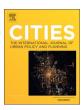
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# Unpacking the paradox of "insecure" housing rights in China: Urban residents' perceptions on institutional credibility



Ying Zheng<sup>a</sup>, Peter Ho<sup>a,b,\*</sup>

- <sup>a</sup> Zhejiang University, School of Public Affairs, Zijingang Campus, Hangzhou 310058, China
- <sup>b</sup> Department of International Development, London School of Economics, Houghton Street, London WC2A 2AE, UK

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### ABSTRACT

Formal or de jure property rights are deemed conditional for development in a neo-liberal reading. Paradoxically, real estate underwent explosive development even though China's rights for housing are informal, ambiguous, and insecure. This article intends to explain this contradiction by examining how Chinese urban residents perceive the credibility of housing rights from three perspectives, i.e., ownership, land lease, and the 70-year lease term. The study is based on a survey (n = 1207) demonstrating: i) half of the respondents are indifferent about formalization policies; ii) 92 percent have never experienced housing-related conflicts, however, of those reporting conflict, close to half indicated demolition as the source; iii) housing ownership is considered important for most while the land use (or lease) permit is considerably less relevant, and the lease term is considered insignificant. Three conclusions can be drawn. First, urban residents have no preference for a "full bundle" of formal rights. Second, although low conflict indicates credibility of the current rights structure, there are risks to social stability due to expropriation. Three, credibility hinges on combinations of (in)formality and (in)security rather than being a direct function of formalization. Findings emphasize a need to rethink the property rights theory in terms of credibility, conflict, and time.

# 1. Introduction

Real estate in China – regardless of whether that relates to residential, commercial, or non-commercial realty – has been a critical source of capital accumulation, vying interests, and social contention. During the era of centralist planning, housing was allocated by the work units (*danwei* or state-run institutions) to urban residents as a form of social welfare (Deng, Shen, & Wang, 2011, p. 169). After the abolition of state-allocated housing in 1998, real estate flourished (see Fig. 1) and catapulted the sector into what it is today: a core segment of the Chinese economy.

Despite the vigorous growth, Chinese real estate is considered to be predicated upon "imperfect", "inefficient", or "incomplete" property rights that lack the degree of formality, excludability, and security as can allegedly be observed in a "Western", developed context. This apparent paradox has attracted significant scholarly attention. Ai

(1999, pp. 86–90), for instance, pointed at the ambiguous ownership of urban land that is attributed to fragmented and overlapping authorities. Pan (2005, pp. 14-15) argued there is a misguided focus of Chinese legislation on administrative rather than civil law that results in confusion over the exact content of the "bundle of rights". To account for the paradox, some ascertained that "imperfect institutions can be efficient" which, ironically, inherently constitutes a contradictio in terminis. Others have drawn attention to the conflicts associated with informal, insecure, and ambiguous property rights and ascertained that, without further reforms, China would be heading towards a socio-economic collapse (Pei, 2008). Yet again, others contended that China's property rights structure is only temporary in nature, in effect, "second-best" and, as such, in transition to a "best" institutional constellation (e.g., Li, 1996; Qian, 1999; Zhu, 2005). However, these explanations, albeit based on a solid and comprehensive analysis, uphold the paradox: prosperity despite informal, inefficient, and imperfect institutions.<sup>2</sup>

<sup>\*</sup> Corresponding author.

E-mail address: peter\_ho@zju.edu.cn (P. Ho).

<sup>&</sup>lt;sup>1</sup> See also the "third Coase Theorem" as mooted in Lai and Lorne (2015).

<sup>&</sup>lt;sup>2</sup> Theoretically, there is no need for property rights to be perfect, efficient, or fully defined for a market to boom. According to Stephen Cheung, this was inherent to a version of the Coase Theorem which he found based in Coase's 1959 paper. Based on this finding, Lai and Lorne (2015) elucidated a Fourth Coase Theorem, positing that state rules, which include property rights, can enlarge a market. This theorem lends support to state planning insofar as it establishes rules that enable and promote market transactions and illuminates the operation of the market's spontaneity which is subject to constraints.





Fig. 1. Prices and investments of Chinese real estate (1995–2014).

<sup>1</sup>http://www.stats.gov.cn/tjsj/ndsj/2013/indexeh.htm; http://data.stats.gov.cn/easyquery.htm?cn=C01&zb=A051M&sj=2013. Accessed on 4-4-2017. Source: China statistical yearbook 2013 from National Bureau of Statistics<sup>1</sup>

Contrarily, this paper offers an alternative thesis, known as the Credibility Thesis (Ho, 2017), which necessitates a shift of the paradigm. It posits that the property rights upon which China's explosive property development was founded were not imperfect, inefficient, or second-best but, in fact, optimally adapted to the *then* existing conditions. It is the reason why the approximate past three decades have witnessed a phenomenon that cannot otherwise be described as something other than a boom. Moreover, that institutional constellation was evidently functional, thus *credible*, as it evolved through an endogenous process of adaptation driven by social and economic actors' endless interactions, bargaining, and conflicts. Having stated this, functionality does not imply that the property rights of the past or present will achieve similar levels of credibility in the *future*.

The Credibility Thesis was originally advanced to probe into the alleged "insecurity" of China's rural property rights (Ho, 2014). More particularly, it was applied to explain the incidence and persistence of land reallocations in the agricultural lease system for farm households (known as the Household Contract Responsibility System). In later years, the thesis was applied to and validated for different sectors such as natural resource conservation (Fan, Yang, Liu, & Wang, 2019), water management (Gomes & Hermans, 2018), labor organizations (Miyamura, 2016), and financial institutions (Marois & Güngen, 2016) as well as for different geographical contexts, such as Mexico (Monkkonen, 2016), Ethiopia (Mengistu & van Dijk, 2018), and India (Mollinga, 2016).

To substantiate the Credibility Thesis, the functionality of property rights as perceived by the social, economic, and political actors who *shaped* and *were shaped* by them would need to be qualified and quantified. To this end, a nation-wide survey was conducted on the perceptions of housing rights by those actors most directly involved in the Chinese property market, i.e., urban residents.<sup>3</sup> Furthermore, we examined a specific segment of that market, i.e., housing or residential property, thus omitting property for industrial, commercial, and public purposes.

To understand how Chinese residents perceive urban property rights and to what extent this subsequently played and plays a role in the purchase of housing, the research is structured around three questions: 1) what is the level of credibility (or social support) achieved by policies aiming at formalizing property rights; 2) what is the nature and frequency of the perceived conflict around urban housing, and 3) what is the relative importance of formal property rights vis-à-vis other property-related factors during the purchase of a house? As further background to the questions, it must be noted that Chinese cities, without exception, feature a land lease or ground lease system (whereby ownership of built structures is separate from the land) as can be observed in various metropoles around the common and civil law parts of the world such as London, Vancouver, Amsterdam, and Hong Kong. In this context, three housing rights were examined:

- The ownership of the house (in the cities, generally apartment ownership):
- The lease of the land (as owned by the state as landlord);
- The term of the lease (mostly 70 years, although there are regional exceptions with shorter lease terms).

