

Empirical study on the impact of regional trade agreements on strengthening China's FDI

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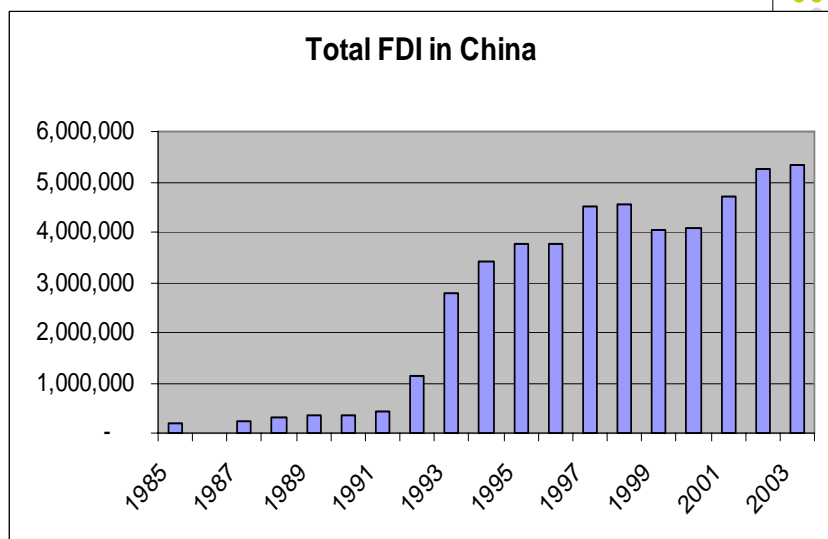
1.Introduction



- Important economic development factor
- FDI has increased within regions, especially in EU and NAFTA
- Study on the impact of regional trade agreements on countries from EU and NAFTA, few on China

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China's FDI development



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Research question



Under the current regional trade agreements what is the impact of RTAs on changes of foreign direct investment in China?

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2-1 RTA as a determinant of FDI



- RTA can indirectly affects FDI flows through trade liberalisation process; and directly affects FDI flows through investment liberalisation
- Trade liberalisation: form a free trade area and an enlarged regional market to attract more FDI; exports preference to FDI by cutting down external trade barriers

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2-2 RTA as a determinant of FDI



- FDI restriction relief: industry level – MNCs would not re-invest if they possess ownership or internalization advantage; country level – MNCs would re-invest FDI upon better location advantage

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2-3 Economic determinants of FDI



- Political factors – stable political environment
- Economic factors
ownership-location-internal advantages
framework (OLI)

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3-1 Variables



- FDI: dependent variable
- GDP: control host country's market size, positive
- GDP growth rate: measure market growth rate, positive
- Population: measure absolute country size, negative-self sufficient investment; positive-more product consumption
- Gross fixed capital formation: investment in machinery and equipment, residential construction and transport infrastructure, positive

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3-2 Variables



- Distance: negative- headquarters encounter large operating costs in host countries; positive- decrease trade costs
- Labor cost: FDI prefers lower wages, negative
- Capital cost: higher interest country attracts capitals borrowed from lower interest countries, positive
- Exports: more exports, more FDI, positive
- Tariff rate: higher tariff rate induces FDI instead of exports, positive – decrease costs to enter a foreign market; However, vertical FDI negatively related with tariff rate, pursue a low tariff rate to import intermediate goods for further production and exports

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3-3 Variables

- Openness: measure the degree of general trade restrictions of host countries, positive, or negative
- RTA variables: EU, CUSFTA, ASEAN and CER, negative; APEC, positive
- Country dummies: positive, specific country has preference for investing in China
- Year dummies: in period analysis

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3-4 Research model

$$\begin{aligned} \ln FDI_{CHN_{it}} = & \alpha + \beta_1 \ln GDP_{CHN_t} + \beta_2 GDPG_{CHN_t} + \beta_3 \ln POP_{CHN_t} \\ & + \beta_4 \ln GROSS_{CHN_t} + \beta_5 \ln DIST_{CHN-i} + \beta_6 WAGE_{CHN_t} \\ & + \beta_7 \ln INTEREST_{CHN_t} + \beta_8 \ln EXPORT_{(i-CHN)_t} + \beta_9 \ln TARIFF_{CHN_t} \\ & + \beta_{10} \ln OPENNESS_{CHN_t} + \beta_{11} EU_{it} + \beta_{12} CUSFTA_{it} + \beta_{13} ASEAN_{it} \\ & + \beta_{14} CER_{it} + \beta_{15} APEC_{(i-CHN)_t} + \beta_{16} APEC_{it} + \sum_{i=17}^{32} COUNTRY_i + \mu_t \end{aligned}$$

