Financial Liberalisation and Growth in China's Economic Reform

Kui-Wai Li and Tung Liu

1. INTRODUCTION

RECENT studies (Borensztein and Ostry, 1996; Chow, 1993; and World Bank, 1997) document that the rapid growth in China since the early 1980s is accompanied by productivity increase in labour and capital. Evidence on the improvement in industrial productivity of state and collective sectors (Chen et al., 1988a and 1988b, Jefferson, 1989; and Jefferson, Rawski and Zheng, 1992 and 1994) was contrasted by the unrealistic reporting of outputs and inputs (Woo, Fan, Hai and Jin 1993 and 1994). These studies, however, do not provide the productivity of individual financial sources of investment. The financial liberalisation advocates argued (for example, McKinnon, 1973 and 1991; and Shaw, 1973) that an equally important constraint is institutional rigidity and government intervention in the opportunity cost of financial capital. Financial liberalisation in China is characterised by a gradual decline in the state sector and a growing importance of collective, individual and foreign enterprises. This paper analyses the efficiency of financial capital to economic growth in China. We estimate the effect of total and individual sources of fixed asset investment (state budget appropriation, national bank loans, self-raised funds, and foreign investment) on the growth of GDP and industrial production. Section 2 summarises China's financial liberalisation experience since reform. Section 3 discusses the four sources of financial investment. Sections 4 and 5, respectively, present the econometric model and show the empirical result. Section 6 discusses the various financial and policy implications, while the final section concludes the paper.

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2. FINANCIAL LIBERALISATION EXPERIENCE IN CHINA

The state was responsible for the livelihood of households before economic reform in 1978, investments activities were centrally planned, and investment funds were allocated either through bank credits or fiscal subsidies. State banks acted as 'accounting agents' that took care of various monetary transactions (Pohl, 1995). Financial liberalisation occurred in two dimensions: the internal dimension and the external dimension. Internally, marketisation and privatisation have resulted in a decline of the state sector, while de-centralisation can be seen from the reallocation of the fiscal budget between the state and local governments. Beginning from 1979, the Chinese government began to substitute state budget allocation by bank loans. Since 1988, enterprises have the right to decide their own investments and a bidding system was established (Cheng, 1997, pp. 78–79). The ownership pattern of fixed asset investment was originally classified under state-owned units, collective units and individual units. New classifications on private ownership include individual units, joint ownership, share-holding units, foreign-funded units and overseas-Chinese-funded units. Statistics shows that state ownership in total fixed asset investment has fallen by 25 per cent between 1980 and 1994.

Reform in financial institutions and regulations is characterised by a process of revitalisation in banking institutions in the 1980s (Byrd, 1983; Li, 1994; Yi, 1994; and Dipchand, Zhang and Ma, 1994). The central authority has undergone different phases of evolution in its monetary control since 1983, and a 'stop-go' monetary policy has been applied in times of inflation and the authority's desire to raise expenditure (Tang and Li, 1997). Interest rates have been adjusted on various occasions since the 1993 Austerity Plan (Qian, 1994). The 1995 Central Bank Law established an independent central bank, supported by a three-tier banking structure: policy banks (3), state-owned commercial banks (4) and commercial banks (corporate, regional and non-state owned) (Tang and Li, 1997; and EAAU, 1999). The two features in the 1995 Bank Law are the 'good-bad bank' structure (Saunders and Sommariva, 1993, p. 944) and that banks are related to major economic sectors, such as agriculture, construction and commerce. National banks in China are primarily hand-tied by the large inter-enterprises debts, the so-called 'triangular debts,' among state-owned enterprises (Qian, 1994; and Li, 1996).[1]

Another aspect of domestic financial liberalisation is the development of the bonds and the two stock markets, the Shanghai Securities Exchange and the Shenzhen Stock Exchange, which were established in December 1990 and July

[1] It was reported that state-owned enterprises need at least Rmb one trillion (about US$ 120 billion) in order to adjust their asset-debt ratios. *South China Morning Post* and *Ming Pao*, Hong Kong (22 September, 1997).

1991, respectively. Two types of shares have been traded. The A-shares are ordinary shares denominated and traded in Renminbi by domestic legal entities, enterprises and individuals. The B-shares are traded in foreign currencies by foreign investors. Chinese enterprises can issue H-shares in the Hong Kong Stock Exchange, and N-share in the New York Stock Exchange. The composition and trading volume of different securities have changed and expanded considerably (Li and Wong, 1997; Wei, 2000; and Su and Fleisher, 2000). State-owned enterprises and other enterprises are permitted to raise their funds in the bond and the two stock markets.

