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Land titling program and farmland rental market participation in China: Evidence from pilot provinces

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ABSTRACT

Because of the incompleteness and instability of property rights, high transaction costs have hindered the development of the farmland rental market in China and reduced the efficiency of resource allocation. In an attempt to remedy this, a land titling program (LTP) that removed the obstacles caused by ambiguous property rights was proposed by the Chinese Central Government in 2008, and was implemented as a series of pilot projects in several provinces. We developed a series of econometric models using data from the 2012 China Health and Retirement Longitudinal Study (CHARLS) to quantitatively estimate the impact of this program on the farmland rental market, incorporating representative examples from each of two pilot provinces in eastern, central, and western China. The results of this study suggest that the proportion of people leasing farmland increased by approximately 3.9% as a result of land titling, while the rent received increased by about one quarter due to the implementation of this system. Although the effects of this program varied across regions and the hysteresis of land titling was significant, the proportion of people leasing farmland as well as rent increased with increasing implementation time. We, therefore, recommend that the Chinese Central Government continues to implement the LTP across the country, and that farmland maps are utilized to solve disputes caused by the measurement of farmland areas and ambiguous property rights. It will also be necessary to strictly implement the LTP nationwide in order to ensure that both the stability and authority of the policies are not compromised.

1. Introduction

As non-agricultural wages have continued to rise, massive numbers of people have tended to flow from Chinese villages into urban areas, and even extensive agricultural operations have remained relatively widespread across China (Van Boeckel et al., 2015). This trend has led to the phenomena of abandoned or idle farmland becoming widespread across the country (Hua et al., 2016; Yan et al., 2016; Yanagawa et al., 2016); the proportion of idle farmland in China reached 13.5% in 2011 and was as high as 15% in 2013 (Gan et al., 2015). It has, therefore, become increasingly important to reconfigure agricultural resources to improve the operation efficiency of farmland, transferring land from farmers who have relatively low production efficiency to those who can perform at a higher level (Huy et al., 2016). In addition, in order to enhance the low labor productivity that has resulted from the fragmentation of cultivated land caused by the Household Contract Responsibility System that has been in place since the 1980s, land circulation has often recently been applied across the whole country. However, the per household size of farmland is very small compared to other countries because of the low land circulation rate (Li et al., 2010; Lowder et al., 2016; Matteazzi et al., 2016).

Clear land contractual management rights (LCMR) that are protected in law provide the basis for an efficient farmland rental market, which can efficiently enhance the vitality of land circulation (Ma et al., 2015b). At the same time, however, insecurity over land property rights has led to high transaction costs and has hindered the development of the farmland rental market in rural China over the last three decades (Kung and Bai, 2011). Although a regulation was introduced in 1993 via Document No. 1 of the Central Committee of the Communist Party of China that extended the LCMR period by an additional 30 years and left land management rights effectively unchanged for a substantial period, in reality, adjustments to farmland have occurred frequently in numerous areas because of land expropriation or population migrations. The resultant Property Law, which defined the LCMR as an usufructuary right, was nevertheless passed in 2007; while this law strengthened the legal status of LCMR from a property perspective, the

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spatial attributes of farmland, a definition of these attributes, and legal property rights remained undefined (Wang et al., 2011). Reductions in the efficiency of the Chinese farmland rental market may, therefore, largely be the result of poorly defined property rights (Huy et al., 2016; Liu and Xu, 2016; Qiu et al., 2015; Wang et al., 2015), which have limited the extent of farmland circulation and reduced the effectiveness of land resource allocation.

The question of security in land property rights has received an increasing level of attention in recent years from different groups, especially the Chinese Central Government; in 2008, a number of land titling program (LTP) pilot projects were initiated via Document No. 1 of the Central Committee of the Communist Party of China. Villages and towns from eight provinces including Shandong, Sichuan, Hunan, Chongqing, Guangdong, Guangxi, Heilongjiang, and Jiangxi were selected by the Ministry of Agriculture as LTP implementation pilot samples, and an initial nationwide scheme was launched by this ministry and six other departments in March 2011. Document No. 1 continued to emphasize the importance of the LTP in subsequent years and clearly stipulated that this process should be implemented across more provinces in order to attain national coverage.

The Chinese LTP has also received attention from the academic community; it has generally been assumed that insecurity in farmland property rights has increased transaction costs, which has led to frequent land circulation between close acquaintances, and a reduction in the efficiency of the farmland rental market (Deininger and Jin, 2009; Deininger et al., 2014; Kung, 2000). It is thought that this process has also caused a reduction in land quality while the risk of landlessness has increased due to land property rights (LPR) instability (Benjamin and Brandt, 2002; Ito et al., 2016). In contrast, other studies have shown that the numbers of people participating in the farmland rental market have increased in concert with LPR improvements (Holden et al., 2011; Yan and Huo, 2016), and the scale of farmland circulation has also expanded (Deininger and Jin, 2005). Some studies have also proposed that land titling has had no significant effect on farmland use (de Janvry et al., 2015). Preliminary research on Chinese LTP has tended to support the view that land titling can significantly improve long-term agricultural investment (Feng et al., 2010; Kousar and Abdulai, 2016; Li et al., 2016; Ma et al., 2013), although one study that was carried out in Chengdu in Sichuan Province showed that land titling led to an increase in prices (Li, 2012).

