# Does Financial Reform Promote the Inflow of FDI? Evidence from China's Panel Data

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**Abstract**

This paper empirically tests whether the host country financial reform promotes the inflow of FDI. We test the hypothesis on the panel data of China. First, Granger causality tests (Granger, 1969; Sims, 1972) show that financial deregulation causes FDI and the causality is unidirectional. Second, OLS regressions show that financial deregulation has an insignificant effect (at the 10% level) on inward FDI, after controlling for other factors, and time and province effects.

*Keywords:* Gradual financial deregulation; Inward FDI; Causality; Panel data

*JEL classification:* O11; O16; G28; C23

# 1 Introduction

The theoretical models in Acemoglu (2009, ch. 18) and Barro and Sala-i-Martin (2004, ch. 8) show that the rate of economic growth of backward countries depends on the adoption of new technologies transferred from leading countries. Foreign direct investment (FDI) is considered to be a major channel through which advanced technologies are transferred to developing countries (e.g., Keller and Yeaple, 2003; Markusen and Venables, 1999; Findlay, 1978; Borensztein et al., 1998).[1] Developing countries, however, often have different types of financial distortions and protectionist policies (Easterly, 1993; Borensztein et al., 1998). These would create serious barriers for the inflow of FDI. Would the removing of these distortions facilitate the inflow of FDI? In this paper, we use the Chinese symbiotic financial deregulation and opening-up experience to investigate this question.

The Chinese experience is appealing because the Chinese government has not only put attracting more FDI as a priority on its agenda,[2] but also reformed its unhealthy financial system concurrently since 1978.[3] Moreover, China's gradual approach to reform and opening-up results in substantial time and province variation in both FDI and financial deregulation. Concerning FDI, China has attracted a larger inflow of FDI each year, which is unevenly distributed across provinces. The share of world FDI inflows to East Asia increases from 2% in 1979 to 17% in 1994, which is mainly due to the increasing volumes of FDI inflows to China (UNCTAD, 2008). Figure 1 illustrates some of the substantial provincial variations in our measure of FDI–the nominal FDI to GDP ratios– and in our measure of financial deregulation–detailed below. Figures 1 and 2 further illustrate the substantial time variations in the two variables. Gastanaga et al. (1998) evidence that the results from panel data and those from cross-section data could be quite different. This emphasizes the necessity to control for cross-section characteristics in the empirical analysis. We exploit the time variation to control for unobserved cross-section (i.e., cross-province) effects in our panel data regressions.

[Figures 1 and 2 Here]

[1] Keller and Yeaple's (2003) U.S. evidence shows that FDI raises the productivity of domestic firms more than imports do. In our paper, FDI refers to the inflow of FDI (or inward FDI).

[2] The adoption of advanced technologies from leading countries is emphasized by Deng, the designer of the reform and opening-up strategy and the leader of China after 1978 (see Deng, 1975).

[3] Lardy (1998, ch. 3) and Naughton (1995, ch. 1) discuss China's financial reform in depth.

Our work is close to existing cross-country works that study how institutional reforms of relevant policy changes in the host economy affects FDI inflows (e.g., Gastanaga et al., 1998; Desai et al., 2004). Gastanaga et al. (1998), for example, show that such policy/institutional variables as tariff rates, the degree of openness to international capital flows and exchange rate distortions affect FDI inflows. Desai et al. (2004) evidence that liberalization that removes capital controls increases the inflow of FDI. Comparing to these cross-country works, our cross-province analysis is more appealing because the financial deregulation policies with a single country are more homogenous to one another. This makes it more meaningful to quantify these financial deregulation policies and conduct regressions based on comparable data on financial deregulation. There are works that show China's financial deregulation facilitated the inflow of FDI (e.g., Branstetter and Feenstra, 2002; Head and Ries, 1996). Branstetter and Feenstra (2002) focus on the relationship between trade and FDI, stating that deregulation policies in China promoted the inflow of FDI. We formally test their conjecture. Head and Ries (1996) study the inter-city competition for FDI. In contrast, we explicitly quantify the financial deregulation policies and examine how the quantified deregulation policies affect the inflow of FDI. Last but not least, we use Granger causality tests (Granger, 1969; Sims, 1972) to test whether financial deregulation policies Granger-cause FDI.

First of all, our results show that financial deregulation Granger-causes FDI in China, and the causality is unidirectional. Second, we show that controlling for fixed province effects is vital for the estimated coefficients of financial reform on FDI. Without controlling for fixed province effects, financial deregulation significantly (at the 1% level) increases the inflow of FDI. After further controlling for other factors, the estimated coefficient on financial deregulation is still positive and significant at the 10% level. However, after further controlling for fixed province effects, the estimated coefficient on financial deregulation is negative, which is insignificant at the 10% level regardless of whether we control for other factors or not. The results are robust when we use alternative measures of financial deregulation.

