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**INFLATION IN CHINA (1978 – 1995):
CAUSES AND ITS RELATION TO ECONOMIC GROWTH**

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ABSTRACT

This paper studies both the causes of recurring inflation in China since the beginning of its economic reforms (1978 – 1995), and the relation between its rates of inflation and growth.

The study has found out that financing a persistent government deficit is the major cause of inflation. It has led to an increasing money supply and, hence, constant inflationary pressure in the economy. This cause can be interpreted as “structural” due to the peculiar institutional relationships between China’s central and local governments and between governments and the central bank system, which render endogenous the behavior of money supply. The new central-local government relationship under administrative decentralization has led to declining government revenue and increasing government expenditure. In the meantime, the necessity of financing SOEs and the hunger for local investment has kept government spending at a high level. A huge government deficit persists, which the central bank is forced to finance by creating more money.

The relation between China’s economic growth rate and inflation rate is of an interesting nature. Regression results suggest both a significant negative effect of the previous year’s inflation rate on the current growth rate, and a significant positive effect of the previous year’s growth rate on the current inflation rate. This phenomenon can be explained by the important role of investment in China’s economic growth.

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I INTRODUCTION

1.1 *Inflation in China Since 1978*

Since the introduction of economic reform in 1978, China's economy has expanded more than four times in fifteen years (Graph 1). Real GDP per capita grew at an official rate of 8 percent per year, which made China the world's No. 1 growth performer (Graph 2). Though the alternative growth rate calculated by the World Bank is 6.8 percent, lower than the official rate claimed by the Chinese government, this rate still lists China as the second fastest growing economy of the world. However, the problem of macroeconomic instability has been present since the initiation of the reforms. The economy has experienced cyclical inflationary pressures, with several rounds of serious inflation (Graph 3). The inflation rate peaked at 1980, 1985, 1988-89 and 1993-94. The Chinese government has faced enormous pressure to manage the economy's macro-stability.

1.2 *Reforms in China*

Serious inflation occurred much more frequently once the market-oriented reforms started. To discuss the problem of macroeconomic instability in the context of the reform era, it is necessary to review China's reform policies.

The market-type reforms were advocated by the paramount leader of China, Deng Xiaoping (1905 – 1997). By the time of Mao's death in 1976, members of China's political elite agreed that restoring the Chinese Communist Party's (CCP) prestige required improving

economic performance and raising living standards. The traumatic experience of the Culture Revolution (1966 – 1976) had not only eroded popular trust in the moral and political virtue of the CCP, but also destroyed the economy. There was a consensus on the political necessity of economic progress.

Beginning with the Third Plenum of the Eleventh Communist Party Central Committee in December 1978, Deng and his allies initiated a series of policies designed to reform the structure of the Chinese economy, which was central-planned and inefficient at that time. These reforms were far-reaching. A distinct characteristic of the reform policies was the economic and administrative decentralization. The following is a brief overview of the reforms in agriculture, price system, state-owned enterprises (SOEs), taxation and fiscal system, monetary policy and financial system, and investment system.

Agricultural reform

Reform was initiated in the agricultural sector in 1978 and its great success encouraged policy makers to expand it into other sectors. The Household Responsibility System, which was officially endorsed in 1981, restructured the rural economy through institutional changes. Land, which had been owned collectively, was assigned to individual families. Land contracts were for fifteen years and were renewable and transferable by inheritance or lease. Individual instead of collective production units had the decision-making power. Farmers signed contracts with the production team, promising to provide a certain amount of crops or services, and to retain or sell the rest on their own. Farm households were allowed to invest their profits in farm machinery,

trucks, or industrial equipment, and to engage in private marketing and manufacturing. Farmers were given more incentives, and agriculture production expanded rapidly. From 1978 to 1988 the average annual increase of agriculture production was almost 7 percent, adjusted for inflation. This is more than triple the average (1.9 percent) of the previous twenty-six years (China Statistical Yearbook, 1989).

