Article

To Have Versus To Have Not: A Cross-City Configurational Analysis of Social Service Contracting

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Abstract

This study employs a fuzzy-set qualitative comparative analysis to explore how combinations of demand- and supply-side factors jointly shape the scale of government-nonprofit contracting in social services across 38 Chinese cities. Our analysis reveals a huge disparity by identifying two pathways to large-scale government contracting for "to-have" (well-resourced cities with low service needs but a well-developed nonprofit sector) versus the other two pathways to small-scale government contracting for "to-have-not" (poorly-resourced cities with an underdeveloped nonprofit sector struggling with meeting high service needs). The study contributes to the literature by highlighting how different demand- and supply-side factors can complement each other to form different combinations in shaping the scale of government contracting with new empirical evidence from an authoritarian context. The rise of government-nonprofit contracting in China is more supply-driven, reflecting the government's active role in cultivating the nonprofit sector development. The findings also raise an important policy issue of accessibility and equity in social service provision.

Keywords

government contracting, government-nonprofit relations, qualitative comparative analysis

Introduction

Governments are increasingly using government-nonprofit contracting to deliver government funded services. Instead of directly delivering services to citizens, governments contract-out to nonprofit organizations as third-party actors to deliver publicly funded services. According to the studies on third-party governance (Salamon, 1987), hollow state (Milward & Provan, 2000), and government-nonprofit partnership (Brinkerhoff, 2002), government funding of nonprofit activities in service delivery has become a widespread public management practice. Literature has widely documented the significant scale of government-nonprofit contracting in various countries (e.g., Dong & Lu, 2021; Heinrich & Choi, 2007; Peng et al., 2020; Petersen et al., 2015). For example, in the United States, government agencies award nearly two hundred thousand contracts and grants to human service nonprofits valued at more than $100 billion in any given year (Boris et al., 2010). In European countries like Austria and Belgium, nearly 50 percent of nonprofits' revenue originates from public agencies (Neumayr et al., 2015; Verschuere & De Corte, 2015).

Given the significant use of government-nonprofit contracting in the public service delivery landscape, the underlying factors of government contracting-out decisions attract substantial scholarly attention (e.g., Bel & Fageda, 2009; Brudney et al., 2005; Fernandez et al., 2008; Hefetz & Warner, 2012; Warner et al., 2020). Governments typically face a choice between in-house production and contracting-out services for citizens. Many researchers examine this make-or-buy decision, that is, what leads governments to contract-out service delivery? Generally, contracting-out determinants can be analyzed from both demand and supply sides (Ferris & Graddy, 1986; Kettl, 1993). The demand-side analysis emphasizes the importance of citizen's service demand in shaping government contracting-out decisions and proposes demand-side factors such as citizen perception, population diversity, and service characteristics (e.g., Bel & Miralles, 2003; Brown & Potoski, 2003; Garrow, 2014). In contrast, the supply-side analysis

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highlights the effects of service supply characteristics on government contracting-out and points to supply-side factors including a government's fiscal condition and market competition (e.g., Hefetz & Warner, 2004; O'Toole & Meier, 2004; Warner et al., 2020).

Our existing knowledge on contracting-out determinants is deficient for two reasons. First, methodologically, the extant studies typically rely on regression analysis to gauge the marginal effects of single demand- or supply-side factors on explaining contracting-out, without accounting for the configurations of those factors.[1] Contracting-out is a complex public management decision simultaneously driven by a mix of demand- and supply-side factors through different causal paths. The sole focus on individual effects may fail to unpack the causal complexity underlying contracting-out decisions. Second, empirically, the existing knowledge on contracting-out determinants largely rests on public management practices in Western democratic regimes, with very limited attention paid to non-Western regimes. The applicability of the "Western knowledge" to other institutional contexts, especially authoritarian ones where state, market, and civil society interact differently, requires further exploration. These two intellectual gaps serve as the motivation for our study.

In this study, we follow a configurational perspective to explore a research question: what combinations of demand- and supply-side factors jointly shape the scale of government-nonprofit contracting in an authoritarian context? We approach this question with a fuzzy-set qualitative comparative analysis (fsQCA) of government-nonprofit social services contracting in China. Specifically, we explore different configurations of demand-side factors (the percentage of poverty population and the percentage of population with access to unemployment insurance) and supply-side factors (the number of nonprofit organizations, nonprofit sector employment, and total government expenditure) leading to large- and small-scale of government-nonprofit contracting in social service provision across 38 Chinese cities.

Our analysis identifies four configurations of demand- and supply-side factors leading to large- and small-scale of government-nonprofit contracting, demonstrating a contrasting pattern of "to-have" versus "to-have-not" among these 38 Chinese cities. We used "to-have" to refer to the groups of well-resourced cities with large-scale contracting whereas "to-have-not" to the groups of poorly-resourced cities with small-scale contracting.[2] Specifically, two pathways consistent with large-scale government-nonprofit contracting cover well-resourced governments with low service needs but a well-developed nonprofit sector ("to-have"); the other two pathways consistent with small-scale government-nonprofit contracting include poorly-resourced governments with an underdeveloped nonprofit sector struggling with meeting high service needs ("to-have-not"). Moreover, compared with demand-side factors, supply-side factors seem to drive government-nonprofit contracting in China in a more forceful way. To our knowledge, our study represents the first empirical study on Chinese government contracting-out determinants. Although the cities under study are not a representative sample of Chinese cities and thus the findings might not be generalizable, this explorative study motivates and informs a fresh examination of different combinations of demand- and supply-side factors and contributes new empirical evidence from an authoritarian context.

Literature Review: Existing Theories and Expectations

Since the 1980s, contracting-out has become a widespread government tool for public service delivery in various countries around the globe (Pollitt & Bouckaert, 2004). Government contracting refers to "a business arrangement between a government agency and a private entity in which the private entity promises, in exchange for money, to deliver certain products or services to the government agency or to others on the government's behalf" (Kelman, 2002, p. 282). Through contractual relationships, governments rely on third-party actors to produce and deliver publicly-funded services to citizens. Given the significant use of government contracting for service delivery, a lingering line of inquiry in government contracting exploration aims to understand what leads governments to contract-out service delivery, rather than providing services directly using public employees ("make-or-buy decisions"). The long volume of literature identifies contracting-out as driven by a myriad of economic, managerial, political, ideological, and demographic forces (e.g., Bel & Fageda, 2009; Brudney et al., 2005; Hefetz & Warner, 2012; Petersen et al., 2015; Schoute et al., 2018). In addition, we must better understand what drives governments to contract-out more and less, once they decide to do so. We focus on one demand-side factor and two supply-side factors in this study and examine how they jointly influence the scale of government-nonprofit contracting across jurisdictions.

