiple types, such as urban village regeneration and park reconstruction [9]. This changes the physical and environmental structure of cities and improves human settlements in densely populated urban areas by changing urban land use and buildings [10]. In other words, this is a process of planned reconstruction for neglected urban areas which are adapted to modern urban social surroundings [11]. This not only upgrades the urban structural function system and industrial structure but promotes the development and evolution of cities [12,13]. Despite the shift in China's attention from urban expansion to urban regeneration, the regeneration projects have been recognised as costly and contentious projects by municipal authorities in the last two decades [14]. Large-scale and incremental redevelopment results in mass migration, resulting in not only an inconvenience for residents but considerable economic loss for the local government. Hence, incremental planning gradually transforms into stock-based planning due to limited resources.

Public participation plays an essential role in the transformation process. This is an important factor in solving the issues of vacant land in cities and assisting long-term regeneration [15]. This decision-making on how to manage or reuse land and space in neglected communities could enable stakeholders to better understand those issues and the potential of the ecological and social value of the neglected space [16]. However, due to the constraints of the planned economy and traditional concepts, the top-down participation model dominates and forms the centralisation of government. The residents generally follow the government's decisions and seldom participate in the projects [17]. Moreover, numerous studies show that community-level projects remain marginalised in terms of partnerships and initiatives [18].

As a type of urban regeneration, community micro-regeneration has the characteristics of low cost and short cycle [19]. Furthermore, it involves more scattered stakeholders than other types of urban regeneration [20,21]. This is a continuous process of community governance in which joint actions reconcile the different stakeholders to promote community development. The success of community micro-regeneration projects is dependent on public participation [8,13,22]. This has received considerable support from the central government in China. Thirty-nine thousand communities have been renewed up to 2020, concerning almost 7 million households, and the working mechanism, institutional framework, and policy system of community micro-regeneration will be formed by 2022 [23]. However, the problems within the social network during the process are gradually emerging [24]. For example, most other stakeholders, with their complex interaction networks, hold negative perceptions of public participation [25]. Residents, even though the main users, are often neglected in the projects [19,26,27]. It is meaningful and necessary to investigate residents' participation in China's community micro-regeneration.

This research paper aims at exploring residents' social profiles and how they influence their participation in community micro-regeneration projects in China. This paper is structured into four stages: firstly, the research lacuna is verified by a literature review on residents' participation and their social profiles in community micro-regeneration. The second explains the adopted research methodologies, including case study, Delphi technique, and analytic hierarchy process (AHP) for selecting and weighting the derived indicators, and stepwise linear regression to analyse the relationship between residents' social profiles and the level of their participation. Thirdly, the main findings are emphasised by designing a comprehensive evaluation model and testing the significance of the characteristics. The final part discusses the potential reasons combined with existing studies, contributed knowledge, and implications for further development.

As explorational research, this forms a scientific evaluation system of residents' participation in the context of community micro-regeneration through sociological and statistical methods. Discussing residents' social profiles and how they affect community microregeneration can have reference value for communities with similar regenerating processes, and provide a Chinese case for the study of residents' participation in those projects. The outcomes of this research can not only make the relationship between residents and communities better but provide references for managers to distribute social resources in the projects. Furthermore, from the perspective of urban planning and development, clarifying the explanatory factors of residents' participation can provide references for enhanced public engagement and sustainable urban development.

2. Literature Review

Studies on public participation began with Mills (1959), who advocated that this could change the decision-making model of the traditional closed bureaucratic system [28]. Davidoff (1962) stated that citizens' choices should not be decided by planners who needed to listen to the ideas of other stakeholders, laying a theoretical foundation for the application of public participation in urban planning [29]. He further proposed the concept of "advocacy planning" to encourage residents to participate in the process of urban development to protect their democratic rights and interests [30]. Arnstein (1969) divided public participation into three levels: dominant participation, symbolic participation, and non-participation as a reference to evaluate the degree of public participation [31]. With "top-down" policies constantly resisted by "bottom-up" voices in the 1970s [32], democratic pluralism began to emerge in Europe and North America, and public participation began to be widely accepted by residents as a form of "direct democracy" [33]. The Charter of Machu Picchu also stressed the importance of communication and the participation of planners, governments, and residents in urban development and construction [34]. Healey (1991) pointed out that the relationship between planning interventions and land development and distribution was complex [35]. It was difficult to overcome many public issues and challenges by a single organisation in urban development [36]. These issues, thus, must be solved through multi-stakeholder cooperation and participation [37,38].