The major form of external financial liberalisation is the inflow of foreign direct investment, loans from foreign governments and international organisations. Utilised foreign direct investment increased drastically, Hong Kong alone accounted for 56 per cent in 1997. Foreign direct investment comprises 5.5 per cent of China's GNP.[2] Beginning from the early 1980s, Special Economic Zones and various open cities along the coastal provinces were established to attract foreign direct investment (Kueh, 1992; Nyaw, 1997; and Lardy, 1992 and 1994). The low production cost in labour and land has initiated the 'pull' effect, while the rising cost in Hong Kong and other neighbouring economies has 'pushed' investment into China (Pomfret, 1991; Chen and Li, 1997; and Sung, 1994). In the 1993 Austerity Plan, China emphasised the importance of investments in infrastructure rather than in such unpopular items as luxurious real estate development (Li, 1995). Five 'economic belts' in the western provinces of China were opened. The idea is to open up the poorer interior regions, where infrastructure investment is badly needed. New guidelines have been issued in the utilisation of foreign direct investment. High-technology industries are given a higher priority. It was estimated that a total of US$ 600 billion would be needed in the first decade of the 21st century for development in the backward interior regions, and much of this sum is expected to come from abroad.[3]

International organisations, such as the World Bank, have been supportive to China's economic reform and development. There are three dimensions in the World Bank's programme in China: formal economic sector works with comprehensive coverage; well-prepared investment projects; and lending programmes with well-defined objectives (Jun and Katada, 1997).

[2] *China Statistical Yearbook 1999*, Beijing, and *South China Morning Post* (29 November and 15 December, 1997).
[3] *South China Morning Post* (4 January, 1998).

3. SOURCES OF FINANCIAL INVESTMENT

In the post-reform period, total investment in fixed asset (TIFA) is composed of four sources of financial investment: state budget appropriation (SA), national bank loans (DL), self-raised fund and others (SRF), and foreign direct investment (FI). Total investment in fixed assets includes investment by the state-owned units, collective units, share-holding corporations, joint ownership units, limited liability corporations, share-holding corporations as well as investments by individuals, by business from Hong Kong, Macau and Taiwan, and from foreign countries.[4]

State budget appropriation (SA) refers to appropriation in the budget of the central and local governments earmarked for capital construction and innovation projects, and the transfer of funds to banks as loan issues for capital construction projects. China's fiscal policy is characterised by a 'soft budget' problem as it has been in deficit since the early 1980s (Qian and Roland, 1996). Extra-budgetary expenditures and revenues represent 29 per cent and 33 per cent of total government expenditure and revenue in 1997, respectively.

National bank domestic loans (DL) refer to funds borrowed by enterprises and institutions from banks and non-bank financial institutions for the purpose of investment in fixed assets. This category also includes loans issued by banks from their self-owned funds and deposits, loans appropriated by higher authorities, special loans by government, loans arranged by local governments from special funds, domestic reserve loans and working loans. The increase of DL comes from two parts: the deposit funds from private sectors and the government's financial allocation. Part of the decrease in SA was offset by the increase in the DL. The efficiency of DL, however, depends on whether the interest rate can reflect the market conditions. National banks are faced with debts mainly from the large state-owned enterprises. A conservative estimate of non-performing loans (NPL) amounted to 25 per cent of outstanding loans (EAAU, 1999, p. 297). Total debt as a percentage of GDP amounted to 124 per cent in 1998.[5] The Ministry of Finance has created an asset management company (AMC) to buy the NPLs from state banks so as to improve their balance sheets, with the aim to introduce a healthy financial situation for credit creation and to improve production and establish market-clearing prices. The remaining questions are how soon the losses associated with the NPLs will be recognised, how a market for NPLs could be created, and how many AMC there should be.[6]

Operation of foreign banks is limited to Beijing, Shanghai and Shenzhen, but the marketisation and improvement in economic efficiency of national banks are

[4] *Statistical Yearbook of China 1999*, Beijing, pp. 240–42.
[5] 'Developing a Corporate Bond Market', Greater China: Economics, Asia/Pacific Investment Research, Morgan Stanley Dean Witter (30 April, 1999).
[6] 'Building Economic Fundamentals in China', Asia/Pacific Investment Research, Morgan Stanley Dean Witter (9 April, 1999).

under huge pressure. A major requirement on China's accession to the World Trade Organisation is market access by foreign companies in banking, insurance and securities. Effectively, assuming China enters the World Trade Organisation in late 2000, Beijing has a period of about six years or so to improve the national banking system so as to make it competitive with foreign banks.

