

MACROECONOMIC FACTORS EFFECT ON HOUSING PRICE INDEX IN
CHINA

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"To my beloved family, thank you for your support, and most importantly for my supervisor Dr. NAJIB who never gave up inspiring and motivating me, through this project. Thank you. "

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ABSTRACT

There are lots of empirical studies and theory concluded that house price able to reflect economic fundamentals in the long-term. However, based on empirical analysis in the context, it has been seen that house price has deviated upward from the economic fundamentals since the Chinese government started macro-control of the real estate market. It is considered that the mechanism between the economic fundamentals and house price were distorted by China's real estate policy, particularly its' land policy. However, the policy itself is a significant factor in explaining the changes of China's housing price. The study was conducted by estimating different data model on house price using statistical models and the variables which are controlled by real estate policy. The result shows that land supply and other variables has negative effects on house price, and also that financial mortgages for real estate have positive effects on house price; and the area of vacant houses as well as the area of housing sold, which reflects the demand and supply of the housing market, showing a negative effects on house price. The study also finds some differences in house price influence factor between cities in China. In conclusion, the study proposes policy suggestions according to the empirical results obtained.

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LIST OF SYMBOLS

ADF	Augmented Dickey-Fuller Test
BJ	Beijing
CPI	Inflation Rate
DI	Disposable Income
GDP	Gross Domestic Products
HP	House Price
LR	China Interest Rate
M2	China Money Supply
OLS	Ordinary Least Squared
SH	Shanghai
TIFA	Total Investment in Fixed Assets
TJ	Tianjin

CHAPTER 1

INTRODUCTION

1.1 Background

After the global financial crisis, the world economy has been expensive to fragile; while China's economy is still strong. China has enjoyed the growth of 8% of GDP. (Sina finance, 2010) China is an undoubtedly mainstay in the international economic stage. However China also has to face various of problems concerning of real estate in particular residential property. As the major force of economic development in China, the development of real estate industry has always been in top priority. The development of the real estate industry, is a driving force of economic development in China, it also drives the development of relevant industries. The real estate industries affect the national economy and people's livelihood. Influenced by Chinese traditional concept, housing is the top priority in life. Because of this, the housing problem in China is particularly prominent (Huang Jun, 2011).

The annual growth in property sector was at about 5% level from year 1953 to 1978, contributing 1.83% to China economic growth. These two values increased further to 11.4% and 2.39% respectively from year 1978 to 2005. The eminent position of the housing property sector serves as a pillar industry in the national economy and was endorsed by the official documents of the state council of China

(see figure 1.1).

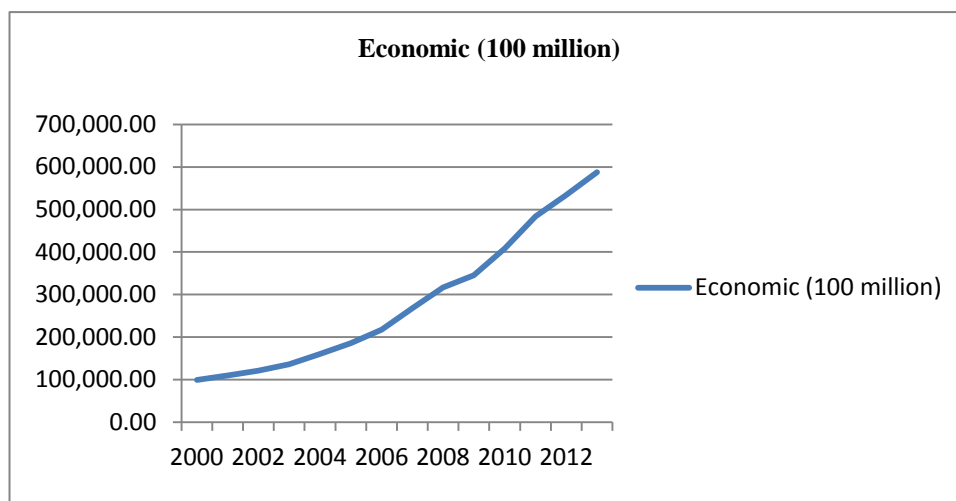


Figure 1.1: China economy(National Statistics Bureau, 2014)