Existing research has fully explored the social network with stakeholders' interaction in urban studies. On the one hand, the key to improving urban problems lies in coordinating public projects, and emphasising participation as the main role in the projects [39–41]. On the other hand, as Wang and Chan (2020) revealed, unbridled divergent interests can enhance the gaps between expected and actual outcomes [42]. Governance is designed to coordinate multiple stakeholders and multi-dimensional policy objectives [43]. Sun et al., (2016) figured out that the government's strict stability maintenance measures intensify public opposition to the projects [44]. The government and other stakeholders must look for solutions together by upgrading old cities for sustainable urban development [45–47]. Community micro-regeneration is an essential component of urban development [17,48]. Joint commitment through a collaborative partnership is fundamental to successful project implementation because different stakeholders with diverse features and characters can fully influence their cognitions and actions [8]. Various stakeholders, therefore, should be considered to ensure the achievement of objectives in the projects.

Existing studies widely discussed the issues of public participation in China's community micro-regeneration projects [25,27,49–51]. They mainly focus on revealing the interaction between different stakeholders. The stakeholders' interaction network is of high complexity [25]. Stakeholders' characteristics are seen as essential network elements [52]. However, there is a significant disparity among them [27]. Key factors distinguished by each type of stakeholder are crucial and worthy of further study [53]. Therefore, it is necessary to explore their social profiles. Many scholars consistently consider that residents and how they participate are the key to successful projects, and put forward many available participation approaches [25,27,50]. Groups of residents unquestionably play an important role in the projects as they are the main users in the areas. They also affect government decision-making about the projects [54]. In general, residents have numerous opinions and ideas about the projects relative to their interests [20]. Their preferences and behaviours significantly impact the private sector and government decision-making [39]. When they can openly express and discuss their views, the transparency of the decision-making process, the long-term viability of projects, and the benefits to communities can be improved [55]. However, residents are generally excluded from direct involvement during the process [13,22,56]. For example, Sun et al., (2016) state that public participation in mainland China is limited, does not happen often and comes in late [38]. Therefore, methods of reflecting the residents' demands and preferences during the projects need to be explored and clarified.

With environmental resources decreasing and social resources limited, the difference in stakeholders' social profiles is one of the important references for resource allocation. Few scholars discussed the residents' social profiles and how they influence their participation in the projects. It has been confirmed that residents' social profiles influence them to participate in social activities [24]. For example, marital status impacts their participation degree as the residents who live with spouses are less likely to participate in social events outside the home than residents who do not live with spouses [24]. Females are typically more socially active than males, and more educated citizens show higher levels of social involvement [57]. For some specific groups like older people, their income level is relative to their participation [58]. The higher the income of older people, the higher the level of their engagement in social activities [24]. Although their findings have contributed to the relationship between residents' social profiles and their participation, their relationship in the specific context of community micro-regeneration has never been verified. Residents' social profiles influencing their participation in community micro-regeneration projects is still an essential but unclear issue deserving empirical exploration.

3. Materials and Methods

This research utilised mixed methods of analysis to show the completeness of research and analysis. A complete answer to a research question or series of research questions can be obtained with both quantitative and qualitative approaches. This fact implies that the gaps left by one method, e.g., the quantitative, can be filled by the other—the qualitative [59]. The qualitative methods employed in this research include the Delphi technique and literature research, while the quantitative ones include the questionnaire, AHP, and stepwise linear regression.