Apart from the introduction and conclusion, the article is divided into four sections. The following section reviews the scholarly discussions regarding the premise of institutional form versus performance with particular reference to credibility. This is followed by a section that elaborates on the history and current structure of the three housing rights. Section 4 consists of the methodology section that introduces the design, sample features, and research sites of a nation-wide survey conducted with urban residents in ten large and medium-sized cities. The results of the survey are highlighted in Section 5 and illustrate respondents' perceptions of the credibility of formal property rights, their attached importance to formal property rights during property transactions, and the sources and level of housing-related conflicts.

# 2. Form versus function: a review of credibility

As mentioned in the introduction, Chinese real estate experienced exponential growth in a period when many considered that property rights were imperfect, that is, by and large, informal, ill-defined and insecure. Markedly, this growth stands in contrast with certain neoliberal premises of development which posit that the form of institutions (be it formal, private, or secure) is related to institutional performance as ascertained, for instance, by Miceli, Sirmans, and Turnbull (2000, pp. 370):

"One of the least controversial principles in the economics of land

 $<sup>^3</sup>$  Urban residents in this study is defined as people having lived in the city for over six months following the definition of the "urban permanent population" (in Chinese 常住人口)" as also used in Chinese demographic statistics.

markets is the notion that the more *clearly defined* the property rights, the greater the land market efficiency" (emphasis added).

Similarly, Haas and Jones (2017, p. 5) claim:

"There is now a growing body of empirical evidence which reveals how the *formalization* of property rights – specifically land titling – can raise the level of investment in developing countries" (emphasis added).

It must be emphasized that the "China paradox" of significant growth in the absence of formal and secure institutions has also been observed in other geographical and temporal contexts (Ho & Spoor, 2006). In an attempt to account for this paradox, scholars have challenged aforementioned premises on various grounds. Some rejected the presumed individual rationality in general economic models, others addressed the problem of causality (or endogeneity) between institutions and development and, again, others criticized the preclusion of certain "unfavourable" forms of institutions in development (see, e.g., Aron, 2000; Chang, 2010; Grabel, 2000; Ho, 2013; Hodgson, 1998, 2004).

Based on these arguments, scholars have proposed alternative perspectives on the relationship between property rights and development, one of which focussed on credibility. In the 1970s, credibility was coined as a concept to analyze the success and failure of macro-economic and monetary policies (e.g., Fellner, 1976). Since its inception, however, the concept was ambiguous. As Blackburn and Christensen (1989, p. 2) noted with a sense of understatement, credibility "has received different interpretations by different authors". In response, a distinct definition has been proposed of credibility as "the perceived social support at a given time and space" (Ho, 2014, p. 14).

The conceptualization of credibility as the *perceived* support for institutions follows recent research on the assessment of tenure (in)security, more specifically, the seminal studies by Van Gelder on the perceptions of property rights (Van Gelder, 2010, 2013). In this context, credibility has been operationalized and analyzed as actors' aggregate perceptions of institutions along formal, actual, and targeted dimensions, otherwise known as the FAT Institutional Framework (Nor-Hisham & Ho, 2016; Arvanitidis and Papagiannitsis, this volume; Sun and Ho, this volume). Other indicators for the operationalization of credibility include the level, incidence, source, timing, involved actors, and nature of institutional conflict (Yang & Ho, 2019) as well as the calculation of endogenous transaction costs (Fan et al., 2019).

In its initial reading, the concept of credibility had a distinct neoliberal signature and was perceived as being linked to the state's *exogenous* commitment to uphold formal, private, and secure property rights as a condition for development (Frye, 2004; Haber, Maurer, & Razo, 2003; Newman & Weimer, 1997). Although some inconsistently and paradoxically regarded credibility as endogenous to an *exogenously* engineered institutional change (Diermeier, Ericson, Frye, & Lewis, 1997, pp. 22, 25), the conceptual bottom-line or the deciding factor from the neo-liberal interpretation holds that credibility is a measure of the *form* of institutions – whether they are formal, private, or secure (i.e., long term with legal protection against outside intervention).

Grabel (2000, p. 1) can be regarded as one of the earliest critics of the neo-liberal interpretation of credibility when she maintained that:

"[C]redibility is always secured *endogenously* (...) rather than *exogenously* by virtue of the epistemological status of the theory that promotes it" [emphasis added].

According to her, the neo-liberal interpretation of "the credibility criterion is used to privilege neo-liberal economic policies and associated institutions" (Grabel, 2000, p. 1). Against this backdrop, other scholars ascertained that institutional performance (as can be expressed in terms of investments, transaction costs, prices, or sustainability) is not related to the form of institutions but likely the result of something entirely different, i.e., the function of institutions (Agrawal,

Wollenberg, & Persha, 2014; Chang, 2007; Dixon, 2012).

In this context, the Credibility Thesis was put forward positing that institutional Form follows from Function, rather than *vice versa* (Ho, 2014, 2017). According to the thesis, *different* functions can possibly be performed by *similar* institutional forms inasmuch as *different* forms can perform *similar* functions. *Ergo*, form is subordinate to function to the extent in which the former may appear in endless varieties as shaped in time and space, and the former may correspondingly differ for social, economic, and political actors – whether it is in terms of social cohesion and welfare (Guhan, 1994), political influence (Zhang, 2018), or transactions in low-end markets (Fold, Allotey, Kalvig, & Moeller-Jensen, 2018).

Before continuing, the terms form and function must first be clarified. To begin with a neo-liberal interpretation, the desired *forms* for institutions denote: 1) *formal property* = described in law or other official regulations; 2) *secure property* = long term and free from exogenous intervention; and 3) *private property* = owned by an individual entity who can exclude others from its use.<sup>4</sup> Function, on the other hand, is conceptualized in evolutionary, Lamarckian terms as the "role of an institution as it has endogenously evolved in continuous adaption to the environment" (Ho, 2018, p. 848).<sup>5</sup> The current study intends to apply the Credibility Thesis in relation to urban property rights and, more specifically, the rights to housing.

# 3. Property rights of housing in urban China

There is a plethora of literature available regarding the various factors that have affected housing prices in China. Identified factors include per capita disposable income, construction costs, vacancy rate, the rate of unemployment, land price, migration, urban land supply, and housing policies (Chen, Guo, & Wu, 2011; Du & Zhang, 2015; Du, Ma, & An, 2010; Qiao, 2012; Wen & Goodman, 2013). At the same time, research has also pointed to property rights (Wang & Sun, 2014) which are the focus of this paper. They are conventionally defined as "a bundle of rights" consisting of, among others, the right to possess, use, manage, mortgage, inherit, and transfer (e.g., Walder, Luo, & Wang, 2013; Zhu, 2004).

For our purposes, three types of housing rights will be scrutinized: land lease as represented by the Chinese land use permit (or: *tudi shiyongzheng*); housing ownership as represented by the housing title (*fangchanzheng*); and the land lease term popularly known as the "70-years property right" (*qishi nian chanquan*).

