



Empirical study of the local government deficit, land finance and real estate markets in China[☆]



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ABSTRACT

The purpose of this study is to explore an important issue concerning the relationship among the local government deficit, land finance and real estate markets in China. This study uses a panel data of 30 provinces in China during 1999–2010 to estimate the panel smooth transition regression model. Since the estimated transition threshold value is 14.62, provinces with the ratio of fiscal deficits to GDP of greater than 14.62% are categorized as in the high fiscal difficulty (HFD) regime. Otherwise they are in the low fiscal difficulty (LFD) regime. The primary finding of this study is that the land leasing fee has a significantly positive influence on the total value of commodity buildings sold in the LFD regime. In addition, the local fiscal deficit has a significantly positive impact on the real estate market in the LFD regime, but this impact turns to be negative in the HFD regime.

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1. Introduction

With the rapid economic growth, China has attracted many foreign investors into the real estate market, and real estate has become the most popular industry (Jiang, Chen, & Isaac, 1998; Fung, Huang, Liu, & Shen, 2006). In fact, China's real estate development has become one of the major factors promoting economic growth in the country. Unlike the mature real estate markets in most western countries, the real estate market is an outcome of urban land reform in China.¹ Over the past decade, the transaction of real estate

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¹ Since the housing market reform from 1998 to 1999, commodity housing has come to China's property market, replacing and mainstreaming state-provided housing.

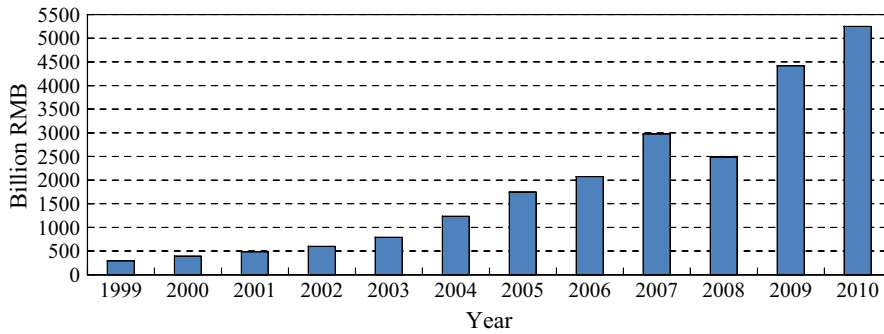


Fig. 1. The total value of commodity building sold in China, 1999–2010 (billion RMB).
Data source: CEIC China Premium Database.

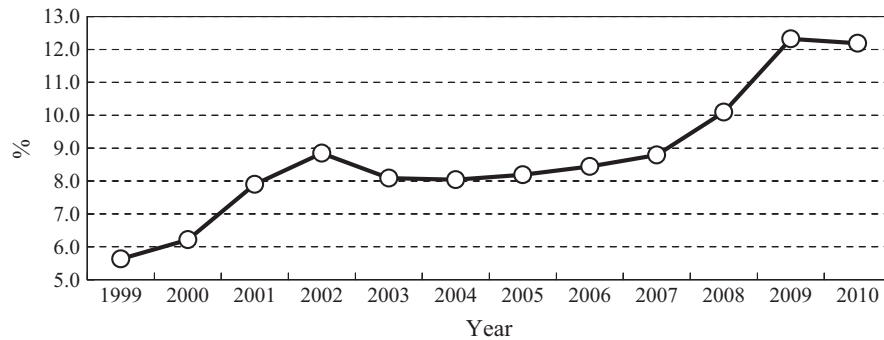


Fig. 2. The ratio of local deficits to GDP in China.
Data source: CEIC China Premium Database.

in China increased rapidly, and the growth in housing prices has outpaced the growth in income,² thereby exacerbating the affordability problem proposed by [Fung, Jeng, and Liu \(2010\)](#),³ inequality and low consumption as suggested by [Yan and Zhu \(2013\)](#), potential local government debt crisis indicated by [Fan and Lv \(2012\)](#), and lack of entrepreneurship pointed out by [Li and Wu \(2014\)](#).

According to the above description, a high housing price is the signal of an over-booming real estate market. Observing the total value of commodity buildings sold is a simple way to understand the situation of real estate markets. [Fig. 1](#) illustrates that the total value of commodity buildings sold increased from 300 billion RMB in 1999 to 5.2 trillion RMB in 2010, except that real estate market downturn due to a tightening policy of the real estate market implemented in 2008. This implies that China's real estate market will grow very fast if there are no interventions from the central government.

The overwhelming development of real estate markets, causing a high housing price, due to that real estate is a special type of asset that represents a dual role of consumption and investing goods ([Glindro, Subhanij, Szeto, & Zhu, 2011](#)). Therefore, the demand for real estate, particularly a house, increases over time once China's economic growth remains at a high level. This increasing demand for real estate provides local governments a chance to mitigate their fiscal deficits by selling the land-use right, the most important input of real estate output. This strategy is often referred to as land finance. More precisely speaking, land finance usually refers to the practice of some local governments who sustain their fiscal expenditure by selling the land-use right. Land finance suddenly becomes a panacea for local governments to cure their severe illness of fiscal deficits. The severe situation of the local government fiscal deficit is shown in [Fig. 2](#). [Fig. 2](#) shows the ratio of local fiscal deficits to GDP of China from 1999 to 2010. This ratio was greater than 8% in 2008, then showed a U-shaped pattern, and further reached a highest value in 2009 during this period. It is found that the problem of fiscal deficits has been very serious since the recent years.

After the land-use right is transferred, local governments can receive revenue of the land leasing fee from real estate developers. The land finance strategy can stimulate real estate markets, further pushing up the house price ([Cao, Feng, & Tao, 2008](#); [Fang & Zi, 2012](#); [Lu & Liu, 2012](#)). In order to finance more and more budget deficits, local governments put lots of efforts to supply land to real estate markets. According to [Cao et al. \(2008\)](#), land finance has existed for many years, meaning that local governments play a leading role in the process of "acquiring land, leasing land, imposing taxes, mortgage and then acquiring land again," and local

² Almost all studies found that China's real estate price can be pushed up by different factors, such as economic growth, acceleration of urbanization, commodity housing reform, high saving rate, limited investment vehicle, and speculative investment demand ([Ahuja, Cheung, Han, Porter, & Zhang, 2010](#)).

³ According to [Fung et al. \(2010\)](#), the ratio of housing price to household income went up from 9.79 in 1997 to 11 in 2006, suggesting that residents were actually becoming less able to afford housing.

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