Price system reform

Since 1978, the price system was liberalized gradually. By 1993, the proportion of goods subject to price control was estimated to be 5 percent for retail goods, 15 percent for means of production, and 10 percent for agriculture products. Only 5 percent of total industrial output was subject to mandatory planning.

State-Owned Enterprises (SOEs) reform

The introduction of the Management Responsibility system in the early 80s gave enterprises a great degree of autonomy over production decisions, etc. Before 1978, all enterprise profits were remitted to the central government. By 1986, almost all enterprises paid taxes for their profits instead of profit remittance. The Contract Responsibility System was introduced in late 80s. Taxes were paid according to pre-negotiated contracts. However, autonomy and financial accountability of SOEs remained weak. SOEs operated under the direct supervision of the central or local governments. The Bankruptcy law was enacted in 1986 but

applied infrequently, mainly to small SOEs (IMF, 1994). SOEs continued to bear a heavy social burden, including the provision of employment, social security, and welfare such as housing, health care, and education.

Taxation and Fiscal reform

Before 1980, the fiscal system was centralized. All taxes and profits were handed over to the central government, then transferred back to the provinces according to center-approved expenditure needs. Since the early 1980s, the central-local fiscal relationship had evolved through three major decentralization steps.

In 1980, the Contract Responsibility System was introduced. For fifteen provinces and autonomous regions out of the total number of thirty, provincial revenues were divided into three types: central-fixed which were accrued to the center, local-fixed which were accrued to the localities, and shared which were between the center and localities. Other provinces, cities, and autonomous regions adopted various revenue-sharing methods. The local finance bureaus collected all the taxes, except a few minor ones such as customs duties, while the bases and rates of the taxes were determined by the central government.

The concern over regional inequality caused by the uniform sharing formula led to the State Council's redesign of the sharing system in 1985. Different schedules were set based on localities' budget balances in the previous years. The basic guideline was: 1) provinces whose local-fixed revenues exceeded expenditure should remit a certain portion of revenue to the center, 2) provinces whose expenditure exceeded local-fixed revenues should be given a proportion of the shared revenues.

Such policies promoted regional equality but reduced tax-collection incentives of the rich provinces. Concerning this effect, in 1988 the State Council decided to adopt a new system in which six types of central-provincial revenue-sharing methods were introduced, each applying to a number of provinces (Ma, Jun, 1997). This system further increased the share of revenues retained by the local governments.

In 1992, an experiment of a tax-assignment system was conducted in nine cities. This new plan was extended to all 30 provinces in 1994. Taxes would still be divided into central-fixed taxes, local-fixed taxes, and shared taxes. One major difference between the new system and the previous system lay in the tax collection mechanism. The central government would set up its own tax collection agency – the National Tax Service. This agency was responsible for collecting both the central-fixed taxes and shared taxes. The Local Tax Services collected only the local-fixed taxes, while it had collected virtually all the taxes under the old system.

The objective of introducing this new system was to raise gradually the central control to over 60 percent of the total revenue, of which about 40 percent would finance central government expenditure and the other 20 percent would be transferred to local governments.

Monetary Policy and Financial System reform

Before the reforms started in 1978, People's Bank of China (PBC) was the only bank in the economy, carrying on the functions of a commercial bank and making the credit plan. From 1979 to 1983, its commercial bank function was limited to the industrial and commercial enterprises in urban areas while it also supervised the newly restored or created banks. In 1984, it was granted the central bank status and was responsible for the conduct of monetary policy and supervision of the financial system. Policy and commercial lending operations were assigned to

four state-owned specialized banks: Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, and People's Construction Bank of China. However, PBC had little independence, and the banking system had a highly decentralized structure. Both PBC's and state banks' local branches were highly vulnerable to pressures from local governments to provide loans for local projects.

Before 1978, credit was simply programmed to support output goals of the physical plan. During the reform era, the credit plan remained the key to the monetary policy framework. However, its formulation had taken into account the annual macroeconomic targets of inflation and real GDP growth.

