



Economic development and farmland protection: An assessment of rewarded land conversion quotas trading in Zhejiang, China



Weiwen Zhang^{a,b,1}, Wen Wang^{c,2}, Xuewen Li^{a,3}, Fangzhi Ye^{d,*}

^a College of Public Administration, Zhejiang University, Hangzhou 310058, China

^b The Earth Institute, Columbia University, New York, NY 10115, USA

^c School of Public and Environmental Affairs, Indiana University-Purdue University Indianapolis, Indianapolis, IN 46202, USA

^d Department of Public Policy, City University of Hong Kong, Hong Kong, China

ARTICLE INFO

Article history:

Received 28 September 2012

Received in revised form

12 December 2013

Accepted 14 December 2013

Keywords:

Transfer of development rights (TDR)

Rewarded land conversion quotas (RLCQ)

Economic development

Farmland protection

ABSTRACT

Facing a substantial loss of farmland in the reform era, the Chinese central government established a highly centralized land management system in 1998 to guarantee its capacity to meet the domestic food needs. In order to maintain high-speed economic growth, local governments in China made great efforts to circumvent the stringent constraint on land use by launching various innovative land management schemes, among which Zhejiang's rewarded land conversion quotas (RLCQ) trading scheme, a program similar to the transfer of development rights (TDR) in Western countries, has attracted a lot of policy and scholarly attention. In this research, we first provide an overview of China's farmland protection policy and the RLCQ trading scheme in Zhejiang Province. Then, using the system GMM estimator for economic growth models and a panel dataset of 69 local jurisdictions in Zhejiang Province covering the period of 1989–2008, we assess the impacts of RLCQ trading on local economic growth. The empirical results corroborate our hypotheses that participation in land quota trading in general led to faster local economic growth, and that the trading had a stronger and more lasting impact on the economic growth of the quota buyers than on that of the sellers. The analysis suggests that in order to balance the competing goals of economic development and farmland protection, market-based land management tools have a good potential for further development in China and other countries confronting similar challenges.

Published by Elsevier Ltd.

Introduction

With China's rapid economic development and urban expansion, the substantial loss of farmland since the 1980s has become a serious concern of the public and policymakers. The concern over the threat of China's incapacity to meet its domestic food needs (Brown, 1995) induced some major policy changes in the late 1990s, which turned a previously chaotic land management system into a highly centralized one. The central government used annual and long-term plans to impose tight control over the quotas allocated to local governments for the conversion of cultivated land⁴ to

construction (non-agricultural) use (Wang et al., 2010). Confronted by the huge mismatch between the scant land quotas assigned by the central government and their high demands for obtaining construction land for the purpose of achieving fast economic development, local governments in China attempted to evade the constraint of the construction land quota by using some innovative land management tools. The land development rights market developed in Zhejiang, one wealthy coastal province in China with limited land endowments, was such a case in point. Zhejiang provincial government established a market to trade land development rights across localities in the province at the end of the 1990s (Wang et al., 2010). This study focuses on the trading of rewarded land conversion quotas (RLCQ, or *tudi zhengli zhedi zhibiao*), one key component of the trading market,⁵ which made a substantial contribution to the addition of cultivated land in China in recent years (Chau and Zhang, 2011). The policy scheme allowed localities with

* Corresponding author. Tel.: +86 1395832818.

E-mail addresses: wwzh@zju.edu.cn (W. Zhang), wenwang@gmail.com (W. Wang), xuewen.195@163.com (X. Li), yefangzhi@hotmail.com (F. Ye).

¹ Tel.: +86 13067986170.

² Tel.: +1 317 274 1078.

³ Tel.: +86 18157100951.

⁴ As Lichtenberg and Ding (2008) pointed out: "'cultivated land' [in China] does not correspond exactly to what would be defined as farmland in most countries. Instead, it refers only to land used to grow major food grains, feed grains, soybeans, and tubers" (p.60). According to the *Land Administration Law of the People's Republic*

of China, farmland includes cultivated land, woodland, grassland, land for farmland water conservancy and water surfaces for breeding.

⁵ The market for land development rights in Zhejiang also involves the trading of basic farmland protection quotas and quotas for replacing construction land with new farmland across regions (Wang et al., 2010).

land scarcity in the province to buy RLCQ for promoting economic development from those with plenty of land endowments, who traded out quotas to gain extra fiscal revenues (Cai, 2010; Wang et al., 2010).

In essence, the institutional design of the RLCQ trading scheme in Zhejiang was similar to that of the transfer of development rights (TDR) programs in Western countries. Traditionally, scholars believed that government regulation of land use through zoning provided the most effective way to minimize externalities. However, Coase's seminal work of 1960 argues that, under the assumption of zero transaction cost, market transaction would achieve more efficient outcomes than government intervention if property rights can be clearly defined (Coase, 1960; Wang et al., 2010). In 1968, the first case of transfer of development rights (TDR) appeared in the New York City (Richards, 1972). Aiming to protect historic landmarks from demolition and redevelopment in the city, its *Landmark Preservation Law* allowed their owners the option of transferring unused development density rights to adjacent properties. Since then, TDR has attracted substantial policy and scholarly attention as an important market-oriented land management tool, and has been adopted by many local governments in the US and Europe to address one key issue of growing urban areas: reducing the development potentials in places where resources should be preserved by increasing the development potentials in places where growth is wanted (Berry and Steiker, 1977; Thorsnes and Simons, 1999; Tavares, 2005).

