Research on Trade, FDI and Stabilizing Effect of Economic Growth during Financial Crisis in China

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ABSTRACT

Financial crisis have led to sharp fluctuations of China's foreign trade and foreign direct investment (FDI), which in no doubt exert a profound influence on the stabilizing effect of China's economic growth. As trade and FDI are the primary impetuses of China's economic growth, will this kind of growth effect fall dramatically during financial crisis? Utilizing data on China's 36 industrial sectors, this paper conducts panel data regressions in terms of two stages - periods before and after financial crisis, and in terms of classification on the different degree of revealed comparative advantage(RCA). The result shows that financial crisis doesn't weaken the economic growth effect of trade and FDI; instead, it strengthen the high efficiency of trade and FDI firms and the crowding out effect on other firms; In the group with higher RCA, the direct economic promotion of trade and FDI is stronger in post-crisis period than that in pre-crisis period, while in the group with lower RCA, the result is totally reversed. It demonstrates that financial crisis strengthens the efficiency advantage and resource reallocation effect of trade and FDI. From this point, the steady growth of trade and FDI is more important than enlarging domestic demand and investment to the stabilizing effect of economic growth.

Introduction

The world economy has been subjected to a great shock due to the global financial crisis brought by the US subprime crisis in August, 2007. According to statistics from IMF, global economy growth reached a peak in 2007 with an average growth rate of 5.2%, while the growth rate decreased to 3.8% in 2008, even worse in 2009 with a negative growth rate of 0.6%, the first negative growth since 1980. The financial crisis was transmitted to China through many channels, such as international financial transactions, international investment and international trade, which imposed a profound influence on China's macro-economy, financial market and foreign trade. As the crisis deepened in 2008 and 2009, China's economic growth descended obviously. China's economy growth rate was 9% in 2008, putting an end of double-digit growth for a decade. And it went down further in 2009 with an average growth rate of 8.7%. At the same time, China's foreign trade suffered even more severe shock. China's foreign trade growth rate was 17.2% in 2008, decreased by 8.5% compared with that in 2007, while it even hit the ground in 2009 with a huge negative growth rate of 16%. China's foreign direct investment (FDI) suffered to fall likewise, with inward FDI dropping from CNY 641.69 billion in 2008 to CNY 615.02 billion in 2009, a decrease of 4.34%. China's economy growth depends on trade and FDI to a certain degree in its long process of development. For instance, the growth rate of China's import, export and FDI was 36.04%, 46.01% and 2.80% respectively in 2007. Did high degree of dependence of China's trade and FDI lead to excess capacity and efficiency distortion? Are there any changes on the growth effect of trade and FDI between pre-crisis period and post-crisis period? This paper focuses on the stabilizing effect of economic growth in the promotion of trade and FDI during the global financial crisis. Based on the Feder (1982) extended model, this paper adopts data from 36 industries in China during a period of 2001 to 2010, and utilizes panel data regression to perform a comparison analysis of stabilizing effect between pre-crisis period and post-crisis period to reveal how foreign trade and FDI impact stabilizing effect of economic growth during the global financial crisis.

Literature Review

There are a plenty of literatures that study how international trade and FDI promote economic growth and technological progress, but most of them only focus on single internationalization growth effect. Few researches have comprehensively studied the relations between integration of internationalization growth effect and financial crisis. Therefore, the results are quite inconsistent. The relevant literature review could be divided into three respects: integration research of trade and FDI growth effect, firm-level productivity efficiency and financial crisis.

