1. Introduction

1.1 Purpose of the Paper

Persistent growth under price stability is the primary purpose of macroeconomic policy. Recently, some economists agree that a low but positive inflation is good for economy. Inflation may “grease the wheels” of labor market, although inflation brings menu cost and price distortion.[1] Thus, people inevitably ask “How much is the suitable inflation for economic growth?”

China, ranked as the second largest economy of the world in 2008, has suffered from four major inflation impacts in her reform-open age; each of them has brought economy great threat on growth.[2] To illustrate 1986, 1988, 1994 for instance, the three years have inflation disturbance; each of them is accompanied by a slowdown of economic growth in the coming year. The growth rates of the three years are 16.2%, 11.3%, 12.6%, but the rates slumps to 8.9%, 4.1%, and 10.5%, of the sequential years, respectively. It seems that a trade-off nexus exists between inflation and growth of China. Certainly, it still needs to be examined empirically.

Except for Kong (2007), there is almost no study concerning China’s nonlinear inflation-growth linkage. It is worthy to look into the case of China and to test the existence of the nonlinear nexus between inflation and growth. Understanding the relation of such a large country, China, is helpful to verify growth theory and to make policy decisions, not only for China, but also for lots of country governments, multinational companies, and individual investors.

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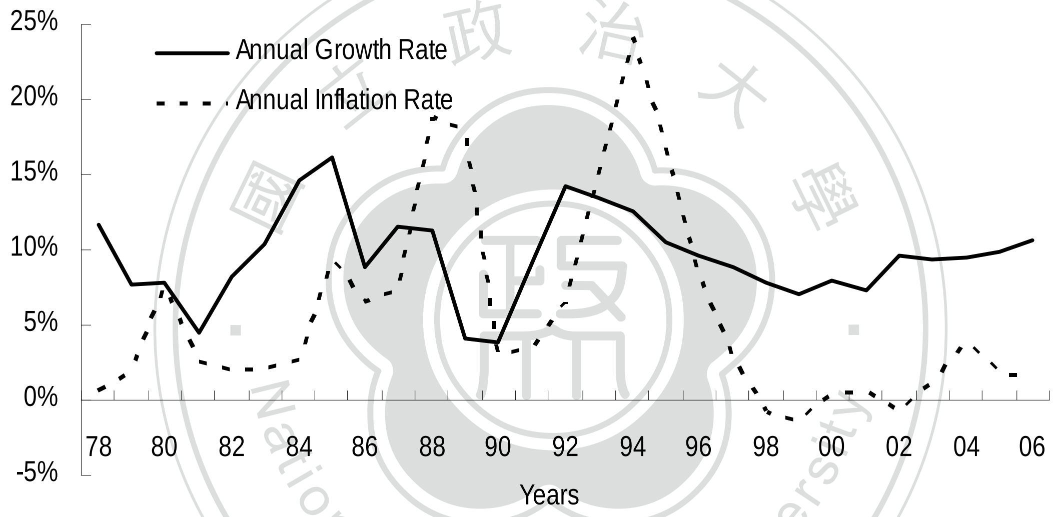
[1] For instance, Tobin (1972) spread out the issue.

[2] Based on new purchasing power parity (PPP) estimates from the 2005 International Comparison Program (ICP), GDP of China in 2005 reaches US$ 5,333.2 billions. What should be noted is that members of European Union (EU) are not labeled as one whole country. See World Bank (2008), *World Development Indicators 2008*, pp. 8-10. Permanent URL: <http://go.worldbank.org/U0FSM7AQ40>.

1.2 Brief Review on China's Inflation and Growth in the Open Era

Before the empirical procedure, it is necessary to retrospect inflation and growth of post-reform China. In Figure 1, the both variables, from 1978 to 2007, are showed in line-graph form. The dotted line represents annual inflation rates of various years; the solid one stands for annual output growth rate. It is noted that inflation and growth in China are characterized as the major feature; that is to say, each inflation peak (bottom) is often followed by a growth bottom (peak) in subsequent year.



