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Working Paper

The financial deepening-productivity nexus in China: 1987 - 2001

WIDER Research Paper, No. 2007/08

Provided in Cooperation with:
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Suggested Citation: Zhang, Jun; Wan, Guanghua; Jin, Yu (2007) : The financial deepening-productivity nexus in China: 1987 - 2001, WIDER Research Paper, No. 2007/08, ISBN 9291909475=978-92-9190-947-6, The United Nations University World Institute for Development Economics Research (UNU-WIDER), Helsinki

This Version is available at:
https://hdl.handle.net/10419/63427

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Research Paper No. 2007/08

The Financial Deepening–Productivity Nexus in China: 1987–2001

Jun Zhang,[1] Guanghua Wan,[2] and Yu Jin[3]

February 2007

Abstract

The financial intermediation–growth nexus is a widely studied topic in the literature of development economics. Deepening financial intermediation may promote economic growth by mobilizing more investments, and lifting returns to financial resources, which raises productivity. Relying on provincial panel data from China, this paper attempts to examine if regional productivity growth is accounted for by the deepening process of financial development. Towards this end, an appropriate measurement of financial depth is constructed and then included as a determinant of productivity growth. It finds that a significant and positive nexus exists between financial deepening and productivity growth. Given the divergent pattern of financial deepening between coastal and inland provinces, this finding also helps explain the rising regional disparity in China.

Keywords: growth, financial development, productivity, China
JEL classification: N1, O5

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This study has been prepared within the UNU-WIDER Sabbatical and Visiting Fellows programme, and is published in the project on Inequality and Poverty in China.

UNU-WIDER acknowledges the financial contributions to the research programme by the governments of Denmark (Royal Ministry of Foreign Affairs), Finland (Ministry for Foreign Affairs), Norway (Royal Ministry of Foreign Affairs), Sweden (Swedish International Development Cooperation Agency—Sida) and the United Kingdom (Department for International Development).

ISSN 1810-2611 ISBN 92-9190-947-5 ISBN 13 978-92-9190-947-6

Acknowledgements

This paper is part of a research project on economic growth and financial development in China, and was prepared during the sabbatical visit of Jun Zhang to UNU-WIDER in Helsinki, Finland, from July to October 2005. The sabbatical fellowship of UNU-WIDER is acknowledged. Earlier versions of the paper were presented at the International Conference on Transition and Economic Development, Fudan University, Shanghai, 10-11 September 2005, and at a seminar of the Institute for Economic Transition, Bank of Finland, 4 October 2005. Comments and suggestions from the conference and seminar participants are acknowledged. The authors are responsible for any remaining errors.

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Typescript prepared by Lorraine Telfer-Taivainen at UNU-WIDER

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1 Introduction

In the literature of development economics, it is generally held that the depth of financial development promotes economic growth in two ways. First, it facilitates resource mobilization, reduces the transaction costs of financing investments, and therefore, induces more investments (e.g., Merton and Bodie 1995). Second, it helps improve the allocative efficiency of financial resources, and thus lift the returns to financial resources, which raises productivity (e.g., King and Levine 1993; Beck et al. 2000). While the deepening financial development generally leads to increases in the level of and returns to investment in many economies, this may not be true in the case of China, however. For example, Lu and Yao (2004) found that the level of financial development did not have a statistically significant impact on growth. Meanwhile, Liang (2005) concluded that the impact of financial depth on growth is only apparent in coastal regions and not in the inland, implying regional variations in the financial deepening-growth relationship in China.

Previous studies on China usually use total credit/GDP to measure the depth of financial intermediation. This ratio tends to overestimate the financial depth in China, and possibly discount the financial deepening-growth nexus, primarily due to both policy-directed lending and a large scale of non-performing loans in China's banking sector. In a financially depressed economy like China, the deepening process of financial intermediation is normally defined as a process of banking liberalization from state control, reductions in or elimination of directed credits, and marketization of financial parameters (Shaw 1973; McKinnon 1973; King and Levine 1993). Without taking out directed credits and funds allocated to state-owned enterprises, the ratio of total credit to GDP is not an appropriate indicator of the depth of financial intermediation in China. As China gradually liberalizes her financial sector and implements relevant institutional changes, the rising depth of financial intermediation is most likely to be a result of commercialization of state banks and should be closely related to the change in the relative share of bank financing between state-owned enterprises and a variety of newly emerged enterprises. Lack of data, however, prevents us from calculating the relative shares of bank lending to state or non-state sectors. Consequently, we propose an indirect measure by determining how much the total outstanding bank loan was granted to state and non-state sectors. The measure is then constructed as the ratio of credit for the non-state sector to GDP. Adding this indicator of financial deepening as an independent variable to the productivity growth model allows us to explore the relationship between financial depth and productivity growth in China. Our modeling results confirm a positive and significant impact of financial development on productivity, conditioning on a number of control variables. Such finding has important implication for and supports the necessity of both in-depth liberalization of the state banking sector and rapid privatization of locally owned state enterprises in China.