The Chinese legal system is a complex amalgam of civil law, so-cialist law, and elements of common law. It is the legacy of a history during which Chinese law was initially styled after German law following the fall of the Qing empire in 1911, increasing influence from the Soviet legal tradition after 1949, and a revival of German, French, and other western legal systems since the beginning of the reforms in the late 1970s (Luney, 1989). According to the Chinese Constitution, urban land is state-owned, therefore, land users may only lease land. In effect, the buildings in Chinese cities are privately owned while the land underneath is publicly owned. Such a property rights lay-out is known as "land lease" or "ground lease" under civil law and "leasehold" under common law (as opposed to fee simple or freehold whereby both the land and the buildings can be privately owned).

<sup>&</sup>lt;sup>4</sup> More in particular, from using that what the institution or property right governs, such as a resource or an asset.

<sup>&</sup>lt;sup>5</sup>This definition has various implications: i) function is *endogenous* thus unintentional as institutions are unintentional as read in a Ferguson (1782: 1) sense; ii) function does not achieve equilibrium as it is in perpetual flux, although the *pace* of change varies, i.e., at times slow, at times sudden and rapid; iii) institutions' function is subject to incessant bargaining, conflict, and cleavage (Ho, 2005, p. 848).

<sup>&</sup>lt;sup>6</sup> For more information on how land rental has affected rural-urban migration, see (Zheng, Gu, & Zhu, 2019).

Residential property is developed on land that is commercially assigned to the real estate developer – who must pay a premium or land conveyance fee (churangjin) – by the government as the landlord or lessor. In the case of non-commercial residential property (such as land for social and affordable housing), land is allocated (huabo) to the developer who must remit a nominal fee. Due to this dual-tiered ownership, the property rights to land and buildings have traditionally been administrated by two separate state organs in China: the Ministry of Natural Resources (MNR, prior to 2018 known as the Ministry of Land and Resources) and the Ministry of Housing and Urban-Rural Development (MOHURD).

In accordance with relevant laws, <sup>7</sup> the land use and housing ownership should be registered with official certificates that are issued as legal proof. In this context, MNR and MOHURD have promulgated regulations regarding the titling of land and buildings. <sup>8</sup> At the local level, land use permits and housing ownership certificates are generally separately issued by the registration offices under the two respective ministries. <sup>9</sup> Thus, the land use permit and the housing title are physically separate except for some cities where the administration of land and of housing was integrated after the 2000s (e.g., Guangzhou and Tianjin where a combined certificate of land and housing is issued). A full proof of homeowners' property rights consists of a certificate of land use (in effect, a lease) and a certificate of the ownership for the housing. This situation has been enshrined in law since the 2007 Property Law stipulated that registration is formal proof of property (Article 9).

However, land use permits and housing titles are often incomplete or missing, particularly under the following circumstances. First, land use rights may not have been registered at all, a situation quite common during the early stage of the economic reforms in the 1980s when urban land was not commercialized. 10 Second, the property rights might not have been registered during the privatization of public housing (formerly allocated to employees by the work units or danwei) during the 1990s. 11 Due to the involvement of the work units, the privatization of (social) housing was not always registered or completed with the responsible governmental offices. For instance, certain work units would only register the housing ownership but retain the land use permit. Third, the land use permit might not be issued, particularly prior to the promulgation of the 2007 Property Law. In most cities where land and buildings are separately administered, the housing title is issued first to be followed (if at all) by the land use permit. 12 In an attempt to address these problems, the authority over real estate titling has been concentrated in a single ministry, the newly established Ministry of Natural

Resources, since March 2018.

What about the term of the lease for urban housing? For residential purposes, the lease is for a maximum period of 70 years. Different lease terms are used for commercial, industrial, and public purposes, respectively 40, 50, and 50 years. Although the land lease for residential purposes is generally specified at 70 years, there are regional exceptions. For instance, in Wenzhou and Shenzhen, lease terms had been set at 20 years<sup>13</sup> to gain greater control over land planning and revenues. It is noteworthy that the lease term is only stipulated in "temporary" regulations dating back to 1990<sup>14</sup> which, ironically, are still effective today.

Unknown to many, these temporary rules stipulated that the state has the right to acquire the land use and buildings without compensation upon expiration of the lease (known as a reversionary right; see Article 40). In later years, this reversionary right was overturned. The 2007 Property Law confirmed the private ownership of the residential buildings (Article 64) and stipulated that "the residential land use right is automatically extended upon expiration of the term" (Article 149). Interestingly, this did not end the confusion as the Urban Real Estate Administration Law that was proclaimed just a few months earlier in the very same year fully contradicts the Property Law and regulates a conditional extension (based on payment, prior application, and approval; Article 21).

To date, it is ambiguous how the land lease is to be extended and if any costs are involved (Yu, 2016). Recently, the expiration of land leases with significantly shorter terms than the usual 70 years, such as those in Wenzhou Municipality, caused public concern over the extension. The then Ministry of Land and Resources replied to queries from the Zhejiang provincial government that such land leases could be extended automatically at no cost. Furthermore, Premier Li Keqiang reiterated the principle of an unconditional extension of the land lease at a press conference during the annual session of the National People's Congress in 2017. At the same time, however, the Premier contended that specific legislation would be further discussed.

# 4. Methods: survey design

To examine the credibility of urban property rights, a survey was conducted with urban residents preceded by a pilot survey. The survey consists of three parts one of which examined the level of support to formal property rights as upheld and protected by the government. Subsequently, it investigated the source and frequency of housing conflicts. The final section gauged to what extent formal property rights played a role during property transactions. Additional detailed information about the operationalization of credibility is provided in Section 5 below.

The survey was conducted among 1291 urban residents who were dispersed among large- and medium-sized cities. After checking the administered questionnaires, a valid sample size of 1207 was derived. The pilot-survey comprised 39 respondents in three selected sites, i.e., Guangzhou, Wenzhou, and Rizhao. 17 The survey adhered to a multi-

<sup>&</sup>lt;sup>7</sup> Urban Real Estate Administration Law (城市房地产管理法), Article 60, 1994 (lastly revised in 2009), issued by the Standing Committee of the National People's Congress (NPCSC). Property Law (物权法), Article 9, 2007, issued by the National People's Congress (NPC).

<sup>&</sup>lt;sup>8</sup> For the land, see Measures for Land Registration (土地登记办法), issued by MNR in 2007. For the buildings, see Measures for Building Registration (住房登记办法), issued by the Ministry of Construction (later renamed as MOHURD) in 2008.

<sup>&</sup>lt;sup>9</sup> The aforementioned laws stipulated that the executive administrative level for the registration is the county or above. In practice, the strategy of the implementation is usually defined at the provincial level, such as the formats of the certificates; while the certificates are usually issued by cities or districts (county-equivalent). In this article, the local level refers to the city level unless otherwise specified. More information about the Chinese model of governance in a historical perspective can be found in (Shue, 2018).

 $<sup>^{10}\,\</sup>rm Urban$  land became legally commercialized when the constitution and the Land Administration Law were amended in 1988 (Deng et al., 2011, p. 171; Ding, 2003, p. 112).

<sup>&</sup>lt;sup>11</sup> The privatization of public housing, as one of the features of the housing reform in 1990s, referred to the transfer of home ownership from the work units to the urban households (usually the employees of those work units).