Non-bank Financial Institutions (NBFIs) emerged in the 1980s, and developed rapidly. The assets of NBFIs had grown substantially faster than those of the state banks, and accounted for about twenty percent of assets within China's financial system (World Bank, 1995). But there are still many weaknesses within the present structure.

Investment System Reform

Central control over investment declined gradually as decentralization took place since 1978. An elaborate project approval system for medium- and large-scale projects still existed, under which approval was necessary from the State Planning Commission (SPC). For smaller-scale projects, local governments were granted powers of approval.

The annual national investment plan, in principle, covered all domestic investments. At first, the central government issued investment indicators concerning the size and scope of the coming year's investments. Then local governments made their investment plans accordingly. Different ministries in Beijing also made investment plans for SOEs under their control. These

two kinds of plans were submitted to the SPC and merged into a national investment plan, which was submitted to the State Council for approval. The Planning Bureaus made quarterly implementation reviews and the banks supervised the projects:

In this process, quotas were an important element (Huang, 1996). Provinces and ministries aggregated investment requests from their subordinate units and submitted the plans to the SPC. Afterwards, the SPC assigned preliminary investment quotas to the provinces and to the line ministries, who further disaggregated the quotas to their subordinate units. Upon receiving the preliminary quota, provinces and ministries proposed matching specific investment plans (projects). A national planning conference set inter-provincial balances. The final result was submitted to the State Council for approval.

II THEORY OF INFLATION IN DEVELOPING COUNTRIES

2.1 Structural Difficulties Faced by Macro-Policy-Making in Developing Countries

There are some fundamental institutional differences between developed and developing economies, which greatly affect the effectiveness of conventional macroeconomic policies. Standard fiscal policy and monetary policy tools, which function well in developed economies, are usually not applicable in developing economies.

Governments in developing economies usually find it difficult to determine expenditure and tax rates. The tax collection structure is either nonexistent or incomplete. With the low average income of the population, the tax revenue is scanty, if any tax is collected at all. Many expenditures of the government are mandated and can not be cut in the time when fiscal contraction is needed. The central banks in developing countries have much less independence in conducting monetary policies. In most cases, they are merely money-printing centers to monetize government debts.

2.2 Two Schools on Theory of Inflation in Developing Countries

Traditionally, there are two schools of theories on the inflation in developing countries: structuralist and monetarist.

The first school is the structuralist theory (Jha, 1994). From its view, the presence of structural bottlenecks within developing economies makes inflation inevitable once the economy attempts to grow rapidly. There are three key bottlenecks.

The first is the inelastic supply of foodstuffs. Food is the most important consumption item for people in developing countries. Demand for food goes up as the economy expands.

However, supply of food is inelastic, there is an excess demand for food. Food prices hence rise and so does the general price level.

The second constraint is the paucity of foreign exchange. When developing countries begin a course of industrialization, demand for industrial investment goes up. Plant equipment and technology need to be imported given the lack of such supply within the domestic economy. Because of the scarcity of foreign exchange, demand for investment remains unfulfilled. Therefore, prices are pushed up.

The third constraint is the government budget constraint. As the economy expands, the government becomes the driving force of industrialization of the public sector. Government expenditure increases. However, tax revenues are inelastic given the low income level of its people and the inefficient tax collection system. The government has to resort to inflationary methods of expenditure financing. Typically, budget deficit is covered by additional money creation. This method leads to higher inflation as supply is lagging behind.

The structuralist school of thought believes that the expansion of a developing economy creates additional demand while supply is inelastic, hence prices rise. As prices go up, workers push for a higher wage, which further tightens supply. In the meantime, government accommodates price increases by money supply increase to avoid recession. The inflation is demand-pull cost-push and can be sustained for a substantial amount of time.

