# Chapter 5

## Conclusion

### 5.1 Conclusions and discussions

This paper employs a panel data of 30 provinces in China from 1998 to 2009 to examine the cointegration and causality between house prices and economic growths with the methods of panel unit root test, panel cointegration test and error correction models. The empirical investigation shows those followings results:

Firstly, the panel cointegration test results show that there is a long-run relationship between house prices and economic growths. The panel Granger Causality test reveals that there exists a strong bidirectional Granger-causality between house prices and economic growths in the short run. While in the long run, there is only one-way causality from GDP to house prices. Those results are consistent with the researches of Sheng and Liu (2001), Hu and Liu (2007), Zhonghua Huang et al. (2008), Song and Wei (2009), and Yu Kong (2009). All of those papers found that there was a long-run cointegration between house prices and economic growths and economic growths were Ganger-cause of house prices.

Secondly, the paper has provided new conclusions. The results from generalized least square show that there is a positive relationship between house prices and economic growths. Moreover, the panel pooled least square test reveals that the difference of house price elasticity coefficients among provinces is huge and the western part provinces have bigger price elasticity coefficients than the major cities. Therefore, taking advantage of those results, we can provide some policy suggestions for the real estate entrepreneurs and local governments.

#### 5.2 Recommendation

## 5.2.1 Policy suggestions

On one hand, the hedonic house price theory reviewed in the second part shows how do the house prices are determined by the characteristics in them. The real estate entrepreneurs can take advantage of this theory to control the house prices by adjusting the housing demands. For example, they can improve the characteristics of the lot, structure of the house, neighborhood amenities, public transportations, public services or other characteristics to affect the house demands. Taking Yunnan province as an example, in 2008, due to the financial crisis, the real estate market went in to a downturn. The Junfa Real Estate Company, one of the biggest real estate firms in Yunnan, has used a variety of polices to boost the demand for housing. In the end of 2008, it conducted a promotion on the lot prices to promote the sale of new houses. And in the beginning of 2009, it improved the public transportation in Beijing road to promote the house sales of that area. All those policies have helped the Junfa Real Estate Company to encounter the low period in the real estate market.

On the other hand, according to the results of long-run cointegration relationship between house prices and economic growths and the long-run causality from economic growths to house prices in the fourth part, the government can make a long-run controlling of house price policies to adjust the effects from the economic growths to house prices. And based on the results of panel least square method, the policies in different provinces should adapt the local fact because of different characteristics of each province. Taking Yunnan province as an example, regarding the huge effect of house prices on economic growths in Yunnan, promoting the house consumption, particularly the self-residential housing, is meaningful for the Yunnan government to stimulate the economic development.

Furthermore, some policies for the government can be employed. Firstly, the government can use the fiscal policy to adjust the house prices, such as promoting

the buildings of public residential house, public transportation, new commercial district, and increasing or decreasing taxes on the house property. Also taking Yunnan province as an example, in 2009, the Kunming government successfully set up a new commercial area out of the urban city by providing some preferential polices on the taxation for major real estate companies to build the houses in that area. This policy has adjusted the housing demand for people and promoted the development of the economy in Kunming.

Secondly, the government can implement the monetary policy to adjust the house prices by affecting the housing demand. It can be seen from table 1.1 that, the government has implemented a variety of monetary policies during 2003 to 2009. It has adjusted the interest rates for several times to promote the healthy development of the real estate market. Thus, we can know that the interest rate has become a useful instrument for the government to adjust the housing demand.

Thirdly, the government can employ some special policies on the real estate sector to affect the house prices. For example, in order to prevent the rapid increase in house prices, the Chinese government has issued a property-purchasing-limitation policy for the Beijing city on 30<sup>th</sup>, April, 2010. Later this policy was expanded to the second and third-tier cities as it set up efforts to cool the real estate market. This policy was still being conducted at present.

## **5.2.2 Future researches**

Some further researches can be conducted. Firstly, the econometric model in the third part can be improved to examine the relationship between house prices and economic growths, such as adding the interest rate or other variables as an instrument.

Secondly, some further studies on the reasons why house prices are not the Granger cause of economic growths in the long run can be preceded. The panel least square results in table 4.3, which shows that the house prices is not a big contributor

of economic growths for the major big cities, can only provide partial answers for this question. Therefore, other reasons may have to be considered. For example, the export and investment are the main reasons of China's rapid economic growths. Thus, we can have a clear understanding about why the house prices are not Granger-cause of economic growths in the long run.