<sup>&</sup>lt;sup>12</sup> From the on-site investigation into the local land office, one of the required documents to apply for a land use permit was the housing title.

 $<sup>^{13}\,\</sup>mathrm{See}$  the news reports on official media in China, such as Yu (2016).

<sup>14</sup> Interim Regulations of PRC Concerning the Assignment and Transfer of the Right to the Use of the State-owned Land in the Urban Areas (中华人民共和国城镇国有土地使用权出让和转让暂行条例), Article 12, 1990, issued by the State council.

<sup>15</sup> Reply of the General Office of the Ministry of Land and Resources about to Properly Tackle the Issue of the Land Use Rights of Some Residential Land, MNR[2016] No.1712, in Chinese "国土资源部办公厅关于妥善处理少数住宅建设用地使用权到期问题的复函". General office of MNR.

<sup>&</sup>lt;sup>16</sup> See video Chinese Premier Li Keqiang meets the press on 15-03-2017. Source: <a href="http://news.xinhuanet.com/english/2017-03/15/c\_136131424.htm">http://news.xinhuanet.com/english/2017-03/15/c\_136131424.htm</a> (accessed on 29-12-2018).

<sup>&</sup>lt;sup>17</sup> The survey was conducted from May to September 2015, whereas the pilotsurvey was executed between November 2013 and February 2014.

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Table 1
Comparative indicators for the sampled cities.
Source: National Data (http://data.stats.gov.cn/easyquery.htm?cn = E0105), Economic and Social Development Statistics Report 2014 of each city.

Administrative level	City	Urban built- up area (km²)	Urban population (million)	GDP (billion CNY)	Annual disposable income per capita of urban households (CNY)	Average sold price of commercial housing (CNY/m²)	Sold area of commercial housing (million m <sup>2</sup> )	Administration of urban land and housing: unified or separate
China			749.16	64397.4	28844	5933	1051.88	Separate
Province-level municipality	Tianjin	797.1	12.48	1572.69	31506	8828	14.84	Unified
Provincial capital	Guangzhou	1035.01	11.17	1670.69	42955	14739	11.96	Unified
	Wuhan	552.61	5.59*	1006.95	33270	7399	19.79	Separate
	Nanjing	734	6.65	882.08	42568	10964	11.25	Separate
	Zhengzhou	412.7	6.41	677.70	29095	6579	12.93	Separate
	Changchun	439.61	3.66*	534.24	27299	5847	6.63	Separate
	Guiyang	72.72	3.34	249.73	24961	4904	7.90	Separate
	Xining	113.73	1.47	106.58	21291	4807	2.64	Separate
Prefecture-level city	Wenzhou	301.55**	1.52	430.28	40510	16468**	3.83	Separate
	Rizhao	99.60	1.07	161.19	27540	4943	1.47	Separate

<sup>\*</sup> Population with local urban registration (Hukou), while the rest refers to urban population (with or without local Hukou).

stage stratified sampling (Bernard, 2006, p. 153) following a city-community-individual approach. As shown in Table 1, the selection of the research sites intends to depict an adequate representation of China's cities at a national level, taking into consideration: i) the administrative level (province-level municipality under the State Council, provincial capital, and prefecture-level city); ii) size (built-up area and urban population<sup>18</sup>); iii) level of development (GDP, disposable income, housing price, and sold area); iv) the type of land and housing administration (unified or separate titling); and v) the geographical distribution (spread over various parts of the country, see Fig. 2). In total, ten cities were selected, specifically, Tianjin (Tianjin Municipality), Guangzhou (Guangdong Province), Guiyang (Guizhou Province), Nanjing (Jiangsu Province), Wuhan (Hubei Province), Zhengzhou (Henan Province), Xining (Qinghai Province), Changchun (Jilin Province), Wenzhou (Zhejiang Province), and Rizhao (Shandong Province).

In each city, the sampling was geographically delimitated to the urban built-up area thus no surveys were conducted beyond the built-up area of the research sites. Subsequently, 82 residential communities were selected in terms of the selling price, the type of housing, and the administrative districts. The research involved 47 administrative districts or special development districts<sup>19</sup>; an overview of the information is included in the Appendix A (Table A1).

The survey team consisted of 18 undergraduate students who were specially trained prior to the fieldwork. Under the guidance of the main researcher, the team members worked in pairs in face-to-face surveys in selected residential communities (or *shequ*). Residents were randomly invited in a public space, and the surveys were anonymously conducted to ensure the privacy of the respondents. The sampling frame was set as follows: 1) adults above 18 years of age (with no maximum); 2) stratified according to age, specifically, 18–34 years, 35–50 years, and above 50 years<sup>20</sup>; and 3) one respondent per household. The total sample size (1207) is statistically representative of China's urban population (749.16 million) with an error margin of three percent and a

confidence level of 95 percent.<sup>21</sup>

The sample features are depicted in Table 2.22 The age of the respondents ranged from 18 to 90 with a mean of 43.35 years. Three stratified age groups, i.e., 18-34, 35-50, and 50 above, accounted for 36.3 percent, 31.2 percent, and 32.5 percent, respectively.<sup>23</sup> Male respondents comprised 52.2 percent, and 47.2 percent were female.<sup>24</sup> The majority (64.8 percent) of the respondents was native to the city where the surveys occurred while the rest was non-native. 25 Respondents had a fairly high level of education; approximately half (46.4 percent) had received a college/university education.<sup>26</sup> Their occupations varied from being retired (24.5 percent), self-employed or temporarily employed (24.6 percent); working for a governmental organization (9.6 percent), state-owned enterprise (11.8 percent), non-state owned enterprise, or organization (16.1 percent); and others (13.2 percent). More than half of the respondents' annual household income was either "lower than 50 thousand CNY" (27.2 percent) or "between 50 and 100 thousand CNY" (34.6 percent).<sup>27</sup> As many as 90.2 percent of the

<sup>\*\*</sup> Data from 2013 for reference.

 $<sup>^{18}</sup>$ Urban population refers to "Changzhu Renkou (常住人口)" according to China's official statistics and is defined as urban residents who had been living in the city for longer than six months either with or without local urban registration.

<sup>&</sup>lt;sup>19</sup> Such as the Binhai New District in Tianjin, Automobile Industrial Development Zone in Changchun, etc.

<sup>&</sup>lt;sup>20</sup> The stratified variable was defined according to the implementation of the housing reform in 1998: the age group 18-34 was unlikely to participate in the housing in 1998, the age group 35-50 was likely to participate in the housing in 1998, and the age group above 50 was assumed to be likely to participate in both the housing and the real estate market in 1998.

<sup>&</sup>lt;sup>21</sup> As is common with survey research, the margin of error is not calculated but is a decision by the researchers of how certain they want to be that the collected responses reflect the views of the population. Moreover, we adhered to the most standard confidence level of 95%. With a large, total population (749 million), the required sample size no longer changes and remains constant at 1,067. Therefore, the sample size of 1,207 is statistically representative.

<sup>&</sup>lt;sup>22</sup> See also Table 5 in the Appendix for details.