The motivation of this paper is elaborated upon in Section 2, together with a review of existing literature. In Section 3, we define and construct an index, measuring the depth of financial development in China. Data issues are discussed in Section 4, where we empirically estimate the financial deepening–productivity nexus in China using a panel dataset covering 29 provinces over the period of 1987-2001. The standard growth accounting is employed to produce annual estimate of total factor productivity in each province. These estimates are then regressed on a set of independent variables. Finally, concluding remarks are presented in Section 5.

2 Motivation of research

After more than a decade of silence following the pioneer work of Goldsmith (1969), Shaw (1973) and McKinnon (1973), the financial intermediation–growth nexus has returned as a widely studied topic in the literature of development economics since the 1990s. Notwithstanding controversies over the causal relationship between financial development and economic growth, dating back to the early 1950s, there has been growing consensus since 1990s that 'Schumpeter might be right'. That is, services provided by financial development are essential to economic development (Levine 1997; King and Levine 1993; Greenwood and Jovanovic 1990). This consensus leads to many empirical studies that attempt to verify the linkage between financial liberalization and economic growth using aggregate data from large cross sections of countries.[1]

There are several channels through which the deepening process of financial development fosters economic growth. For instance, financial development can help mobilize savings into investment projects, an effect of mobilization (e.g., Merton and Bodie 1995). Also, it may help increase the marginal productivity of capital through the intermediation function of well-informed financial institutions, an effect of efficiency enhancement (e.g., King and Levine 1993; Beck et al. 2000).

As a transition economy, China attracts considerable research interests, including those on bank-based financial intermediation. For example, Tan (1999), Zhou and Hu (2002), Lu and Yao (2004), Liang (2005), among others, constructed indicators of financial development and examined their impact on economic growth. However, these studies do not differentiate the mobilization effect from the efficiency effect. Rather, they simply regress GDP growth on an indicator of financial development. In this paper, we choose to focus on the efficiency effect by modeling the impact of financial development on productivity growth. As emphasized by Ezaki and Sun (1999) and Guo (2005), productivity growth has become increasingly important to promote economic growth, and to explain the regional imbalance in China.

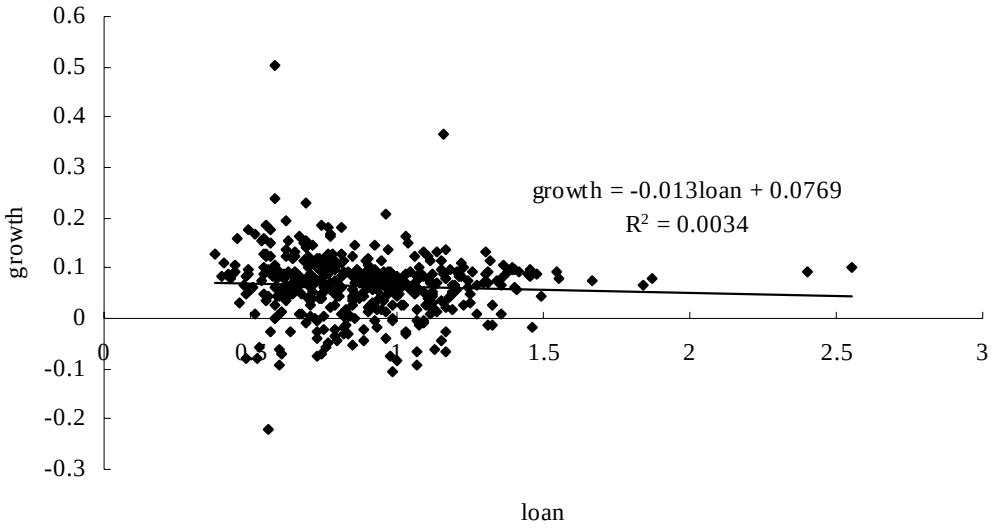
Another problem with existing studies on China relates to the measurement of financial deepening, mostly using M2/GDP, or total year-end credit/GDP or banking financial assets/GDP. These measures are found to be inappropriate. To demonstrate our finding, Figure 1 plots total credit/GDP and growth of per capita GDP for 29 provinces over the period of 1987-2001. The plot clearly shows a weak and negative correlation. Provided that GDP growth is measured with some precision, such a counterintuitive plot is indicative of measurement problem associated with financial depth. This is so despite concerns over how much efficiency gains has been made in allocating credits by China's state banks (Cull and Xu 2000; Allen et al. 2005). Given the existence of policy lending and large scale non-performing loans, these above-mentioned measures are expected to overestimate financial depth in less developed regions. And this will almost certainly yield misleading results regarding the financial intermediation–growth nexus in China.