Demand-Side Factor

Extant studies consider the role of population heterogeneity as a proxy for demand heterogeneity in shaping government-nonprofit contracting (e.g., Feiock & Jang, 2009; Garrow, 2014; Lecy & Van Slyke, 2013; Matsunaga et al., 2010). Government failure theory highlights diverse service demand in explaining the existence of nonprofit organizations in market economies (Weisbrod, 1988).[3] According to the theory, nonprofits are established to fill the service gap left by government provision, a gap caused by tension between diverse service needs and a majority voting system. A demographically diverse population expects the government to be more responsive to the needs of various groups. However, the quality and quantity of government provision is determined by a majority of voters through the political process, inevitably

leaving certain service needs unsatisfied. As a result, the government fails to meet the needs of all citizens. Under this circumstance, nonprofits can position themselves as supplements to fill the needs left unfulfilled by the government. In contrast, Salamon (1987) interdependence theory challenges the government failure theory's notion that government and nonprofits compete to deliver services and argues government and nonprofits can forge collaborative relationships through financial tools like contracts and grants to jointly serve citizens' needs. For example, nonprofits' social mission, community expertise, and programmatic flexibility could help governments deliver services in a more effective way; governments' funding stability and programmatic accountability can help nonprofits overcome their weakness. In this way, the government and nonprofit sector can each compensate for each other's strengths and weaknesses to mutually address diverse service needs.

Empirical evidence supports the positive association between a jurisdiction's service demand and its scale of contracting-out. For example, Feiock and Jang (2009) found U.S. local governments in racially diverse communities are more likely to contract-out elder services to nonprofits. According to Garrow (2014) study of human service nonprofits in Los Angeles, nonprofits located in neighborhoods with higher percentages of minority residents and greater poverty rates receive more government funding for service delivery. Lu (2016) reported U.S. states with higher degrees of population heterogeneity (across multiple demographic dimensions such as race, income level, and employment status) tend to use contractual networks with nonprofits more often. In sum, we posit: *a jurisdiction with a more diverse population is more likely to have larger-scale government-nonprofit contracting*.

Supply-Side Factors

Two factors have been extensively studied on the service supply side: market size (nonprofit sector size) and government fiscal prosperity (e.g., Hefetz & Warner, 2004; O'Toole & Meier, 2004; Rho, 2013; Schoute et al., 2018). Market size informs government contracting-out decisions in two ways. First, when public managers deliberate on the possibility of contracting-out, they must first ensure a provider market exists for the services they want to buy (Kettl, 1993). If such a market does not exist to meet government's demand, contracting-out becomes technically infeasible. Second, market size directly shapes market competitiveness. Economic theory considers competition as a fundamental premise of a fully functioning market. Contracting-out is more likely to be beneficial in a competitive market with multiple vendors (Savas, 2000). Literature states public managers always take measures to sustain and enhance the number of vendors in the market from which they purchase services (Girth et al., 2012; Graddy & Chen, 2006). Although no clear definition exists regarding the specific number of vendors required to warrant sufficient competition, a larger market size usually establishes a higher degree of competition (Hefetz & Warner, 2012; Jing & Chen, 2012; Lamothe & Lamothe, 2010). Ni and Bretschneider (2007) reported U.S. state governments facing larger markets of computer-related service providers contract-out more e-government services. Feiock and Jang (2009) discovered U.S. local governments are more likely to rely on nonprofits as contractors in communities with larger numbers of nonprofits as potential service providers. Hefetz and Warner (2004) and Girth et al. (2012) found U.S. local governments are less likely to contract-out when market competition decreases. In sum, in the context of government-nonprofit contracting, we expect: *a jurisdiction with a larger nonprofit sector to be more likely to have larger-scale government-nonprofit contracting*.

Financial considerations also shape a government's contracting-out decision. Current literature extensively discusses the influences of fiscal prosperity in governments. A dominant argument is that governments operating with limited resources are more likely to engage in contracting-out, because contracting-out has the potential of cost savings due to economies of scale and market competition (Savas, 2000). This efficiency gain makes contracting-out particularly appealing to governments under financial pressures to manage limited resources: if contracting-out produces less costly services, governments may have to contract-out to afford the services.[4] As a result, under-resourced governments are more inclined to consider contracting-out (Bel & Fageda, 2009; Savas, 2000; Warner et al., 2020). Brudney et al. (2005) found U.S. government agencies tend to spend larger proportions of their budgets on public service contracting in states with lower levels of revenue capacity. Schoute et al. (2018) echoed that Dutch municipalities in a better financial position are less likely to contract-out local services.

However, this line of argument and supporting evidence is not immune to challenges, since there is empirical evidence showing that contracting-out does not always lead to cost saving (Bel et al., 2010; Petersen et al., 2018). Previous studies suggest contracting-out is also appealing to resourceful governments for at least two reasons. First, contracting management typically incurs substantial transaction costs throughout the contracting process (e.g., contract negotiation and oversight), and thus only wealthier governments have the financial capacity to contract-out services (Bel & Fageda, 2009; Brown & Potoski, 2003; Hefetz & Warner, 2012). Second, contracting might be used when slack resources are available to enhance noncore services (i.e., services that are nice to offer if resources are available) (Ni & Bretschneider, 2007; O'Toole & Meier, 2004). For example, economically affluent school districts in Texas tend to contract-out more (Rho, 2013). Petersen et al. (2015) found economically prosperous municipalities in Denmark are more likely to contract-out social services. In sum, we follow O'Toole and Meier (2004, p. 348) argument that *the relationship between contracting-out and government's fiscal prosperity "might*

work in either direction, therefore, depending on the kinds of pressures and incentives working on decision makers."

A Configurational Approach

Although existing studies have examined the demand- and/or supply-side factors of government contracting-out, the findings from the literature are still inconsistent. These competing theoretical arguments and empirical results call for further investigation. Previous studies mostly rely on statistical regression analysis, which aims to tease-out the separate effect of a single cause. As a result, the joint effects of these demand- and supply-side factors have yet to be sufficiently explored.

According to a configurational approach in organizational studies, one specific organizational outcome of interest stems from the interdependence and combination of multiple organizational factors (Fiss, 2011; Furnari et al., 2020; Meyer et al., 1993). In other words, the influence of one factor may interact with other factors in leading to an outcome, and thus we must take a holistic perspective towards examining those factors. For example, we posit the effect of governments' fiscal prosperity on contracting-out may be contingent on demand-side factors. In this way, government contracting-out decisions are best understood as being driven by combinations of multiple interdependent causal conditions. This configurational approach allows us to delve into the combinations of demand- and supply-side factors as well as their relative importance in shaping government contracting-out decisions.