<sup>&</sup>lt;sup>23</sup> For reference purposes, the population census 2010 showed that the percentages of each age group in the cities were: 40.24 percent, 34.07 percent and 25.69 percent. Source: http://www.stats.gov.cn/tjsj/pcsj/rkpc/6rp/indexce.htm (accessed on 26/10/2016), Table 4–1a.

<sup>&</sup>lt;sup>24</sup> For reference purposes, the gender ratio of male to female was 51.14 to 48.86 in cities, according to the population census 2010. Source: <a href="http://www.stats.gov.cn/tjsj/pcsj/rkpc/6rp/indexce.htm">http://www.stats.gov.cn/tjsj/pcsj/rkpc/6rp/indexce.htm</a> (accessed on 12/3/2017), Table 1–1a.

 $<sup>^{25}\,\</sup>mathrm{In}$  this survey, "native" refers to the respondents born in the city where the surveys were administered.

<sup>&</sup>lt;sup>26</sup> By comparison, the population census 2010 showed that the percentages of each educational level in cities (aged above 18) were: 50.91 percent at junior middle school level or below, 24.74 percent at high school level, 23.22 percent at college/university level, and 1.12 percent at master or above. Source: http://www.stats.gov.cn/tjsj/pcsj/rkpc/6rp/indexce.htm (accessed on 26/10/2016), Table 4–1a.

<sup>&</sup>lt;sup>27</sup> According to the national statistical data of 2014, the average annual disposable income of urban households was approximately 80 thousand CNY (the annual disposable income per capita as 28844 and average population per household is 2.9). Source: http://www.stats.gov.cn/tjsj/ndsj/2015/indexch. htm (accessed on 13/3/2017), table 2–9.

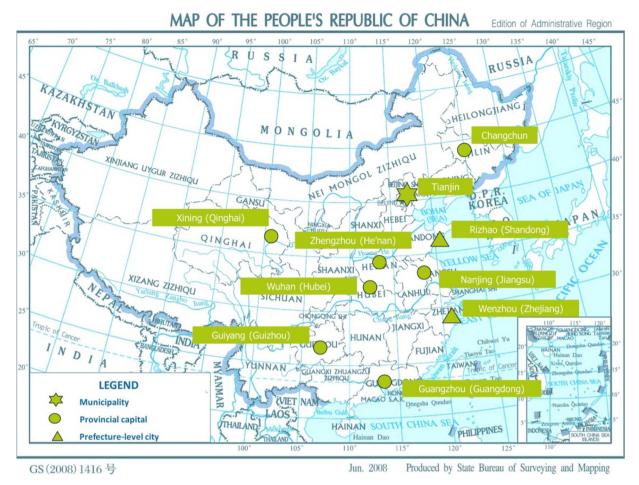


Fig. 2. Selected cities. Source: Adjusted on basis of map GS(2008) No. 1416 by State Bureau of Survey and Mapping

Table 2 Sample features (N=1207). Source: This survey.

Sample size in each location	Tianjin	Guangzhou	Guiyang	Nanjing	Wuhan	
	141	109	134	102	131	
	Zhengzhou	Xining	Changchun	Wenzhou	Rizhao	
	125	96	125	123	121	
Age	Min	Max	Mean	18-34	35-50	> 50
	18	90	43.35	36.3%	31.2%	32.5%
Gender	Male	Female				
	52.2%	47.2%				
Native	Yes	No				
	64.8%	35.1%				
Educational Level	Junior middle school	High school/technical	College/university	Master or above		
	or below	school				
	23.1%	26.1%	46.4%	4.4%		
Occupation	Retired	Self-employed or	Governmental	State-owned	Non-state-owned	Others
		temporarily employed	organization	enterprise	enterprise or organization	
	24.5%	24.6%	9.6%	11.8%	16.1%	13.2%
Annual household income (in	< 50	50-100	100-200	200-500	> 500	No comment
thousand CNY)	27.2%	34.6%	22.5%	6.2%	1.4%	8.1%
The household has ever owned any	Yes	No				
residential property	90.2%	9.7%				

respondents or their families owned or had owned residential property.

5. Results

The survey examined the credibility of the property rights of urban housing regarding the three research questions elucidated in the introduction. Below, the findings for each of these questions is

respectively discussed.

# 5.1. Credibility of formal property rights

To probe into the level of support for formal property rights of housing, a series of questions was asked in order to examine respondents' perspectives on certain policies, more in particular, their

opinion on the "unified" housing permit (that merges land use and housing ownership), <sup>28</sup> the lease of land to home owners for a 70-year term (rather than having full land ownership), and the governments' efforts to title real estate in a nation-wide, fully searchable land registry (underway since 2013). The answer categories to the questions were designed on a five-point Likert scale, with an additional option of "do not know" (see Fig. 3).

Two points can be ascertained from Fig. 3. First, a relatively significant number of the respondents, ranging from 42 percent to over 51 percent, indicated being indifferent or having no opinion regarding policies aimed at formal property rights. This result may suggest rather minimal appreciation or awareness for government action to increase tenure security through formalization. Second, there is a clear variation between the support for the policies. The policy to promote a unified housing permit rallies the highest score (49.8 percent being positive or very positive); real estate titling a medium score (40.6 percent positive or very positive); while the 70 years' land lease had the lowest score (only 24.8 positive or very positive). Thus, the 70-years' land lease is evidently least supported with the number of opponents exceeding the advocates (respectively, 35.4 against 24.8 percent).

# 5.2. Conflict over property rights

The survey's second stage examined the conflict surrounding urban housing by examining the overall frequency of housing conflicts, the source of conflict, and the frequency per source. The research also investigated the timing and resolution mechanism of housing conflicts; the results are not reported here due to lack of space. The nature, intensity, involved actors, and length of disputes earlier identified as other potentially relevant factors for the assessment of credibility were also not included because of logistical constraints (Ho, 2014, p. 18; Yang & Ho, 2019).

It was discovered that the perceived level of housing-related conflicts (and conflicts within the community or *shequ*) was low. As shown in Table 3, as much as 92.4 percent of the respondents stated that their households had never experienced conflicts regarding housing property rights while over two-thirds (67.1 percent) had never heard about housing-related conflicts within their close circles (i.e., relatives, friends and acquaintances; this excluded hearsay through media or other channels). More than half (57.0 percent) of the respondents had never learned of any disputes (apart from housing-related conflicts) in their communities. Hereafter, the respondents were inquired about the source and the frequency per source of housing-related conflict.

Markedly, Fig. 4 shows that urban residents perceived conflicts to be primarily incited by demolition, followed by conflicts with community organizations (such as the home-owners' committee/association, property management company, and residential committee),<sup>29</sup> property transactions, and housing titles (regardless of whether that concerned the land lease or the property on top of the land). Conflicts resulting from disputes with neighbours were considered to be the least likely. Among others, conflicts caused by housing titles (bars on the right of each cluster) were not significantly higher than those caused by demolition, community organization, or transactions: 11.30 percent of the respondents felt conflicts were "often" caused by the housing titles while 30.15 percent indicated "sometimes".<sup>30</sup>

Those who had encountered conflicts themselves or in their close circles were invited to provide further details. In total, 233 respondents completed the conflict profiles. The results of these additional profiles (Fig. 5) generally confirmed the scenario presented above: almost half of the housing-related conflicts (48.1 percent) originated from demolition, 14.6 percent from the housing titles, 10.0 percent from property transactions, 7.1 percent from neighbours, and 5.4 percent from community organizations. The survey also found that title-related conflicts primarily occurred in two situations:

- 1) Titles had been incompletely registered during the privatization of public rental housing formerly allocated by the work units;
- 2) The property transaction from the real estate developer to the individual buyers had not been successfully registered, i.e., alteration of the registration from the building title to the individual housing title.