Both Liang (2005) and Lu and Yao (2004) also used bank loans to the private sector as a financial indicator in the explanation for economic growth in China, as suggested by King and Levine (1993). While Lu and Yao (2004) found a negative and insignificant relationship, the opposite was concluded by Liang (2005), but only for regions in the coastal

1 See Levine (1997) for a literature review. Guo (2005) prepared a comprehensive survey of literature.

area, not the inland provinces.[2] The panel data on bank lending to the private sector used by Liang (2005) and Lu and Yao (2004) are not explained in detail. In particular, how they define the private sector remains unclear. To our best knowledge, no such data are published by China's national authorities on a consistent base. If collected from individual provinces, consistency in definition and categorization across regions and over time may be questionable; see Zhou and Wang (2002) for discussion on the inconsistency issue in China's financial statistics at the provincial level. In any case, bank lending to private enterprises may not reflect well the depth of financial intermediation in China. Several ownership types of enterprises exist which are between state-owned enterprises and private enterprises, including various joint ownership enterprises and FDI related companies. Most importantly, the well-known township and village enterprises (TVEs) are of collective ownership and they represent 30 per cent of the Chinese economy. Therefore, private credit as a percentage of GDP would underestimate the depth of financial intermediation in China.

Figure 1: Total credit/GDP versus growth of per capita GDP



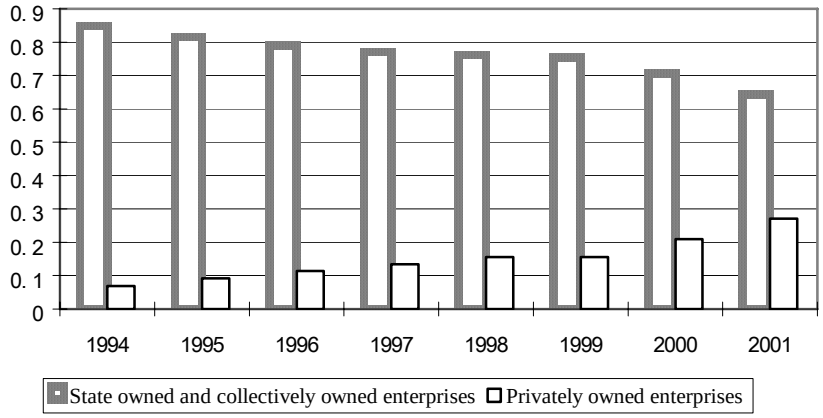
Note: This diagram is based on provincial panel data. 'Growth' is measured by annual growth rate of per capita GDP, and 'loan' is measured by total loan/GDP ratio.

Sources: Authors' calculation based on CCES dataset.

In what follows, we will construct a variable measuring the depth of financial deepening, which excludes credits allocated to state-owned enterprises, but includes credits for all non-state enterprises. This is appropriate as financial liberalization and commercialization of state banks in China are slowly implemented to facilitate the emergence of various non-state enterprises. For instance, collectively owned and joint ventures dominated many provincial economies from the mid 1980s to the mid 1990s. After the mid 1990s, the number of private enterprises began to grow, partly due to privatization of state-owned enterprises. Across regions, both the extent of privatization and the importance of private enterprises vary considerably. As Figure 2 indicates, even today, apart from private enterprises, collectively owned enterprises account for a large share of bank credits.

2 Liang (2005) uses a dataset covering 29 Chinese provinces over the period of 1990-2001, while Lu and Yao (2004) use a dataset covering 28 Chinese provinces over the period of 1991-2001.