This study adopts a configurational approach to analyzing interactions among demand- and supply-side conditions, illustrated in Figure 1. The biggest circle represents the scale of government-nonprofit contracting. The smaller circles within it refer to contributing factors. The sign of "+" indicates positive impacts of individual conditions whereas "−" represents negative one.

Our configurational analysis will reveal the potential joint effects of conditions, represented by overlapping areas in Figure 1. Specifically, our analysis can test at least four configurational hypotheses informed by existing theories:

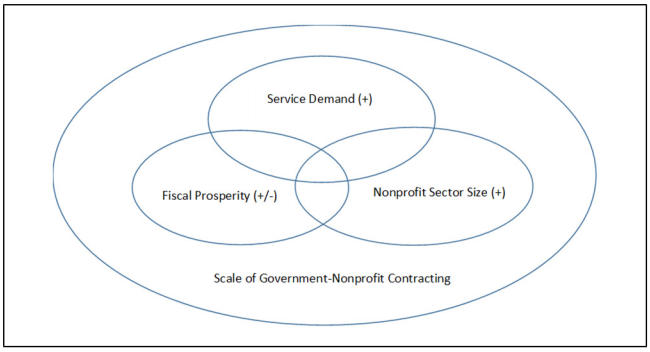

Figure 1. A configurational analysis of government-nonprofit contracting.

H_1: If government and nonprofits are interdependent, a combination of high service demand, high government fiscal prosperity, and well-developed nonprofit sector should lead to large-scale government contracting.

H_2: If government failure theory holds, a combination of high service demand, low government fiscal prosperity, and well-developed nonprofit sector should be associated with small-scale contracting.

H_3: If government contracting is driven by government prosperity as a supply-side factor, a combination involving low service demand, high government fiscal prosperity, and small nonprofit sector should result in large-scale government contracting.

H_4: If government contracting is shaped by a jurisdiction's nonprofit sector size, the same combination should be associated with small-scale government contracting.

Empirical Setting: Government-Nonprofit Contracting in China

We explore our research question using data from government-nonprofit social service contracting in China. The government-nonprofit relations in China have changed dramatically in the past half-century (Frolic, 1997; Ma, 2005). Historically, nonprofit activities were discouraged by the authoritarian regime after the founding of the People's Republic of China in 1949. However, since the open-door reform in the late 1970s, especially the transition from a command-based to a market-based economy, the Chinese regime has adopted increasingly favorable policies towards nongovernmental actors, making it possible for nonprofits, especially service delivery nonprofits, to develop and flourish (Ho, 2007; Howell, 2015; Spires, 2011; Zhan & Tang, 2013).[5] As a result, the Chinese nonprofit sector has seen tremendous growth in its size and impact in the past several decades. According to the Ministry of Civil Affairs of China (2020), responsible for nonprofit registration and supervision, 866 thousand registered nonprofit organizations existed in mainland China as of 2019. The nonprofit sector is now an active player in the policy process and social service delivery across a variety of fields including environmental protection, poverty reduction, education, and healthcare (e.g., Ho, 2007; Jing, 2018; Li et al., 2017; Teets, 2012).

A unique feature of government-nonprofit relations in China is the decisive role of government in the development of the nonprofit sector (Frolic, 1997; Spires, 2011; Zhang & Guo, 2021). On the one hand, the Chinese regime is concerned about the power of nonprofits and thus seeks to maintain control over its development. As a result, the regime employs various coercive and co-optative tactics to minimize the sector's expressive function, but to encourage the sector's service function (Hildebrandt, 2011; Howell, 2015; Spires, 2011). On the other hand, cooperating with government is a strategic choice for many nonprofits to achieve a favorable operating environment and legitimacy. Nonprofits

are thus interested in building a close relationship with government and serving government priorities and policies (Ho, 2007; Ni & Zhan, 2017). Put together, Chinese nonprofits are often symbols and instruments employed strategically by the party-state regime to manage a rapidly growing economy and changing society (Frolic, 1997; Spires, 2011). It is in this institutional environment that government-nonprofit contracting emerges.

After decades' rapid social and economic transformations, the party-state system can no longer dominate social affairs and mobilize resources to address the increasingly pluralistic social needs. The Chinese regime thus began to work with nonprofits to tap private resources and community expertise to supplement government service provision (Ma, 2005; Whiting, 1991). By recognizing the positive role nonprofits play in serving vulnerable populations and mitigating social conflicts, the Chinese government started to hand certain service provision over to nonprofits by purchasing their services. Through contracting with nonprofits, the regime not only improves social welfare and political stability, but also enhances the nonprofit sector's service function and minimizes its expressive function (Howell, 2015; Zhao et al., 2016). Nonprofits are also interested in becoming government contractors and then building financial ties to government to boost their legitimacy and operations (Jing, 2018; Ni & Zhan, 2017).

Although local experiments on service contracting can be traced back to the 1990s, significant expansion of government-nonprofit contracting for service delivery across Chinese territory did not occur until the 2010s when the central government issued a series of regulatory documents to urge and guide government contracting with nonprofits (refer to Wang & Snape (2018) for a more comprehensive review of the development of government-nonprofit contracting in China). For example, the State Council issued the Guiding Opinion on Government Purchase of Services from Social Forces in 2013, which provides guidance on government-nonprofit contracting practice across the country. The Ministry of Finance issued the Guiding Opinion on Supporting the Cultivation of Social Organizations through Government Purchase of Services in 2016, urging governments at all levels to increase their purchase of services from nonprofits and ensure at least 30 percent of new public service procurement occurs through nonprofit contracting. Since then, contracting-out has emerged as an important mechanism increasingly used by governments to procure a wide range of social services from nonprofits to meet diverse service demands.

Despite its growing popularity, government-nonprofit contracting still faces various implementation challenges. For example, Jing and Chen (2012) and Jing (2018) documented that contracting programs usually do not have enough nonprofits in the bidding process to compete for government contracts. Teets (2012) found that government-nonprofit contracting increases the pluralism in local service delivery, but ineffective government monitoring measures may undermine service quality. Chan and Lei (2017) noted that due to the lack of appropriate legislations to protect contractor rights, local governments may treat contractors as their subordinate administrative agencies and require them to take on duties beyond contracts. Several studies suggest that funding agencies often award contracts to nonprofits with government connections (e.g., nonprofits having people with government working experience on governing boards, or nonprofits created by government) (Dong & Lu, 2021; Ni & Zhan, 2017).