An AD-AS analysis (illustrated in Figure 2.2.1) of this theory shows that initially economy expansion leads to an increase of Aggregate Demand, represented by an upward shift of the AD curve from AD_0 to AD_1 . The rising prices reduce Aggregate Supply as the cost of production increases due to wage bill increase. The AS curve shifts upward from AS_0 to AS_1 . Prices rise further up. Accommodating the price increase, money supply becomes an

endogenous factor and increases too. This further pushes up the AD curve from AD_1 to AD_2 . Prices keep going up in this inflationary spiral.

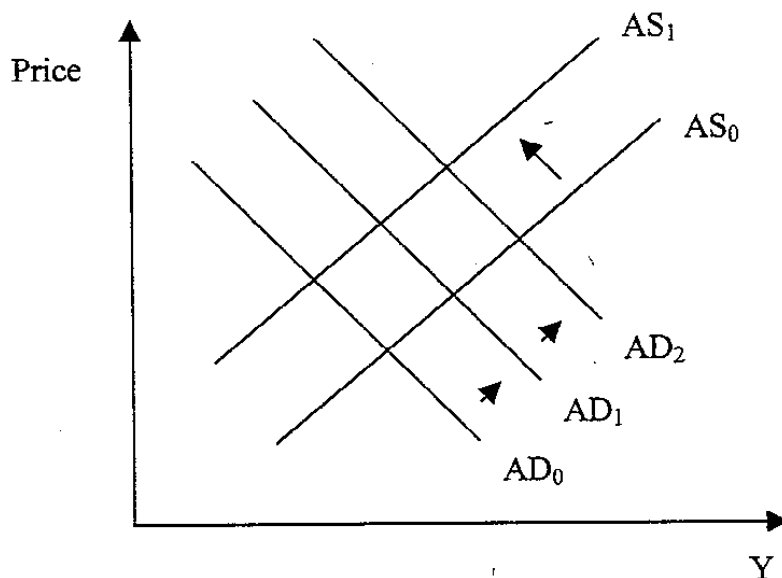


Figure 2.2.1

The other school is the monetarist theory (Jha, 1994). Monetarists see inflation as a purely monetary phenomenon. Money supply is exogenous and controlled by the government. Inflation is the result of money supply exceeding money demand, which is caused by expansionary monetary and fiscal policies (government deficit spending, expansionary credit policies and expansionary operations of central banks). The excess supply of money is equivalent to an excess demand for goods and price level rises consequently.

An AD-AS analysis (illustrated in Figure 2.2.2) show that an exogenous money supply increase leads to an upward shift of the AD curve from AD_0 to AD_1 . As Aggregate Supply remains at its potential level, the full effect of this increase is reflected by the permanent increase

in price level. Intuitively, as the amount of goods supplied in the market is fixed while there is more money, the outcome is bound to be an increased price level. Money supply increases have no real effect on output levels.

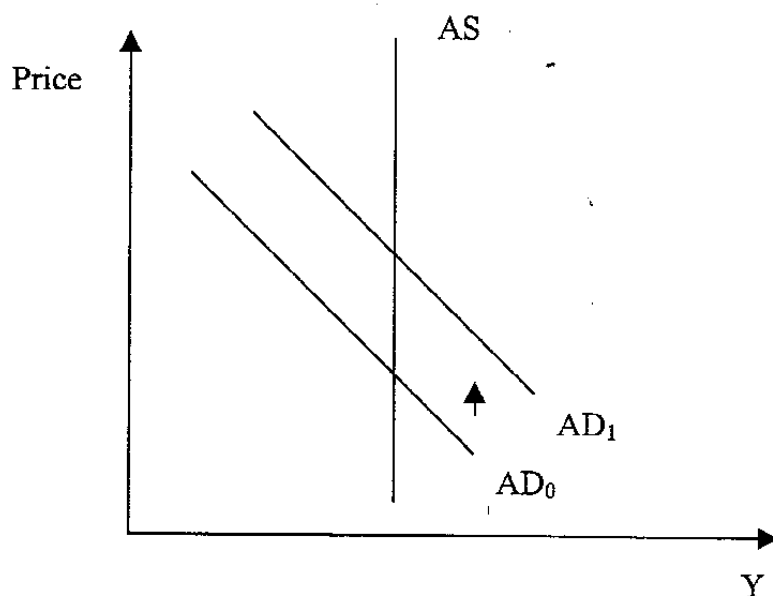


Figure 2.2.2

Monetarists argue that structural bottlenecks are the result of wrong governmental policies. For example, the inelastic supply of foodstuffs results from administered low prices of agricultural products. The paucity of foreign exchange is caused by an overvalued exchange rate.