The rest of the paper proceeds as follows. After we briefly discuss the financial deregulation and inward FDI in China, we provide an account of the data used in the empirical analysis in Section 2; Section 3 presents the regression results, and Section 4 concludes.

## 1.1 Foreign direction investment and financial reform in China

Among the works studying FDI in China (e.g., Head and Ries, 1996; Lardy, 1998; Branstetter and Feenstra, 2002), some evidence that deregulation policies in China have promoted the inflow of FDI. For instance, Head and Ries (1996) study how policies favoring particular cities affect the city-level distribution of foreign investment in China. Branstetter and Feenstra (2002) summarize that China's liberalization policies related to FDI have increased the inflow of FDI. A comprehensive description of China's financial reform is beyond the scope of this paper. Here, we briefly list some financial deregulation policies related to FDI (see section 2.3 for sources of the financial deregulation policies). Nevertheless, there are more financial deregulation policies unrelated to FDI.

In 1983, the People's Bank of China announces that foreign financial institutions can apply to set up permanent institutions in Beijing and 'special economic zones' (SEZ). In 1984, the State Council of China (SCC) reduces the tax rates in SEZ and 14 coastal 'Open Door' cities. In 1985, the regulations on foreign banks and sino-foreign joint venture banks in SEZ are announced and implemented to expand international economic and financial cooperation. The aim is to attract foreign investment and technology and promote the economic development of SEZ. The first foreign bank, HSBC Bank (Hongkong and Shanghai Banking Corporation), establishes a branch in Shenzhen city, one of the four SEZ. In 1986, Bank of China sets up four measures to support foreign invested enterprises so as to solve their existing problem of shortage of funds. In particular, Bank of China gives loans to foreign firms to support their development. In 1988, Shanghai sets up foreign exchange market, allowing state-owned enterprises, collective enterprises and foreign invested enterprises to mutually swap foreign exchange. In 1990, the SCC ratifies the Shanghai's administrative solutions on foreign financial institutions, allowing foreign financial institutions to conduct financial business in China, which is unseen since the reform and opening-up in 1979.

From the brief list of the financial deregulation policies related to FDI, we can see the gradual approach to reform. Moreover, we can see that these policies directly reduce tax rates or the financing constraints and costs of FDI. However, as stated above, there are more financial deregulation policies that are unrelated to FDI. In the following, we formally test whether financial deregulation policies (related and unrelated to FDI) together have promoted the inflow of FDI.

# 2 Data

## 2.1 Empirical specification

Before we construct the data, we first present the empirical specification and identify the suitable independent variables. We utilize the following basic formulation to empirically assess the effect of financial deepening on inward FDI:

$$\ln\left(\frac{FDI}{GDP}\right)_{it} = \beta_0 + \beta_1 F\text{-}Reform_{it} + \beta_2(\text{Controls})_{it} + u_i + T_t + \varepsilon_{it} \tag{1}$$

where $\ln\left(\frac{FDI}{GDP}\right)$ is the logarithm of nominal FDI to GDP ratios; F-Reform is the degree of financial deregulation; $u_i$ and $T_t$ stand for fixed province and time effects respectively. (Controls) are the other independent variables that are identified below. The use of FDI to GDP ratios as the measure of FDI is the same as in Gastanaga et al. (1998).

There is no consensus regarding what should be included as control variables. Most of the control variables in cross-country works such as Gastanaga et al. (1998) are not available for the cross province analysis within China. However, we do have a common control variable as in Gastanaga et al. (1998), the growth rate of the provinces. Therefore, the first control variable in our analysis is the growth rate of the provinces.

In Mankiw et al. (1992) and Barro (1991), economic growth is further decided by initial output per worker, human capital investment rate, physical capital investment rate, and government expenditure to GDP ratios. Therefore, we further include these variables as control variables. We further include them to capture their direct effect on inward FDI. That is, they may impact FDI via affecting the growth rate of the host province, but they may have effects on FDI via other mechanisms. For instance, initial real GDP per worker measures the richness of the host province. A province with higher initial real GDP per worker is richer and may have larger market and better infrastructure. These would attract more FDI inflow. As FDI is usually more skill-intensive, more human capital stimulates foreign firms to directly invest in the host province. Domestic physical capital investment rate is included because domestic firms may compete for market and raw labor with foreign firms. Whether domestic investment increases FDI depends on whether they are complements or substitutes. Higher government expenditure to GDP ratio is usually used to measure the tax burden on the economy, which is found to lower economic growth. Therefore, provinces with higher government expenditure to GDP ratio are expected to

be unattractive to inward FDI. We further control for export to GDP ratios, since export and FDI are tightly linked to the degree of opening and other regulation policies in the host provinces.