Method: A Fuzzy-Set Qualitative Comparative Analysis (fsQCA)

In line with a configurational approach, this study employs a qualitative comparative analysis (QCA). QCA is a case-oriented approach examining relationships between conditions (independent variables) and outcome variables (dependent variables), using a set theory and Boolean algebra (Fiss, 2011; Ragin, 2000, 2008). QCA provides four advantages over conventional correlation-based regressions. First, *equifinality*. Regression analyses assume linear and addictive effects of explanatory variables on the outcome. QCA helps identify multiple, different, and mutually non-exclusive sufficient conditions that influence the scale of governments contracting. Second, *conjunctural causation*. A regression approach is designed to assess the marginal effect of single variables. QCA examines all logical configurations of conditions against empirical data. Interaction terms in regressions used to test joint effects typically do not include more than two independent variables. Yet our study involves 32 combinations of five conditions. Adding multiple interaction terms also requires a large dataset to alleviate the issues of multicollinearity and stretching degree of freedom and we have only 38 cases. Third, *asymmetric causation.* Conventional regressions assume symmetric causation—if A is positively associated with B, the absence of A indicates the absence of B. Using QCA, we explored a set of conditions leading to large-scale government contracting, as well as another set of conditions resulting in small-scale government contracting. Fourth, QCA studies small-to-medium-size empirical cases (10–50) (Ragin, 2008). The QCA method includes two types of analytical approach: crisp-set QCA (csQCA) and fsQCA. The conditions and outcome in csQCA are all binary whereas fsQCA includes binary and continuous conditions and continuous outcomes. This study adopts a fsQCA approach.

Empirical Cases

The first step in any QCA study is to purposively sample cases using the outcome of interest to identify the population of cases. Purposive sampling establishes "theoretically defined" samples (Ragin, 2008, p. 4) to ensure their relevance to a research question. Comparative case data were collected from China Charity Alliance (CCA), a government-backed umbrella organization for Chinese nonprofits. In April 2018, CCA launched its data

collection effort for its 5th China City Charity Index project. CCA sent survey questionnaires to local civil affairs departments in over 400 cities across 31 provinces, autonomous regions, and municipalities to collect data on the cities' economic development, nonprofit sector, and government-nonprofit service contracting in 2016 and 2017, respectively. CCA received responses from 221 cities at the end of July 2018, including 3 municipalities, 132 prefecture-level cities, and 86 county-level cities. These cities spread across 26 provinces, covering 43 percent of prefecture-level cities, 23 percent of county-level cities, and 46 percent of the country's population. We chose prefectural-level cities (including provincial capitals) as our unit of analysis.[6] After dropping missing data, our case dataset included a total of 38 cities. To our knowledge, this is the first time for researchers to have access to government-nonprofit contracting data across Chinese jurisdictions.[7] We further supplemented the CCA data with socioeconomic data for the 38 cities. This data accrued from the Statistical Yearbook 2016/2017. To rule out potential ups and downs in our variables in a certain year, all the variables used in the analysis are averaged values between 2016 and 2017. Table 1 summarizes the variables, including their measurements, descriptive statistics, and data sources.

Figure 2 provides a visual description of the distribution of these 38 cities across China. Appendix provides the names of these cities. Although these 38 cities represent many of China's geographical regions, they do not constitute a representative sample of Chinese prefectural-level cities. Despite that, our goal for this study was not to propose generalizable results, but to explore how different theories and factors can combine in different ways to explain an outcome of interest. The key objective of QCA is to explore logical combinations of conditions through a small-to-medium-N analysis, rather than claiming generalizable results through a large-N analysis (Greckhamer et al., 2013; Rihoux & Ragin, 2009). In this sense, these 38 cities/cases are relevant to our explorative effort to unpack complex configurations of theoretically-relevant conditions in our empirical setting.

Identifying and Calibrating Outcome and Conditions

The next step is to identify the outcome and conditions and calibrate them. Calibration involves transforming raw data into case membership scores in the sets representing the outcome and conditions (Ragin, 2008). For fsQCA, researchers convert all interval conditions into a scale ranging from 0.0 to 1.0 with multiple values in-between (Ragin, 2000). A fuzzy-set calibration involves determining which raw condition values constitute full membership ("in," the 95th percentile) in a respective category (e.g., large-scale government contracting), full non-membership ("out," the 5th percentile, small-scale government contracting), and the crossover point (neither "in" nor "out," the 50th percentile, intermediate-scale). We relied on the direct method of calibration where software computes the values corresponding to the three above-mentioned threshold points based on data distribution (Ragin, 2008) for each condition and the outcome. The software then performs variable transformations into fuzzy membership scores using the three benchmarks "based on the log odds of full membership" (Ragin et al., 2006, p. 17).

Scale of Government-Nonprofit Contracting. This study's outcome of interest regards the scale of government-nonprofit contracting. The scale was measured as the total amount of money a local civil affairs department allocates to procure social services from nonprofits. Among the cities under our study, the scale varies widely from RMB 1.55 million to RMB 2,601.45 million, with a mean of RMB 260.41 million. We set the large-scale benchmark to RMB 1.13 billion (the 95th percentile of all cases), the crossover point to RMB 59.1 million (the 50th percentile), and the absence of large-scale (in other words, small-scale, or fully-out) to RMB 2.03 million (the 5th percentile).

Demand-Side Conditions. Previous literature employed various demographic indicators to capture population heterogeneity as a multidimensional construct (see Lu (2020) and Matsunaga et al. (2010) for reviews). We used two conditions to gauge service demands in this study: poverty population and population with access to unemployment insurance.[8] Following the existing literature (e.g., Lecy & Van Slyke, 2013; Matsunaga et al., 2010; Peck, 2008), both conditions are measured using percentages. The first demand-side condition is *Poverty Population*, measured as the percentage of population below the poverty line. We expected cities with high poverty population to have large-scale government contracting. We calibrated the full membership at 6.53 percent, the crossover point at 1.17 percent, and non-membership at 0.14 percent. We used *Population with Access to Unemployment Insurance,* the percentage of population with access to unemployment insurance, as the second demand-side condition, setting the 95th percentile benchmark to 49.26 percent, the 50th percentile to 16.69 percent, and the 5th percentile to 6.30 percent. Access to unemployment insurance indicates less service need; therefore, we expect this condition to reveal small-scale government contracting.

Supply-Side Conditions. This study includes three supply-side conditions. First, we employed two conditions following the existing practice in measuring nonprofit sector size (see Lu & Xu (2018) for a review). *The Number of Nonprofit Organizations* refers to the total number of registered nonprofits in a city (Kim, 2015; Lecy & Van Slyke, 2013; Ni & Zhan, 2017). We set the threshold for the number of nonprofits (i.e., fully in) to 12,026.70 (approximately the 95th percentile), 4,553.50 as neither (the 50th percentile), and 725.15 as fully-out (approximately the 5th percentile). *Nonprofit Sector Employment* was measured as the total number of people employed by the nonprofit sector in a city (Ben-Ner & Van Hoomissen, 1992; Matsunaga et al., 2010). The thresholds of full membership were set to 151,256.20 persons, the

Table 1. Description of Outcome and Conditions ($N = 38$).