In general, title-related conflicts were caused by missing titles rather than the titles *per se*.

# 5.3. Formal property rights versus other factors

The survey's final section gauged to what extent the housing ownership title, the land use permit, and the land lease term played a role during property transactions. For this purpose, respondents were asked to report on the relative importance that they accorded to the three property rights upon buying their first property. The importance of these rights was scored along with other factors, i.e., the location of the housing, the attributes of the housing, and surrounding facilities (such as green space, gym accessories, and parking lots). To achieve a more unbiased outcome, respondents were not asked to compare the various factors. Instead, they were requested to score each factor independently after which the ranking was performed during data processing.

As can be ascertained from Table 4, housing ownership as represented by the housing title was deemed to be important by an overwhelming majority of the respondents (91.1 percent of which 42.8 percent even considering it "extremely important"). By contrast, the other rights, i.e., the land use permit and the lease term, were considered to be no more important than the remaining factors, i.e., the location of the property, housing attributes, and surrounding facilities. Markedly, the land use permit and lease term also rallied higher numbers of respondents who considered it "not important" (9.8 percent and 6.4 percent, respectively) or "neutral" (12.5 percent and 9.3 percent) than any of the other factors.

To analyze the differences among the various group means in the sample, an Analysis of Variance (ANOVA) was also conducted. It confirmed that the land use permit and lease term were scored significantly lower than the remaining factors at a confidence level of 95 percent (See Table 5). Otherwise stated, urban residents were more concerned about the housing title, the location of the property, the housing attributes, and the surrounding facilities compared to the land use permit and the lease term.

# 6. Discussion and conclusion: the complexity of credibility, time and conflict

This paper sought to reveal a paradox that is inherent in a neo-liberal interpretation or neo-liberal theory of property rights: the contradiction between China's "imperfect", incompletely titled rights for urban housing coupled to the past explosive growth in real estate. <sup>31</sup>

 $<sup>^{28}</sup>$  According to Chinese law, full property rights to housing should consist of both permits for the house and for the land. In some localities, e.g., in Tianjin and Guangzhou, the two permits have been unified since the 2000s.

<sup>&</sup>lt;sup>29</sup> Whereby the home-owners' commission is the executive arm representing the interests of the home-owners' association (all home-owners), the residential committee being the lowest level of government in the community, and the property management company being the institution responsible for the maintenance of common property such as parks, parking lots, hallways, and elevators (De Bie, 2013: 9–10).

 $<sup>^{30}</sup>$  It needs to be noted that the respondents indicated that they believed that

<sup>(</sup>footnote continued)

conflicts could also result from the titling itself, i.e., from issuing the permit.

<sup>&</sup>lt;sup>31</sup> That is, if it can be assumed that a consistent and coherent body of such a "neo-liberal" literature exists which, in fact, it does not.

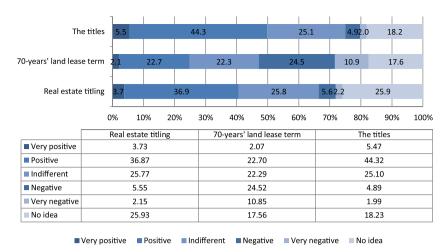


Fig. 3. Support for formal property rights.

Source: This survey

**Table 3**Occurrence of housing conflicts.
Source: This survey

%	Has your household ever encountered housing conflicts?	Has anyone in your close circle ever encountered housing conflicts?	Are there disputes in the community (regardless cause)?
No	92.4	67.1	
Yes	7.6	32.9	
Never			57.0
Sometimes			20.1
Often			3.6
No idea			19.2

Thesis. This thesis postulates that an explanation for the property boom is that, instead of being imperfect, urban property rights were, in fact, functional and thus regarded as credible by a majority of social actors involved in the property market. If that were the case, such credibility would likely be reflected through the aggregate perceptions of these social actors.

Against this backdrop, various findings could be reported. For one, a significant number of respondents (varying between 42 percent to over 51 percent) were found to be indifferent or having no opinion regarding policies aiming at greater formalization of urban housing property rights. Therefore, it may be concluded that many of them did not demonstrate a clear preference for a full bundle of formal property rights.

Two, the level of housing-rights' related conflict was minimal with

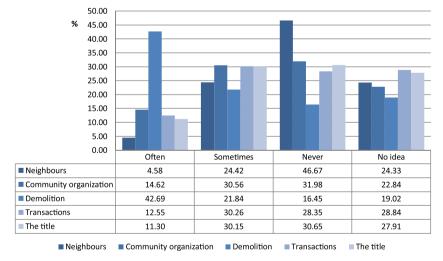


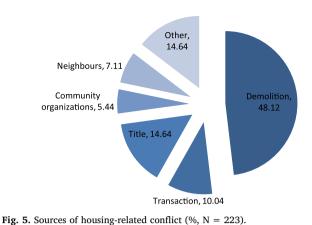
Fig. 4. Perceived sources of housing-related conflict.

Source: This survey

Some have discussed "dead capital" when referring to untitled housing and have posited that formalization is the way to unleash its potential for development and growth (De Soto, 2000: 33 and 47). Others believe that titling is conducive to "increase property and income" (Li cited in Hu, 2016). Yet, the assumption about a straightforward relationship between institutional form (here: formal property) and performance (capital accumulation) stands in contrast with the Chinese property boom.

In searching for a plausible explanation for the paradox, this paper proposed to validate an alternative hypothesis known as the Credibility over 92 percent of respondents stating their household had never encountered conflict. This finding is indicative of the overall credibility for the current structure of urban property rights. Having said this, our survey also pinpointed certain risks to social stability. The numerous urban redevelopment projects undertaken in Chinese cities appear to have taken a significant toll: approximately half of the respondents who reported experiencing conflict mentioned demolition as the primary source. Interestingly, a similar, contradictory result – low overall conflict but demolition identified as a prime cause – was also determined in a nationwide survey (n = 1140) of rural property rights (Ho, 2014).