## 2.2 Measuring FDI

The provincial FDI inflow data and the GDP data are available from China Statistical Yearbook (CSY). The FDI data are in US dollars, so we multiply them by the fixed exchange rate[4] of the Chinese currency (yuan) against the US dollar in each year to get the FDI data in Chinese currency. We then calculate the ratio of FDI over nominal GDP in each year as our measure of FDI, denoted by FDI/GDP.[5] Figures 1 and 2 illustrate its substantial variation across province and time.

## 2.3 Measuring financial reform policies

China adopted the gradual approach to reform its backward financial system in 1978. We locate the financial reform policies from the chapter "Fiscal, Finance, and Insurance" in the book "The Big Economic Events since China's Reform and Opening-up (1978-1998)", edited by the Institute of Economic Research, the China Academy of Social Sciences.[6] Most policies are conducted at the city level; few are at the province level. Following the division by the Chinese Economists Society's international symposium on Chinese financial reform at the University of Southern California in 1997, we divide China's financial deregulation policies into five categories (see Table 1). Since the book only documents financial reform policies for the period 1978-1998, our data sample covers the period 1981-1998.

[Table 1 here]

Then we use the following formula to quantify policies in the five categories into five policy indexes/indicators, using 1992 as an example:

$$Index = \sum_j (\sum_i \frac{Total\ Population\ of\ City\ i\ in\ 1992}{Total\ Population\ of\ the\ Province\ in\ 1992} \cdot I_{ci}^{1992} + I_p^{1992}) \qquad (12)$$

[4] China has adopted the fixed exchange rate regime until year 2005 in which the government allows its currency to appreciate gradually each year.

[5] Qinghai province does not have any FDI for 1981-1986, and the datum from 1987-1992 is used.

[6] The attractiveness of the financial reform policies in the book lies in the provision of authority and uniformity. There are other books documenting the financial reform policies in China, but the main financial reform policies are quite similar across these books.

where $I_{ci}^{1992}$ is an indicator variable that equals one if city $i$ receives a financial reform policy $j$; $I_{p}^{1992}$ is an indicator variable that equals one if a financial reform policy $j$ is conducted in the province. Adding together all policies (the $j^{'}s$) in and before year 1992 for all the cities (the $i^{'}s$) within a province yields its policy index. The data on the cities' population are from the Statistical Yearbook on China's Cities.

Based on the five financial deregulation policy indexes, we build three measures for F-Reform to thoroughly examine the effect of financial deregulation on inward FDI and to check the robustness of our results. The first measure is our main indicator that includes only banking and non-bank sector financial deregulation policies. Given the four indicators (three on banking sector and one on non-bank sector), we add them up to get our first measure for the degree of financial deregulation, denoted by F-Reform. We use this indicator for the following reasons. First, Demirguc-Kunt and Levine (2001) show that there is no evidence that banking sector (and/or non-bank sector) is worse than stock market in promoting growth. Previous literature commonly measures and studies banking sector and stock market separately. Second, for the period 1981-1998, the majority of financial reform policies are in the banking and non-bank sectors. Figures 1 and 2 have illustrated the substantial variation across province and time for our indicator F-Reform.

The second indicator is just the capital market deregulation policies index, denoted by Capital. Our third indicator includes all the financial deregulation policies. That is, we add up all the five indicators, yielding the third indicator, F-Total. We mainly report the results on indicator F-Reform, and the results with the other two indicators are put in robustness check in section 3.3.

## 2.4 Measuring all other variables

Our data sample comprises panel data of 27 provinces and 18 years (1981-1998).[7] Following the standard in the empirical growth literature, we take six-year averages of the panel data to avoid the influence from short-run fluctuations. This yields three sub-periods: 1981-1986, 1987-1992, and 1993-1998. Each province has three data points.

The first control variable is growth, which is the average annual growth of real GDP per worker for each sub-period. Initial real GDP per worker, $ln(\frac{GDP}{L})_{t-1}$, takes the value of the

[7] Out of China's 31 provincial governments, four are municipalities and four are autonomous regions. We delegate the usage 'province' to all. Four provinces are dropped due to unavailability of their data.

beginning year of each sub-period. Human capital investment rate, denoted by $School$, is measured as secondary school enrollment divided by the total number of workers following Mankiw et al. (1992). Secondary school enrollment is the sum of student enrollments for middle schools (grades 7 to 9) and high schools (grades 10 to 12). For labor force growth measure, $ln(n + g + \delta)$, we use 0.08 for $(g + \delta)$ and $n$ is the growth rate of labor force. $Fiscal$ and $Export$ are nominal values of fiscal expenditure and export to nominal GDP ratios respectively. $\frac{I}{Y}$ is the nominal physical capital investment rate, which is to avoid the deflator problem for investment in China (see Young, 2003).[8] The data come from CSY. Table 2 lists the summary statistics of the final data.