Figure 2: Skewed allocation of credit in China, 1994-2001



Note: Credit allocated to those other than state-owned, collectively owned and private enterprises, is not included.

Sources: China National Bureau of Statistics (various years).

3 Estimating the depth of financial intermediation in China

Note that the total bank loan can be classified into two components: that issued to state-owned enterprises and the rest issued to all non-state enterprises. The first component as a percentage of the total loan is expected to be highly correlated with the output share of state-owned enterprises, denoted by *soe*. This leads to the following equation:

$$loan_{it} = \alpha + \beta soe_{it} + \eta_i + v_{it}$$
$$v_{it} = \rho v_{i,t-1} + \varepsilon_{it} \quad |\rho| < 1 \qquad (1)$$

where *loan* is the total loan as a percentage of GDP and subscripts *i* and *t* index regions and time. The term, βsoe_{it}, captures the proportion of loan that is allocated to state-owned enterprises and other terms represent the share of loan allocated to non state enterprises. In (1), we specify a first order autoregressive (AR1) process to correct for serial correlation in the error term, v_{it}. Table 1 reports estimation results.

Table 1: Panel regression for total bank loan/GDP, 1987-2001(AR1/fixed effect)

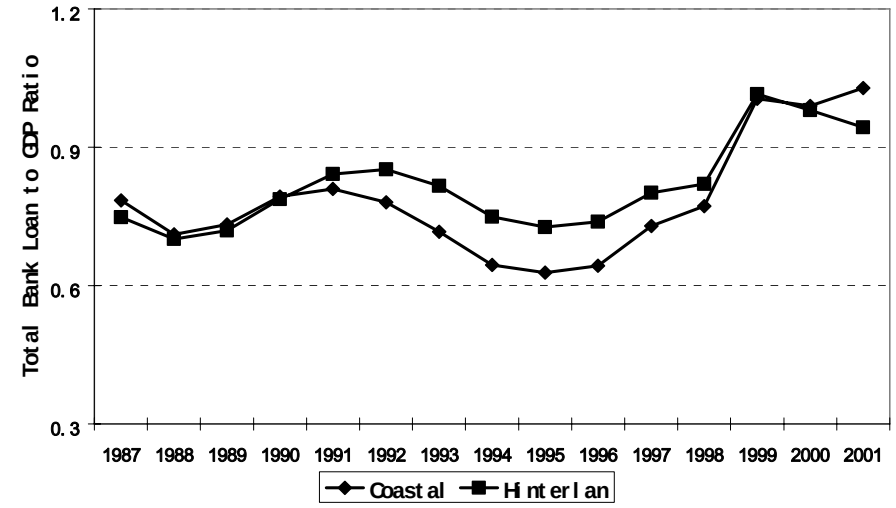
	coefficient	t-value
SOE output/total output	0.507	8.45
rho-ar	0.806	
R-sq	0.172	
observations	406	

Source: Authors' estimations.

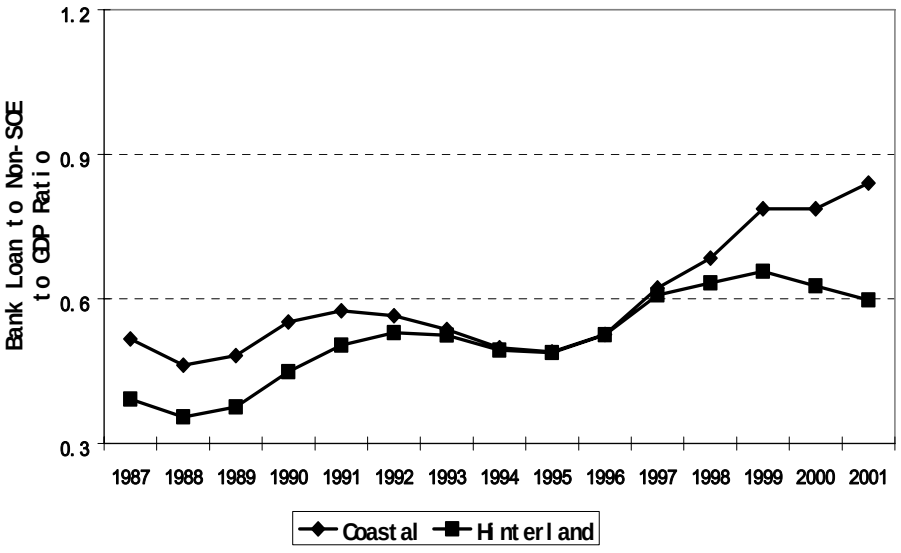
Now we can compute the ratio of bank lending (to non-state sector only) to GDP for each province and each year between 1987 and 2001. This is obtained simply by deducting the values given by βsoe_{it} from $loan_{it}$. The computed ratios are averaged for the coastal and

