

The Impact of China's Economic Growth and External Debt on China's Foreign Direct Investment (1982-2010)

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Abstract. China is one of the most dynamic economy in the world. China's average economic growth rate since 1980 is higher than many countries average economic growth rate due to the China's export based regime. In this article, the impact of China's economic growth and external debt on China's FDI rate measured. It has been found that China's external debts have significant influence on FDI rates in SPSS analysis within the periods of 1982 –2010. Moreover, China's economic growth rates have significant impact on China's FDI rates in the same period. Although both China's external debt and China's economic growth has significant impact on China's FDI, China's external debt forecasting rate is higher than China's economic growth forecasting rate for calculation of China's FDI rates. In addition, according to Granger causality analysis, there is a causality between China's economic growth and China's FDI rates.

Keywords: “Granger Analysis”, “China's FDI Rate”, “China's external debt”, “China's economic growth”

1. Introduction

With the collapse of USSR in 1991 and Berlin Wall, trade liberalizations have been increasing remarkably in the world. Since 1991, international business activities have been more active; some of the Asian countries such as China has been developing fast economically through FDI. Foreign Direct Investment is an investment to gain lasting interest in enterprises operating outside of the investor's country. As a key element in international economic integration, FDI establishes direct, stable and long-lasting boundaries between economies. FDI not only allows the host economy promote its products in international markets more extensively but also stands as an additional source of funding for investment. Besides, it encourages the transfer of technology and know-how between countries which could turn out to be an important tool for enterprise development under appropriate policy implementations (OECD, 2010). Over the first part of the last century, primarily on the Japanese experience of modern industrialization, Prof. Dr. Kanane Akamatsu developed what is known today as the “flying geese theory” in which he splitted countries into different levels of industrialization and economic development into three categories: late developing countries, industrially advanced countries and newly rising countries. The theory indicates that late developing countries can sustain on the technology capital and products of industrially advanced countries and newly rising countries. This catching up process often embarks with the late developing countries first having imports from industrially advanced countries, then moving forward to domestic production, and finally turning around to export to industrially advanced countries. A flying geese pattern is apparent here in the sense that Japan is leading both in moving into and out of the period of high GDP share of industrial output followed by second wave, Korea, Singapore and Taiwan and then more recently by China (Huang, 2004). Since China's economy is based on exports, external debt financing is crucial for China's investment. China has surplus dollar reserves and lends other countries such as USA due to the export success. After China adopted import substitution policy and embarked market economy principles, China's total external debt has been increasing. Since China's savings rate are more than China's investment rates, China's debt is outnumbered by export revenue and China Treasury has surplus. In this article, the impact of China's external debt and China's economic growth on China's FDI rates between the periods of 1982-2010 will be scrutinized.

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2. Literature Review

According to Tuan, Linda, Zhao (2009), China has become the top FDI destination among all developing countries and remained host to the world's largest share of FDI receipts since its accession to the WTO in 2001.

The increased role of FDI in developing and emerging economies has raised expectations about the potential contribution of FDI to the country's development. In order to benefit from the inward FDI, governments of host countries use many tools such as financial incentives, duty drawbacks and grants due to the value FDI would create. As a consequence of these efforts, in 2008 developing countries account for almost one-third of the global stock of inward FDI, compared to slightly more than one fifth in 1990 (OECD, 2008).

Numerous studies have examined the role played by FDI in stimulating innovation and leading to increased trade (Bayoumi and Lipworth, 1997; Balasubramanyam, 1996). The results indicate a stronger impact of FDI by trade orientation namely the export oriented FDI and import-substituting FDI (Ahmed, 2008).

Theoretically, it is not adequate to fund the domestic investment through external credit borrowing, nevertheless, if such external credits are used for production facilities effectively, it will contribute and facilitate import reduction. Besides, if foreign debt could be financed by foreign exchange, the accumulation of foreign debt would never happen. Actually, developing countries in far Asia, borrowed excessively for their economies development endeavours. However, the debt export ratio on average decreased for Asian economies and when the outstanding debt reduces the export ratio rises significantly, even more than the velocity of debt accumulation. This type of speedy increase in aggregate exports involves enhancing the export of manufactured commodities. Such correlation appear to demonstrate a vicious cycle operating in fast developing countries, particularly in Asian countries where the domestic investment has risen more intensively through external credits, which boost the production and export volume. Thus, the obtained adequate foreign exchange earnings cover the accumulated debt service. Generally, in less developed countries external debts were not effectively implemented to generate production plan and export capacity (Hayami, 1997).