There were two flows of the data collection, which converged into the data analysis (Figure 1). The first was establishing an indicator system through literature research, the Delphi technique, and AHP. Meanwhile, the dataset of residents' social profiles was selected and collected by literature research and questionnaire survey, respectively. Their results would be used in stepwise linear regression to verify which residents' social profiles influence their participation in community micro-regeneration projects. These methods were described in the following specific sections.



Figure 1. Methodological framework (Source: Compiled by the researcher).

3.1. Case Study

Case studies are particularly effective for probing an area of interest in great depth and identifying cases rich in information [60]. Guangzhou is a metropolis that has led in urban regeneration over the past decade in China. It has undergone profound urban change since the 1990s, along with other major Chinese cities [61–63]. The community micro-regeneration projects with the renovation of public space and partial demolition and reconstruction were first put forward in the Guideline of Urban Regeneration in Guangzhou in 2015, signifying the transformation of urban regeneration [64]. As one of the first-round pilot projects, a localised model was developed in Guangzhou after an almost seven-year exploration. There are numerable practical cases in Guangzhou and almost seven hundred projects were finished by July 2019 [64]. Many relative regulations and policies were published to support the projects in Guangzhou. A Work Plan for Deepening Urban Regeneration and Promoting High-Quality Development in Guangzhou in 2020, published by Guangzhou Government, stated that improving the community micro-regeneration was one of the best practices for current urban development [65]. The Implementation Plan of Reconstruction of Old Communities in Guangzhou published in 2020, stated that the first phase, from July 2020 to December 2021, would undertake and complete 484 projects [66]. In short, the projects and their practices in Guangzhou are typical and representative. Their location and internal distribution are shown in Figure 2. Its analysis can offer valuable experiences for relevant studies in other Chinese cities.

The Yongtai community in Guangzhou was selected as the study area in this research due to its advanced practice and typical characteristics. Yongtai community is located in Baiyun District, Guangzhou (Figure 3). There are six natural villages, 14 economic cooperatives, and currently a population of about 100,000 people, most of whom are migrant workers characterised by high mobility. Only 5% of the population is registered, with more than 1000 households and 5000 people.



Figure 2. The location and internal distribution of the projects. N = the number of community regeneration projects in the first phase of the plan (Source: Compiled by the researcher).



Figure 3. The location of the Yongtai community (Source: Adapted with permission from Ref. [67]. 2016, Guangzhou Municipal Planning and Natural Resources Bureau).

This is the first pilot community micro-regeneration project in Baiyun District, with a total land area of about 95 hectares and a total floor area of about 300,000 square metres.

The project includes 16 fire channels, seven newly-added micro fire stations, 260 fire hydrants, 85 residential buildings, and 36 garbage collection stations. This project has special meaning in the history of Chinese community micro-regeneration as an example of state market society cooperation within this type of project was widely discussed by scholars previously [38,42,44]. Moreover, according to follow-up media reports, some residents, scholars, and other stakeholders also became actively involved in the whole process. As such, a practical reflection on residents' participation as well as an exploration of internal factor analysis should be developed.

3.2. Literature Research

Literature research as a method of data collection is used in secondary data collation. This comprises a description, summary, and critical evaluation of works concerning the research problem being investigated by surveying books, scholarly articles, and any other sources relevant to a particular issue, area of research, or theory [68]. This was utilised for two items in the data collection: collecting indicators of residents' participation, and potential variables of residents' social profiles in existing studies. Firstly, this procedure was based on the following principles to identify the selection of indicators: (i) If an indicator is in line with residents' participation? (ii) If an indicator is measurable? The initial dataset of relative indicators would be established based on the answers to these questions. Secondly, based on the existing literature relating to residents' participation in social activities (detailed in Section 2. Literature Review), their social profiles were selected to be the references for the questionnaire design and the basics of statistical analysis.