The housing property prices have been strong over the past decade, especially from year 2004 when the housing prices went up extraordinarily (Jin Zhang, 2013). The annual growth rate of housing property prices rose to 15.1% and 19.5% in 2004 and 2005 respectively as compared to previous respective years (See figure 1.2).

In recent years real estate regulated in China by the government, but the housing prices keep rising year by year. Its rise has far more than China residents' income growth. (Guo Xin, 2013) China urban housing price to income ratio is far more than the international housing price to income ratio, 6:1. The first-tier cities housing prices even more than resident's income about ten times. China government to take consecutive policies to push down prices, but the effect is not obvious; the house prices are still rising.

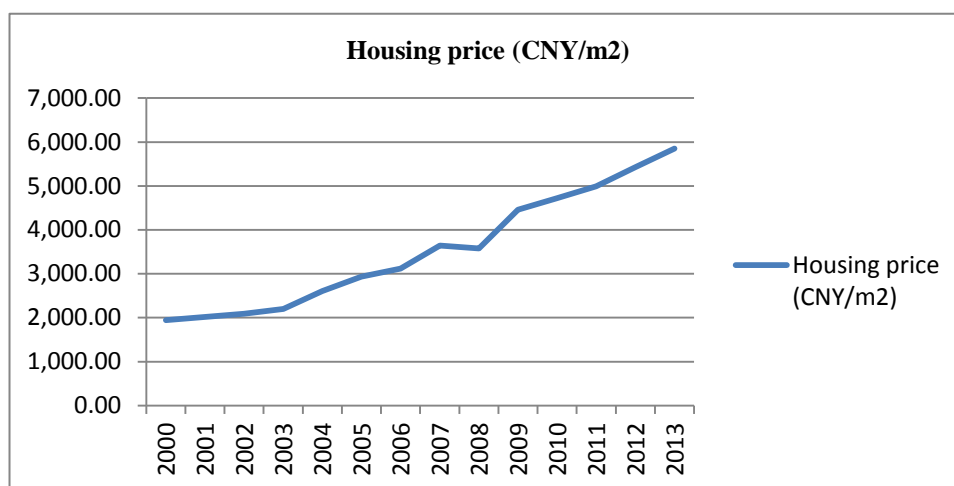


Figure 1.2: China average housing price (National Statistics Bureau, 2014)

1.2 Problem Statements

House prices have been rising in the main cities of China. Even though the house prices in China vary to a great extent among different regions, already the average national sales prices increased by 5.7% in the year 2009 (Yan et al., 2011). Economically booming cities like Beijing, Shanghai have experienced much higher increases. New house prices in Shanghai and Beijing on average rose to 23 thousand RMB while that of Guangzhou climbed to 14 thousand RMB. In November 2010, the Consumer Price Index (CPI) attained a 28-month high of 5.1% (EIU ViewsWire, 2010).

China's housing market has continued to grow vigorously in defiance of government efforts to cool prices allowing China to face an increasing risk of housing property bubble (Jonathan & Richard, 2002). The increasing house prices in China during 2008 and 2010 were due to excess liquidity and speculative or irrational behavior of investors and consumers (Yao & Luo 2011).

House prices were pointed out to be a bit out of control especially in China big cities (Li Gang, 2007). During the first 10 months of 2013, the sales of residential buildings in China increased by 32.6% (NBSC, 2010). A survey of house prices of the 100 Chinese cities showed an increase in October 2013, and the 17th regular succession monthly rise by 1.24% to an average Of CNY 10,685 equivalent to US\$ 1,742 per square meter (sq.m) (CREIS, 2013). This is an increase of 10.7% as compared to the same period in 2012.