Firstly, researches on the multiple combinations of trade and FDI promoting economic growth have emerged recently. Blind, Jungmittag (2004) and Hui-lin Lin、Eric S. Lin (2010) analyze technology innovation with the four internationalization patterns: import, export, FDI and OFDI, to find the effect was positive. Lee (2006) studied the technology spillovers through FDI, OFDI, import of intermediate products, verifying the spillover effect of these patterns. Liu and Buck (2007) make a comparison of the effect of technology progress through channels of import, export and FDI. Through the way of import and FDI, Keller and Yeaple (2007) estimate the technology spillovers on American manufacturing industry from 1987 to1996. Chinese scholars, Huang Xianhai (2005) analyze china's technology spillovers through the way of import, export and FDI. Wang Ying and Liu Sifeng (2008) make an empirical analysis on the channels of the four international technology

spillovers. They find that technology spillovers through FDI and export are significant sources of TFP growth. Kong Zanling and Zhang Bisong (2006) conclude that there exist a long-term equilibrium between international trade, FDI and economic growth. Yao Limin, Chen Chao, Zhao Jianhua (2011) do empirical research showing that there exists a U-shaped relationship between Zhejiang manufacturing industry growth and the dependence of import and FDI, while an inverted U-shaped relationship between Zhejiang manufacturing industry growth and export dependence.

Secondly, there are many literatures concentrate on trade and FDI growth effect in the perspective of firm-level productivity and efficiency. Based on the hypothesis of firm heterogeneity, the new-new trade theory focuses on the relation of trade and firm productivity efficiency. Scholars such as Bernard and Jensen (1995), Clerides, Lach and Tybout (1998), Bernard and Jensen (1999), Delgado (2002), Baldwin and Gu (2003) do their own researches on the relation of trade, and firm productivity efficiency in different country samples. However, the results are quite similar. Those studies have demonstrated that only a few number of firms engaging in exporting, but most of them own lager size and higher productivity efficiency. Melitz (2003) introduces the model of monopolistic competition into the research of firm heterogeneity to explain the difference of trade performance among firms. Bernard, Eaton, Jensen and Kortum (2003) explain the relation of trade and firm productivity with the Bertrand competition model. Result shows that international trade will induce firms with higher productivity to export. However, firms with lower productivity will give up exporting and engage in domestic market. In this way, resources will move from low productivity firms to the higher ones, to optimize resource allocation. Other literatures study the relation of firm productivity and the choices of internationalization patterns. Head and Ries (2003) use disparity of productivity to explain why some firms only provide domestic market, while others offer to export or even provide outward FDI. Helpman (2004) finds the most efficient firms will choose FDI to get access to international market, the second best firms will choose to export, remaining the inefficient ones stay in domestic market. Kimura (2006), Raff and Ryan (2006) rank the Japanese firm samples according to the degree of firm productivity, and they find that industries with highest productivity also possess the biggest share of FDI.

Thirdly, some researches consider the relations of financial crisis and trade, FDI growth effect. In the study of relationship between financial crisis and economic growth, most literature usually use international trade as a media to explain how financial crisis affect economic growth through transmission of international trade and international investment. Eichengreen and Rose (1999), Glick and Rose (1999) think the transmission of financial crisis more relies on international trade than macro-economic factors. Forbes (2002) uses firm-level information to measure the importance of trade in the international transmission of financial crisis. Results show that companies that had sales exposure to the crisis country or that competed in the same industry as the crisis country had significantly lower stock returns during these two crises. Park (2009) studies how export demand shocks associated with the Asian financial crisis affected Chinese exporters. They find that firms whose export destinations experience greater currency depreciation have slower export growth, and that export growth leads to increases firm productivity and other firm performance measures. Chinese scholars such as Li Jun and Wang Li (2008) sum up four main

trade transmission channels of financial crisis: demand transmission, exchange rate transmission, price transmission and trade policy transmission. Li Zengguang (2009) concludes that financial crisis in 2008 spreads to China through four effects: price effect, income effect, policy effect and expectation effect. Zhang Hongyan (2009) thinks China's special growth pattern is inclined to suffer from external economic crises. The two most important shocks come from external demand and internal labor cost.