3.3. Delphi Technique

Due to the lack of an evaluation framework, an indicator system to evaluate the level of residents' participation is necessary. The system designation is a complicated assignment since it needs to meet several requirements, such as independence, policy relevance, representativeness, and comprehensiveness [69]. The Delphi technique, used as a tool for reaching out to experts through multi-round interviews or meetings [70], is appropriate for developing indicators, especially if there is no relative existing indicator exploration for specific topics [71].

This paper addresses the difficulty of producing sets of indicators by gathering experts' ideas to address a complex problem [72–74]. Hence, this was used in this research in two steps. The first step was to structure sets of indicators drawn from existing literature. After the initial selection, a five-point Likert scale of selection was adopted to reselect the indicators obtained from the early sets in the second stage. The number of experts depends on the research objective [75], and between 30 and 50 participants are adequate to establish the deliberate research and to garner various opinions [76]. There were 32 experts involved in community micro-regeneration projects who were asked to rate the relevance of indicators using a five-point Likert scale in this round. Their responses were evaluated by a parametrical statistical analysis in SPSS 26, suitable for thirty samples or above [77,78], to calculate the mean and standard deviation. The mean was used to measure the control of tendency and the standard deviation to measure the degree of convergence [72,73]. Only indicators with 3.75 means score, or above and below 1 standard deviation, were selected. After that, the final indicators in the evaluation framework were confirmed.

3.4. Analytic Hierarchy Process (AHP)

AHP was used to weigh indicators in the indicator system in this paper. This is used to solve complex choice issues through a multi-level progressive structure of goals, criteria, sub-criteria, and options. This can provide a holistic and rational framework for structuring a decision problem, quantifying its elements, and evaluating alternative solutions [79]. The appropriate information was gathered by utilising an arrangement of pairwise comparisons [80]. The filtered indicators were rated by Saaty's 1–9 scale [81]. A meeting was convened and the interviews for the group of 32 experts were administered in order to weight these indicators. The initial weights of the indicators were obtained from the comparisons. Each row element was then divided by this sum, and the normalised elements in each row were arithmetically averaged to produce the final weights [82]. As such, the indicator system was established for the following statistical analysis.

3.5. *Questionnaire*

A project team named 'Research on Residents' Participation in Community Microregeneration Projects in Guangzhou' was established in July 2020. The fieldwork was conducted from July to September 2020. The respondents were randomly determined from the Yongtai community. The survey took the individual interviewee as a unit and adopted the form of questionnaires where residents' social profiles and their participating situations were investigated to obtain first-hand data. The questionnaire survey was regarded as a type of public participation conducive to people-oriented planning, which is widely recommended by scholars [83,84].

The random sampling selection of respondents in the Yongtai community was guided by the following criteria: permanent residents of the community and those currently living there (excluding commercial tenants or neighbourhood administrative staff) as they know their living environment better than others such as tenants [85]. Questionnaire surveys were conducted to investigate residents' social profiles and their participating situations. Each questionnaire collection took about 20 min, including briefing participants about the research background and marking his/her evaluation on the indicators. During the interviewing process, the interviewees and other involved neighbourhood residents were fully respected in terms of willingness and privacy protection. Those questionnaires with any missing items (e.g., not filled in by either the interviewee or interviewer) were considered invalid and removed from the analyses [86].

The questionnaire was designed based on the social profiles and indicators finalised above. The questionnaire included details about the respondents' social profiles such as gender [57], age [58,87], marital status [24], education level [57], and income level [24,58] selected from existing literature. The other part involved residents' participating situations with the eight indicators in the projects, investigated by a five-point Likert scale of 1—very unacquainted, 2—relatively unacquainted, 3—moderately acquainted, 4—relatively acquainted, and 5—very acquainted.