inland areas[3] and then plotted in Figure 3. The only difference between Figure 3(a) and 3(b) is that the level of financial deepening is estimated by total bank loan-to-GDP ratio in 3(a), while in 3(b), it is measured by bank loan to non-state sectors as a percentage of GDP. Figure 3(a) shows that, prior to discounting bank lending to state-owned enterprises (referring to the total credit-to-GDP ratio), the depth of financial development in the inland area is higher. But Figure 3(b) indicates the opposite. Figure 3(b) also depicts increasing variations in financial deepening, especially since mid 1997.

Figure 3: The measured level of financial deepening: coastal versus inland regions in China, 1987-2001



(a)



(b)

Sources: Authors' calculations based on own estimates.

3 In the literature, the coastal region in China usually includes 12 provinces and municipalities, namely, Beijing, Tianjin, HeBei, Liaoning, Shangdong, Shanghai, Jiangsu, Zhejiang, Fujian, Guangdong, Hainan and Guangxi. The inland provinces include Shanxi, Inner Mongolia, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei, Hunan, Sichuan, Guizhou, Yunnan, Xizang (Tibet), Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang. In this study, we include Chongqing in Sichuan Province as Chongqing was granted the status of province-treated municipality in 1997, but we exclude Xizang (Tibet) from this research due to the lack of data. Hong Kong, Macau and Taiwan are not covered either here.

4 The financial development–productivity nexus in China

We explore the financial development–productivity nexus by estimating fixed effects panel regressions. Apart from financial development which raises productivity, other variables can generate positive or negative impact on regional productivities and they need to be controlled for in the regression models. These control variables include level of urbanization, privatization, and opening up. Also institutional factors such as fiscal expenditure and governmental influence on bank lending are also considered. For a complete list of independent variables, see Table 2.

The dependent variable is not directly observable and must be estimated. In this paper, we use standard growth accounting methodology to generate the series of total factor productivity. According to Solow (1957), an aggregate production function with neutral technological change can be written as (Y = output, K = capital, L = labour, A = technology parameter and t = time subscript):

$$Y = A_t f(K, L) \tag{2}$$

Differentiating with respect to time and then dividing both sides by output Y yield:

$$\frac{\dot{Y}}{Y} = \frac{\dot{A}}{A} + w_K \frac{\dot{K}}{K} + w_L \frac{\dot{L}}{L} \tag{3}$$

where dotted variables indicate discrete changes over time, $w_K = \frac{\partial Y}{\partial K}\frac{K}{Y}$ is output elasticity of capital and $w_L = \frac{\partial Y}{\partial L}\frac{L}{Y}$ is output elasticity of labour. Further assuming homogeneity of (2), then $w_K + w_L = 1$. Let $y = Y / L$ and $k = K / L$, we can obtain:

$$\frac{\dot{A}}{A} = \frac{\dot{y}}{y} - w_K \frac{\dot{k}}{k} \tag{4}$$

Equation (4) will be used to estimate regional total factor productivity (TFP) and its growth.[4] This dataset covers 29 provinces and municipalities for the period 1987-2001. Observations for real capital stock are sourced from Zhang et al. (2004). Rather than estimating the aggregate production function, we assume a value of 0.33 for w_k. This is because most studies document output elasticity of capital between 0.3-0.6, and around 0.3 for China. Estimates of TFP and TFP growth for selected years are presented in Table 3. Meanwhile, Figure 4 shows the average (over all regions) level and growth of TFP for the period 1987-2001. It shows that the TFP has been growing less since early 1990s.

