Measuring China's Fiscal Policy Stance

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Abstract:

This paper argues that the tradtitional way of gauging a country's fiscal policy stance by looking at government budget deficit or cyclically adjusted budget deficits is misleading in the case of China, since a lot of what usually would be considered fiscal policy is conducted via investment by state owned enterprises. The paper therefore proposes a different indicator for the fiscal policy stance, constructed from government consumption, government expenditure, the state-owned-enterprises' investments and tax revenue. Using this indicator, it can be shown that fiscal policy has been strongly counter-cyclical in China over the past two decades.

Keywords: Fiscal Policy, China, State-Owned Enterprises, Statistics

JEL-Classification: E62

1. Introduction

It is widely agreed that China used active fiscal policy in order to stimulate the economy after the Asian crisis in 1998 (e.g. Jia 2002). However, if one looks at traditional measures of fiscal policy stance such as the general government deficit, hardly any impulse can be seen. Instead, the changes from year to year are only minimal and seem to be much too small to have any significant effect on the business cycle.

This paper therefore tries to construct a different indicator for fiscal policy in China. It is argued that fiscal policy in the People's Republic is different from traditional fiscal policies in industrialized or traditionally more market-oriented economies. As in

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China, state-owned enterprises (SOE) are to a large extent used to reach policy goals, their actions have to be taken into account for judging the overall fiscal policy stance. From an economic point of view, the SOEs' credit financed investments which are to a large extent conducted under the influence of politicians and the loans for which are often also handed out after political influence, have a similar effect as an credit financed government investment. Thus, they have to be taken into account when judging the PRC's fiscal policy stance.

The further paper is structured as follows: Section 2 gives a short overview of what fiscal policy appears to have been like given traditional indicators such as the overall budget deficit. Section 3 explains what might be wrong with the official indicators for judging China's fiscal policy. Section 4 proposes a different indicator and explains how expansionary or restrictive fiscal policy has been according to this alternative indicator. Section 5 concludes.

2. Policy stance according to official data

Taking the official budget deficit both as measured by the International Monetary Funds (IMF) or the national statistical office, fiscal policy does not seem to have been very active over the past two decades except for short periods around 1989 and 2000. According to national statistics, the budget deficit hovered most the time around one percent of GDP; according to the IMF data, it was most the time around two percent of GDP (see table 1). The two instances in which the deficit widened sharply were the 1989/90 recession and – curiously – the global New Economy boom of the late 90s. Both occurrences are odd: The 1989/90 recession has usually been interpreted as the government slowing down the economy sharply after the events of June 4, 1989 (Lin/Schramm 2003, p. 256), while the New Economy boom usually is interpreted as a period where strong export demand provided the Chinese economy with a strong demand stimulus, so that the economy did not really need an additional policy stimulus. The 1994 slowdown when the government managed to cool the overheating economy without raising interest rates much, at the same time, does not turn up in overall deficit figures.

[Table 1: Traditional measures for fiscal policy stance: budget deficits relative to GDP]

The picture even becomes more obscure when one tries to use some business cycle adjusted measure for the traditional budget deficits. Columns (4) to (7) in Table 1 show cyclically adjusted measures for the Chinese budget deficit, derived both from the IMF and the national budget figures. These structural deficits are computed using a Hodrick-Prescott-Filter[2] and under the assumption of an elasticity of the deficit towards GDP deviations from trend of alternatively 0.15 or 0.3.[3] Of course, computing business cycle adjusted deficits already is problematical for developed economies as in reality, demand and supply cannot be seen as independent from each other and the filter therefore might not include feed-back-effects of fiscal policy to current output and thereby to measured potential output. For a developing country like China with high and – sometimes very – volatile growth rates, it is even more of a problem. Therefore these figures should only be used here for the sake of illustration.