There has been a substantial literature investigating TDR from multidisciplinary perspectives, but the majority of the literature focuses on the issue of preservation rather than development in the US and Europe. Scarce literature has been devoted to analyzing TDR or other similar programs in developing countries where economic development often ranks as top priority in governments' policy agenda when compared with farmland preservation. Furthermore, a review of the existing literature indicates that few studies have been committed to empirically assessing the effect of TDR and TDR-like programs on accommodating development pressure, one of the advantages claimed by its proponents, with rigorous statistical methods and large-N datasets (Costonis, 1973; Berry and Steiker, 1977). Offering a preliminary evaluation on the origin and evolution of land development rights trading in Zhejiang, Wang et al. (2010) suggests that systematic data on land transaction, land quality, and local public finance would be needed to better assess the impacts of the trading scheme on local economic development and farmland preservation. Chau and Zhang (2011) show that an appropriately designed land development allowance policy, or the trading of RLCQ, may harness the forces of urbanization to encourage agricultural land development. Our empirical study extends the previous research on this topic. Using the system GMM estimator for economic growth models and a panel dataset of 69 local jurisdictions in Zhejiang for the period of 1989–2008, we intend to address two research questions in this paper: First, did RLCQ trading in Zhejiang promote economic growth for those localities participating in the trading scheme? Second, did RLCQ trading have differential impacts on the economic growth of the buyers and sellers on the trading market? In addition, we also provide an analysis on whether RLCQ trading helped local governments to balance the competing goals of economic growth and farmland protection.

This research aims to make an important contribution in at least two aspects. First, by assessing how RLCQ trading affects the economic growth of both land quota buyers and sellers, it contributes to the literature on the impact of market-based land management tools on local economic growth. Second, our empirical analysis may help to inform public policies designed for meeting the competing goals of farmland protection and economic development faced by many local governments in China as well as in other countries.

The remainder of this paper is divided into four sections. The next section provides a brief overview of China's farmland protection policy and the RLCQ trading scheme in Zhejiang. In the third section, we provide an empirical analysis on the impacts of RLCQ trading on local economic development. The fourth section discusses whether RLCQ trading helped to address the tradeoffs between economic development and farmland protection under the broad background of central–local relations over land management in China. The final section concludes and discusses directions of future research.

China's farmland protection policy and RLCQ trading in Zhejiang Province

Food security and restrictive farmland protection policy

The reform and open-door policy launched in the late 1970s has greatly unleashed the development potential of the Chinese economy. The rapid twin processes of industrialization and urbanization in the reform era created a huge demand for the conversion of farmland to non-agricultural use, putting the country's farmland protection under a great pressure. Scholars (Yang and Li, 2000; Ding, 2003, 2007; Lichtenberg and Ding, 2008) argue that the encroachment of various constructions was one of the major causes of farmland loss in China. Even though the lack of consistent and reliable data makes it difficult to measure farmland loss with precision, statistics from different sources still indicate a serious problem. The State Statistical Bureau reported 96.8 million hectares of cultivated land in 1985 and 94.9 million hectares in 1995, though the estimates derived from remote sensing and detailed surveys exceed the figures reported by the Bureau during this period by more than 40% (Lichtenberg and Ding, 2008). According to Liu (2000), between 1990 and 1996, China's farmland had shrunk by 4.84 million hectares in total, or 4.0% of the total farmland. In eastern China, the reduction was 5.0%, higher than the average 3.0% in both central and western China. In the same period, China's non-agricultural land had increased by 2.3 million hectares, or 9% of the total non-agricultural land. Divided by 1.243 billion people, China's mid-1998 population, the per capita cultivated land was less than 0.08 ha, a rate comparable to that of Bangladesh, or equal to only about 60% of Asia's and to roughly 40% of India's mean, and just 25% of the global average (Smil, 1996). In his famous publication "Who Will Feed China?" in 1995, Lester Brown predicted that, by 2030, China would not be capable to feed itself. The surplus of the rest of the world would also not be enough to cover China's grain shortfalls (Brown, 1995).

The serious concern over the substantial loss of farmland, together with a poor harvest in 1994, induced a major policy change in China's land management system, aiming to maintain grain self-sufficiency (Ash and Edmonds, 1998). Since 1998, the Chinese central government has begun to exercise strict centralized regulations over the conversion from cultivated land into non-agricultural construction land (Yang and Li, 2000; Lin and Ho, 2003; Ho and Lin, 2004). On January 1st, 1999, the revised *Land Administration Law of the People's Republic of China* came into effect, according to which the central government used the comprehensive land use plan (*tudi liyong zongti guihua*, CLUP) to set a long-term agenda for both the area and location of cultivated land in a locality that is allowed to be converted into construction (non-agricultural) use.⁶ The CLUP is implemented through the annual land use plan (*tudi liyong niandu jihua*, ALUP) made by the central government that

⁶ See *Land Administration Law of People's Republic of China* for more details. Available at: <http://www.ml.gov.cn/mlrenglish/laws/200710/t20071011.656321.htm> (accessed 29.03.12).

Download English Version:

<https://daneshyari.com/en/article/6548816>

Download Persian Version:

<https://daneshyari.com/article/6548816>

[Daneshyari.com](https://daneshyari.com)