The important elucidation for the components of China's capital inflows is that it is the significant conclusion of a pragmatic strategy which has been adapted over time through the legislation and lapse. The mould in both 1980 and 1990 could well have reflected a composition of inaction and chance, through the post-1997 mould demonstrating the anxiety of the Asian countries financial crisis. The initial reform tried to import just the type of external capital which was essential in order to contribute convey technical and marketing know-how; by this way, the policy enunciated was "Welcome to FDI, but no thank you to foreign debt and portfolio flows." Export performance and foreign exchange balance requirements were initially imposed even on foreign investors and their firms. The restrictions on Foreign Direct Investment were relaxed step by step, together with certain supernational treatment incentives for foreign-owned enterprises and joint ventures. Laterly, the government promoted to relax the constraint on external debt by firms and implemented some necessary structural reform to improve the set of Chinese stocks listed on B-share market and the Hong Kong and U.S. stock exchanges. In the 1995, the government notified that it intended to use capital account convertibility by 2000 (Wei, 2000).

Sun (2011) finds that there is a first order co-integrated relationship between LGDP and LFDI. Two of them have a long term stable equilibrium relationship. Sun (2011) also indicates that according to Granger causality test, China's economic growth would inevitably lead the rise of FDI and the error correction term has a stronger negative adjustment effect on the long term equilibrium relationship between China's economic growth and China's FDI.

3. Methodology

Research Question: Do China's Economic growth rates and total external debts have significant influence on China's Foreign direct investment rates (1982-2010) ?

In order to answer the research question, regression analysis has to be done. SPSS programme mainly was used and E-views programme was used as an additional source. Regression analysis and Granger causality analysis was implemented.

H1: China's economic growth has significant impact on China's FDI within the periods of 1982-2010.

$$\text{LN}(\text{FOREIGN DIRECT INVESTMENT})_t = \beta_0 + \beta_1 \text{LN}(\text{GDP})_t + u_t$$

H2: China's total external debt has significant impact on China's FDI within the periods of 1982-2010.

$$\text{LN}(\text{FOREIGN DIRECT INVESTMENT})_t = \beta_0 + \beta_1 \text{LN}(\text{EXTERNAL DEBT})_t + u_t$$

First of all, in both experiments ANOVA p value is 0.0. That means both regression analysis can be done. There is no autocorrelation and error terms were randomly distributed. Since H1's p value is 0.000; H1 hypothesis will be accepted which means China's economic growth can explain the change of China's FDI with %37.2 forecasting rate within the periods of 1982-2010.

Since H2's p value is 0.00; H2 hypothesis will be accepted which means China's external debt can explain the change of China's FDI with %95.7 forecasting rate within the periods of 1982-2010.

Table 1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,889	4,431		1,329	,195
	GDP	,648	,162	,610	4,000	,000

a. Dependent Variable: FDI

Table 2

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-14,852	1,562		-9,507	,000
	EXTNDBT	1,521	,062	,978	24,623	,000

a. Dependent Variable: FDI

Table 3

Null Hypothesis:	Obs	F-Statistic	Probability
Foreign direct investment does not Granger Cause economic growth	26	1.96447	0.16516
Economic growth does not Granger Cause foreign direct investment		3.96556	0.03459

According to Granger causality analysis, when lag number is 2 China's economic growth does Granger cause foreign direct investment in China which means China's economic growth rates lead China to take more foreign direct investment. It can be argued that since China adopted import substitution policy and has higher growth rates with state export based policies, China offered more investment opportunities for foreign direct investors. The more China has sustainable economic growth rates, the more offshore jobs attracted to China.

4. Discussion and Conclusion

China has been developing fast economically since 1980. After leaving import substitution and adopting market economy, China's economic growth embarked to increase and sometimes diminished but in general China's economic growth increased in the long run. Moreover, one can argue that China's external debt should be problematic for China's FDI and high external debts can be the reason for debt crisis and lead less foreign direct investment. But it is not case for China. Because China's export rate is very high and China uses external debt mainly for economic development purposes. Since China's export rate is more than its debts and consumption, China has surplus budget and lends to USA Treasury. It can be indicated that since China extensively uses external debt for secondary industry export based economic development purposes, China has higher efficiency on debt usage and converging that debt into surplus.

Research result supports Sun's (2011) findings. Sun indicates that there is a significant relationship between China's economic growth and China's FDI which means both of the parameters have a long term stable equilibrium relationship.

Research result is also consistent with Sun's (2011) applied Granger methodology. Sun (2011) indicates that there is a causality between China's economic growth and China's FDI.

Research result is consistent with Hayami's (1997) finding. Hayami (1997) indicates that theoretically, it is not adequate to fund the domestic investment through external credit borrowing, nevertheless, if such external credits are used for production facilities effectively, it will contribute and facilitate import reduction. Since China's main target is to facilitate import reduction, China Treasury can have more surplus and China can have more economic growth. When China's economic growth increases in sustainable way, China can be more suitable country for Foreign Direct Investment within a given market economy regime.

That article research results are as follows: China's economic growth rates and China's total external debts have significant impact on China's FDI rates separately within the periods of 1982-2010. In order to calculate China's future FDI rates, China's external debt forecasting rate is higher than China's economic growth forecasting rate.

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7. Appendix

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,610 ^a	,372	,349	1,46558

a. Predictors: (Constant), GDP

b. Dependent Variable: FDI

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,978 ^a	,957	,956	,38188

a. Predictors: (Constant), EXTNDEBT

b. Dependent Variable: FDI