For both schools, money supply is the key factor in the explanation of inflation. Both agree that increase of money supply causes inflation. The difference between the two schools' views lies in what causes money supply to increase. Structuralists believe that money supply is endogenous. Money supply increases due to the accommodation of price increase, which is

demand-pull initially. Monetarists believe that money supply is exogenous. Expansionary monetary and fiscal policies cause money supply to be in excess of money demand. Price level increases permanently due to this surplus, and output remains at its potential level.

Given this fundamental difference between the two schools, it follows that Structuralists and Monetarists argue differently for the role of government regarding monetary control. Structuralists argue that since growth is demand led, monetary controls would stifle the impetus behind growth. Hence the governments should not overemphasize controls on monetary expansion. Instead, it should encourage supply-side growth, which will eliminate the structural bottlenecks. However, from the Monetarists' view, meaningful economic growth can occur only in an atmosphere of stable or slightly rising prices. Hence, Monetarists advocate governmental control over a stable increase of money supply.

III ANALYSIS ON THE CAUSES OF INFLATION IN CHINA

Many factors have contributed to the success of the reforms. Decentralization is one the essential strategies, which has led to improved productivity and more efficient allocation of resources. It has revitalized the country's fiscal policy. State-Owned-Enterprises (SOEs) were given greater autonomy and more incentives for better performance. Revenue and expenditure responsibilities were decentralized to local governments, which have since been striving for fast local growth.

Although decentralization is an important driving force behind the robust economic growth, its negative effects cannot be ignored:

- 1) Administrative decentralization has led to a new central-local fiscal relationship, has resulted in a declining government revenue-to-GDP ratio (Graph 4);
- 2) Weak control by the central government over local governments has led to surges in local-government-led investment. This phenomenon both increases government spending and forces the banking system to create more money to finance the investment projects. Continuous subsidizing SOEs has also imposed an upward pressure on government spending. Government expenditure remains in excess of its revenue (Graph 4). The net effect results in a persisting government budget deficit.
- 3) The Consolidated Government Deficit, which takes into account the bank loans subsidizing state-owned enterprises, has remained large. A major way of financing this deficit was to create reserve money through the central bank (Table 1). Money supply has increased rapidly (Graph 5).

- 4) In the meantime, “moral hazards” widely exist in investment activities and in subsidizing SOE losses, which aggravates the problem by putting more pressure on money creation.

Given the above conditions, both fiscal and monetary policies are handicapped in their maneuvers to guide the economy. There is no effective instrument to restrain the increasing money supply. Inflationary pressure has been mounting over time and the occurrence of severe inflation cannot be avoided.

3.1 Declining Government Revenue

Since 1978, budgetary revenue-to-GDP ratio has declined constantly. This has much to do with the structural characteristics of China’s tax system. Tax revenues have been shrinking constantly. Furthermore, with local governments keeping as much tax money as possible to their own pockets, central government has seen its share of tax income continuously declining.