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Source: This survey

Table 4 Factors of importance during property purchase (in percentages). Source: This survey

promulgated in the same year. To account for the difference in the attached importance to housing ownership vis-à-vis land lease, it is vital to consider the concept of time. Whereas the ownership of the house affects the direct interests of the buyer at the time of the property transaction, the lease is a matter of a more distant future of up to 70 years. Thus, whether or not the land lease will be renewed, and if so, under what conditions, might be

Administration Law - in complete contradiction of each other, albeit

something the average buyer is not concerned with as long as the expiration of the lease is sufficiently far removed from the present. Through the surveys, there were three types of responses found for the ambiguity of the land lease: i) ignorance: ii) passiveness; and iii) opportunism. A number of respondents mentioned that they were not aware of the lease upon purchasing their house; others considered it "national policy" beyond their control; and, again, others believed that 70 years was a long time and, by then, there would be new policies. 32

Item	Extremely important	Important	Unimportant	Extremely unimportant	Neutral	Total
housing title	42.8	48.3	2.7	1.1	5.1	100
land use permit	36.4	47.0	6.4	1.0	9.3	100
land lease term	27.7	48.6	9.8	1.4	12.5	100
Location	34.0	55.9	4.8	1.1	4.2	100
housing attributes	35.5	54.3	4.6	1.1	4.5	100
surrounding facilities	33.8	56.2	4.6	1.0	4.4	100

Table 5 Results ANOVA test (1 = extremely not important, 4 = extremely important, 0 = no idea). Source: This survey

		N	Mean	n Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between- Component Variance
						Lower Bound	Upper Bound	•		
housing	title	1207	3.2245	.95424	.02747	3.1706	3.2784	.00	4.00	
land use	permit	1207	3.0017	1.14170	.03286	2.9372	3.0661	.00	4.00	
land leas	e term	1207	2.7755	1.22784	.03534	2.7061	2.8448	.00	4.00	
location		1207	3.1408	.89408	.02573	3.0904	3.1913	.00	4.00	
housing a	attributes	1207	3.1541	.90756	.02612	3.1028	3.2054	.00	4.00	
Surround	ling facilities	1207	3.1400	.89468	.02575	3.0895	3.1905	.00	4.00	
Total	· ·	7242	3.0728	1.02251	.01202	3.0492	3.0963	.00	4.00	
Model	Fixed Effects			1.01202	.01189	3.0495	3.0961			
	Random Effects				.06639	2.9021	3.2434			.02560

The study's third main finding is that there is a marked difference in the importance that urban residents attach to formal housing ownership vis-àvis the land lease. Whereas the former is regarded as "extremely important" (43 percent) or "important" (48 percent), much less so was claimed about the land use permit and the lease term. In fact, as the ANOVA test ascertained, the latter two are equally or even substantially less important compared to other factors such as the location of the house, its attributes (i.e., size, number of rooms, and geographical orientation) and surrounding facilities (e.g., parking lots, green spaces, and gym accessories).

The finding is all the more striking when considering the fact that China's urban land use was and still is shrouded in legal ambiguity and insecurity (see discussion in Section 3). For several years until the adoption of the 1994 Urban Real Estate Administration Law, urban land use was actually governed under reversionary right. In other words, upon expiration of the lease, the state could acquire the land and buildings on top without compensation to the owner of the house. Furthermore, although many believe the term of land lease extends for a maximum of 70 years, this is only stipulated in "temporary rules" that are, interestingly, still currently effective. Lastly, the conditions for the extension of the land lease are unknown with two major laws - the 2007 Property Law and the 2007 Revised Urban Real Estate All in all, for most respondents, becoming a homeowner was significantly more important than the insecurity of the land lease.

Whereas some researchers have raised alarm about the insecurity of China's urban property rights (Ellickson, 2012: Palomar, 2002), other studies, such as by Clarke (2018, p. 906), have pointed to recognizing exactly this divergence between the interests over immediate ownership as opposed to a distant lease expiration:

[I]t is difficult to take seriously complaints about imminent homelessness from a propertied class that has had seventy years' advance notice of the loss of possessory rights. Thus, the complaints can be seen not as reflections of any inherent lack of clarity in the law, but instead as a move in the ideological struggle of current LUR [Land Use Right, PH] holders to extend their claims."

Considering this, it might be important to draw attention to the often minor differences between property values under private land ownership (or fee simple) as opposed to land lease (or leasehold). As

 $<sup>^{\</sup>rm 32}\,\rm Our$  survey did not directly probe respondents into the issue of time, therefore, it is believed this may be an important area for future research.

Clarke notes, the difference in value "is not much less. At an annual discount rate of 5%, the present value of a seventy-year residential leasehold is almost 97% of the value of a perpetual fee simple. In markets where fee simples co-exist with long-term lease-holds, this mathematical near-equivalence seems to be reflected in buyer behaviour" (Clarke, 2018: 904). China may not be alone in this as there have been similar reports in other parts of the world.<sup>33</sup>

Having stated this, there are generally two situations when the difference between ownership versus lease becomes evident: 1) during times of economic adversity and crisis and 2) upon or close to the expiration of the lease (Ploeger & Bounjouh, 2017: 82). During the 2008 Credit Crunch, Dijkstra (2013: 78) identified a significant, negative effect of approximately six percent on the transaction price of houses under leasehold versus those under freehold in Amsterdam. In connection to the latter phenomenon, Colliers International's Director of Research aptly noted:

"[A]s the property ages and the lease shortens, the price gap will widen" (Tay cited in Teo, 2010: 1).

The quote above emphasizes the fact that the credibility of property rights is no direct measure of the level of formalization but the way these are perceived (Van Gelder, 2010). At the same time, the specific behaviour that the land lease elicits amongst social actors has, at times, led to considerable criticism of the system being unfair and unjust

(aptly described in Korthals Altes, 2018; Vonck, 2013: 209-211).34

The findings reported in this article may highlight the need to critically reconsider the property rights theory and, more specifically, the assumption of an unambiguous relationship between institutional form and performance. Despite the fact that titles are often missing, the fact that the renewal of the lease is uncertain, and that laws fully contradict each other, Chinese residents heavily invested in residential property. The likely reason why they did this is because the ownership of a house is perceived differently than the lease of the land. In fact, although the land lease is de jure inconsistent, informal, and ambiguous, it made no difference for people in actuality. To a large extent, social actors opportunistically speculated that the insecurity of the land lease would not significantly affect the price and transaction of their house as its tenure insecurity is a measure of time. Thus far, they have speculated correctly as the property boom has lasted for a sustained period of nearly two decades.

# Acknowledgments

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### Appendix A

See Table A2.

Table A1
Profile of the study site

ty	Administrative District	Community	Frequency	Percent	Margin of error (%, confidence level = 95%)*
anjin	7	9	141	11.8	9
	Hexi District	Fujian Road	22	1.8	
	NanKai District	Fukang Road	15	1.2	
	Hebei District	Jinshiqiao Station	11	.9	
	Hongqiao District	Qinjian Road	10	.8	
	Binhai New District	Shimin Square (metro station)	4	.3	
		Tanggu metro Station	10	.8	
	Hedong District	Tianjin Railway Station	12	1.0	
		Zhongshan Park	18	1.5	
	Heping District	Xikang Road	39	3.3	
uangzhou	4	6	109	9.0	10
	Yuexiu District	Huaqiao Xincun	14	1.2	
		Jianshe Road	15	1.2	
	Haizhu District	Kecun (Zhujiang Dijing & Chigang Dong)	20	1.7	
		Gongye Avenue North (Guangda, Fenghuang and Wuyi)	18	1.5	
	Panyu District	Lijiang Huayuan	21	1.7	
	Tianhe District	Tiyu Xi Road	21	1.7	
uiyang	4	10	134	11.1	9
	Yunyan District	Dongshan Road	18	1.5	
		Fushui North Road	21	1.7	
	Nanming District	Gongyuan South Road	4	.3	
		Huaguo Yuan	22	1.8	
		Wenhua Road	7	.6	
		Xingguan Road	8	.7	
	Guanshanhu District	Guiyang municipal government surrounding	9	.7	
		Jinyang New District	20	1.7	
		Zhongtian Huizhan Cheng	9	.7	
	Huaxi District	Xiao He area	16	1.3	

(continued on next page)

<sup>&</sup>lt;sup>33</sup> See, for instance, the description of the Dutch Supreme Court case on the land lease in The Hague in (Ploeger and Bounjouh, 2017: 82) or, as Sluysmans (2017: 88–89) noted: "Problematically, the difference [between leasehold and freehold, PH] is often not discounted in the sale prices by buyers, as a result of which prices that are at times paid for houses on (temporary) leasehold, hardly deviate from the prices for freehold."