	Expected impact on outcome	Measurement	Mean	*SD*	Min	Max	Data source
Outcome							
Scale of government-nonprofit contracting		Total amount of money a local civil affairs department spends in procuring services from nonprofits in a city (in million RMB)	260.41	535.39	1.55	2,601.45	China Charity Alliance Survey
Demand-side conditions							
Poverty population	+	Percentage of population below the poverty line in a city (in %)	1.93	2.30	.05	9.70	Statistical Yearbook 2016 and 2017
Population with access to unemployment insurance	+	Percentage of population with access to unemployment insurance in a city (in %)	21.82	16.15	3.06	86.58	Statistical Yearbook 2016 and 2017
Supply-side conditions							
Number of nonprofits	+	Total number of registered nonprofits in a city	5,190.66	3,312.73	588	13,491	China Charity Alliance Survey
Nonprofit sector employment	+	Total number of people employed by the nonprofit sector in a city	50,013.08	49,048.20	1,495	186,946	China Charity Alliance Survey
Total government expenditure	+/−	Total amount of government expenditure in a city (in billion RMB)	91.52	87.50	10.73	440.25	China Charity Alliance Survey

Note: All the conditions used are averaged values between 2016 and 2017. "+" indicates a positive impact whereas "−" represents a negative impact.

crossover point to 35,670.75, and non-membership to 3,091.80. A larger nonprofit sector, measured by the number of organizations or by size of employment, was expected to reveal large-scale government contracting.

Second, we measured the city's fiscal prosperity as *Total Government Expenditure*, like previous studies (e.g., Lecy & Van Slyke, 2013; Stater, 2010). The thresholds of full membership (the 95th percentile) were set to RMB 279.4 billion, the crossover point (the 50th percentile) to RMB 69.4 billion, and non-membership (the 50th percentile) to RMB 16.6 billion. A larger total government expenditure may relate to either small- or large-scale government contracting.

Analyses

We used fsQCA 3.0 (Ragin et al., 2006) to perform analyses. We first followed Ragin (2000) to examine necessary condition. None of the five conditions met the consistency threshold of 0.90 and therefore no necessary condition was identified. The next step in our analysis involved creating a "truth table," a data matrix summarizing the property space occupied by our five conditions. The analyses were then performed on the Boolean property space comprised of 2^k logically possible combinations, where k is the number of causal conditions under consideration. In our study, five conditions yielded $2^5 = 32$ combinations.[9]

We followed the standard practice by employing a threshold of at least one case for each configuration and set the priori minimum consistency threshold at 0.75 (Ragin, 2008). For fsQCA consistency, it is a ratio of the sum of membership scores of cases with a combination of conditions that also displays the outcome over the sum of membership scores of the total number of cases with the same combination of conditions. Low consistency indicates a given configuration is not reliably related to the outcome of interest; high consistency means a given configuration of factors almost always leads to the outcome of interest (Misangyi & Acharya, 2014). In contrast, coverage refers to the degree to which cases sharing an outcome display the same combination of conditions. Its computation is to divide the sum of membership scores of cases with a combination of conditions that also displays the outcome by the sum of membership scores of the total number of cases with the same outcome. Consistency and coverage share the same numerator but with different denominators.

The truth table configurations were simplified, or logically reduced, using the software's Boolean algorithm (Ragin et al., 2006). The final analysis generated three solutions:

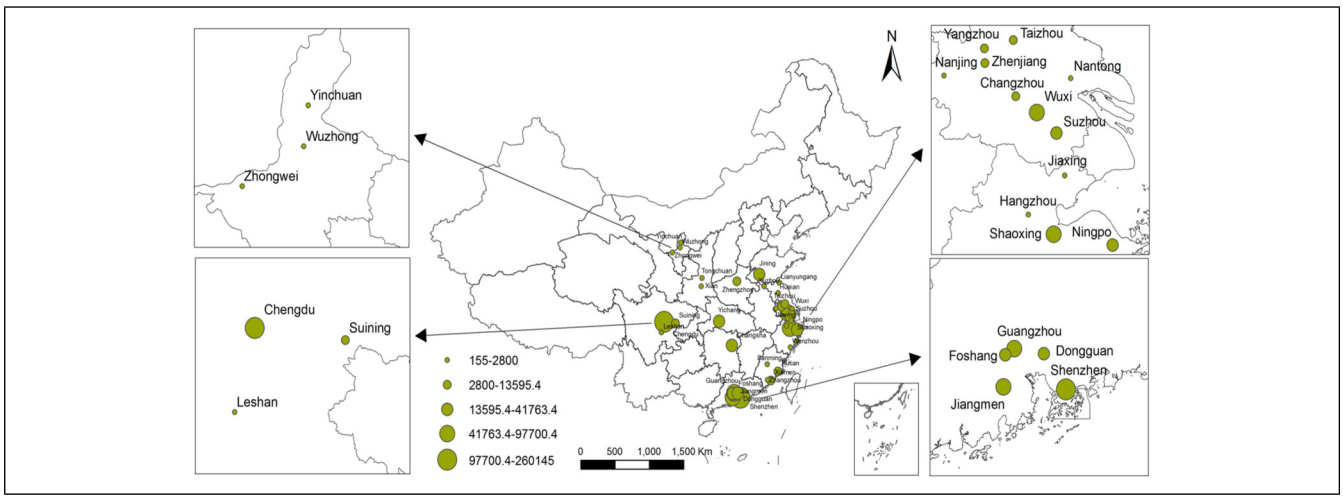

Figure 2. Distribution of the Chinese cities under study. *Note*. The size of a dot in the map represents the average amount of money (in RMB 10,000) a city spent in contracting with nonprofits in 2016 and 2017, with a larger dot indicating a larger amount.

complex, parsimonious, and intermediate. We followed extant studies (e.g., Fiss, 2011) to examine parsimonious and intermediate solutions, which allowed us to determine core and peripheral conditions. Core conditions have strong causal relationships with the outcome whereas peripheral ones have weak causal relationships. Core conditions are identified as those present not only in intermediate but also in parsimonious solution, while peripheral conditions are only present in intermediate solution but absent in parsimonious solution (Misangyi & Acharya, 2014). Finally, we repeated the analyses to produce the configurations of conditions leading to small-scale government contracting.