Source : *China Statistical Yearbook 2007* (National Bureau of Statistics of China), *Comprehensive Statistical Data and Materials on 50 Years of New China* (National Bureau of Statistics of China), *and Taiwan Economic Journal Database* (TEJ, a fee-paying database in Taiwan, http://www.tej.com.tw.)

Figure 1: Annual Rate of Inflation and Growth in China—from 1978 to 2007

There have been four inflation episodes in China since 1985. The first peak of inflation (9.3%) appears in 1985. To inhabit high inflation, in the March of 1985, the State Council of China issues the emergent notice to request local governments to strengthen price control. Such macro-control adopts three main policies successively, i.e. adjustment of interest rates of deposit and lending both, keeping down the investment scale, overall credit examination by People' Bank of China. However, from loose policy execution, the over-heating situation is controlled unsuccessfully and foreshadows the next inflation impact in few years.

The second inflation shock happens in 1988, against this wave of inflation pressure, the State Council re-issues the notice of examination on tax, finance, and price in September, 1988. In the March of 1989, the China government reaffirms her determination toward eliminate inflation. In the fall of the same year, the plenary session of thirteenth central committee of Chinese Communist Party passes a series of measures to keep down the aggregate demand as well as constrain fiscal expenditure and credit. Due to the authorities' firm attitude, the inflation rate drastically drops to 3% in 1990, from 18% of the prior year. Nevertheless, those violent measures, the so-called "one-knifed cut," lead to a hard-landing in the event[3].

The third inflation threat breaks out in 1993 and makes a record of inflation rates for post-reform China, that is, 24.1% in the next year. In the June of the 1993, China announces the so-called "Sixteen Terms" to carry out the "tight but adequate" fiscal and monetary policies. Finally, the inflation rate successfully falls to 8.3% in 1996; economy also reaches a soft-landing as well.

In 2003, the inflation seems to come back. For announcement, People's Bank of China raises the reserve rate one hundred basis points, up to 7%, in August of 2003, although inflation rates of the four years between 2003 and 2007 do not rise above 5%. Next October, it lifts up the both deposit and lending interest rates.[4] From 2005 to 2007, China frequently raises kinds of annual interest rates to restrain possible inflation pressure caused by huge trade surplus and other factors relevant.[5]

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[3] The real GDP growth rates of 1988, 1989, and 1990 are 11.3%, 4.1, and 3.8%, respectively.

[4] Deposit and lending interest rates are raised from 1.98%, 5.31% up to 2.25%, 5.58%, respectively.

[5] Before China joins WTO, China has trade surplus US$ 22.55 billion. Until 2004, the annual surplus is just US$ 32.09 billion. Dramatically, in the next year, the surplus jumps up to US$ 102 billion and rockets to US$ 262.2 billion in 2007. Such huge surplus results in increasing money supply and

1.3 Research Framework

The aim of this study is to examine the threshold effect of inflation on China's economic growth. We use a set of annual pooling data of provinces in China and spline function method for inflation turning point estimation, suggested by Sarel (1996).

The rest of this paper is organized as follow. Section 2 reviews some relative theoretical and empirical literature to our issue; section 3 provides the introduction of methodology and data for this study; section 4 analyzes and discusses the results of inflation threshold effect on China's economic growth. Finally, we conclude our findings as well as discuss future extension of this issue. The main frame of this paper can be diagramed as Figure 2.

over-liquidity. Besides, the aggregate demand is also spurred by the Beijing Olympic game; the price problem becomes worse and worse. In order to stop inflation worsening, China had continuously raised the interest rates of micro-deposit of US and Hong Kong dollars for five times in 2005; the rates are lifted from 0.8755% and 0.8125% to 3% and 2.625%, each. Additionally, from 2006 to 2007, all the interest rates of reserve, deposit, and lending of Renminbi are raised for many times. Those three rates are adjusted from 8%, 2.25%, and 5.58% up to 14.5%, 4.14%, and 7.47%, respectively.