<sup>&</sup>lt;sup>34</sup> In this context, it is noteworthy that most of the respondents (64.3 percent of which 22.4 strongly) disagreed that the extension of the land lease should be conditional upon a fee. In other words, although the land was state-owned at the time the house was purchased, most respondents regard themselves as owners rather than as lessees of the land.

Table A1 (continued)

City	Administrative District	Community	Frequency	Percent	Margin of error (%, confidence level = 95%)*
Nanjing	6	11	102	8.4	10
, ,	Gulou District	Shanghai Road	17	1.4	
	Jianye District	Cha Ting	8	.7	
		He Xi area	3	.2	
		Jiahe Yuan	9	.7	
	Xuanwu District	Dashu Gen	3	.2	
		Xiangpu Ying	7	.6	
	Qixia District	Jingtian Lu	13	1.1	
		Xianhe Men	19	1.6	
	Qinhuai District	Madao Street	5	.4	
	Yuhua District	Pude Cun	4	.3	
		Yuhua Xincun	14	1.2	
Wuhan	7	13	131	10.8	9
.,	Jiang'an District	Baibu Ting	14	1.2	
	Julia di Bistret	Jianghan Buxingjie Bei	16	1.3	
		Jinhan Avenue	20	1.7	
	Donghu High Tech District	Guanggu	13	1.1	
	Hanyan District	Hanyang Avenue	14	1.2	
	Wuchang District	Jiyu Qiao	6	.5	
		Liangdao Street	8	.7	
	or 1 protection	Wuchang Railway Station (surrounding)	4	.3	
	Qiaokou District	Liji Bei Road	3	.2	
	Hongshan District	Nanhu	10	.8	
		Xudong	9	.7	
	Jianghan District	Shuita Street	7	.6	
		Youyi Road	7	.6	
Zhengzhou	5	9	125	10.3	9
	Guancheng District	Erqi Square	24	2.0	
	Zhongyuan District	Gongren Road	10	.8	
		Jinshui Riverside	6	.5	
		Ruhe Road	7	.6	
	Jinshui District	Huanghe Road	13	1.1	
		Yan zhuang	19	1.6	
	Zhengdong New District	Zhengzhou CBD	15	1.2	
		Zhengzhou Station East	17	1.4	
	Erqi District	Zhengzhou Railway Station	14	1.2	
Xining	4	5	96	7.9	11
	Chengbei District	Chengbei District	25	2.1	
	Chengdong District	Chengdong District	23	1.9	
	Chengxi District	Chengxi District - others	18	1.5	
	Ghengar District	Haihu New District	10	0.8	
	Chengzhong District		19	1.6	
Changahun		Chengzhong District 7	125	10.3	9
Changchun	6				9
	Luyuan District	Chuncheng Avenue	20	1.7	
	Kuancheng District	Changchun Railway station south	16	1.3	
	Automotive Economic Trade and	Jincheng Avenue	21	1.7	
	Development Zone				
	Erdao District	Linhe Street	19	1.6	
	Nanguan District	Minkang Road	21	1.7	
		New CBD	7	.6	
	Chaoyang District	Tongzhi Street	21	1.7	
Wenzhou	3	10	123	10.2	9
	Lucheng District	Chezhan Avenue	23	1.9	
		Jiangbin Road	19	1.6	
		Liming Road (East & West)	16	1.3	
		Nanpu	14	1.2	
		Wenzhou Old city centre	9	.7	
		Xintian Road	6	.5	
	Ouhai District	Nanou Jiayuan	10	.8	
		Yuele Street	6	.5	
	Longwan District	Longwan Qufu	4	.3	
	. 0	Yandang Road	16	1.3	
Rizhao	1	5	121	10.0	9
	Donggang District	Da Run Fa	33	2.7	-
	Zonobung Dionici	Haiqu Gongyuan	31	2.6	
		Rizhao Old city centre			
			15	1.2	
		Shifu Xincheng	26	2.2	
		Shijiu Laojie	16	1.3	
Total	47	85	1207	100.0	3

 $<sup>^{\</sup>ast}\,$  Calculated according to the urban population.

**Table A2**Results of ANOVA test (Likert Scales: 1 = extremely not important, 4 = extremely important, 0 = no idea).

Dependent Variable: Likert\_Scale\_adj Tukev HSD (I) category (J) category Mean Difference (I-J) Std. Error Sig. 95% Confidence Interval Lower Bound Upper Bound .22287\* .04120 .000 .1054 .3403 housing title land use permit 44905 04120 000 3316 5665 land lease term location .08368 .04120 .325 -.0337.2011 .07042 housing attributes .04120 .525 -.0470 .1878 -.0329 surrounding facilities .08451 .04120 .313 .2019 -.22287° land use permit housing title .04120 .000 -.3403-.1054land lease term .22618\* .04120 .000 .1088 .3436 -.13919\* .04120 location .010 -.2566-.0218housing attributes -.15244\* .04120 .003 -.2699 -.0350surrounding facilities -.13836 04120 010 - 2558 -.0209land lease term housing title -.44905\* .04120 .000 -.5665-.3316-.22618\* .04120 land use permit .000 -.3436-.1088-.36537\* .04120 .000 -.4828 -.2479 location housing attributes -.4961 -.2612- 37862\* 000 04120 surrounding facilities -.36454° 04120 000 -.4820-.2471housing title -.08368 .04120 .325 -.2011 .0337 location land use permit .13919\* .04120 .010 .0218 .2566 land lease term .36537 .04120 .2479 .4828 .000 housing attributes -.01326.04120 1.000 -.1307.1042 surrounding facilities .00083 .04120 1.000 -.1166 .1183 housing attributes housing title -.07042 .04120 .525 -.1878 .0470 land use permit .15244 .04120 .003 .0350 .2699 land lease term .04120 .37862 000 .2612 .4961 location .01326 .04120 1.000 -.1042.1307 surrounding facilities .01408 .04120 .999 -.1033.1315 -.08451 surrounding facilities .04120 .313 -.2019.0329 housing title land use permit .13836 .04120 .010 .0209 2558 land lease term .36454 .04120 .000 .2471 .4820 -.00083 .04120 location 1.000 -.1183.1166

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<sup>\*</sup> The mean difference is significant at the .05 level.

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