According to all measures of the cyclically-adjusted figures, there was indeed a sharp restriction of fiscal policy in 1989, as common wisdom has perceived. However, in 1994, when another slow-down occurred which was widely perceived as policy-induced, the figures show a strongly expansionary fiscal policy stance. Moreover, in 1998, when China avoided falling into a recession even though the Asian crisis brought a sharp fall in regional demand and Chinese manufacturing employment slumped sharply (10 percent of manufacturing jobs got lost within one year), fiscal policy appears to have been only slightly expansionary. Instead, the cyclically adjusted data shows a large expansionary impulse in 1999 and 2000 when the world economy was booming anyway and Asian countries were already recovering from the Asian crisis.

So, the headline and cyclically-adjusted data do not well go together with either the common sense about Chinese fiscal policy in the 1990s, nor with the other GDP

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[2] For details, see Hodrick/Prescott (1997).

[3] For industrialized countries, often elasticities between 0.25 to 0.5 are used. See e.g. van den Noord (2000). However, more developed countries usually have more sophisticated automatic fiscal stabilizers, especially those with an extensive social security system and high replacement payments. The value of 0.15 for China would imply no automatic reaction of expenditure and a roughly linear reaction of tax revenue to GDP fluctuations. 0.3 could be interpreted as a linear reaction both of expenditure and tax revenue to GDP.

figures. Why, for example, should the running hot Chinese economy have slowed beginning in 1994 had fiscal policy been expansionary given that monetary policy was still rather loose with real interest rates still negative? Or why did the Chinese economy get so smoothly over the Asian crisis which hit important trade partners heftily if the government did not provide any additional stimulus? I will argue in the following section that the reason is that the measured budget deficit is a very insufficient measure for Chinese fiscal policy.

3. Problems with standard data

So what is wrong with taking China's measured government budget deficit as a gauge for the fiscal policy stance? The problem is that in China's government budget, only a small share of government activities and borrowing related to these activities really shows up. Government expenditure as reported in the national hovered around only 12 percent most of the 1990s, incredibly low for a transition country in which most state assets have not been yet privatized. The reason for this very low figure is that most economic activity of the state (which works through its state-owned-enterprises) does not turn up in the national accounts.

Especially on local levels, but also on the national level, SOEs are often used to reach policy objectives by (local) politicians using their influence over the management. For example, their investments are often used to shore up aggregate demand. They are not free to lay off workers as they wish in order to prevent social tensions. Finally, they are not faced with a hard budget constraint: Many of the SOEs are not able to service their debts, but still get new loans from the banks, either because the banks want to prevent an insolvency of their debtor and the subsequent write-off of the loan, or because local politicians push local bank branches into handing out new loans. The banks can hand out the loans as they are not really confronted with hard budget constraint either: The government has injected capital into the banking sector by taking over non-performing-loans from the banks several times over recent years and is widely expected to do so again.

From an economic point of view, this is not much different from traditional fiscal policy: Investments are decided upon for political reasons, the governments' (implicit or explicit) liabilities increase and the economy gets a demand impulse. However, this debt-financed policy impulse is neglected in the traditional analysis of fiscal policy.

The relevance of SOE investments must not be underestimated (Figure 1): In 2002, when private investment for the first time overtook SOE investment, it amounted to 43.3 percent of total gross capital formation in the economy (or 18 percent of GDP), while the state's infrastructure investment (which is included in the national accounts) only amounted to 7.2 percent of capital formation (or 3 percent of GDP). When we take a look at the SOEs' investment compared to the private sectors', we also see clearly that their investment is in fact used to manage the economy as its pattern often leads the private sectors' investment pattern (Figure 2). In 1987/88 when the government was faced with a external deficit and it wanted to slow the economy, the SOEs' investment was cut back while private investment was booming. A similar pattern could be observed in 1993/94. SOEs' investment slowed already in 1993, while private investment soared. Finally, in 1998, in the midst of a regional crisis and an increased competition by main competitors which had just devalued their exchange rates, SOE investment picked up much stronger than the private sectors' investment.