3.6. Stepwise Linear Regression

The stepwise linear regression was adopted for analysis since the dependent variable in this paper was a continuous variable, and the independent variables contain multiple classification variables. It was conducted by SPSS 26 based on the data from questionnaires. This utilised a set of explanatory variables including gender, age, marital status, education level, and income level to estimate the quantitative relationship to the dependent variable, the level of residents' participation, by the least sum of squares method. The model is shown below

$$y = \beta_0 + \beta_1 G + \beta_2 A + \beta_3 MS + \beta_4 EL + \beta_5 IL + \varepsilon \tag{1}$$

where the *G* and *MS* as dummy variables denote respondents' gender (0 is male and 1 is female) and married status (0 is married and 1 is unmarried), respectively. The rest are ordinal variables. Specifically, the *A* referred to their age (1 is below 18 years as the benchmark), *EL* referred to their education level (1 is a primary school and below as the benchmark), and *IL* referred to their income level (1 is below 3000 CNY as the benchmark).

4. Results

4.1. The Indicator System

Twenty indicators were selected from literature research, including the level of recognition (LR) [88], sense of belonging (SB) [89], sense of cohesion (SC) [90], level of satisfaction (LS) [87], level of approval (LA) [91], level of understanding of projects (LU) [51], participating willingness (PW) [89], the channel of delivering information (CD) [92], participating awareness (PA) [93], participating channels (PC) [25,38], participating time (PT) [51], and participation degree (PD) [50]. Through the Delphi technique, thirty-two experts rated these indicators by the five-point Likert scale, and four indicators were eliminated in this round: LR, LA, CD, and PA, which did not meet the threshold of a standard deviation 1 (Table 1). The remaining eight indicators, including SB, SC, LS, LU, PW, PC, PT, and PD, were finally filtered by a parametrical statistical analysis with the means and standard deviation principle.

Table 1. The initial set of criteria for residents' participation in the community microregeneration projects.

Indicator	Mean	SD	Selected
LR	3.61	0.44	
SB	4.48	0.83	\checkmark
SC	4.33	0.85	\checkmark
LS	4.24	0.75	\checkmark
LA	3.33	1.16	
LU	4.30	0.77	\checkmark
PW	4.67	0.48	\checkmark
CD	4.35	1.01	
PA	3.60	0.79	
PC	4.21	0.93	\checkmark
PT	4.09	0.88	\checkmark
PD	4.12	0.67	\checkmark

Moreover, a meeting was held and the interviews for the group of experts were administered based on the AHP. Data was collected from thirty-two experts' opinions using Saaty's 1–9 scale of pairwise comparisons for these eight indicators. Respondents had to re-evaluate the factor weightings until the Consistency Ratio (CR) was achieved below 10%. The CR in this research was calculated to be 1.58%, and this matrix thus was considered to be consistent. The final weights of the eight indicators are shown in Table 2.

	SB	SC	LS	LU	PW	PC	PT	PD	Final Weight (%)
SB	1	1	2	1/2	1/2	1/2	1/3	1/5	6.07
SC	1	1	1	1/3	1/3	1/3	1/3	1/5	4.78
LS	1/2	1	1	1/3	1/3	1/5	1/5	1/7	3.70
LU	2	3	3	1	1	1	1/2	1/3	11.61
PW	2	3	3	1	1	2	1	1/2	14.53
PC	2	3	5	1	1/2	1	1/2	1/3	11.35
PT	3	3	5	2	1	2	1	1/2	17.76
PD	5	5	7	3	2	3	2	1	30.21
CR					1.58%				

Table 2. Result of Decision Matrix and Final Weights of Indicators.

4.2. Residents' Social Profiles

A total of 300 residents were involved, and 285 questionnaires were ultimately valid with an effectiveness rate of 95% rectified, and filtered based on the requirements of completeness of the questionnaire and the research demands in this investigation. Table 3 shows descriptive statistics for respondents' social profiles.