Out of the 100 cities in China, 93 of them had year to year house price increase. China top 10 cities including Beijing and Shanghai also increased by almost 2% within few months and were up by 15.7% as of October 2013. (Sina finance, 2013) Shanghai's second-hand house price index in October 2013, increased by 11.6% year to year as compared to the decline of 0.2% in October 2012 (Ehomeday, 2014). Sales volume of new homes in Shanghai rose by approximately 26% in 2013 (Colliers International, 2013). In Beijing, the residential sales were up by about 3.2% in the first 10 months of 2013 (Beijing Bureau of Statistics, 2014).

Patrick (2013) also stated in a CNBC interview which was published in March 2013 that the ratio of residential floor space under construction to floor space sold have been increasing. For every one sq. m. of space sold in 2008, 3.9 sq. m. was under construction. This ratio increased further to a record high of about 4.4 sq. m. in 2012. China economy expanded in growth by 7.8% towards the end of 2013 and GDP growth was at about 7.6% at the end of 2013 which is lower as compared to the GDP expansion of 9.3% in 2011 and 10.4% GDP expansion in 2010. In 2014, the GDP growth rate set at about 7.3% due to the influence of policy makers in supporting activities that provide financial stability to the economy and allowing a more sustainable and balanced growth path (IMF, 2014).

In order to curb excessive housing price rises, China government adopted comprehensive control measures, such as fiscal policy, monetary policy, land policy, etc. As a result, of bank reserve ratios were raised eight times more to reach 19.5% by February 2011. Some banks lessened their mortgage lending, while some local governments have implemented even more difficult lending conditions.

The upward price trend in residential property has developed an important political influence, which affect the social stability and social harmony. It is considered to be a double-edged sword. On the one hand, expensive house prices can able to bring real estate boom, as well as improve China economic growth; On the other hand, it may lead to serious real estate bubble, the financial and economic crisis. (Jin Zhang 2013)

How to curb housing prices has become a top priority of national economic development. The factors that affect the increasing of house price needs to be identified.

1.3 Research Questions

This research is to identify and analyze how macro-economic variables affect house prices. Therefore it aims to answer the following research questions:

1. Why the China government took a series of measures to rein in property prices, but no significant effect has been seen? Which factor effect housing price in China?
2. What are the factors influence housing prices?

1.4 Research Objectives

Based on the problems mentioned above, there are three research objectives:

1. To identify macroeconomic factors that affects the housing price in major cities in China.
2. To analysis the house price trend in major cities in China.
3. To assess the macroeconomic factors on house price in major cities in China.

1.5 Significance of Study

Real estate as a special commodity, price fluctuates relates to people's living standard, but also plays an important role in the national stability and economic development.

To public: House is the basic people's livelihood. House price have raised sharply effect residential house demand and residential quality. The important thing is efforts to restrict excessive real estate investment and lower overheated real estate prices in China. Keep housing prices at a reasonable level; promote the steady and sound development of the real estate market.

To industry: Real estate industry is an important pillar of the national economy, it has a significant impact on China's economy. It increases in employment and promoting the consumption. Chinese real estate developed in a high speed and takes heavier degree in the local economic development, and led other related industries development of building industry, Chemical industry, furniture industry and so on. Whether real estate industry develops healthily or not is vital to China.

To government: Japan's economic eclipse, the financial crisis in Thailand, the U.S. financial crisis was preceded by a real estate bubble. China house prices have been galloping out; the government tries to cut the risk of a bubble in house prices. It has a very important practical significance to study the impact real estate price fluctuations. To offers advice on effectively solve the resident's housing problem and give some countermeasures.