4 The data we use for estimating (4) are from the China Center for Economic Studies, Fudan University.

Table 2: Summary of variables

Dep. variables:	GTFP	Growth of total factor productivity	
Indep. variables:			References:
Initial state	GTFP88	growth of TFP in 1988	
Core variables:			
financial deepening	pLoan	bank lending to non-state enterprises/GDP	
Fiscal spending	Exp	fiscal spending/GDP	
Gov't intervention	Loan×Exp	bank loan×fiscal spending	
Control variables:			
investment	Inv	fixed investment/GDP	
Education	Edu	average years of schooling	Wan et al. (2006)
Opening up	FDI	fdi/gdp	Dayal-Gulati and
	Trade	trade/gdp	Husain (2000)
Privatization	NSOE	1-SOE employment/total employment	Chen and Feng (2000)
Urbanization	Urban	non-rural population/population	Chen and Lu (2004)

Source: See text.

In considering determinates of productivity, we include the fiscal expenditure-to-GDP ratio (*Exp*). This is dictated by the current literature, arguing that the ratio measures government intervention in economic development. While the ratio usually exerts a negative effect on economic growth elsewhere, in China, it may well be conducive to productivity improvement and economic growth (Qian and Weingast 1997; Cao et al. 1999). Nevertheless, the impact of *Exp* on productivity is likely to be related to financial deepening (*Loan*) in a region. In fact, some fiscal spending is probably financed by borrowing from banks, especially in inland provinces where the fiscal status of local governments was weakened by the 1994 intergovernmental fiscal reform (Dabla-Norris, 2005). Therefore, it is justified to include an interactive term in the productivity function, namely *Loan*×*Exp*. In calculating the fiscal expenditure-to-GDP ratio, an adjustment is made to deduct fiscal expenditure on sciences and technology, education and health as they do not reflect direct government intervention in economic activities.

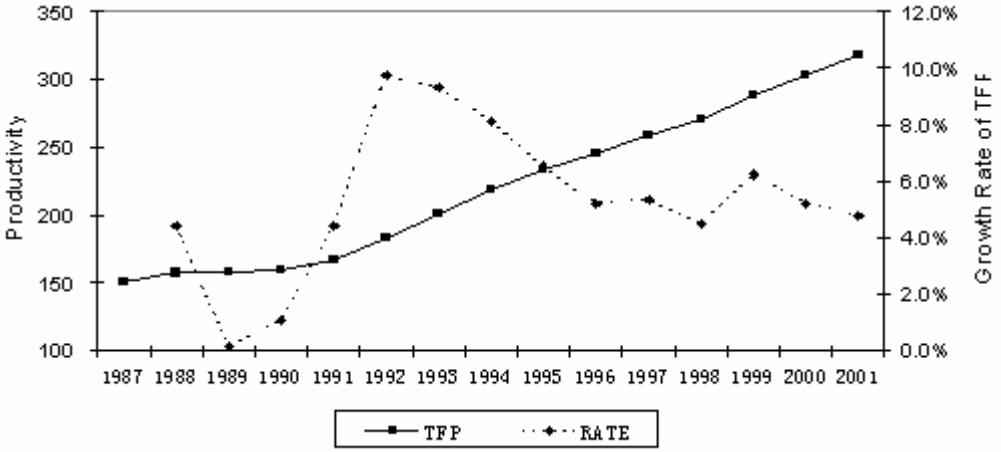
Table 3: Total factor productivity and its growth in provincial China for selected years (based on growth accounting)

Provinces	1988a	1988b %	1993a	1993b %	1998a	1998b %	2001a	2001b %
Beijing	275	6.05	322	10.00	414	8.25	495	5.65
Tianjin	230	3.56	274	6.05	412	5.46	586	7.15
Hebei	145	7.14	190	9.84	255	3.81	290	5.64
Shanxi	132	3.50	161	4.55	205	5.06	220	4.42
Inner Mongolia	167	3.76	187	2.52	248	6.03	300	6.02
Liaoning	239	5.69	274	7.09	366	5.78	455	5.06
Jilin	199	6.15	215	6.93	309	5.80	401	6.84
Heilongjiang	200	4.01	238	4.61	302	2.75	365	6.29
Shanghai	330	4.44	404	5.93	570	6.44	790	4.75
Jiangsu	198	10.32	263	11.20	383	5.13	465	5.74
Zhejiang	186	4.16	259	13.05	369	4.86	418	3.64
Anhui	136	-0.84	162	12.00	240	3.23	276	4.75
Fujian	172	8.11	264	15.33	387	4.94	439	4.29
Jiangxi	128	7.41	162	7.29	227	4.79	272	4.77
Shandong	164	5.74	226	13.11	287	5.08	363	0.07
Henan	119	2.68	146	10.15	193	1.42	208	5.77
Hubei	178	2.96	230	8.77	324	4.27	374	3.72
Hunan	141	1.96	178	8.06	239	4.28	284	5.39
Guangdong	206	-10.38	308	11.52	405	3.79	462	3.64
Guangxi	101	1.53	144	7.16	167	2.95	183	3.93
Hainan	148	3.41	193	6.13	194	4.01	227	4.44
Sichuan	97	2.97	128	9.60	173	5.34	197	5.08
Guizhou	91	2.88	108	6.47	138	2.61	144	2.90
Yunnan	107	11.00	124	4.20	156	2.65	169	2.74
Shanxi	133	13.20	155	7.93	205	5.89	239	6.41
Gansu	111	8.12	132	2.95	171	4.77	233	4.99
Qinghai	130	3.25	138	2.28	166	3.81	197	5.47
Ningxia	120	7.16	139	5.78	175	5.74	193	4.42
Xinjiang	149	4.80	191	3.55	235	7.02	268	3.49