With respect to measuring service supply (i.e., number of nonprofits, number of nonprofit sector employees, government expenditure), some previous studies use per capita measures while others use total amount measures (e.g., Kim, 2015; Lecy & Van Slyke, 2013; Matsunaga et al., 2010; Ni & Zhan, 2017; Stater, 2010). Our treatment is consistent with the latter body of literature. We checked the robustness of our results by first performing bivariate correlational analyses of total and per capita values on social service procurement from nonprofits, number of nonprofits, nonprofit sector employment, and government expenditure. Correlational coefficients are reasonably high, suggesting the identical distributions of case values across two different measurements. We then reran QCA analyses using per capita measures of outcome and supply-side conditions, and the results are largely consistent. We decided to use the current results because they have a better model fit and cover more cases.

Results

Table 2 reports the four configurations generated by our analysis. Each column represents a configuration on combination of demand- and supply-side factors. We followed the notation Fiss (2011) and subsequent researchers applied where "●" represents the presence of a condition, "⊗" represents its absence, and a blank space indicates a "does not care" situation, meaning a given condition does not causally relate to the outcome. Moreover, larger symbols indicate the condition is core to a given configuration, while smaller symbols point to a peripheral role. The five theoretically important factors yielded an equal number of empirically-supported configurations: Configuration 1 and 2 for large-scale government contracting and Configuration 3 and 4 for small-scale government contracting.

With different configurations to both "large" and "small" outcomes, *equifinality* is clearly present. The results also reveal the combinations of factors are *asymmetric* across "large" and "small" configurations and are not simply each other's mirror opposites.

Our individual combinations show acceptable consistency levels (perfect consistency being 1), but the levels vary in degrees of coverage. In the same way multiple regressions explained variance, coverage further divides into "raw" and "unique" portions. Unique coverage explains cases in the outcome other solution terms do not cover (Ragin et al., 2006), referring to the cases each configuration uniquely covers, whereas raw coverage takes into account cases that more than one configuration cover. The difference between raw and unique coverage points to another QCA advantage —identifying multiple, non-mutually exclusive paths to the same outcome. Rather than taking only one path, cases like Chengdu, can take either of two pathways to the same outcome of large-scale government contracting.

Configuration 1: "To-Have I"

Configuration 1 includes two demand-side conditions: a low percentage of poverty population (absence) and a high

Table 2. Configurations to Large- and Small-Scale Government-Nonprofit Contracting in China.

	Large-scale contracting		Small-scale contracting	
	1	2	3	4
Demand-side conditions				
Poverty population	⊗	⊗		●
Population with access to unemployment insurance	●	●	⊗	
Supply-side conditions				
Number of nonprofits		●		⊗
Nonprofit sector employment	●		⊗	
Total government expenditure		•		⊗
Consistency	0.76	0.77	0.85	0.87
Raw coverage	0.65	0.66	0.76	0.68
Unique coverage	0.05	0.06	0.04	0.01
Overall consistency	0.76		0.78	
Overall coverage	0.70		0.88	

●: Presence of core condition; •: presence of peripheral condition; ⊗: absence of core condition; ⊗: absence of peripheral condition; Blank space indicates it does not care.

percentage of population with access to unemployment insurance (presence), as well as one supply-side condition (a large number of people employed by the nonprofit sector [presence]). The three conditions are all core conditions. The results are contrary to our expectation. We expected high service demands due to a high percentage of poverty population and low percentage of population accessing unemployment insurance, rather than a low service need (low percentage of poverty population and high percentage of population accessing unemployment insurance), in conjunction with the presence of a large provider market. This low service need and large provider market (demonstrated by the large number of nonprofit sector workers) leading to large-scale government-nonprofit contracting.

Four cities of Chengdu, Shenzhen, Wuxi, and Zhenjiang follow this pathway. The City of Chengdu represents a good example. The city seems to have relatively low service demand, which a small poverty population (0.75 percent, approximately the 35th percentile) and relatively large population with access to unemployment insurance (24.24 percent, approximately the 65th percentile) indicate. However, the city embraced a large nonprofit provider market, with 186,946 residents working in the nonprofit sector (the 100th percentile). This mix of low demand and high supply leads to large-scale government-nonprofit contracting (RMB 2.6 billion, the 100th percentile).

Configuration 2: "To-Have II"

Configuration 2 exhibits some differences from Configuration 1, as it includes one core supply-side condition (a large number of nonprofits) and one peripheral supply-side condition (high total government expenditure), in addition to two core demand-side conditions (low percentage of poverty population and high percentage of population with access to unemployment insurance). The result is also not what we expected. Even with low service need illustrated by low percentages of poverty population and high levels of access to unemployment insurance, local governments with rich financial resources, paired with the presence of a larger nonprofit sector, are able to allocate more funding to procure social services from nonprofits.

This pathway encompasses five cities: Chengdu, Foshan, Guangzhou, Shenzhen, and Wuxi. The City of Foshan is a typical example of this configuration. On the demand side, the city has a relatively low percentage of poverty population (0.29 percent, approximately the 15th percentile) and a relatively high percentage of population with access to unemployment insurance (31.39 percent, approximately the 75th percentile); on the supply side, the city has a relatively large number of nonprofits (4,554 organizations, approximately the 50th percentile) and a relatively high total government expenditure (RMB 73.54 billion, approximately the 55th percentile). The combination of these demand- and supply-side factors leads to relatively large-scale government-nonprofit contracting (RMB 0.34 billion, approximately the 80th percentile).

Put configurations 1 and 2 together, in either configuration a well-developed nonprofit sector (measured by the number of nonprofits or the number of nonprofit sector employment) is central to drive large-scale local government contracting with nonprofits. In addition, configuration 2 also suggests that government fiscal capacity, a state-led indicator gauged by total government expenditure, plays a contributing role.

Configuration 3: "To-Have-Not I"

Configuration 3 points to a cluster of less access to unemployment insurance (meaning high service demands) as a demand-side core condition, and a small number of nonprofit sector employment as a supply-side core condition. This

configuration presents a mismatch of supply with demand-side conditions: a small market of nonprofit service providers cannot meet the increasing service needs of local residents.

This pathway includes as many as thirteen cities: Huaian, Jiaxing, Leshan, Lianyungang, Nantong, Sanming, Taizhou, Tongchuan, Wenzhou, Wuzhong, Xuzhou, Yinchuan, and Zhongwei. The City of Nantong constitutes a typical case for this configuration. The city has a relatively low percentage of population with access to unemployment insurance (14.35 percent, approximately the 40th percentile) and a relatively small number of nonprofit sector employment (13,672 employees, approximately the 20th percentile). As a result of this mismatch between high demand and low supply, the city only exhibits small-scale government-nonprofit contracting (RMB 10.35 million, approximately the 30th percentile).

Configuration 4: "To-Have-Not II"

In configuration 4, a high percentage of poverty population as a core demand-side condition mixes with two supply-side conditions (small number of nonprofits as a peripheral condition and small total government expenditure as a core condition). The poorly resourced local governments are unable to support the development of the nonprofit sector to meet a high level of service demand, resulting in small-scale local government contracting.