[Figure 1: Gross Fixed Capital Formation by type]

[Figure 2: Private and SOE investment in China, change on previous year]

Of course, part of the SOEs' activities are profit-orientated and driven by sound business calculation and similar consideration as for the private sector. Table 2 gives an hint how much influence both the political and the business objectives might have. The table shows the correlations for the shares of the three kinds of investment (government infrastructure, SOE investment and private investment) of GDP. If SOE investment were driven exactly by the same considerations as private sector investment, their correlation coefficient should be 1. However, as we can see, this coefficient is not even 0.1. Thus, we can conclude that SOE investment is to a large part driven by different considerations than private investment. At the same time, the coefficient between government infrastructure investment and SOE investment is 0.1, larger than that between SOE and private investment. This hints that both SOE and government infrastructure investment are sometimes used at the same time, possibly to reach the same objectives.

[Table 2: Correlation Coefficient between different investments' share of GDP, 1986 to 2002]

4. Alternative Measure

So how can we get the SOEs' activities together with other measures of state activity into an indicator showing the overall fiscal stance of the public sector, including SOEs? The correct thing would be to add all SOEs' expenditures and revenues to the state sector and compute a financing deficit for the whole sector. However, data on SOEs' revenue is not available, nor is data on their total expenditure. Thus, we will not be able to construct a precise indicator.

However, we can construct a proxy. To this end, we add government consumption, government investment in infrastructure and SOE investment. From this measure we substract tax revenue and put this number into relation to GDP. Thus, we get some kind of measure of public sector expenditure less tax receipts. By looking at the changes relative to one year earlier, we now have an indicator showing whether fiscal policy has been expansionary or restrictive. Of course, this indicator has caveats. For example, it will not be able to track changes in the SOEs' revenues from changes in demand for their goods. Thus, it might underestimate net fiscal stance in an upturn and overestimate net fiscal stance in a downturn. However, given the large weight of SOE investment in GDP, this indicator should still be a large improvement over standard budget deficit data.

Table 3 shows the details of the calculation and the results. Column (1) gives GDP in current prices, column (2) government consumption. Column (3) gives government capital investment and column (4) SOE investment. Column (5) shows tax receipts. Column (6) finally shows the sum and (7) that sum in relation to GDP. Column (8) finally gives the annual change in the public sectors expenditure less tax receipts in percentage points of GDP. This is the indicator which most likely shows the fiscal stance of fiscal policy: Positive Values mean an expansionary fiscal policy while negative values indicate a fiscal contraction.

[
Table 3: Details for alternative fiscal policy indicator]

The picture from this indicator now gives a strong picture of a contra-cyclical fiscal policy over most of the period: In 1989, fiscal policy was strongly contractionary, just as it is perceived by common wisdom. Again, 1994 and 1995, fiscal policy

contributed strongly to the slow-down with a contraction of 1.4 percent of GDP each year, respectively. When the Asian crisis hit in 1998, fiscal policy was strongly expansionary with a shift of 1.7 percent of GDP. These results are even more remarkably as the indicator – as above remarked – should rather err at understating counter-cyclical fiscal policy.

5. Conclusion

This paper has shown that the plain budget deficit data for China most likely draws a wrong picture of actual fiscal policy during the past two decades. Instead of being rather passively in the fiscal policy domain as those standard indicators propose, China has actively been using fiscal policy. Starting in 1989, fiscal policy in China has instead been strongly counter-cyclical, with cooling the economy strongly in the mid-90s and given it a significant boost during the Asian crisis.

Bibliography

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Van den Noord, P. (2000), The Size and Role of Automatic Fiscal Stabilizers in the 1990s and Beyond, OECD Economics Department Working Papers No. 230.

Data used

Budget Deficit (IMF), International Financial Statistics, Series 92480...ZF... divided by 92499B..ZF...

Budget Deficit (National Statistics): Datastream series CHGOVBAL

GDP Deviation from Trend: Own Calculation using HP-Filter, lambda=100.

Government Consumption (National Statistics): Datastream series CHCNGOV.

Gross Fixed Asset Formation (National Statistics): Datastream series CHIFATOT

Government Expenditure: Capital Constructuction (National Statistics): Datastream series CHGECPCO

SOE investment (National Statistics): Gross fixed investment by state owned enterprises; Datastream Series CHINVFXS

Private Investment: Gross Fixed Asset Formation minus Government Infrastructure Investment minus SOE investment

Tax Revenue (National Statistics): Datastream series: CHGRTAX.