(a) Declining Tax Revenue from SOEs

China’s tax system has gone through significant changes since the initiation of reforms. Revenue from major taxes has declined relative to GNP since 1985; the drop was largest for the income tax on SOEs (IMF, 1994) (Graph 6). By 1986, almost all enterprise profits were subject to taxation instead of being fully remitted to the government (IMF, 1991). In the second half of the 1980s, the enterprise tax system changed further with the introduction of the Contract Responsibility System. Under this system, tax was paid according to negotiated tax contracts

rather than a standardized tax schedule (IMF, 1994). Lack of uniformity and large degrees of discretion within the system posed administration problems. On top of the regular income tax, an adjustment tax was applied to compensate for differential profitability due to external factors, such as technology, location, market share, degree of price controls, and the size of state-provided investment. It served as an equalizer and its rate varied from case to case. By the nature of its design, the income adjustment tax was necessarily discretionary and highly differentiated. In most cases, enterprises managed to obtain favorable terms on this tax. Overall, tax revenue declined significantly.

The Contract Responsibility System was designed to provide SOEs with greater incentives by leaving larger funds at their disposal. About eighty-four percent of all industrial SOEs adopted the system by 1990. However, the nonindustrial SOEs were still subjected to the old system. They generated about thirty percent of profits in SOE sector. The higher tax rates for these enterprises created incentives for tax avoidance. (IMF, 1994)

It is obvious that the reduction of revenue income from SOE sector was an expected outcome of the reform procedure. Yet it could not be neglected that the weak performances of SOEs had eroded the tax base substantially. Despite experiments with enterprise reforms, performances of SOEs have remained weak, with about one third of SOEs are making losses and another one third breaking even (IMF, 1994).

(b) Revenue Sharing between the Central and Local Governments

Lack of effort in collecting tax by the local governments is another major reason for the declining revenue-to-GDP ratio. In China, there was not a national tax service until very recent. Although tax rates and tax bases were determined by the central government, local tax

authorities collected most taxes. Under the fiscal contract system introduced in the 1980s, local governments had de facto control over tax collection. Because any tax revenue collected above the target would be shared with the center, it was a common practice for local government to grant tax exemptions as often as possible in order to keep the resources within the region.

There is a second method to keep funds within the locality - shifting budgetary funds to extra-budgetary funds. Local extra-budgetary funds are free from the central government's control and have been increasing rapidly (Graph 7). One major source of the funds is a set of taxes and charges controlled by local finance bureaus. Local governments use this kind of fund largely to avoid sharing tax revenues with the center. These kinds of tax also cover the revenue foregone through the grant of tax exemptions.

3.2 Rising Government Expenditure

If the level of government expenditure declined in proportion to its revenue, there would be no serious problem. However, in reality, government expenditure has been constantly rising. There are two factors contributing to the rise: government investment expenditure and subsidies for SOEs.

(a) Government Investment Expenditure

The long-established investment planning system constructs an elaborate procedure for investment approval, complemented with central allocation of raw materials and foreign exchange. Since the reform, local governments have become less dependent on central government budgetary contributions and have little incentive to subject the investment projects of their SOEs to central government approval. Various ways have been found to bypass the

State Planning Commission. Over time, an increasing share of local-government-directed SOE investments has been undertaken without SPC scrutiny.

Local governments are strongly motivated to develop local economies. Economic achievement is often given heavy weights in political appointments and promotional considerations. This urge is also compelled by regional competitions; if the regional growth rate is higher than the national average level of inflation, one is a net winner and vice versa. Hence, different regions are competing with each other to have a higher growth rate (Huang, 1996).

Because resources are immobile across different regions in China (Huang, 1996), investments intended to increase local industrial capacities of production often constitute the only means to develop local economies. Pursuing a high growth rate, local governments are zealous in regional investment activities, and the actual investment has greatly exceeded the planned level (Graph 8). This phenomenon is termed "investment hunger".

Furthermore, local governments prefer to invest in sectors that promote regional growth and do not take any externality into consideration. They are reluctant to invest in sectors like transportation or communication, which benefit other regions and the nation as a whole, and which are considered high priority by the central government. Increasingly, funds are diverted from their intended uses under the credit plan to local government sponsored projects. More often than not, these projects are considered low priority by the central government. As a result, the People's Bank of China is forced to finance the projects sponsored by central government through policy lending (World Bank, 1995).