[Table 2 here]

# 3 Empirical results

Our purpose is to examine whether financial deregulation promotes inward FDI. To make sure that the direct of causality runs from financial deregulation to FDI, but not vice versa, we first conduct Granger causality tests. If the test results show that financial deregulation precedes inward FDI, then OLS regression is sufficient. Otherwise, we have to deal with the potential endogeneity of financial deregulation.

## 3.1 The exogeneity of financial deregulation policies

In China, many exogenous factors such as politics, culture and politician's preferences determine the provincial distribution of financial deregulation policies. Shirk (2003, p. 129), for example, argues that the Chinese financial liberalization was mainly conducted on a political ground. These show that FDI has not played a role in influencing the financial deregulation process of China.

A more formal way of examining the direction of causality between FDI and financial reform is to apply tests in Granger (1969) and Sims (1972). Let us use F-Reform to denote the measure of financial deregulation policies. Since our panel data have only three periods (each of which is a six-year average), it is impossible to lag the data for too many periods. To avoid this problem, we use year-to-year data. After lagging the variables, we end up with 405 observations. Following the specification in Dawson (2003)

[8] See Perkins and Rawski (2008) for a recent dealing with this issue.

who examines the direct of causality between freedom and growth and that in Blomström et al. (1996), we estimate the following:

$$\begin{aligned} FDI_t &= f\left(FDI_{t-1}, FDI_{t-2}, F\text{-}Reform_{t-1}\right) \\ F\text{-}Reform_t &= f\left(F\text{-}Reform_{t-1}, F\text{-}Reform_{t-2}, FDI_{t-1}\right) \end{aligned}$$

where $FDI_t$ is FDI to GDP ratios at year $t$, and $F\text{-}Reform_{t-1}$ is the average of the quantified financial reform policies during year $(t-1)$. In the early years of reform and opening-up, some provinces have no inward FDI. Therefore, we use FDI to GDP ratios rather the logarithms of the ratios to have as many observations as possible. We interpret financial reform to be Granger-causing FDI when a prediction of FDI on the basis of its past history can be improved by further taking into account past financial reform. The results with year-to-year data with 405 observations, after controlling for fixed time and province effects, are reported below (p-values are in parentheses). One can see that financial reform Granger-causes FDI and the causality is unidirectional.

$$\begin{aligned} FDI_t &= \underset{(0.000)}{0.86}\, FDI_{t-1} - \underset{(0.077)}{0.097} FDI_{t-2} + \underset{(0.029)}{0.160} F\text{-}Reform_{t-1};\ R^2 = 0.90,\ n = 405 \\ F\text{-}Reform_t &= \underset{(0.000)}{0.86}\, F\text{-}Reform_{t-1} - \underset{(0.130)}{0.06}\, F\text{-}Reform_{t-2} + \underset{(0.184)}{0.014} FDI_{t-1};\ R^2 = 0.98,\ n = 405 \end{aligned}$$

## 3.2 OLS results

Since financial deregulation in China Granger-causes or precedes FDI, OLS regression is sufficient (in the absence of reverse causality) to identify the effect of financial deregulation on FDI. The OLS results that only control for fixed time effects are reported in Table 3. The OLS results that control for both time and province fixed effects are reported in Table 4. One can see that the results depend crucially on whether we control for fixed province effects. The simple correlation (that is, without controlling for time and province effects, and other variables) can be seen from figures 1 and 2, which show that provinces receiving more financial deregulation policies also have higher FDI to GDP ratios. However, the partial correlation plot that controls for time and province effects in figure 3 shows that the fitted line actually has a negative slope.

In regression 3.1, we only include financial deregulation (F-Reform) in the regression. One can see that the estimated coefficient on F-Reform is positive, which is signif-

icant at the 1% level. This evidences that, without controlling for fixed province effects (i.e., only controlling for time effects), financial deregulation has a significant effect on ln(FDI/GDP). In regression 3.2, we put growth in the regression. The estimated coefficient on growth is positive and significant at the 1% level. It evidences that higher rates of economic growth bring more inflow of FDI. In regression 3.3, when we put both growth and financial deregulation into the regression, the estimated coefficient on F-Reform remains positive and significant at the 1% level, while that on growth becomes insignificant. In regression 3.4, we further include initial real GDP per worker, human capital (ln(school)), and fiscal expenditure to GDP ratios (ln(fiscal) as control variables. The estimated coefficient on F-Reform remains positive and becomes significant at the 10% level, while that on growth remains insignificant. The estimated coefficient on initial real GDP per worker is positive, meaning richer provinces attract more FDI. However, the estimated coefficient on initial real GDP per worker is not statistically significant (at the 10% level). The estimated coefficient on ln(school) is negative and significant at the 10% level, while that on ln(fiscal) is negative and significant at the 1% level. It means that higher fiscal expenditure to GDP ratios significantly reduce FDI inflows. The results are similar when we further control for other variables in regressions 3.5 and 3.6.