Graphs and Tables

Table 1: Traditional measures for fiscal policy stance: budget deficits relative to GDP

	According to IMF (1)	According to national statistics (2)	GDP Deviation From Trend (3)	Assumed elasticity of deficit to GDP =0.15		Assumed elasticity of deficit to GDP =0.3	
				(1) adjusted for business cycle effects (4)	(2) adjusted for business cycle effects (5)	(1) adjusted for business cycle effects (6)	(2) adjusted for business cycle effects (7)
1984	-0.6%	-0.8%	1.5%	-0.8%	-1.0%	-1.1%	-1.3%
1985	0.2%	0.0%	4.3%	-0.4%	-0.6%	-1.0%	-1.3%
1986	-0.8%	-0.8%	2.7%	-1.2%	-1.2%	-1.6%	-1.6%
1987	-0.5%	-0.5%	3.9%	-1.1%	-1.1%	-1.7%	-1.7%
1988	-0.9%	-0.9%	5.2%	-1.7%	-1.7%	-2.5%	-2.5%
1989	-1.0%	-0.9%	-0.8%	-0.8%	-0.8%	-0.7%	-0.7%
1990	-4.0%	-0.8%	-7.1%	-2.9%	0.3%	-1.8%	1.3%
1991	-3.5%	-1.1%	-7.7%	-2.4%	0.1%	-1.2%	1.2%
1992	-2.7%	-1.0%	-5.0%	-2.0%	-0.2%	-1.2%	0.5%
1993	-2.0%	-0.8%	-2.0%	-1.7%	-0.5%	-1.4%	-0.2%
1994	-2.0%	-1.2%	0.1%	-2.0%	-1.2%	-2.1%	-1.3%
1995	-1.6%	-1.0%	0.7%	-1.7%	-1.1%	-1.8%	-1.2%
1996	-1.3%	-0.8%	0.8%	-1.4%	-0.9%	-1.5%	-1.0%
1997	-1.2%	-0.8%	0.8%	-1.4%	-0.9%	-1.5%	-1.0%
1998	-1.6%	-1.2%	0.0%	-1.6%	-1.2%	-1.6%	-1.2%
1999	-2.5%	-2.1%	-0.9%	-2.3%	-2.0%	-2.2%	-1.9%
2000	-3.1%	-2.8%	-0.5%	-3.0%	-2.7%	-2.9%	-2.6%
2001	-4.4%	-2.6%	-0.4%	-4.4%	-2.5%	-4.3%	-2.5%
2002	-3.0%	-3.0%	0.7%	-3.1%	-3.1%	-3.2%	-3.2%
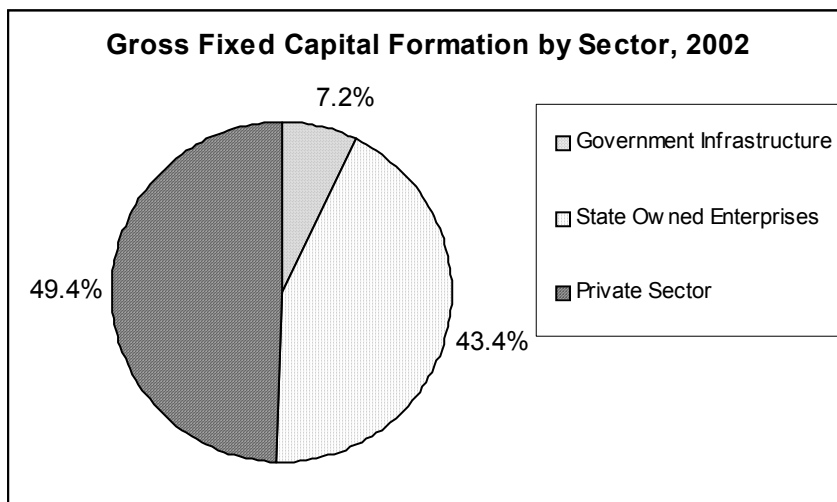
Gross Fixed Capital Formation by Sector, 2002