The above literatures study the relations of trade, FDI and economic growth in three different aspects: integration research of trade and FDI growth effect, firm-level productivity efficiency and financial crisis. However, In the study of relationship between financial crisis and economic growth, most literature usually use international trade as a media to explain how financial crisis affect economic growth through transmission of international trade and international investment. Rarely seen literatures integrate trade, FDI, economic growth and financial crisis into a comprehensive research. This paper adopts data from 36 industries in China during a period of 2001 to 2010, and utilizes panel data regression to perform a comparison analysis of stabilizing effect between pre-crisis era and post-crisis era, and try to reveal the different growth effect of trade and FDI among different period of time, in order to provide theoretic and empirical foundation for trade and FDI policy adjustments.

A Comparison of Trade and FDI Development in Pre-crisis period and in Post-crisis period

China's GDP growth has increased steadily since the start of the 21st century. The real GDP rises from CNY 10745.24 billion in 2001 to CNY 29371.53 billion in 2011. The annual growth rate of real GDP goes steadily up, starting from 7.6% in 2001, peaking at 12.44% in 2007. Even during financial crisis, China's GDP growth rate stayed above 8%. On the contrary, the growth of trade and FDI has gone through dramatic fluctuation during the same period of time. The growth of import and export is quite similar. China's import and export increased rapidly during 2001-2007. The highest growth rate of import was 28.56% in 2003, while highest growth rate of export reached up to 26.10% in 2004, almost tripling its GDP growth. Suffered from financial crisis, china's trade growth rate descended dramatically in 2008. The growth rate of import and export decreased to 7.83% and 6.80% respectively in 2008. As the crisis deteriorated in 2009, the growth of import and export hit the ground at -15.95% and -22.39%, respectively. After that it recovered to positive growth as a rapid speed. At the same time, China's FDI underwent some fluctuations as well. The growth rate of FDI was positive during 2001-2007, except 2005. Compared with trade, the growth of FDI during financial crisis showed some kind of hysteresis. FDI growth rate reached up to 11.40% in 2008 and it went down sharply in 2009, at the bottom of -4.34%, then it ascended to positive growth from 2010. The Figure 1 shows the changes of growth rate of GDP, import, export, FDI from 2001 to 2010.

After making a comparison of trade and FDI development in pre-crisis era and in post-crisis era, we find that the growth rates of four invariables during 2001-2007 are higher than those in post-crisis era. Statistic data shows the average growth of GDP, import, export and FDI were 9.73%, 19.19%, 17.47% and 7.02%, respectively during 2001-2007, while the same index were 8.78%, 5.32%, 8.93%, and 6.40%, respectively during 2008-2011. Especially in 2009 when the crisis deepened, the growth rate of trade and FDI underwent fluctuation

dramatically. Take export as an example, in pre-crisis era, the highest growth rate of export was 26.10%, and the lowest growth rate was 6.31%. However, in post-crisis era, he highest growth rate of export 23.39%, and the lowest growth rate was -15.95%. The situation was quite similar in the growth of import and FDI. The table 1 shows the average growth rate, the highest and lowest growth rate of the four invariables in pre-crisis period and in post-crisis period.
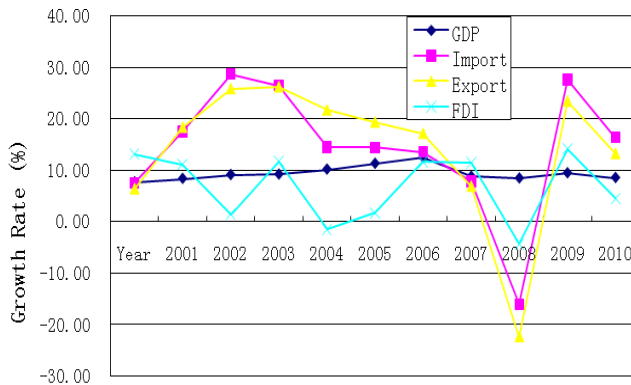

Figure 1: The Growth Rate of GDP, Import, Export and FDI

Data Source: China Statistical Yearbook from 2001 to 2010

The development of trade and FDI suffered huge shock during the financial crisis, while GDP grew in a moderate steady way owing to china's stimulus policy. Will the inadequate external demand brought by the fluctuation of trade and FDI exert negative impact on the economic growth? We will perform an empirical analysis on the research of trade and FDI growth effect in two stage of time (2001-2007 and 2008-2010) in the next section.