However, when we further control for fixed province effects, the results change dramatically. We repeat all the regressions in Table 3, further controlling for fixed province effects. The corresponding results are reported in Table 4. In regression 4.1, one can see that the estimated coefficient on F-Reform becomes negative, which is insignificant at the 10% level. This evidences that, after controlling for fixed province and time effects, financial deregulation has no significant effect on ln(FDI/GDP). In regression 4.2, the estimated coefficient on growth also becomes insignificant at the 10% level, which evidences that higher rates of economic growth do not bring more inflow of FDI. In regression 4.3, the estimated coefficients on F-Reform and growth are negative and positive respectively, both of which are insignificant at the 10% level. In regressions 4.4, 4.5 and 4.6, when we further include other variables, the estimated coefficient on F-Reform remains negative and insignificant, with similar magnitude. The estimated coefficient on growth remains positive and insignificant, with similar magnitude. The estimated coefficients on initial real GDP per worker, ln(school), labor force growth are insignificantly negative, while those on ln(fiscal) and physical capital investment rate are positive and insignificant.

[Figure 3 Here]

In summary, financial deregulation does not have a significant effect in increasing the inward FDI to GDP ratios in China. The results that show financial deregulation significantly raises inward FDI to GDP ratios in the absence of province effects would be misleading. It may be because the ratios of inward FDI to GDP in China have substantial time and province variations, as in cross-country works (Gastanaga et al., 1998). Therefore, after we further control for fixed province effects, financial deregulation in China has not resulted in higher inward FDI to GDP ratios, contrary to what we may expect.

## 3.3 Robustness checks

To check the robustness of our results, we use different measures of financial reform. The results after controlling for both time and province effects are reported in Table 5. In regression 5.1, we use the capital market reform policy index as the measure of financial deregulation. As in previous literature on the finance-growth nexus (Demirguc-Kunt and Levine, 2001), banking sector is usually studied separately from capital market. Regression 5.1 shows that the estimated coefficient on Capital is negative and insignificant at the 10% level. The results remain similar when we further control for other factors in regression 5.4. Therefore, capital market deregulation policies have no significant effects on inward FDI to GDP ratios.

In regression 5.2, we include both Capital and F-reform in the regressions. The estimated coefficient on Capital becomes positive, which is still insignificant at the 10% level. The estimated coefficient on F-Reform is negative and significant at the 10% level. The F-test on the joint significance of Capital and F-Reform yields a p-value of 0.23, meaning Capital and F-Reform together have no significant effects on FDI. The results are similar after we further control for other variables in regression 5.5, in which the estimated coefficient on F-Reform becomes insignificant at the 10% level.

There may be some subjectiveness involved in dividing the whole package of financial deregulation into banking/nonbank sector deregulation and capital market deregulation. To avoid this, we simply add all the financial deregulation policies together to generate one single index—F-Total. The results with F-Total are reported in regressions 5.3 and 5.6, which show that its estimated coefficient is always insignificant. The results on other variables are similar to those in regression 4.6 in Table 4. Therefore, it does not matter

how we divide and measure financial deregulation, which always has no significant effects on inward FDI to GDP ratios, after controlling for both time and province fixed effects.

# 4 Conclusions

The rate of economic growth of developing countries depends on the diffusion of advanced technologies via FDI from leading countries (Nelson and Phelps, 1966; Acemoglu, 2009, ch. 18; Barro and Sala-i-Martin, 2004, ch. 8). Developing countries, however, often have different types of financial distortions that may create serious barriers for the entry of FDI. The implication is that, eliminating these distortions would facilitate the inflow of FDI. In this paper, we formally test this hypothesis on the panel data of China. Robustness evidence is found that the effect of financial deregulation on inward FDI to GDP ratios is not statistically significant, after controlling for both time and province fixed effects. The results are robust when we use only capital market deregulation policies or both capital market deregulation policies and banking/non-bank deregulation policies.

It is worth noting that, our results do not rule out the possibility that some particular policies such as lowering tax rates and removing capital controls for foreign firms would promote the inflow of FDI (see Branstetter and Feenstra, 2002; Gastanaga et al., 1998; Desai et al., 2004). Instead, our results emphasize that the whole package or process of China's financial deregulation after 1978 is mainly directed to enhancing the efficiency of the financial system by eliminating existing distortions generated in the central-planning regime before 1978. Since China has adopted financial deregulation concurrently with opening borders to foreign investors, our results do not rule out the possibility that financial deregulation may have an interaction with FDI in the process of China's economic development. In light of Acemoglu (2009, ch. 18), financial deregulation could have an interaction effect with FDI in promoting economic growth by enhancing the technological absorptive capability of the host economy (the Chinese provinces). That is, although financial deregulation does not significantly promote the inflow of FDI as found in our paper, it still can make Chinese provinces exploit FDI more efficiently to achieve a faster catch-up with leading economies. In other words, financial deregulation policies may increase the technological absorptive capability of backward economies as conjectured in the technology diffusion model of Acemoglu (2009, ch. 18, p. 614), although they may not increase the available pool of world frontier technologies transferred by FDI.