- 7.2% Government Infrastructure
- 43.4% State Owned Enterprises
- 49.4% Private Sector

Figure 1: Gross Fixed Capital Formation by type

Private and SOE investment, % change on year earlier

- - - SOE
—— Private

(Chart axis values: 80.0%, 70.0%, 60.0%, 50.0%, 40.0%, 30.0%, 20.0%, 10.0%, 0.0%, -10.0%, -20.0%; years 1986, 1988, 1990, 1992, 1994, 1996, 1998, 2000, 2002)
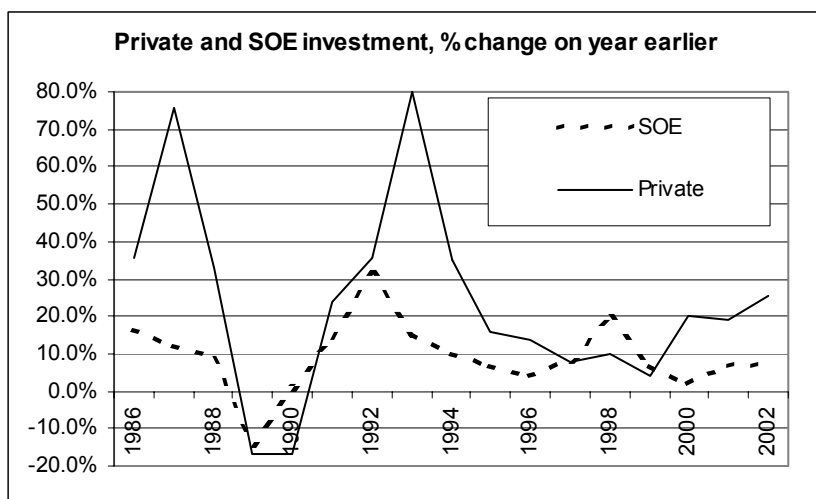
Figure 2: Private and SOE investment in China, change on previous year

Table 2: Correlation Coefficient between different investments' share of GDP, 1986 to 2002

	Government Investment in Infrastructure	SOE Investment	Private Investment
Government Investment in Infrastructure	1	0.109	-0.681
SOE Investment	0.109	1	0.075
Private Investment	-0.681	0.075	1

Table 3: Details for alternative fiscal policy indicator

	GDP, in bn RMB (1)	Government Consumption, in bn RMB (2)	Government Capital Investment, in bn RMB (3)	State-Owned-Units, in bn RMB (4)	Tax Receipts (5)	(2)+(3)+(4)-(5) (6)	(5) as share of (1) (7)	yoy change of (5) (8)
1985	896	12	55	168	204	31	3,5%	
1986	1020	14	60	208	209	72	7,1%	3,6%
1987	1200	15	52	245	214	98	8,2%	1,1%
1988	1490	17	49	302	239	130	8,7%	0,5%
1989	1690	20	48	281	273	77	4,5%	-4,2%
1990	1850	23	55	299	282	94	5,1%	0,5%
1991	2160	28	56	371	299	157	7,3%	2,2%
1992	2660	35	56	550	330	311	11,7%	4,4%
1993	3460	45	59	793	426	471	13,6%	1,9%
1994	4680	60	64	962	513	573	12,2%	-1,4%
1995	5850	67	79	1090	604	632	10,8%	-1,4%
1996	6790	79	91	1201	691	679	10,0%	-0,8%
1997	7450	87	102	1309	823	675	9,1%	-0,9%
1998	7830	95	139	1537	926	844	10,8%	1,7%
1999	8210	104	212	1595	1068	842	10,3%	-0,5%
2000	8940	117	209	1650	1258	719	8,0%	-2,2%
2001	9731	130	251	1761	1530	612	6,3%	-1,8%
2002	10479	138	314	1888	1764	577	5,5%	-0,8%