(b) Subsidizing SOEs

In 1978, the output from SOEs accounted for about three fourths of the gross value of industrial output. By 1992, the share of SOE sector had fallen to less than one half (48%). However, SOE sector's contribution to total output remained large, and it accounted for about one half of total urban employment (IMF, 1994). SOEs bear a huge social burden; it provides its employee a complete welfare basket, including health care, housing, education, and pension, etc. It remains an important safety net for urban population. Furthermore, SOEs support an excessive work force by keeping redundant workers on their payroll. Enterprise reforms have been attempted for numerous times, however, the performances of SOEs remain poor, partly due to this huge burden. As governments rely on SOEs to maintain social stability, it is impossible to let them go bankrupt. The Chinese government has continuously provided direct and indirect subsidies to cover their operational inefficiencies. Explicit budgetary subsidies to loss making SOEs had been declining. However, a significant proportion of budgetary expenditure is made for SOE fixed investments, which in fact implicitly covers their operation losses. These two items added up to a total of 3.5 percent of GDP in 1992, which was equivalent to around 1.5 times the budget deficit (world bank, 1995). In addition, banks have channeled a large sum of short-term policy loans to finance the working capital needs of SOEs. The exact amount might well exceed the above two subsidies.

3.3 Government Deficit financing and Weak Central Bank Control

(a) Government Deficit Financing and Money Supply

Declining government revenue and rising government expenditure result in a persistent government budget deficit. By China's accounting system, bad bank loans subsidizing SOEs are not counted as government expenditure. In fact, such policy lending are pressured by different levels of governments to save those SOEs from bankruptcy and hence to avoid mass unemployment. The Consolidated Government Deficit (CGD), which also accounts for these bank loans, has been rising constantly (Table 2). The average CGD was estimated to be about five percent of GDP per annum (World Bank, 1995), which is considered to be highly dangerous by international standards. A major way of financing this huge deficit has been to create reserve money through the central bank (Table 3).

The central bank of China, the People's Bank of China (PBC), does not have the power and characteristics of its counterparts in the developed countries. It is not independent of the government. Officially, PBC is a ministry subordinated to the State Council and hence a part of the central government. Therefore, it must obey orders from the State Council and accommodate policies from the State Planning Commission and the Ministry of Finance. PBC is obligated to finance the huge Consolidated Government Deficit by creating more money (Table 4), which for sure leads to constant increases of money supply and pushes price levels up.

(b) Weak Control by the Central Bank System

The institutional structure of PBC has remained unchanged. There are branches in every province and regional city, and sub-branches in most counties (Table 5). These branches of the

central bank are not only required to follow the policies issued by their headquarters, but also are a part of the local government, to whom they must answer. Local governments not only control the allocation of housing and other welfare benefits to bank employees, but also, until 1988, had jurisdiction over the appointment of senior PBC branch employees. Under this system of dual subordination, PBC's local branches are doomed to be subjected to the influence of local government. The PBC branches, supposed to regulate strict compliance with the credit plan, are constantly pressured by local governments to submit to local needs.

This problem is reflected both in the making and supervision of the national credit plan and the financing of SOEs losses and local investment.

The preparation of the credit plan is a "bottom up" process. Consultation with the local government was a standard practice and local government played an important role in the decision of provincial plans, which are aggregated into a national plan. As local governments want more credit to satisfy their "investment hunger," this process predetermines the upward bias of the final credit ceiling.

After the approval of the annual credit plan by the State Council at the beginning of each year, PBC rations the ceiling for each category of loans for each state bank. Then the headquarters of each State Bank decide the ceilings for each of their provincial branches, which assign the credit to the level below. PBC's provincial branches carry the task of supervising the implementation of the plan. This "cascading" system of controlling the plan is vulnerable to violations, stemming from the nature of dual subordination of the branches of the People's Bank of China.