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Table 1: Domestic financial deregulation policy indicators

| Domestic financial deregulation | Indicators | Description |
|---|---|---|
| Banking Sector | *Bank* | Banking sector general reforms and policies; Banking deregulation policies that might affect sectoral allocation of credit; |
| | *Newbank* | The set-up of specific new banks; |
| | *Resi-bank* | The remaining banking sector policies; |
| Non-bank Sector | *Nonbank* | Non-bank deposit-taking institutions; Insurance market; |
| Capital Market | *Stock* | Capital (bond and stock) market reform policies |

Table 2: Descriptive statistics

| | Mean | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|
| Annual growth (%) | 6.47 | 2.26 | 2.00 | 12.00 |
| ln(FDI/GDP) | −1.31 | 2.40 | −7.86 | 2.72 |
| F-Reform | 1.41 | 2.24 | 0 | 11.49 |
| $\ln(\text{GDP/L})_{t-1}$ | 7.39 | 0.62 | 6.21 | 9.42 |
| ln(School) | 2.25 | 0.24 | 1.76 | 2.84 |
| $\ln(n+g+\delta)$ | 2.32 | 0.14 | 1.93 | 2.61 |
| ln(I/GDP) | 3.67 | 0.22 | 3.14 | 4.32 |
| ln(Fiscal) | 2.51 | 0.38 | 1.68 | 3.48 |
| ln(Export) | 2.02 | 0.90 | −0.11 | 4.49 |

Observations: 81. The panel data comprise 27 provinces and 18 years.
We cut the 18 years into three sub-periods and take six-year averages to avoid the influence from business cycles. Except for Annual growth, F-Reform and $ln(\frac{GDP}{L})_{t-1}$, all other variables are multiplied by 100 and then taken logarithm.

Table 3: Regressions between FDI and financial deregulation

Dependent variable: ln(FDI/GDP), 1981-86, 1987-92, 1993-98

| | Regression number | | | | | |
|---|---|---|---|---|---|---|
| | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 |
| Indep. Var. | Coefficient | | | | | |
| F-Reform | $0.41^{***}$ | | $0.35^{***}$ | $0.24^{*}$ | $0.24^{*}$ | $0.20^{*}$ |
| | (0.07) | | (0.08) | (0.13) | (0.13) | (0.11) |
| growth | | $0.35^{***}$ | 0.14 | 0.05 | 0.11 | 0.02 |
| | | (0.09) | (0.10) | (0.09) | (0.10) | (0.09) |
| $\ln(\text{GDP/L})_{t-1}$ | | | | 0.40 | 0.76 | −0.46 |
| | | | | (0.49) | (0.54) | (0.57) |
| ln(School) | | | | $-1.14^{*}$ | −1.00 | −0.62 |
| | | | | (0.66) | (0.68) | (0.62) |
| ln(Fiscal) | | | | $-1.41^{***}$ | $-1.05^{**}$ | $-0.96^{**}$ |
| | | | | (0.42) | (0.49) | (0.44) |
| $\ln(n+g+\delta)$ | | | | | 1.38 | 0.34 |
| | | | | | (1.74) | (1.60) |
| $\ln(\frac{I}{GDP})$ | | | | | −1.36 | −0.24 |
| | | | | | (1.00) | (0.95) |
| ln(export) | | | | | | $1.03^{***}$ |
| | | | | | | (0.25) |
| Time FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Province FE | NO | NO | NO | NO | NO | NO |
| R-square | 0.70 | 0.64 | 0.71 | 0.77 | 0.78 | 0.82 |
| Observations: | 81 | 81 | 81 | 81 | 81 | 81 |