This pathway covers 14 cities: Huaian, Jiaxing, Leshan, Lianyungang, Sanming, Taizhou1, Taizhou, Tongchuan, Wuzhong, Xi'an, Xuzhou, Yinchuan, Zhangzhou, and Zhongwei. The City of Zhangzhou represents a typical case of this configuration. The city possesses a relatively large poverty population (1.82 percent, approximately the 70th percentile) but has a relatively small number of nonprofits (1,128 organizations, approximately the 10th percentile) and a relatively small total government expenditure (RMB 4 billion, approximately the 25th percentile). As a result, the city only procures a limited amount of social services from nonprofits (RMB 28 million, approximately the 40th percentile).

In configurations 3 and 4, despite strong service demand (indicated by high percentages of poverty population or by low levels of access to unemployment insurance), insufficient supply is primarily driven by two core conditions of either an underdeveloped nonprofit sector (a small number of nonprofit sector employment) or a lack of government fiscal capacity (a small total government expenditure). Configurations 3 and 4 exhibit a fair amount of empirical overlap, despite their unique coverage, highlighting shared cases across small-scale contracting-out configurations.

In sum, large-scale government-nonprofit contracting occurs in well-resourced cities with low service needs but a well-developed nonprofit sector (configurations 1 and 2). Small-scale government-nonprofit contracting occurs in poorly-resourced cities with an underdeveloped nonprofit sector but high service needs (configurations 3 and 4). In other words, although with different configurations, we confirm the third and fourth configurational hypotheses that government-nonprofit contracting in China is primarily supply-side driven by either the nonprofit sector, government prosperity, or a combination of the two. We did not find support for the first and second configurational hypotheses following either the logic of interdependence theory or government failure theory.

Discussion

Government contracting is widely used as a service delivery mechanism in the public management landscape. Although many studies have examined various demand- and/or supply-side factors underlying government contracting-out decisions, our knowledge on the topic is still insufficient. Particularly, prior literature does not pay much attention to the combinations of these factors and government contracting practices in authoritarian contexts. To address this intellectual gap, this study employs a configurational approach to explore the research question in the context of Chinese local government contracting. The study adds to the literature by delineating different combinations of demand- and supply-side conditions that lead to small- and large-scale government-nonprofit contracting.

The empirical findings suggest demand-side factors contribute in an opposite way to the scale of government-nonprofit contracting. Specifically, high service demand consistently leads to small-scale government contracting. However, low service demand consistently results in large-scale government contracting. In the configurational logic, service demand, whether high or low, does not work in isolation. Service demand must take effect in tandem with supply-side factors. The findings suggest supply-side factors contribute in a positive way to the scale of government-nonprofit contracting. A growing nonprofit sector and rich government resources play important roles in driving large-scale government contracting, while a small nonprofit sector and poor government resources jointly contribute to small-scale government contracting. Put these demand- and supply-side factors together, unlike many western countries where government contracting involves a mix of demand- and supply-side factors, the rise of government-nonprofit contracting in China seems more supply-driven.

These empirical findings concerning the supply-side factors have two more specific theoretical implications. First, a developed nonprofit sector is a sufficient but not necessary condition to drive more local government contracting with nonprofits. This finding results in two implications. In a managerial sense, the existence of a service provider market is the prerequisite for contracting-out (Kettl, 1993; Savas, 2000), as government contracting literature suggests. In this way, a developed nonprofit sector is more likely to enable public managers to identify appropriate service providers and take advantage of the competition among multiple nonprofit vendors to enhance contracting outcomes. In a political

sense, service contracting can be a co-operative tactic used by authoritarian regimes to control the nonprofit sector. In fact, although the Chinese nonprofit sector has experienced remarkable growth in the past several decades, the government is still skeptical of civil society and thus seeks to maintain control over its development through various coercive and co-operative tactics (Hildebrandt, 2011; Hsu & Hasmath, 2014). Given the decisive role of the party-state regime, nonprofits are enthusiastic about building financial and administrative connections with the government to achieve legitimacy (Ni & Zhan, 2017). As a result, the more developed a local nonprofit sector is, the closer the relationship local government has with the nonprofit sector through contracts and other mechanisms. This model also reflects the government's active role in cultivating and controlling the development of the nonprofit sector, a pattern similar to the historical trajectory of government-led economic development in China.

Second, government resource is another sufficient but not necessary condition in forming contractual relationships with nonprofits, contingent upon the development of the nonprofit sector. Existing literature highly contests how government financial prosperity impacts contracting-out decisions. Some studies suggest under-resourced governments are more likely to contract-out services to try to decrease costs, while others argue only economically prosperous governments have the resources to navigate the complex contracting process and expand service functionality and quality through contracting-out. Our finding concurs with the latter argument. Further, government-nonprofit contracting is not a widespread public management practice for many local Chinese governments. Instead, government decision makers consider government-nonprofit contracting a government innovation. Specifically, government contracting with nonprofits "forms a bridge between old governance models and new ones, which allow for a process of administrative modernization without social instability" (Teets, 2012, p. 29). The literature on organizational innovation suggests financial slack is a critical antecedent of innovation (Nohria & Gulati, 1996; Walker, 2014). In this way, economically prosperous governments with slack resources are more likely to consider innovative solutions in their service delivery and foster the development of the nonprofit sector, increasing their willingness to contract-out.

Our study also raises an important policy issue of accessibility and equity in social service provision. Because of their chartable motive, service expertise, and program flexibility, nonprofits are usually advantageous in serving socioeconomically disadvantaged groups. However, our results illustrate a huge disparity between affluent and impoverished cities in the use of government-nonprofit contracting in delivering social services to needy citizens. Well-resourced cities with low service needs embrace large-scale government contracting, whereas poorly-resourced cities with high service needs adopt small-scale government contracting. There is a mismatch between service needs and resource availability: more needy citizens who reside in jurisdictions with less resources have less equitable access to services than less needy citizens who live in better-resourced jurisdictions. In this way, how to improve accessibility and achieve equity in the implementation of government-nonprofit contracting in social services emerges as a pressing public policy challenge. The findings also imply that nonprofits in less resourceful cities have to more actively seek resources other than government funding to serve their communities.