Notes: a: level of TFP, b: the growth of TFP. Hong Kong, Macau and Taiwan, and Tibet are not included due to the lack of data. Chongqing, though has become the province-equivalent municipality since 1997, is still included in Shichuan province.

Sources: Authors' calculations.

Figure 4: The level and growth of TFP in China (provincial averages), 1987-2001



Sources: based on authors' calculations.

Other variables considered include education, fixed assets investment, foreign trade, foreign direct investments (converted from USD into Chinese RMB), and population. Apart from the education data which are taken from Wan, Lu and Cheng (2004), other observations are provided by the China Center for Economic Studies, Fudan University.
Our productivity model is specified as:

$$GTFP_{i,t} = a_i + \rho_0 GTFP88_i + \rho_1 pLoan_{i,t} + \rho_2 Exp_{i,t} + \rho_3 Loan_{i,t} \times Exp_{i,t} + \Sigma \rho_j Ctrl_{j,i,t} + \varepsilon_{i,t} \quad (5)$$

where *GTFP* = productivity growth, *pLoan* = financial deepening, *Exp* = fiscal expenditure as percentage of GDP, *Ctrl* = a vector of other variables discussed in the preceding paragraph. In addition, to allow for convergence in TFP, we include the 1988 TFP in the model (*GTFP88* = initial value of productivity growth). As the estimation results will show, perhaps not surprisingly, divergence rather than convergence is found. To ensure reasonable precision of the ρ_1 estimate, near perfect multicollinarity of *pLoan* and other variables should be avoided. It was found that this important variable is not highly correlated with any of the other variables in the model, the largest correlation coefficient being 0.59.

Following the suggestion of a referee, we conducted unit root tests for all the variables in the model. Using the technique developed by Im et al. (2003), the variables of productivity growth, FDI and education are found to be stationary. All others are trend stationary. As a consequence, we added year dummy variables for 1989-2001 to (5). When these year dummies are included, it is not advisable to apply fixed-effect estimation as the large number of dummy variables will not only consume many degrees of freedom, but also lead to severe multicollinearity problem. Therefore, random-effect estimation will be applied to equation (5). In running the regression, we lagged those explanatory variables which we believe are potentially. The estimation results are reported in Table 4.[5]

[5] The referee also suggested a restricted SUR to test the robustness of coefficients among provinces. However, as our data are available only from 1988 to 2001, the results may not reliable due to limiting time period. On the other hand, it is widely accepted that the behavior within a country are less heterogeneous than the cross-countries, therefore our models do not include restricted SUR.

Table 4: Determinants of productivity

	Growth Rate of TFP (GLS with time dummies)									
Explanatory variables	Model 1		Model 2		Model 3		Model 4		Model 5	
TFP1988	0.1373	***	0.1411	***	0.1383	***	0.1024	***	0.1011	***
	(0.0464)		(0.0461)		(0.0458)		(0.0376)		(0.0374)	
Financial deepening	0.0234		0.0102		0.0211	*	0.0233	*	0.0264	***
	(0.0209)		(0.0100)		(0.0132)		(0.0131)		(0.0102)	
Fiscal spending/GDP	0.0247		-0.0892							
	(0.1721)		(0.0687)							
Loan×Fiscal spending	-0.1188				-0.0971		-0.0928		-0.0880	*
	(0.1644)				(0.0656)		(0.0656)		(0.0462)	
FDI/GDP	0.0538		0.0616		0.0549		0.1164	**	0.1321	***
	(0.0685)		(0.0676)		(0.0680)		(0.0512)		(0.0477)	
Trade/GDP	0.0145		0.0157		0.0148					
	(0.0110)		(0.0108)		(0.0108)					
Privatization	0.00005		0.00004		0.00004		0.00013			
	(0.0003)		(0.0003)		(0.0003)		(0.0003)			
Urbanization	0.0142		0.0129		0.0146		0.0181			
	(0.0220)		(0.0219)		(0.0218)		(0.0217)			
Education	-0.0017		-0.0013		-0.0018		-0.0021			
	(0.0038)		(0.0037)		(0.0037)		(0.0037)			