Model Specifications and Data Explanation

Model Specifications

This paper extends the Feder(1982) model by adding FDI sector into the model. Therefore, three sectors are included in the extended Feder model: sector of export (X), sector of non-export (N) and sector of FDI (W). Three inputs are considered: physical capital (I), import of capital (M) and labor (L). The model could be expressed as follows after a series of deductions.

$$\frac{dY_{it}}{Y_{it}} = \alpha_1 \frac{I_{it}}{Y_{it}} + \alpha_2 \frac{L_{it}}{Y_{it}} \frac{dL_{it}}{L_{it}} + \alpha_3 \frac{M_{it}}{Y_{it}} \frac{dM_{it}}{M_{it}} + \alpha_4 \frac{X_{it}}{Y_{it}} \frac{dX_{it}}{X_{it}} + \alpha_5 \frac{N_{it}}{Y_{it}} \frac{dX_{it}}{X_{it}}$$
$$+ \alpha_6 \frac{W_{it}}{Y_{it}} \frac{dW_{it}}{W_{it}} + \alpha_7 \frac{N_{it}}{Y_{it}} \frac{dW_{it}}{W_{it}} + \alpha_8 \frac{X_{it}}{Y_{it}} \frac{dW_{it}}{W_{it}}$$

Y_{it} refers to the gross industrial output in industry i at the time of t; I_{it} refers to the amount of domestic investment in industry i at the time of t; L_{it} refers to the input of labor in industry i at the time of t; N_{it} refers to the output of non-export sector in industry i at the time of t; M_{it} refers to the value of capital import in industry i at the time of t; X_{it} refers to the value of export in industry i at the time of t; W_{it} refer to the amount of GDI in industry i at the time of t.

Each coefficient has its own economic meanings. α_1 is the rate of investment contribution; α_2 is the rate of labor contribution; α_3 is the rate of export contribution; The export contribution coefficients include α_4 and α_5, which refer to

contribution from the high efficiency of export sector and contribution from the spillover effect of export sector, respectively; The FDI contribution coefficients include α_6, α_7 and α_8, which mean contributions from the high efficiency of FDI sector, contribution from the spillover effect of FDI to domestic non-export sector and contribution from the spillover effect of FDI to domestic export sector.

Data Explanation

The data available mainly comes from China Industry Economy Statistical Yearbook from 2001 to 2010. For inadequate of data resource, we eliminate some of industries, such as other minerals mining and processing, logging and transport of timber and bamboo, The waste of resources and waste materials recycling industry, electric power and heating power production and supply. 36 industries are chosen in this research. Y is the gross industrial output for each industry in each year; I is represented by increments value of investment, obtained from fixed assets-net value; L refers to the number of employees for each industries in each year; X is represented by the value of export for each industry in each year. As the data of FDI for every industry is unavailable, we use the total value of paid-up capital from overseas and paid-up capital from Taiwan, Hong Kong and Macao for replacement. Import data is unavailable in the China Industry Economy Statistical Yearbook, either. We obtain the 3-digit code import data from the database of UN Comtrade in SITC Rev3 version, and classify the data according to the category of China's industries. In addition, the data for output of domestic non-export sector can't be obtained directly. Here we consider it in that way: the output of domestic non-export sector = the gross output of domestic sector - the output of domestic export sector = (the gross output - the output of FDI sector) - (the total value of Export - the value of export in FDI sector). Considering in an overall perspective, we assume that the output of export sector equals to the value of export, ignoring the differences in firm-level aspect.

Estimation Result and Interpretation

The Overall Regression Analysis of Feder Model

In order to study the different growth effects of trade and FDI in pre-crisis period and in post-crisis period, this paper divides the time of 2001-2010 into two stages at the demarcation point of 2008. The period of 2001-2007 is considered as a time when trade and FDI grew rapidly, while the period of 2008-2010 is considered as a time when financial crisis occurred and imposed an influence on China's economy. Based on the above division, this paper performs panel data regressions on both stages. The result of regressions is shown in table 2 below.