The present study has five limitations. First, we included five demand- and supply-side conditions in the analysis to explore their configurational effects on the scale of government-nonprofit contracting, but these conditions could not exhaust all influential factors. Part of the reason is that the QCA could not take too many conditions into consideration.[10] As a configurational method, the results are very sensitive to adding or deleting conditions. Future studies may examine other factors, especially nonmarket ones, to further explore how the authoritarian political regime shapes government-nonprofit contracting. Second, measuring service demand as a multidimensional construct is daunting. We used poverty rate and access to unemployment insurance as proxies, but it is likely that these two indicators may not capture the entire spectrum of demand heterogeneity. Future studies can include other demographic variables such as education level and urban-rural difference. Third, given the limited number of cases under study, our present research is explorative in nature, aiming to explore the logical combinations of conditions through analyzing a small number of Chinese cities, rather than producing generalizable results from a large sample. For example, we only included cities that already decided to contract-out. As such, we do not intend to claim our findings are generalizable. Fourth, the present study is cross-sectional, and thus all the caveats associated with cross-sectional analysis apply. QCA has not been well developed to analyze longitudinal data, and thus our study could not examine the effects and changes of time on the conditions and outcomes. Fifth, QCA can only identify configurations of conditions, but is unable to gauge the magnitudes of those configurational effects like the magnitudes of regression coefficients.

Conclusion

This study conducts the first configurational analysis of the combinations of demand- and supply-side factors to explain the scale of government-nonprofit contracting in the context of Chinese local contracting. The analysis identifies two pathways to large-scale government contracting and the other two pathways to small-scale government contracting. Specifically, well-resourced cities with low service needs but a well-developed nonprofit sector embrace large-scale government-nonprofit contracting, whereas poorly-resourced cities with an underdeveloped nonprofit sector struggling with meeting high service needs adopt small-scale government-nonprofit contracting. The study advances the literature on government-nonprofit contracting

not only by adding new empirical evidence from a non-Western authoritarian context but also by showing how different demand- and supply-side factors can complement each other and form different combinations in shaping the scale of government contracting. The results also illustrate a huge disparity between affluent and impoverished cities in the use of government-nonprofit contracting in delivering social services and serving needy citizens, which raises an important policy issue of accessibility and equity in social service provision.

Recent years have seen a growing renationalization of its economic sector in China. Some previously contracted-out public services, for example, transportation and sanitations, have been reversed or contracted back to state-owned enterprises (Wang et al., 2014; Wang et al., 2018). Despite this new development, as long as the government is lack of service capacity, we believe that the party-state system will pay increasing attention to employing service contracting as a mechanism of supporting the development of nonprofit organization to improve social service provision. As being indicated in a new policy document, government-nonprofit contracting will continue to be an important government practice in contemporary China (Ministry of Civil Affairs of China, 2021). We welcome future research to expand our line of inquiry to include additional conditions and analyze government-nonprofit contracting longitudinally.

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Notes

1. Studies employing regression analysis typically estimate the marginal effects of single demand- or supply-side factors on the level or likelihood of government contracting-out, holding other factors constant. For example, Lu (2016) suggested that governments are more likely to contract-out when service demand is high, ceteris paribus, Ni and Bretschneider (2007) concluded that governments are less likely to contract-out when market competition is low, ceteris paribus, and Brudney et al. (2005) noted governments under great financial stress are more inclined to contract-out, ceteris paribus. However, these studies could not explain how the combinations of these factors shape contracting-out decisions, namely, what if governments face high service demand, low market competition, *and* great financial stress?
2. These two terms were borrowed from Ernest Hemingway's 1937 novel "To Have and Have not."
3. Given the difficulty in measuring demand heterogeneity, Weisbrod (1988) suggested demand heterogeneity can be proxied by population heterogeneity in terms of income, education, gender, ethnicity, and so on.
4. In addition to contracting out, government under fiscal pressures might cut back on services provided. However, we argue that government officials prefer the first option when possible.
5. Along with the transition from a command-based to a market-based economy, the party-state system can no longer have complete control over the society, although it still plays a profound role in public and social affairs. As a result, there is a coexistence of an authority-based logic and a market-base logic in the contemporary Chinese context. Both logics shape government-nonprofit contracting.
6. We focused on prefectural-level cities because they are higher administrative units which typically govern a number of county-level cities. In other words, county-level cities are "nested" in prefectural-level cities. Including both levels of cities in the analysis will mess up our unit of analysis.
7. Within the literature on government-nonprofit contracting in China, existing empirical studies tend to rely on case studies of contracting practices in certain localities (e.g., Jing & Chen 2012; Teets, 2012) or quantitative studies of data from nonprofit charities or foundations (e.g., Dong & Lu, 2021; Ni & Zhan, 2017).
8. The use of these two conditions to measure service demand was based on three considerations: (1) these two demographic indicators have been used in previous studies to measure diverse service demand (e.g., Kim, 2015; Lecy & Van Slyke 2013; Liu, 2017), (2) these two indicators closely relate to vulnerable groups which are the main service recipients of government-nonprofit social service contracting in China (e.g., Chan & Lei, 2017; Jing, 2018; Teets, 2012), and (3) the data for these two indicators are available and consistent in the Statistical Yearbooks across different cities.
9. These 32 combinations are logically possible combinations. Empirically, not all the combinations necessarily have empirical cases, a phenomenon called limited diversity in QCA.
10. QCA typically analyzes 2^k combinations for k conditions. Our current study includes 5 conditions, and thus needs to analyze 32 possible combinations. If we increase to 6 conditions, the number of possible combinations will jump to 64, overstretching small number of 38 cases and substantially complicating our analysis.

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Appendix

See Table A1.

Table A1. Thirty-Eight Chinese Cities under Study.

#	CITY	PROVINCE
1	Changsha	Hunan
2	Changzhou	Jiangsu
3	Chengdu	Sichuan
4	Dongguan	Guangdong
5	Foshan	Guangdong
6	Guangzhou	Guangdong
7	Hangzhou	Zhejiang
8	Huaian	Jiangsu
9	Jiangmen	Guangdong
10	Jiaxing	Zhejiang
11	Jining	Shandong
12	Leshan	Sichuan
13	Lianyungang	Jiangsu
14	Nanjing	Jiangsu
15	Nantong	Jiangsu
16	Ningpo	Zhejiang
17	Putian	Fujian
18	Sanming	Fujian
19	Shaoxing	Zhejiang
20	Shenzhen	Guangdong
21	Suining	Sichuan
22	Suzhou	Jiangsu
23	Taizhou	Jiangsu
24	Taizhou1	Zhejiang
25	Tongchuan	Shaanxi
26	Wenzhou	Zhejiang
27	Wuxi	Jiangsu
28	Wuzhong	Ningxia
29	Xiamen	Fujian
30	Xian	Shaanxi
31	Xuzhou	Jiangsu
32	Yangzhou	Jiangsu
33	Yichang	Hubei
34	Yinchuan	Ningxia
35	Zhangzhou	Fujian
36	Zhengzhou	Henan
37	Zhenjiang	Jiangsu
38	Zhongwei	Ningxia

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