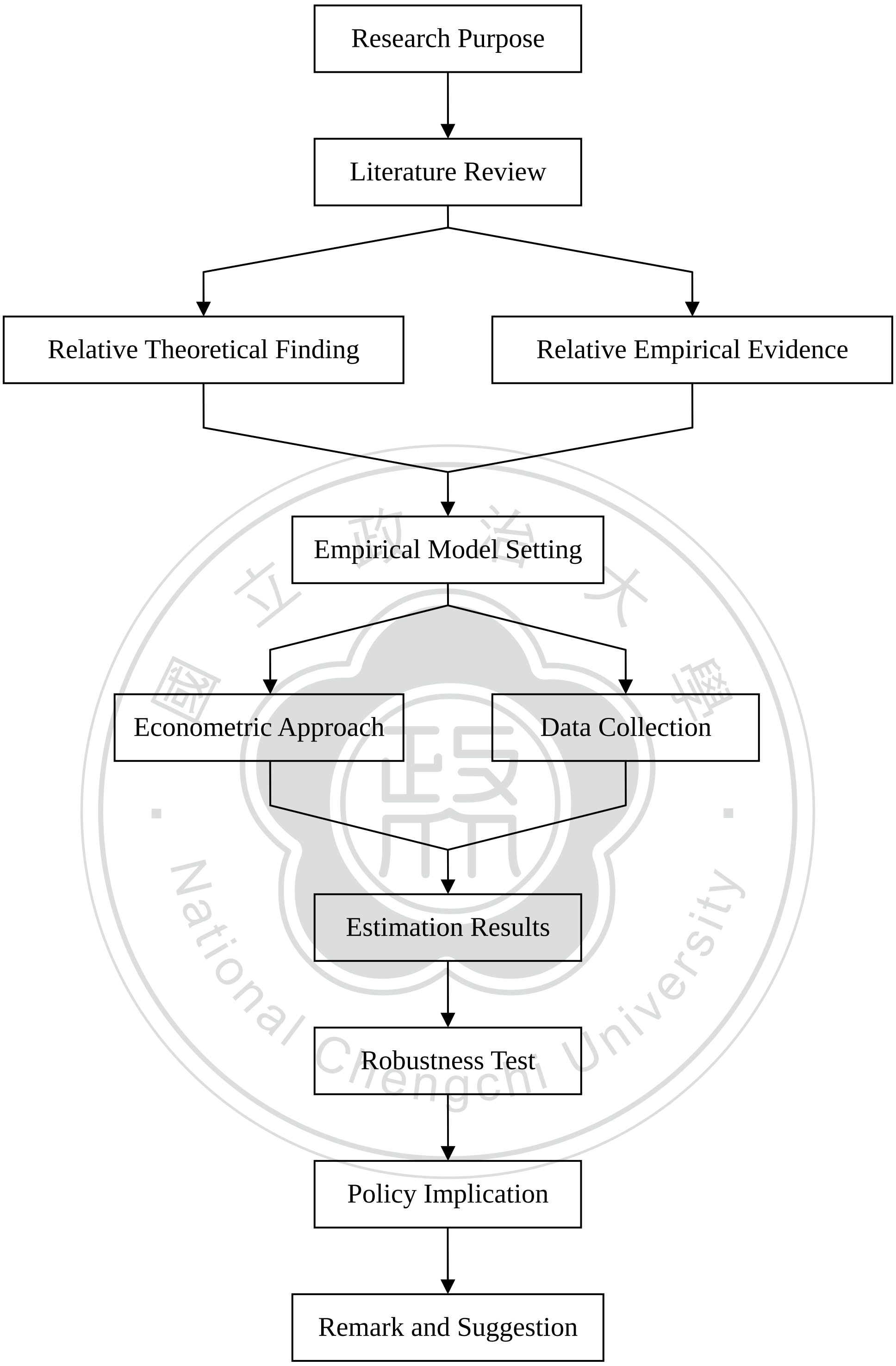

Figure 2: Research Framework