The result shows import and export, FDI have direct positive effects on economic growth in both stages, but the degree of trade and FDI contribution to economic growth is higher during 2008-2010 than that during 2001-2007. It indicates that financial crisis doesn't weaken the economic growth effect of trade and FDI; instead, it strengthens the high efficiency of trade and FDI. It implies that the non-opening sectors suffered more seriously than the opening sectors during financial crisis, thus further enlarging the disparity of efficiency between the both sectors.

Another important character is that the spillovers effect of export and FDI to domestic non-export sector is worse off during 2008-2010 compared with those during 2001-2007. The export spillover was positive during the period of 2001-2007, with a significant coefficient of 0.0325, while it turned to

negative but insignificant during 2008-2010. The spillover effect of FDI to domestic export sector was negative in both stages of time, because of the direct competition between them. However, the degree of this crowding out effect was much higher (with a significant coefficient of -3.9228) during 2008-2010 than the former time. All of these demonstrate that trade and FDI imposed a huge crowding out effect in post-crisis period.

In conclusion, the development of trade and FDI exert different contributions to economic growth between different stages of time. From 2001 to 2007, the rapid growth of trade and FDI not only promoted economic growth with their own high efficiency, but boost up the development of domestic non-export sector. However, from 2008 to 2010, financial crisis led to the enlargement of efficiency between the opening sector and the non-opening sector. Besides, the opening sector crowded out the domestic export sector more seriously during financial crisis. In overall aspect, trade and FDI are conducive to stabilize economic growth during financial crisis owning to the advantages of their own high efficiency

The Analysis of Feder Model Regression in RCA Index Classification

China's export is the typical representative of internationalization patterns, which is highly related to import and FDI. Therefore, this paper divides the 36 industries into two groups according to the Revealed Comparative Advantage. By this means, we explore the different growth effects of trade and FDI based on the different degree of RCA Index during both stage of time.

The revealed comparative advantage (RCA) is an index used in international economics for calculating the relative advantage or disadvantage of a certain country in a certain class of goods or services as evidenced by trade flows. It is based on the Ricardian comparative advantage concept. RCA= $(X_i/X_t)/(W_i/W_t)$, where X_i refers to the value of export in commodity i for a nation; X_t refers to the total value of export of this nation; W_i is the value of world export in commodity i; W_t is the total value of world's export. That is, the RCA is equal to the proportion of the country's exports that are of the class under consideration (X_i/X_t) divided by the proportion of world exports that are of that class (W_i/W_t). A comparative advantage is "revealed" if RCA>1. If RCA is less than unity, the country is said to have a comparative disadvantage in the commodity or industry.

In order to estimate the RCA Index in 36 industries, we choose a typical 3-digit code of trade commodity in SITC Rev3 version to represent each industry. The data of trade in 3-digit code comes from the database of UN Comtrade. With the data of import and export during 2001-2010, we divide the 36 industries into two groups according to RCA at the demarcation point of RCA=1. Industries with RCA>1 are industries with advantage, while industries with RCA<1 are industries with disadvantage. We perform regressions for both of the industries with RCA>1 and RCA>1 in pre-crisis era and post-crisis era respectively to test the different growth effects of trade and FDI in different degree of industry advantages. The result is shown in Table 3.

The result shows there is a significant difference on the growth effect of trade and FDI according to the degree of industry advantages in two stages of time. For industries with comparative disadvantages, the direct contributions of import to economic growth is larger than export and FDI during 2001-2007, and than that during 2008-2010. As shown in table 3, the coefficients of import, export and FDI to economic growth are

0.5345, 1.0019, and 1.6926, respectively in pre-crisis period, while the same coefficients for import, export and FDI are 0.4976, 0.0332 and 1.2121, respectively. It indicates that industries with comparative disadvantages are inclined to be vulnerable to the shock of financial crisis. Thus, trade and FDI in those industries are invalid to stabilize economic growth during financial crisis. For industries with comparative advantages, the situation is totally reversed.