To academics: There are a lot of domestic and foreign scholars study Chinese high house prices. Caused by high house prices in China there are both economic reasons and institutional reasons. The innovation of this article analyzed from 2003 to 2014 years housing prices. This study will also study the effect of the role of policy effects. Furthermore, this study also give an advice on effectively solve the resident's housing problem and give some countermeasures. This study would be a valuable reference for their future researches in order to study on the housing price.

1.6 Scope of Study

This research selects 3 economy-developed provinces and city in China. They are: 1. Beijing, 2. Shanghai, 3. Tianjin. Data used in this research are obtained from past studies and also from the national home price growth index from China's

National Bureau of Statistics. The data obtained for the study including the house price growth index from the year 2003Q1 to 2014Q3. Besides independent variables are Beijing, Shanghai and Tianjin GDP, Disposable Income, Inflation Rate (CPI) and Total Investment in Fixed Assets for the same period. Other exogenous factors also included China money supply (M2), China Interest Rate.

1.7 Research Methodology

This research is conducted in five distinct levels with level providing answers to the research question and fulfilling the research objectives in the final report as the last level of the research. The five distinct levels involved in the research are described in the figure below:

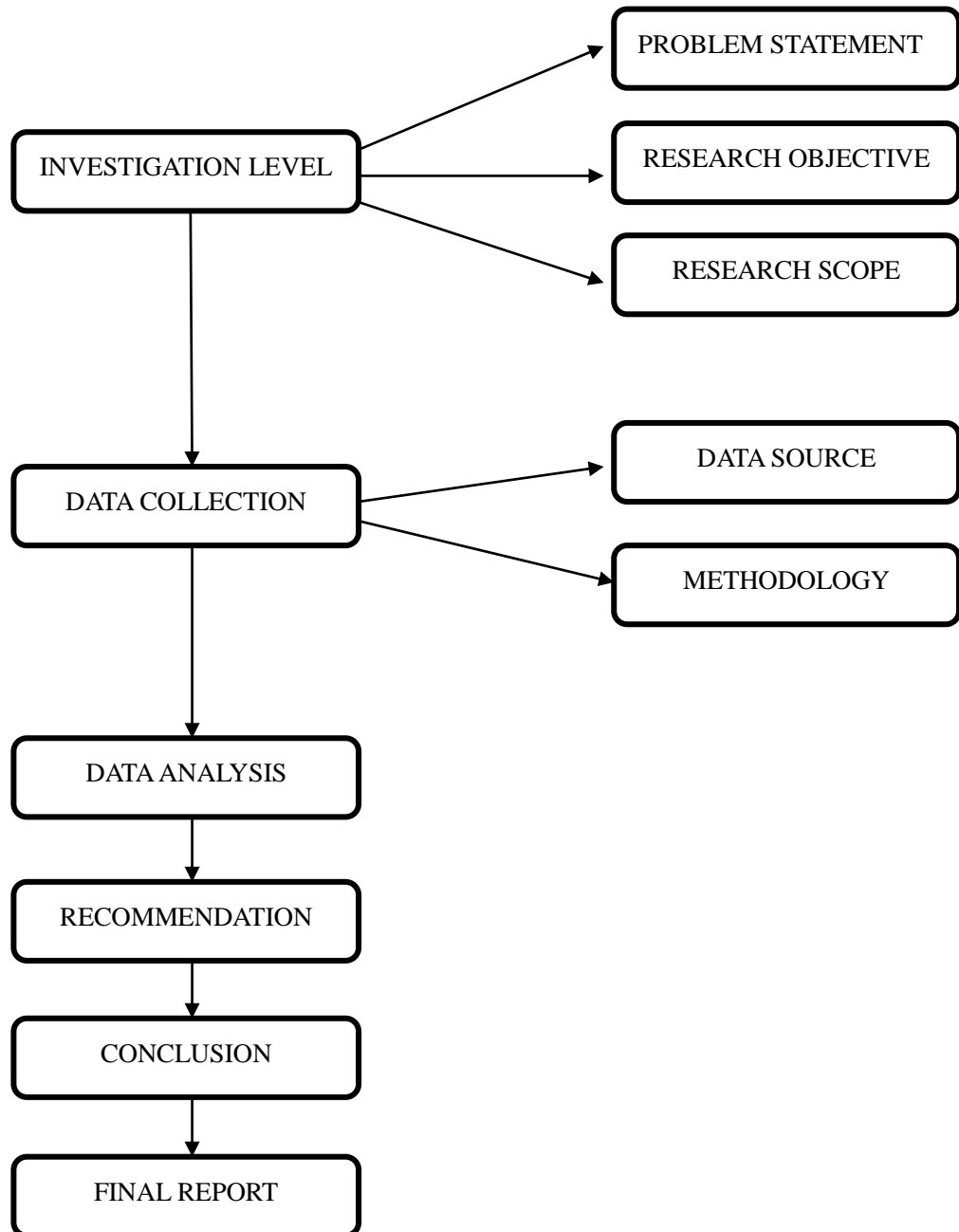


Figure 1.3: Research Development Levels

1.8 Chapter Organization

1.8.1 First Stage: Identify the Problem Statement and Objectives of the Study

The first stage mainly concentrates on identifying the problem statement, the objectives, significance, and scope of the study. The idea for the problem statement was taken from observations, recent media coverage the housing price problems and issues.

1.8.2 Second Stage: Theoretical Research

The second stage is the theoretical review. In this stage, the study emphasizes on gathering theories that are relevant to the study. The focus for this stage is to understand the key issues mentioned in this study.

1.8.3 Third Stage: Data Collection

To ensure this research finding is more precise and accurate, the study used secondary data. Primary data is a data originated by the researcher for the specific purpose of addressing the research problem. Because the data is difficult to collect, so the research relied on secondary data as the main source of information to ensure accurate and appropriate conclusions. This research includes data collecting from the government's National Bureau of Statistics (NBS), the policy is from official government website, online database, E-journals, articles, references books and websites.