***Significant at the 0.01 level, ** at the 0.05 level, * at the 0.10 level

Table 4: Regressions between FDI and financial deregulation

Dependent variable: ln(FDI/GDP), 1981-86, 1987-92, 1993-98

| | Regression number | | | | | |
|---|---|---|---|---|---|---|
| | 4.1 | 4.2 | 4.3 | 4.4 | 4.5 | 4.6 |
| Indep. Var. | Coefficient | | | | | |
| F-Reform | −0.12 | | −0.15 | −0.12 | −0.16 | −0.16 |
| | (0.08) | | (0.09) | (0.12) | (0.13) | (0.13) |
| growth | | −0.004 | 0.06 | 0.07 | 0.06 | 0.05 |
| | | (0.07) | (0.08) | (0.09) | (0.10) | (0.10) |
| $\ln(\text{GDP/L})_{t-1}$ | | | | −0.39 | −0.61 | −0.52 |
| | | | | (1.27) | (1.32) | (1.34) |
| ln(School) | | | | −1.11 | −1.27 | −1.25 |
| | | | | (1.11) | (1.21) | (1.22) |
| ln(Fiscal) | | | | 0.23 | 0.10 | 0.29 |
| | | | | (1.14) | (1.17) | (1.20) |
| $\ln(n+g+\delta)$ | | | | | −0.07 | −0.29 |
| | | | | | (1.49) | (1.52) |
| $\ln(\frac{I}{GDP})$ | | | | | 1.46 | 1.01 |
| | | | | | (1.65) | (1.77) |
| ln(export) | | | | | | −0.28 |
| | | | | | | (0.38) |
| Time FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Province FE | Yes | Yes | Yes | Yes | Yes | Yes |
| R-square | 0.94 | 0.93 | 0.94 | 0.94 | 0.94 | 0.94 |
| Observations: | 81 | 81 | 81 | 81 | 81 | 81 |

***Significant at the 0.01 level, ** at the 0.05 level, * at the 0.10 level

Table 5: Robustness checks

Dependent variable: ln(FDI/GDP), 1981-86, 1987-92, 1993-98

| | Regression number | | | | | |
|---|---|---|---|---|---|---|
| Independent Var. | 5.1 | 5.2 | 5.3 | 5.4 | 5.5 | 5.6 |
| Capital | −0.07 | 0.18 | | −0.03 | 0.20 | |
| | (0.13) | (0.20) | | (0.18) | (0.23) | |
| F-Reform | | −0.21* | | | −0.25 | |
| | | (0.12) | | | (0.17) | |
| F-Total | | | −0.06 | | | −0.07 |
| | | | (0.05) | | | (0.08) |
| growth | | | | 0.01 | 0.07 | 0.03 |
| | | | | (0.10) | (0.10) | (0.10) |
| $\ln(\text{GDP/L})_{t-1}$ | | | | −0.92 | −0.06 | −0.80 |
| | | | | (1.34) | (1.44) | (1.32) |
| ln(School) | | | | −1.13 | −1.43 | −1.15 |
| | | | | (1.24) | (1.24) | (1.22) |
| ln(Fiscal) | | | | −0.20 | 0.12 | 0.15 |
| | | | | (1.21) | (1.22) | (1.22) |
| $\ln(n+g+\delta)$ | | | | −0.22 | −0.36 | −0.24 |
| | | | | (1.55) | (1.53) | (1.54) |
| $\ln(\frac{\text{I}}{\text{GDP}})$ | | | | 0.39 | 0.85 | 0.81 |
| | | | | (1.78) | (1.79) | (1.80) |
| ln(export) | | | | −0.31 | −0.26 | −0.30 |
| | | | | (0.39) | (0.39) | (0.38) |
| F-test on Capital and F-Reform | | F(2,50)=1.54 | | | F(2,43)=1.10 | |
| (p-value) | | (0.23) | | | (0.34) | |
| Time FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Province FE | Yes | Yes | Yes | Yes | Yes | Yes |
| R-square | 0.93 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Observations: | 81 | 81 | 81 | 81 | 81 | 81 |

***Significant at the 0.01 level, ** at the 0.05 level, * at the 0.10 level

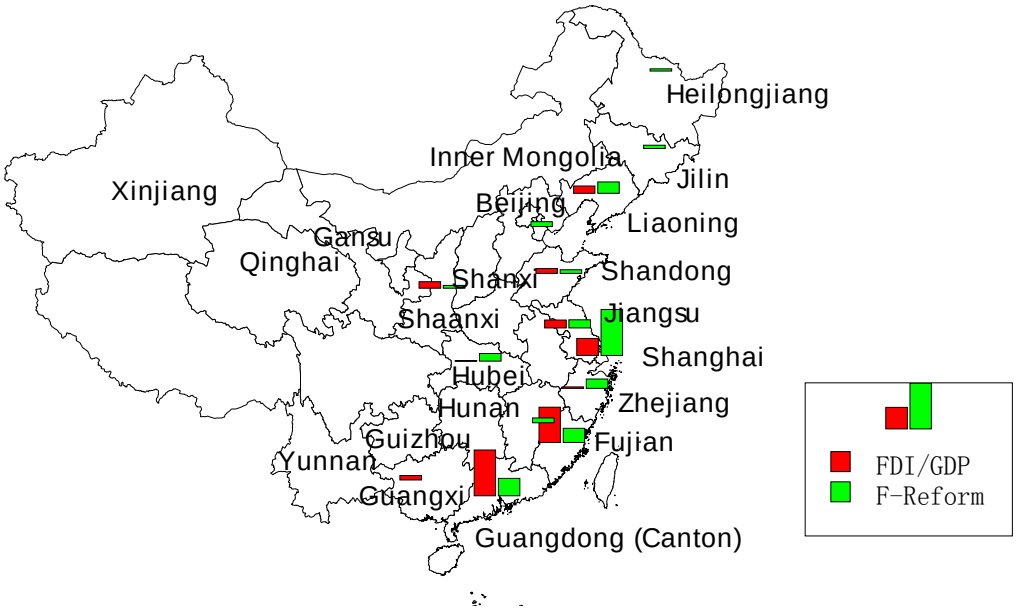


Figure 1. Provincial Variation in FDI and Financial Deregulation (1987-1992)