Self-raised funds (SRF) refer to funds received by construction enterprises from their responsible institutions, local governments or raised by enterprises or institutions themselves for the purpose of investment in fixed assets. Although SRF may be used by state enterprises for government-sponsored projects, these funds are the results of de-centralisation. The two stocks and the bond markets in Shanghai and Shenzhen are the major instruments through which enterprises raise their funds through market channels. Enterprises that have a better chance of successfully raising capital from the stock markets are technology-related enterprises, infrastructure-related enterprises, and medium-sized enterprises with good potentials. The two stock markets, however, have been plagued with market manipulation, speculation and irregularities, though the National People's Congress passed the first security law in December 1998 aimed to introduce market discipline. Shanghai has been the designated bond market. Corporate bonds are used to raise the credit rating or worthiness of the state commercial banks or to readjust state-owned enterprises' asset-debt ratios (see, for example, Burdekin and Hu, 2000). While the national banks are still coping with the size of the NPLs, it is appropriate to develop a corporate bond market created through the disposal of NPLs under the banking reforms.

Utilised foreign investment (FI) refers to foreign funds in fixed assets, foreign funds borrowed and managed by the government and by individual units, foreign funds in joint venture programmes, grants and donations. FI is expected to be more efficient than other forms of financial investment. Although the Asian financial crisis of 1997–1998 did not exert a negative impact on China, China has in fact absorbed a considerable amount of foreign direct investment that could have channelled to neighbouring Asian economies. The devaluation of the Renminbi (Rmb) in 1994 (by 40 per cent) has resulted in the continued growth in China's exports and balance of trade surplus. With China's accession to the World Trade Organisation, the short-term changes will be the inflow of foreign direct investment in such areas as telecommunication, finance and insurance, and manufacturing, followed by increases in trade and exports (see, for example, Dees, 1998).

Table 1 shows that the size and importance of state appropriation has declined drastically, while domestic loans have increased in the late 1980s and mid-1990s, but had stabilised. The decline in state appropriation was partly covered by the rise in domestic loans. Self-raised funds and others are the most important source of financial investment, and its percentage share has increased considerably after liberalisation. Foreign direct investment still occupies a small role, but its

TABLE 1
Sources of Investment in Fixed Assets (TIFA)

Year	*(1) GDP*	*(2) TIFA*	*State Appropriation (as per cent of)*		*Domestic Loans (as per cent of)*		*Self-Raised Funds and Others (as per cent of)*		*Foreign Investment (as per cent of)*	
	(Rmb 100 Million)		*(1)*	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*
1981	4,862.4	961.0	5.5	28.1	2.5	12.7	11.0	55.5	0.7	3.8
1982	5,294.7	1,230.4	5.3	22.7	3.3	14.3	13.5	58.1	1.1	4.9
1983	5,934.5	1,430.1	5.7	23.8	3.0	12.3	14.3	59.3	1.1	4.7
1984	7,171.0	1,832.9	5.9	23.0	3.6	14.1	15.1	59.1	1.0	3.9
1985	8,964.4	2,543.2	4.5	16.0	5.7	20.1	17.1	60.3	1.0	3.6
1986	10,202.2	3,120.6	4.5	14.6	6.5	21.1	18.3	59.9	1.3	4.4
1987	11,962.5	3,791.7	4.2	13.1	7.3	23.0	18.7	59.1	1.5	4.8
1988	14,928.3	4,753.8	2.9	9.1	6.6	20.6	19.9	62.4	1.8	5.8
1989	16,909.2	4,410.4	2.2	8.3	4.5	17.3	17.7	67.8	1.7	6.6
1990	18,547.9	4,517.0	2.1	8.7	4.8	19.6	15.9	65.4	1.5	6.3
1991	21,617.8	5,594.5	1.8	6.8	6.1	23.5	16.6	64.0	1.5	5.7
1992	26,638.1	8,080.1	1.3	4.3	8.3	27.4	19.0	62.5	1.8	5.8
1993	34,634.4	13,072.3	1.4	3.7	8.9	23.5	24.7	65.5	2.8	7.3
1994	46,759.4	17,042.1	1.1	3.1	8.5	23.5	24.7	67.7	3.8	10.4
1995	58,478.1	20,019.3	1.1	3.1	7.2	21.0	22.9	67.0	3.9	11.5
1996	67,884.6	22,913.5	0.9	2.7	6.7	20.0	22.7	67.3	4.0	12.0
1997	74,772.4	24,941.1	0.9	2.8	6.4	19.2	22.9	68.5	3.6	10.8