For industries with comparative advantages, the direct contributions of import, export and FDI to economic growth is larger during 2008-2010 than that during 2001-2007. The coefficients of import, export and FDI to economic growth are 0.1052, 0.2676, and 0.7679, respectively in pre-crisis period, while the same coefficients for import, export and FDI are 0.1500 (insignificant), 0.3895, and2.2533, respectively. It demonstrates that industries with comparative advantages are more invulnerable to the shock of financial crisis than industries with comparative disadvantages. Thus, trade and FDI in industries with comparative advantages are conducive to stabilize economic growth during financial crisis. In conclusion, only in industries with comparative advantages, financial crisis strengthens its economic growth effect of trade and FDI because of their high efficiency, which is in accord with the conclusion in the regression of table 2.

In addition, differences exist in the spillover effect between industries with comparative disadvantages and industries with comparative advantages. For industries with comparative disadvantages, the spillover effect of export to non-export sector is negative but insignificant; while for industries with comparative advantages, the spillover effect of export is positive and significant with the coefficient of 0.0283 in pre-crisis and 0.0618 in post-crisis. Besides, the crowding out effect of FDI to domestic export sector is more obvious in industries with comparative advantage, and it gets worse during financial crisis. As table 3 shows that for industries with RCA>1, the coefficient of FDI spillover to domestic export sector is -1.095 but insignificant during 2001-2010; while the coefficient during 2008-2010 is -2.1684. The main reason is that the direct competition of export between FDI sector and domestic export sector gets intense during financial crisis. On the other hand, because of the non-competition relations between FDI sector and domestic non-export sector, the spillover effect of FDI to domestic non-export sector is positive for both sorts of industries.

Conclusions

This paper studies the relations of trade, FDI and the stabilization effect of economic growth. Firstly, we divide the time of 2001-2010 into two stages at the demarcation point of 2008 for regression estimation, in order to study the different growth effects of trade and FDI in pre-crisis period and in post-crisis period. Then we explore the different growth effects of trade and FDI based on the different degree of RCA Index during both stage of time. The results are shown as follows.

(1) Import and export, FDI have direct positive effects on economic growth in both stages, but the degree of trade and FDI contribution to economic growth is higher during 2008-2010 than that during 2001-2007. It indicates that financial crisis doesn't weaken the economic growth effect of trade and FDI; instead, it strengthens the high efficiency of trade and FDI. The gaps of efficiency enlarge between the opening sectors and non-opening sectors, resulting in more direct effects of export and FDI on economic growth and a huge crowding out effect of FDI sector to the domestic export sector during financial crisis.

Table 1. A Comparison of Growth Rate of GDP, Import, Export and FDI

Time	Growth Rate	GDP	Import	Export	FDI
	Average	9.73	17.47	19.19	7.02
2001-2007	Highest	12.44	28.56	26.10	13.13
	Lowest	7.67	7.54	6.31	-1.55
	Average	8.78	8.93	5.23	6.40
2008-2011	Highest	9.42	27.54	23.39	14.08
	Lowest	8.42	-15.95	-22.39	-4.34

Data Source: Author calculated according data from China Statistical Yearbook from 2001 to 2010

Table 2. The Result of Regressions in Pre-crisis Period and in Post-crisis Period