Social Profiles	Category	Number	Ratio	Variable Treatment	
Conder	Male	145	50.88%	Categorical Variables: 0—Male;	
Gender	Female	140	49.12%	1—Female	
	Below 18 years	17	5.96%	Ordinal Variables, 1 Polosy 19	
1 50	18–45 years	129	45.26%	Vigena 2 18 45 Vigena 2 4((0	
Age	46–60 years	108	37.89%	Years; 2—18–45 Years; 5—46–60	
	Above 60 years	31	10.88%	Tears; 4—Above 60 Tears	
Marital Status	Married	205	71.93%	Categorical Variables: 0—Married;	
	Unmarried	80	28.07%	1—Unmarried	
	Primary School and Below	10	3.51%	Ordinal Variables: 1—Primary	
Education Level	Junior High School	60	21.05%	School and Below; 2—Junior High	
	Senior High School or	10/	44.21%	School; 3—Senior High School or	
	Technical Secondary School	120		Technical Secondary School;	
	College or Above	89	31.23%	4—College or Above	
Income Level (CNY/month)	<3000 (\$458) 1	113	39.65%		
	3000–7999 (\$1220) ¹	122	42.81%	Ordinal variables: $1 - <3000;$	
	8000-14,999 (\$2289) 1	40	14.04%	2 = 3000 = 7999; 3 = 8000 = 14,999;	
	≥15,000 (\$2289) ¹	10	3.51%	4-215,000	

Table 3. Description of the respondents' social profiles.

¹ The all data of Unitied Stated dollar were converted by Google in 27 April, 6:44 A.M. UTC.

The sample attributes are summarised in a graphical approach in Figure 4. Males and females accounted for 50.88% and 49.12%, respectively, with a balanced proportion between them. Most of the residents were aged from18–60, and the elderly population over 60 exceeded 10%, indicating that the ageing of the population occurred in the Yongtai community (The population aged 60 and above accounts for 10% of the total population or the population aged 65 and above accounts for 7% of the total population in an ageing community). The number of married residents was more than that of the single residents, with more than 70% of the population having started their families. The majority have achieved high school degrees or above (75.44%) while primary school completion accounts for 82.46%, indicating that residents' income was at the middle and lower levels.

4.3. Descriptive Analysis

The statistical results show that residents' participation varies across different dimensionalities (Figure 5). The highest score was attributed to the SB (with an average score of 3.78), followed by the LS (3.61), SC (3.56), and LU (3.06). The residents' PD, PW, and PC were moderately acquainted, with an average score of 2.80, 2.59, and 2.13, respectively. Moreover, their PT was significantly low, at only 1.65. This indicates that their PT largely restricts the increase of residents' participation in the Yongtai community micro-regeneration project.

More narrowly, 65.26% and 50.53% of residents said the SB and SC built in the community micro-regeneration projects were strong, respectively. None of them thought the two types of sensing were very low, reflecting that they could unite to solve problems when they met. Although 6.66% of residents were not satisfied with this, more than half of the residents (57.19%) were satisfied with the results of the projects. 46.32% of residents had a general understanding of the regeneration plans, but almost a quarter of the residents did not understand the projects. In comparison, only 5.28% knew very well, indicating the weak publicity for the plans. Information about the projects was mainly gleaned through the community bulletin board, neighbourhood notification, and from the community manager directly. At the same time, the residents' symposia and the hotline were less visited, indicating that the participants preferred new media and other direct ways. However, the community's investment in the promotion of projects focused on bulletin boards, leaflets, and other traditional means, indicating that publicity needed to be improved. Moreover, only 15.44% of the residents regularly reported their opinions and suggestions to the community management agencies about the projects, paying little attention to these. Most residents express their opinions and suggestions by directly presenting their opinions to community managers, indicating that they prefer direct communication with managers. 66.32% did not spend time on the projects and lacked enthusiasm for the operation and management of the projects, making it difficult to perform follow-up and continuous supervision. Only 1.75% of the residents felt that they were deeply involved in the project, meaning that most residents were only at the level of awareness.



Figure 4. The sample attributes (Source: Compiled by the researcher).

In summary, the residents had a high degree of passively receiving information, but a low degree of enthusiasm for active interactive activities, indicating that they were still in the stage of tokenism participation [31]. Most residents had a sense of community belonging and cohesion and were satisfied with the results of the projects. However, they rarely participated in the projects in person and lacked enthusiasm for the operation and management of these projects, making it difficult to form sustainable and effective management and supervision mechanisms.