Source: *China Statistical Yearbook 1998*, Beijing, Sections 3-1, 6-1 to 6-3.

percentage share has grown considerably, suggesting that foreign direct investment will become an important source of financial investment after liberalisation. While state appropriation is expected to be inefficient, and national banks are experiencing reforms and market deepening, self-raised funds and foreign direct investment will be the more efficient performers.

4. METHODOLOGY AND DATA

The financial liberalisation hypothesis suggests that the way investment is financed or the form of investment is equally, if not more, important for output growth than is the size of financial inputs, and that government intervention in financial markets affect investment efficiency. We construct two economic relationships to test this hypothesis. The first function, which aims to measure the overall productivity of financial investment, mainly shows the relationship between the growth of total fixed investment in fixed asset (TIFA) and output growth. This function, however, only shows the importance of aggregate investment and does not distinguish among different forms of financial sources. The growths of four sources of TIFA, including state budget appropriation (SA), national bank loans (DL), self-raised funds (SRF) and foreign investment (FI), are used as the independent variables in the second function. Denote the output growth as $\dot{Q}$, the growth of TIFA as $\dot{\text{TIFA}}$, and the growth of the sources of TIFA as $\dot{\text{SA}}$, $\dot{\text{DL}}$, $\dot{\text{SRF}}$, $\dot{\text{FI}}$. Then the two relationships are shown below:

$$\dot{Q} = f(\dot{\text{TIFA}}) \tag{1}$$

$$\dot{Q} = f(\dot{\text{SA}}, \dot{\text{DL}}, \dot{\text{SRF}}, \dot{\text{FI}}). \tag{2}$$

A labour variable can easily be incorporated into the regressions.[7] A time trend term is used to capture the change in technology or other omitted variables. The following equations show the linear regression models:

$$\dot{Q}_t = a_0 + a_1 t + a_2 \dot{\text{Labour}}_t + a_3 \dot{\text{TIFA}}_t + \epsilon_t \tag{3}$$

$$\dot{Q}_t = b_0 + b_1 t + b_2 \dot{\text{Labour}}_t + b_3 \dot{\text{SA}}_t + b_4 \dot{\text{DL}}_t + b_5 \dot{\text{SRF}}_t + b_6 \dot{\text{FI}}_t + \epsilon_t. \tag{4}$$

We use GDP as the aggregate output in the regression, but also consider industrial production (IP) as an alternative dependent variable in the regressions.[8]

[7] The economic function with labour and total investment on fixed assets is different from the traditional production function with labour and capital. The inclusion of labour in our model is to avoid the misspecification of the omitted variables.

[8] The variables TIFA, SA, DL, SRF, and FI are the aggregates of the whole economy. Because of the data restriction, there is no dis-aggregates data for IP.

The growth rates of these two variables are denoted as $\dot{GDP}$ and $\dot{IP}$, respectively. The comparison of the regressions between equations (3) and (4) can be used to test the financial liberalisation hypothesis. The breakdown of the state appropriation into different forms of financial sources during the post-reform indicates that DL, SRF and FI should be more important than SA.

The empirical estimates are based on the limited annual data from *China Statistical Yearbook*. In order to examine the financial impact on output growth in the pre- and post-reform years, regression based on two periods (1953–1978 and 1981–1997) will be conducted whenever data permits. Two years in between (1979 and 1980) are excluded from the estimation since the dramatic changes may become outliers and distort the regression results. Because of data restrictions, the statistical conclusion from the small sample test should be conservative.