Invariables and Coefficients		2001-2007	2008-2010	Comparison
Investment (I)	coefficient	0.1526^{*}	-0.1139^{***}	Positive to negative
	S.E.	0.0866	0.4119	
Labor (L)	coefficient	0.4643^{**}	1.1158^{***}	Ascending
	S.E.	0.1637	0.1505	
Import (M)	coefficient	0.1900^{***}	0.3771^{***}	Ascending
	S.E.	0.0516	0.0632	
Export Efficient (X)	coefficient	0.1772^{**}	1.2126^{***}	Ascending
	S.E.	0.2553	0.4642	
Export spillover to Non-export Sector (NX)	coefficient	0.0325^{**}	-0.0051	Positive to insignificant
	S.E.	0.0167	0.0045	
FDI Efficient (W)	coefficient	1.2487^{***}	2.0049^{**}	Ascending
	S.E.	0.2415	0.4172	
FDI spillover to domestic Non-export Sector (NW)	coefficient	0.0544^{*}	0.1721^{***}	Ascending
	S.E.	0.0287	0.0485	
FDI Spillover to Domestic Export Sector (XW)	coefficient	-0.4514	-3.9228^{***}	Increasing crowd-out
	S.E.	0.5175	0.9491	
R-square		0.5977	0.8762	
F-stat		5.942	10.5333	
DW-stat		2.1925	2.2373	

Note: *, **, *** indicate that coefficient have passed the level of significance test respectively, by 1%, 5%, 10%

Table 3. The Result of Regressions in RCA Index Classification

Invariables and Coefficients		Industries with RCA<1		Industries with RCA>1	
		2001-2007	2008-2010	2001-2007	2008-2010
Investment (I)	coefficient	0.5558	0.3206^{***}	0.3511	1.3482
	S.E.	0.1134	0.4427	0.3401	0.7019^{*}
Labor (L)	coefficient	0.2750	1.7061^{**}	0.1722	0.0617
	S.E.	0.2420	0.6939	0.1805	0.4162
Import (M)	coefficient	0.5345^{***}	0.4976^{***}	0.1052^{*}	0.1500
	S.E.	0.0595	0.0755	0.0684	0.1464
Export Efficient (X)	coefficient	1.0019^{**}	0.0332^{*}	0.2676^{**}	0.3895^{**}
	S.E.	0.4400	0.8733	0.2153	0.3915
Export spillover to Non-export Sector (NX)	coefficient	-0.0027	-0.0068	0.0283^{**}	0.0619^{**}
	S.E.	0.0037	0.0044	0.0195	0.0250
FDI Efficient (W)	coefficient	1.6926^{***}	1.2121^{***}	0.7879^{**}	2.2533^{**}
	S.E.	0.2937	0.4569	0.6654^{**}	1.8174
FDI spillover to domestic Non-export Sector (NW)	coefficient	0.0513	0.1055^{**}	0.7416^{***}	0.7051^{**}
	S.E.	0.0353	0.0495	0.1132	0.2452
FDI Spillover to Domestic Export Sector (XW)	coefficient	-2.1556^{**}	-0.8770	-1.0915	-2.1684^{*}
	S.E.	0.8633	2.4394	0.8869	2.4445
R-square		0.7866	0.9132	0.9090	0.9531
F-stat		13.3143	13.5831	27.3464	17.1209
DW-stat		2.6384	3.2501	2.0602	2.0906

Note: *, **, *** indicate that coefficient have passed the level of significance test respectively, by 1%, 5%, 10%

(2) For industries with comparative disadvantages, the direct contributions of import, export and FDI to economic growth is larger during 2001-2007 than that during 2008-2010. It indicates that industries with comparative disadvantages are inclined to be vulnerable to the shock of financial crisis. Thus, trade and FDI in those industries are invalid to stabilize economic growth during financial crisis.

(3) For industries with comparative advantages, the situation is totally reversed. For industries with comparative advantages, the direct contributions of import, export and FDI to economic growth is larger during 2008-2010 than that during 2001-2007. It demonstrates that industries with comparative advantages are more invulnerable to the shock of financial crisis than industries with comparative disadvantages. Thus, trade and FDI in industries with comparative advantages are conducive to stabilize economic growth during financial crisis.

In conclusion, financial crisis strengthens the efficiency advantage and resource reallocation effect of trade and FDI enterprises. From this point of view, the steady growth of trade and FDI is considerably more important than enlarging domestic demand and investment to the stabilizing effect of economic growth, it is more important to encourage export and FDI policies than import restriction to stabilize economic growth during world economic crises.

Acknowledgment

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