1.8.4 Fourth Stage: Data Analysis

Data analysis is performed to gather, model, and transform data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making for this research. This research use quantitative statistics techniques. Data analysis is completed by use Eviews8.0.

1.8.5 Fifth Stage: Suggestions, Recommendations and Conclusion

The outcome of the analysis will be used for a final discussion regarding the high housing price problem. Suggestions and recommendations from different macroeconomic actors would also be stated at this stage. The suggestions and recommendations are related to the housing price problem and the conclusion is totie up the relationship between the problem statement and objectives of the study.

1.8.6 Chapter Layout

The report writing of this study consists of six chapters. The breakdown ofthe chapter layout is as follows:

Chapter 1: Introduction

This chapter includes an introduction to the Chinese housing market and housing prices problem in China, background study, problem statement, research question, research objectives and scope, and research work flow. This chapter would

also be discussing if activities in the Chinese property markets have any impacts on the real economy.

Chapter 2: Literature Review

The literature review in this chapter discusses about the background and Macroeconomic index effect housing price. This chapter concludes with the previous studies conducted in the related area. All kinds of reference books, journals, and past researches are used as reference. The literature review in this chapter also studied and referred to opinion and researchers idea from the past researches.

Chapter 3: Research Methodology

This chapter discusses the methods and techniques that were carried to collect and analyze the data in order to complete the goal and objectives of the study efficiently. Research Design, data collection and administration method, research procedure.

Chapter 4: Data Analysis

This chapter presents the results and interpretation of the research. The analyses were done using Eviews 8.0 and analyzed the collected data. Research finding were illustrated by figures and table. All of the data analysis and findings discussion were based on research purpose and objective.

Chapter 5: Conclusion and Recommendations

This final chapter summarizes and discusses the overall findings of this research. There are two parts in this research. The first part discusses in detail the findings from the data. The second part suggests constructive recommendations.

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