5. EMPIRICAL RESULTS

The regression results of equation (3), corrected for serial correlation, are shown in Table 2. The last column shows the adjustment of the autoregressive or the moving-average of order one. All the test results indicate that coefficient of the growth of TIFA is significant and positive. We conclude that the growth of TIFA is important to the output growths, measured in either GDP or industrial production. For the growth of GDP, the estimated coefficients of the growth of TIFA for pre-reform and post-reform periods are very close (0.213 and 0.231). But the adjusted R^2 is higher during the pre-reform (0.87) than the post-reform (0.62) period. This implies that other variables may be added to explain the growth of GDP during the post-reform period. The regressions with the growth of industrial production also show a lower adjusted R^2 during the post-reform period. In addition, the estimated coefficient of the growth of TIFA is lower during the post-reform period.

Table 3 shows regression with the growth of four sources of financial investment for the post-reform period. The first regression for the growth of GDP shows the regression with the growth of four different sources of financial investment has a higher adjusted R^2 (0.81) than the regression with the growth of TIFA (0.62) in Table 2. Among these four sources, SA has a negative coefficient, and the other three (DL, SRF and FI) have positive coefficients. This could be due to the declining trend of the SA over the years. However, all these four coefficients are not statistically significant. With a high adjusted R^2, this indicates the existence of multicollinearity.

The other six regressions in Table 3 show different combinations of independent variables. The positive and significant coefficients are found for the growths of DL, SRF and FI. The estimated coefficient of the growth of SA is

TABLE 2
Regressions with Total Investment in Fixed Assets

Dependent	*Independent Variables*				R^2
	Constant	*T*	*Labour*	$TI\dot{F}A$	
$G\dot{D}P$ 1954–97	−0.003 (−0.11)	0.003* (3.69)	−0.023 (−0.11)	0.221* (9.45)	0.82 (AR1 = 0.40)
$G\dot{D}P$ 1953–78	0.032* (3.58)		0.397 (1.36)	0.213* (11.02)	0.87 (DW = 1.91)
$G\dot{D}P$ 1981–97	0.119* (4.07)		−0.049 (−0.27)	0.231* (2.11)	0.62 (MA1 = 0.90)
$I\dot{P}$ 1953–97	0.018 (0.06)	0.002* (2.01)	−0.003 (−0.07)	0.417* (9.23)	0.80 (MA1 = 0.35)
$I\dot{P}$ 1953–78	0.049* (3.91)		0.045 (0.083)	0.421* (9.65)	0.86 (DW = 1.84)
$I\dot{P}$ 1981–97	0.138* (3.48)		−0.359 (−1.09)	0.319* (2.01)	0.61 (MA1 = 0.67)

Notes:
The numbers in parentheses are the *t*-statistics. The asterisk indicates the statistical significance with a 5 per cent level of significance based on the *t*-test. The last column indicates the correction with serial correlated errors if necessary. The 'DW' denotes the Durbin-Watson statistic; 'AR1' means the adjustment of the errors with the autoregressive of order 1 and 'MA1' means the adjustment with the moving-average of order one.

TABLE 3
Regressions of the Growth of GDP with Individual Sources of Fixed Asset Investment (1981–1997)

Independent Variables						$\bar{R}^2$	*MA(1)*
Constant	*Labòur*	$S\dot{A}$	$D\dot{L}$	$S\dot{R}F$	$\dot{F}I$		
0.119* (3.47)	−0.240 (−0.69)	−0.042 (−0.54)	0.081 (0.96)	0.084 (0.062)	0.058 (1.31)	0.81	1.67
0.107* (3.72)	0.018 (0.09)	−0.123 (−1.66)	−0.0005 (−0.005)	0.293* (2.08)		0.67	0.98
0.129* (5.85)	−0.256 (−0.69)	−0.049 (−0.65)	0.084 (1.13)		0.089 (1.61)	0.62	0.99
0.114* (3.49)	−0.093 (−0.32)	−0.054 (−0.77)		0.147 (1.33)	0.081* (2.46)	0.83	1.67
0.123* (5.51)	−0.399 (−1.16)	0.027 (0.67)	0.178* (2.64)			0.79	1.68
0.108* (3.90)	0.018 (0.13)	−0.123* (−2.24)		0.292* (2.94)		0.70	0.98
0.148* (7.94)	−0.167 (−0.57)	−0.060 (−0.82)			0.082* (2.52)	0.80	1.63

Notes:
The numbers in parentheses are the *t*-statistics. The asterisk indicates the statistical significance with a 5 per cent level of significance based on the *t*-test. All the regression errors are adjusted with the moving average of order one. The last column indicates the estimate coefficient of moving-average.