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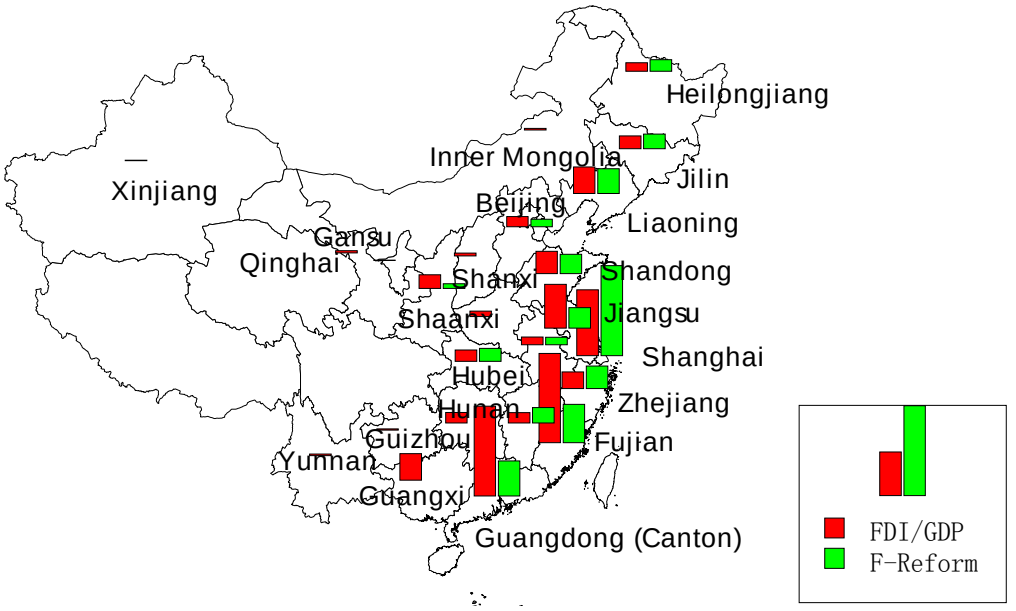


Figure 2. Provincial Variation in FDI and Financial Deregulation (1993-1998)

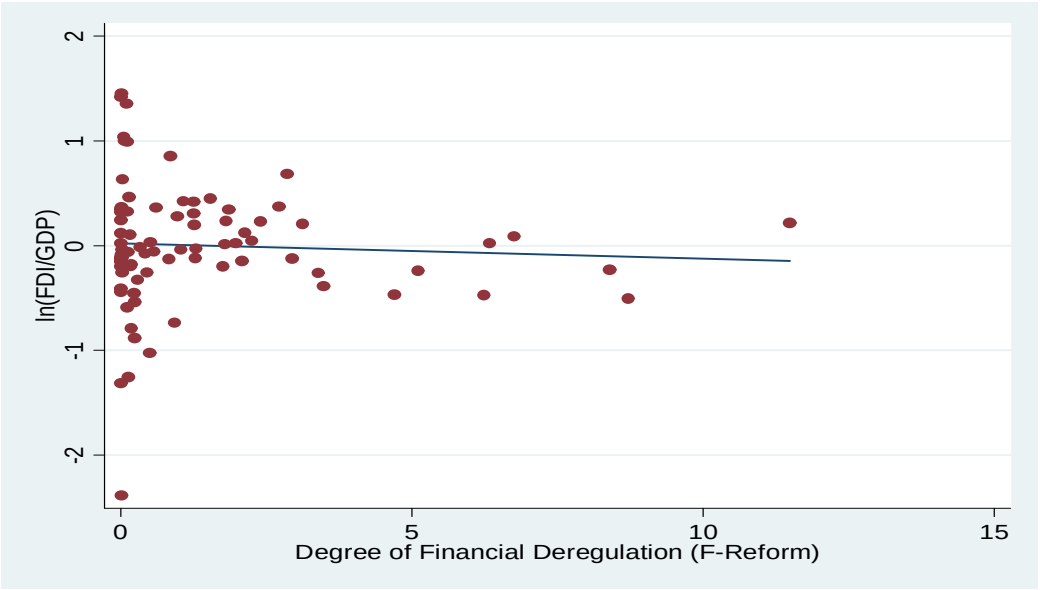


Figure 3. Partial Regression Plot between FDI and Financial Deregulation, Controlling for Time and Province Effects.