The extent to which LTP improve the efficiency of the farmland rental market remains unclear. This is, in part, due to the limitations of data availability and the impact of hysteresis on the LTP; as a result, few studies have attempted to quantitatively estimate the impact of LTP on the Chinese farmland rental market. In addition, previous studies that assessed the effects of land property security before the initiation of the Chinese LTP have two significant deficiencies. Indicators for the stability of property rights were derived from the subjective judgment and cognition of farmers (Ma et al., 2015b; Wang et al., 2014), while the data used in these studies came from surveys of individual areas. Earlier work in this area is not, therefore, representative across larger-scale areas, and no comparative studies between regions have so far been conducted (Ma et al., 2013; Wang et al., 2015). Nevertheless, since 2008, the Chinese LTP has provided valuable data that is representative across large regions, indeed the whole country. Utilizing the 2012 China Health and Retirement Longitudinal Study (CHARLS), we established a series of econometric models to quantitatively estimate the impact of LTP on participation in the farmland rental market via representative examples from each of two pilot provinces in eastern, central, and western China.

The remainder of this paper is organized as follows. The second part describes the information about LTP in China. The third part introduces data resources, descriptive statistics and econometric model specifications. The fourth part presents empirical results and discussion. The final part comprises conclusions, policy applications and limitations.

2. The LTP in China

The Chinese LTP was carried out in a specific developmental context that included both urbanization and agricultural modernization. The traditional land system in China comprised village collective land ownership, with parts of LPR belonging to farmers, including the rights to transfer, usufruct, and contractual management. Thus, the aim of the LTP was to guarantee land property security and to provide a legal definition of contractual management rights in order to support the healthy development of the farmland rental market.

The Chinese Central Government began to implement a series of policies in the 1980s that were aimed at ensuring the stability of land property rights. Importantly, Document No. 1 of the Central Committee of the Communist Party of China established a regulation in 1984 requiring the term of LCMR to be more than 15 years. The earliest implementation of the Household Contract Responsibility System (HCRS) was in Xiaogang village in Anhui Province, which by 1993 had experienced 15 years of this system. Thus, in 1993, Document No. 1 of the Central Committee of the Communist Party of China laid out a further regulation that extended the term of LCMR for a further 30 years following the expiration of an original land contract. These regulations aimed to stabilize land contract relationships and to encourage farmers to increase their investment and improve land productivity. Building on this, a rural land contracting law was introduced in 2002 to protect the long-term stability of rural land contract relations, while the Property Law, passed in 2007, defined the contracted management of land as a usufructuary right. These measures further strengthened the legal status of LCMR from the perspective of property law, further ensuring the stability of the basic system of rural operations (Ma et al., 2015a).

Although these institutional and legal developments were aimed at ensuring the security of land tenure, in practice, the farmland rental market remained inefficient because of frequent land adjustments and contract violations. The proportion of total farmland in circulation is close to 30%, but in approximately ten provinces this figure remains less than 10%, while over 70% of relevant households do not participate at all in the rental market. The proportion of non-participation in the Chinese farmland rental market is high compared to corresponding estimates of 37% in Bangladesh and 54% in India (Deininger et al., 2008; Rahman, 2010).

The Chinese Central Government has attached significant importance to the LTP, regularly proposing policies from 2008 onwards via Document No. 1 and through other departments (Table 1).

The agricultural policies associated with the LTP clearly demonstrate that the aims of the Chinese Central Government are to stabilize long-term rural contract relations and to enable farmers to use their tenure security to rent and mortgage land. Theoretically, an LTP that increases security and reduces the costs of transactions affecting the farmland rental market should enhance land use by farmers and partly solve the problem of idle land. Quantitative scientific analyses, however, are required to verify this phenomenon and to improve the development of the farmland rental market. Performing such an analysis is the aim, motivation, and objective of this study.

3. Materials and methods

3.1. Data

We initially utilized the 2012 CHARLS data for empirical analyses as it includes LTP data. The CHARLS was conducted in 30 provinces by Peking University between May 2011 and March 2012 and included 17,708 individuals, 10,257 families, 450 villages or communities, and 150 counties, encompassing 52.67% coverage in rural areas and 47.33% coverage in urban areas. The CHARLS sampling process comprised four stages to ensure unbiased and representative data collection, at county or district, village, household, and personal levels. Specifically, probability proportional to size (PPS) sampling was