TABLE 4
Regressions of the Growth of IP with Individual Sources of Fixed Asset Investment (1981–1997)

Independent Variables						$\bar{R}^2$	*MA(1)*
Constant	*Labour*	$\dot{SA}$	$\dot{DL}$	$\dot{SRF}$	$\dot{FI}$		
0.151* (2.95)	−0.390 (−0.86)	−0.077 (−0.65)	0.096 (0.73)	0.024 (0.12)	0.102 (1.44)	0.78	0.99
0.143* (2.95)	−0.189 (−0.083)	−0.166 (−1.35)	0.004 (0.03)	0.288 (1.32)		0.59	0.99
0.154* (4.88)	−0.413 (−0.96)	−0.059 (−0.60)	0.112 (0.99)		0.094 (1.40)	0.79	1.66
0.142* (3.02)	−0.162 (−0.61)	−0.174 (−1.74)		0.313 (1.25)	−0.016 (−0.11)	0.59	0.99
0.172* (4.39)	−0.287 (−1.30)	−0.085 (−0.84)	0.124 (1.18)			0.56	0.99
0.143* (3.23)	−0.184 (−1.11)	−0.168* (−1.93)		0.291* (1.80)		0.63	0.99
0.166* (5.86)	−0.253 (−0.69)	−0.101 (−0.99)			0.132* (2.62)	0.81	0.99

Note:
Same as Table 3.

significant only in the second last regression, but the estimate is negative. We can conclude that the growths of DL, SRF, and FI are positively related with the growth of GDP. The estimated coefficient of the growth of SRF is the largest, followed by DL and FI.

Table 4 shows the regressions with the growth of industrial production (IP) as the dependent variable. The first regression with the growth of four sources of investment shows a higher adjusted R^2 (0.78) than the regression with the growth of TIFA (0.61) in Table 2. However, the coefficients of these four sources are insignificant. The rest of the six regressions show that both the growth of SRF and FI are positive and significant. The estimated coefficients for the growth of DL are all insignificant and estimated coefficients of SA are all negative with one significant coefficient. Hence, we conclude the growth of SRF and FI have positive impacts on the growth of IP. The results suggest the government intervention in the financial investment through the budget appropriation is unproductive. SA is entirely state-controlled, and financial investment may not be allocated to the most productive projects. On the contrary, SRF has the best performance, suggesting that the Chinese economy should pursue a more vigorous policy on the marketisation of financial investments.

6. FINANCIAL AND POLICY IMPLICATIONS

Financial liberalisation in China has resulted in a rapid decline of state appropriation and a smaller size of the state sector, while the transition from state to non-state sector development is working through the activities of national banks. The use of state appropriation will probably be confined to non-profit oriental state-owned enterprises, such as hospital and schools. With rapid economic growth and increasing household income, personal saving will become important sources of investment funds. These savings will either flow to banks and become domestic loans or flow to stocks and bonds market and become a part of self-raised funds. For domestic loans, a dual policy on national banks should be adopted. On the one hand, bank debts and non-performing loans should be eliminated through the establishment of a company that either absorbs or reschedules the debts. On the other hand, new loans should be made on a market-oriented interest rate so that opportunity cost on the scarcity of funding is reflected in the allocation of bank loans.

Although the nominal interest rate has remained unchanged since 1998, economic deflation since the mid-1990s has kept the state-imposed interest rate positive. Similarly, although the growth rate of money (M2) has remained relatively high, the high money growth reflects rather a change in China's investment policy than re-generating inflationary pressures.[9] Such monetary instruments as interest rate, money supply and treasury bonds are centrally managed, and changes in these variables can work effectively through national financial institutions. It can be argued that given the 'soft budget' nature of China's fiscal policy, monetary and investment policy is still the more effective instrument than the fiscal policy. Although it is likely that interest rate liberalisation is expected, the related external issue is the full convertibility of the currency, which has been shelved as a result of the Asian financial crisis. The devaluation of the Renminbi in 1994 allowed convertibility in the current account, but full convertibility in the capital account that can facilitate the inflow of foreign direct investment will greatly be facilitated.