Investment/GDP	-0.0573	***	-0.0584	***	-0.0574	***	-0.0610	***	-0.0660	***
	(0.0148)		(0.0147)		(0.0147)		(0.0145)		(0.0132)	
Constant	0.0589	**	0.0649	*	0.0612	***	0.0631	***	0.0585	***
	(0.0268)		(0.0255)		(0.0220)		(0.0219)		(0.0071)	
Time dummies	Omitted									
Observation	406									
R^2	0.404		0.403		0.404		0.401		0.399	

Notes: Figures in parentheses are standard error. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively. We omit reporting the time dummies due to space constraints. Source: See text.

Under Model 1, we run the regression on all right-hand variables. And we drop insignificant variables in the following models. As Fiscal spending/GDP and Loan×Fiscal spending, which character the intervention of government, are highly correlated (correlation coefficient being 0.85), we use each of them correspondingly in Model 2 and Model 3. The measure of goodness of fit suggests that Loan×Fiscal spending explains more. In Model 3 we use both Trade/GDP and FDI/GDP, while in Model 4 we use FDI/GDP. This is because these two variables are correlated and it is unnecessary to include both in the model. Since FDI is expected to generate stronger positive influence on productivity than trade due to its spillover effects, we will use Model 4 and Model 5 in the following discussions.

First, after controlling for other variables, the depth of financial intermediation exerts significantly positive influence on productivity growth in China during 1987-2001. This is true despite which model is used. This finding lends strong support to the existence of financial intermediation–growth nexus in post reform China. Second, we find that the coefficient for the interactive term between bank loan and fiscal spending is significantly negative in Model 5. Thus, governmental influence on bank lending is detrimental to productivity growth though fiscal expenditure may help improve productivity under a decentralized fiscal system. It is also interestingly to note that the coefficient of investment/GDP is both negative and significant. Such a finding is consistent with Zhang (2003),[6] who argued that the incremental capital output ratio (ICOR) has been rising in China recently as a result of excessive investment in the past decade. This and its consequent build-up of excessive capacity must have contributed to the diminishing marginal returns to investment.

Finally, the policy of opening up as measured by FDI/GDP is found to contribute significantly and positively to productivity growth. This is inline with the observation that FDI inflow in China helps bring in new technology and managerial experiences. Other variables such as privatization of SOEs and urbanization produce insignificant positive impacts on growth of productivity. In our view, privatization and urbanization may help lift the initial level of productivity; they are more of one-shot effects, which may not last for a long time. It is not quite unexpected that education produces insignificant negative impact on growth of productivity as the technology improvement and technology efficiency are mainly induced by openness in recent China.

5 Concluding remarks

Using provincial panel data from China, this paper finds a significant and positive impact of financial deepening on productivity growth in post-reform China. An important implication is that China should strive to further liberalize the financial sector and continue to privatize locally owned state enterprises. Both will be beneficial to economic growth. Though the importance of financial reform has been recognized widely, the banking sector reform in China is slow and incomplete. The same can be said to the restructuring and privatization programs of state-owned enterprises. Government intervention in the allocation of bank credit, directly or indirectly, is rather frequent, especially in inland provinces. This intervention slows down the deepening process of financial development.

6 Zhang (2005) discusses the institutional framework within which excessive investment is made by segmentation of Chinese local economies and by excessive entry of local governments in promoting local economic growth.

Our finding also has implications for tackling regional disparity in China. Since inland provinces have experienced a slower deepening process of financial development and financial deepening is conducive to productivity growth, speeding up financial reforms in the inland areas will help narrow regional inequality in China. In other words, the rising regional disparity in China since the mid 1990s is partly due to the divergent pattern of financial deepening process among provinces, especially between the coastal and inland areas.

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