Local governments control the operation of most SOEs. Remaining a safety net, SOEs still carry the social burden of providing a complete basket of welfare benefits such as housing,

health care, education and retirement benefits, etc. to their employees, who consist of fifty percent of urban population. A significant number of SOEs suffer heavy losses. As the consequence of mass urban unemployment resulting from their bankruptcy is disastrous, local governments have pressured branch banks to provide loans to those SOEs to keep their payroll going. Usually, the repayment is out of sight.

Even if SOEs are not on the verge of bankruptcy, there is still an increasing demand for credit. Local governments desire regional growth through intensive investment. They make every effort to channel bank loans to SOEs, in order to achieve high growth rates.

Both situations result in lending outside the credit plan. Consequently, there is not enough credit left for those priority investment projects targeted by the central government. The headquarter of the People's Bank of China is forced to create more reserve money to finance these intended projects.

3.4 Moral Hazards

Another important cause of the "investment hunger" is the fact the neither local governments nor their SOEs bear any significant investment risks (World Bank, 1995). The major source of financing investment projects is bank credits. Historically, interest rates are set very low and often the real interest rates are negative. They aim at minimizing the cost of saving deposits collected by state banks to subsidize production and investment in SOE sector (Girardin, 1997). The tiny opportunity costs of low or negative interest rates have encouraged excessive borrowing and investment. Moreover, loan obligations are not stringent; repayment deferrals are granted frequently. A high percentage of loans is overdue. By 1985, over fifty percent of bank loans were overdue (Huang, 1996). Also in addition, by Chinese tax regulation, the principle

and interest repayments for investment loans are deducted from income before the enterprises pay for the product tax. Hence, a portion of the loan repayment is borne by the state in the form of a reduced tax base, and the cost of excessive investment is socialized.

It is pronounced that, for local governments and their SOEs, there is almost no cost associated with financing investment by bank loans. On the other hand, the potential benefits from the investment are captured wholly by the borrower. "Moral hazards" appear under such a system. The borrower need not worry about any inability of repayment and the subsequent penalty. Excessive borrowing is encouraged; investments take place without cautious assessment of risks. The consequence is the mounting bad loans.

Similar problems exist in the activities subsidizing SOEs. The primary concern of the management is to keep the payroll going. As long as workers are getting their money, there is no punishment for poor profitability. Under the current policies, the management of SOEs is guaranteed loans from banks. Often, SOEs borrow from banks the so-called short-term working-capital loans to pay off the wage bills right before the payday. So strangely enough, although a factory is losing money, its managers are still enjoying as much prestige and financial benefits as those in a well-off factory. The lack of punishment for poor management gives the officials no incentives to improve enterprise profitability. Resulting from this vicious cycle, bank loans are continuously channeled into those SOEs to maintain the payroll.

IV ANALYSIS ON RELATION BETWEEN INFLATION AND GROWTH

The nature of the relation between inflation and economic growth is still not well understood.

There have been recent researches examining the behavior of inflation and economic growth in a wide range of countries during the thirty-year period from 1960s through the 1980s (Hall and Taylor, 1997). The results show a strong negative correlation between inflation and economic growth. As shown by the statistics (Table 6), Asian economic growth rose in the last thirty years when inflation fell, while Latin America experienced lower growth and its inflation rate kept rising.

However, inflation in Latin America is the type of hyperinflation. This extreme form of inflation differs from other forms of inflation. Hence, such research results may well be biased as both hyperinflation and “normal” inflation are treated in the same manner. Furthermore, the correlation between economic growth and inflation does not necessarily imply a causation; there is also a possibility that the causation is reversed.

One research, conducted by IMF, has also suggested nonlinear effects of inflation on economic growth (IMF, 1996). It has found evidence of a significant structural break in the function that relates economic growth to inflation. The break is estimated to occur when the inflation rate is eight percent. Below that rate, inflation does not have any effect on growth, or it may even have a slightly positive effect. When the inflation rate is above eight percent, the estimated effect of inflation on growth rates is significant and extremely powerful.

There has not been a systematic study focusing on China yet regarding this topic. To examine the relation between inflation and growth in China (during the reform era), I ran several regressions.