Figure 5. Characteristics of residents' participation in the community micro-regeneration projects (Source: Compiled by the researcher).

4.4. Regression Analysis

The stepwise linear regression was utilised to obtain the estimation results of the influence of residents' social profiles on their participation levels (Table 4). The three regression models were statistically significant, as the ANOVA test confirmed their effectiveness (F = 9.503, 7.183, 6.226; p < 0.05).

Indonon dont Variable	Model 1		Model 2		Model 3				
Independent variable	β	<i>p</i> -Value	β	<i>p</i> -Value	β	<i>p</i> -Value			
Gender (vs. Male)									
Female	-0.055	0.350	-0.054	0.356	0.043	0.465			
Age (vs. Below 18 years)									
18–45 years	-0.031	0.612	-0.064	0.310	-0.111	0.088			
46–60 years	0.044	0.470	0.059	0.334	0.084	0.170			
Above 60 years	0.180 **	0.002	0.193 ***	0.001	0.215 ***	0.000			
Marital Status (vs. Married)									
Unmarried	-0.048	0.427	-0.036	0.545	-0.049	0.415			
Education Level (vs. Primary School and Below)									
Junior High School	0.036	0.546	0.040	0.504	0.060	0.317			
Senior High or Technical Secondary School	-0.118	0.053	-0.116	0.057	-0.099	0.092			
College or Above	0.105	0.081	0.094	0.115	0.059	0.356			
Monthly Income Level (vs. <¥3000)									
¥3000–¥7999	0.127 *	0.030	0.127 *	0.030	0.174 **	0.006			
¥8000-¥14,999	0.064	0.283	0.042	0.121	0.128 *	0.042			
\geq ¥15,000	-0.005	0.931	0.017	0.770	0.038	0.523			

Table 4. Results of stepwise linear regression of the level of residents' participation.

Note: * *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001.

Table 4 shows the regression results on the level of residents' participation. The variables of residents' age and income have significant effects on their participation in the projects. The *p*-value of the age (65 years and above) and income level (between 3000 to 14,999 CNY/month) was less than 0.05, indicating that these residents' social profiles significantly impacted their participation in community micro-regeneration projects. These results showed significant positive correlations at the confidence level of 5%, indicating that those characteristics significantly influenced the level of residents' participation. In detail, compared with below 18-years and/or lower than 3000-CNY-income residents, those 65-years and above, and/or with monthly 3000 to 14,999 CNY income are willing to participate in the community micro-regeneration projects. The higher the age and/or income level, the higher the level of these residents' participation. Conversely, other aspects did not show a significant relationship.

5. Discussions

Undoubtedly, with the support from the government, China's community microregeneration projects have been shown as united and successful [23]. Residents in these projects also had a high-level of satisfaction and a sense of belonging and cohesion, contrary to the finding that most other stakeholders hold negative perceptions of public participation from Zhuang (2019) [25]. The consciousness of residents' participating awareness may lead to this transformation. Nevertheless, as stated by many scholars [19,26,27], residents' participation focussed on receiving, and understanding the information about the projects instead of becoming involved in them. Our findings also confirmed that residents' practical participation was low-level, mainly reflected in their limited participating channel and time. It was not only due to their unwillingness and low abilities but was also limited due to the constraints of the planned economy and traditional concepts [22]. Due to the top-down governance in these projects [17], the residents relied on the government's arrangements. It invested in promoting projects on bulletin boards, leaflets, and through other traditional ways while participants preferred direct and online communication with other stakeholders. This finding also confirms the concern of Sun et al., (2016) that without multiple participation channels and enough information delivered among different stakeholders, the information residents get from other channels may lead to negative affect, leading to a lack of trust in the government [38]. When the government did not provide enough convenience and trust to the residents to join in those activities, the residents were tokenistic in their approach, with strong willingness but weak personal participation demonstrated.