The deployment of self-raised funds by enterprises has become most efficient in the financial liberalisation process. In principle, only the profitable enterprises can generate funds needed for investment. A very profitable enterprise can generate more self-raised funds than the others. Such resource allocation follows the rule of economic efficiency. Secondly, self-raised funds from stocks and bonds markets have to be repaid with the competitive market interest rates. Their productivity should be higher than state funding. A major policy implication in

[9] 'The End of Interest Rate Cuts?' (31 March, 1999), and 'What Does Accelerating Money Growth Mean?' (30 July, 1999), Greater China: Economics, Asia/Pacific Investment Research, Morgan Stanley Dean Witter.

the efficient use of self-raised funds is the need for the reform in the non-bank financial sector, such as health and life insurance, pension fund, housing cooperatives and education funds. Its successful reform will not only provide fund for enterprises for productive usage and aid the efficient performance of national and commercial banks, it also has great implications on the reform of state-owned enterprises (EAAU, 1999). A major problem in the state-owned enterprise reform is the rise of urban unemployment and the re-deployment of excess industrial capacity.[10] State-owned enterprises are 'mini-societies', and the establishment of non-bank financial institutions, especially foreign owned ones, will facilitate the reform of state-owned enterprises.

Another dimension in the reform of the non-bank sector is the growing number of financial companies, commonly known as investment trust international companies (ITICs). These financial companies engage in trade, loan provisions and investment activities. Rent-seeking activities in these ITICs can have a damaging impact on financial liberalisation. On the contrary, successful ITICs can in turn aid financial efficiency in the non-state sector (EAAU, 1999).[11] The efficient performance of self-raised funds has multiple implications on banking and non-bank financial institutions, reform of state-owned enterprises, the pace of privatisation and marketisation, and economic growth and productivity ultimately.

Foreign direct investment has become increasingly an important and efficient investment resource in the process of financial liberalisation. There is a dual advantage for China to absorb more foreign direct investments. The large domestic market itself is an attraction to foreign businesses that intend to capture the Chinese market. Secondly, China's favourable trade position, coupled with its low cost of production, will attract foreign businesses for exports of manufactured goods. Equally, the Beijing authority has adopted pragmatic and market-friendly policies that lure foreign investors. In China, granting preferential tax treatment to attract investments is a standard procedure.

There are, however, qualifications to the general conclusion that self-raised funds and foreign investment are more productive than state-supported funds. It is true that state appropriation and bank loans have been used to bail out loss-making state enterprises, but in remote areas and regions, they form the only source of financial investment. Furthermore, many of the large profit-making enterprises have been relying on these two sources. Similarly, a considerable amount of foreign investments has also been channelled to dubious activities, such as real estates and entertainment. Workers have sometimes been forced to use their wages to purchase enterprise bonds, while management remains

[10] 'Excess Capacity – What are the Policy Options?', Greater China: Economics, Asia/Pacific Investment Research, Morgan Stanley Dean Witter (28 February, 1999).
[11] 'Reforming the ITICs', Greater China: Economics, Asia/Pacific Investment Research, Morgan Stanley Dean Witter (31 January, 1999).

unchanged. There are a number of reported cases of rent-seeking activities in both state and non-state enterprises.

7. CONCLUSION

A major problem in the price reform of the 1980s was the over-concentration on the price on end products, and a lack of reform in the price of resources: rents, wages and interest rates. Financial liberalisation pushed the need for reform in price of financial resources, institutional and regulatory arrangements, which could open up to effective reforms in other economic areas.

By using the growth of four different sources of financial investment (SA, DL, FI and SRF) as independent variables, this paper shows the impact of individual investment sources on output growth. In particular, we focus on whether government intervention in financial markets can achieve higher productivity, and that the way investment is financed has great impact on output growth. We found that the growth of self-raised funds and the growth of foreign investment are positively related to output growth. This empirical result supports the financial liberalisation hypothesis that economic growth is restricted by the forms of the financial resources instead of the availability of financial resources.

Two important policies introduced in China's economic reforms since 1978 are the market economy policy and the open door policy. The market economy policy paved the way for individual economic units and created the incentive to generate funds, while the open door policy has introduced a vast amount of foreign investment. The results in this paper add to the evidence of success in these two policies. Both the growth of self-raised funds and the growth of foreign investment have positive impacts on output growth. With a rapid economic growth and marketisation, the economy needs a large amount of financial sources. The efficiency of bank loans should improve through a reduction in non-performing loans and the establishment of a fully marketised interest rate regime. A well-established banking system with such interest rate regime can provide efficient investment funds allocation. This will be the major task for the China government in the coming years.

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