The regression result verified that older participants who are 65 years old or above are positive in relation to their participation in community micro-regeneration projects. On the one hand, the older group is one of the sets excluded because of their likelihood of physical frailty, loss of paid work, and age discrimination [94]. On the other hand, they were considered family leaders or breadwinners and carers before their retirement in the context of Chinese cultures [58]. Participation in community activities is regarded as a continuation of the role [95], and participating in the projects provides new role identities. They focus on opportunities to develop different types of activities as citizens during the participating process rather than on attention to the material harvest [96]. Hence, the stereotype of the older citizen should be deleted in this process and they should be encouraged to develop activities in the projects.

Existing studies discovered an association between residents' income and participation among the older residents [24,58]. Importantly, this research breaks the age limit in the context of community micro-regeneration and verifies that the middle-income level (between 3000 and 14,999) is associated positively with their participation. Caution is warranted when interpreting this finding as not all activities in the projects need to be paid. For instance, the monitoring, reporting, and supervision of public opinion are free for different types of stakeholders [27,53]. Hence, the low income itself may not be the ultimate reason for the non-participation of low-income residents. The lower participation of impoverished inhabitants may be due to the negative consequences of poverty, such as dependence and depression [24]. We encourage conducting further research to better understand the barriers to poor residents' participation.

Moreover, marital status, gender, and education level seem not to affect community micro-regeneration projects, in part, opposite to previous findings [24,57]. The reason may be that this study focuses on China's community micro-regeneration projects, which is a very specific context. Compared with the finding that participation is less likely among those living with a spouse and/or child in the context of wide social activities from Feng et al., (2020), participating in community micro-regeneration activities generally involves the family as a unit. Each family is represented but is unrelated to marital status and family size. Additionally, other than the correlation between residents' participation and education and gender in America by Ang (2019), the lack of significance between them in the context of China's projects is mainly because of differences in education priorities and community work systems. By using government and social resources, and cooperating with various service organisations, American communities can not only provide more learning opportunities for residents but also promote their participation [97]. This process mobilised residents of different educational levels and ages in the community to participate in social activities, which seems to be ignored in Chinese communities.

6. Conclusions

Again, this paper verified residents' social profiles and how they influenced their participation in community micro-regeneration projects in China. Their participation was still in the stage of tokenism, where they had a high level of passively receiving information but low-level enthusiasm for active interactive activities. Moreover, an evaluation system for residents' participation in the projects was established, and its evaluation results indicated that the older (65-years and above) and the middle-income group (between 3000 and 14,999 CNY/Month) were positively associated with their participation in the projects. Additionally, marital status, gender, and education level do seem not to show an impact on community micro-regeneration projects. This research could be particularly meaningful in directing and guiding the management and distribution of social resources.

Possible improvement should be included but is not limited to the following aspect. 'Selective Incentives' for the older and middle-income residents can be carried out. Incentives refer to rewarding or punishing those who contribute to the collective to make up for and reduce their economic interests, social prestige, and psychological expectations and punish those who do not bear the responsibility and cost of collective action. Individuals with high rates of participation in and contributions to the group should be rewarded.

7. Limitations and Further Study

As an exploratory study, this research still has shortcomings, such as small total sample size and a lack of comprehensive data covering the whole city. Whether it applies to other regions needs further exploration as this study is based on micro-regeneration projects' characteristics and practical experience in Guangzhou's Yongtai community. However, this can provide a reference for establishing an evaluation framework and factor analysis in other places. Furthermore, residents' social profiles are identified to distribute finite resources more efficiently and enhance the governance of engagement processes. Although this research focuses on the Yongtai community, the defined latent components can be used to empirically evaluate residents' participation in other settings, especially where resident participation is desperately needed. Still, expertise in directing participatory activities is minimal.

The present research on China's residents' participation in old community microregeneration is still limited. In future research, developing a theoretical framework of public participation in the Chinese context, a more comprehensive evaluation system, and targeted refinement analyses with local different characteristics are directions in this field. They can further realise the rational distribution of social resources and promote the development of the theory and practice of public participation in urban regeneration in China and even other developing countries.

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