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4-1 Economic and RTA variables regression results



Variable	Regression 1		Regression 2		Regression 3		Regression 4	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
Intercept	251.8153	1.4599	—	—	269.5052	1.6169	281.8636**	2.3430
LN GDP	19.4412**	2.2835	20.9269***	3.5505	23.40251***	2.7534	23.2769***	3.8317
GDP growth	0.1001**	2.4426	0.1043***	3.67	0.1084**	2.2937	0.1043***	3.0659
LN Population	-57.7021*	-1.7356	-63.6760***	-2.7673	-63.7480**	-1.9788	-67.5860***	-2.9383
LN Gross fixed capital formation	-8.0598*	-1.938	-8.0204***	-2.7788	-10.2906**	-2.4293	-9.4165***	-3.0963
LN Distance	-0.2722**	-2.3087	0.634	0	-0.1627	-0.6907	1.0267	0.3827
Wage	0.0911***	2.6672	0.0916***	3.8622	0.1033***	3.0549	0.0994***	4.0978
LN Export	1.0864***	19.2982	0.4404***	2.7604	0.8906***	10.9362	0.4074**	2.5096
LN Interest	2.2777***	3.3198	2.2907***	4.8226	2.5505***	3.7111	2.4783***	5.0450
LN Tariff	-1.2999**	-2.0208	-1.1943***	-2.6685	-1.3522**	-2.1734	-1.2322***	-2.7565
LN Openness	-3.6602***	-3.163	-3.4119***	-4.2332	-3.8303***	-3.3963	-3.5633***	-4.3814
EU	—	—	—	—	-0.9023*	-1.8694	-3.0534	-0.5154
CUSFTA	—	—	—	—	-0.2218	-0.4326	-0.7879*	-1.9033
ASEAN	—	—	—	—	-0.8054**	-2.2700	-1.9591	-0.5653
CER	—	—	—	—	-1.4663***	-2.8082	-5.2201	-0.7602
APECCHN	—	—	—	—	-0.6108	-1.5046	-0.1764	-0.5967
APEC	—	—	—	—	-0.0943	-0.2046	-0.1400	-0.4211
R-squared	0.7965		0.9084		0.8160		0.9104	
Adjusted R-squared	0.7885		0.8988		0.8040		0.9002	
F-statistic	99.0399		262.1802		68.4411		88.8382	
Probability (F-statistic)	0		0		0		0	13

4-2 Fixed effects and country effects



Fixed effects

Fixed Effects	Coefficient of Regression 2
CANADA	268.9937
USA	271.0773
FRANCE	269.4463
GERMANY	269.5761
NETHERLANDS	269.2897
UK	270.2941
AUSTRALIA	268.9958
NEW ZEALAND	267.1114
JAPAN	271.9258
KOREA	271.2866
HONG KONG	273.3542
INDONESIA	267.9651
MALAYSIA	268.5982
PHILIPPINES	269.8613
SINGAPORE	271.0989
THAILAND	269.8634

Country effect

Variable	Coefficient of Regression 4
CANADA	-2.612
USA	-0.503
FRANCE	0.1819
GERMANY	0.3853
UK	1.0137***
AUSTRALIA	2.0250**
JAPAN	0.3693
HONG KONG	1.8122
INDONESIA	-2.0716
MALAYSIA	-1.3671
SINGAPORE	1.1384

4-3 Period estimation results



Variable	Period 1985-1988		Period 1989-1991		Period 1992-2002	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
LN GDP	-3.0137	-0.1258	-8.8150	-0.4253	-7.8139	-0.0973
GDP growth	0.0136	0.0168	-0.0985	-0.5104	-0.3430	-0.4384
LN Population	—	—	—	—	128.1392	0.1447
LN Gross fixed capital formation	3.9394	0.1537	12.7891	0.5520	-3.0953	-0.6153
LN Distance	-0.8656	-1.3755	-4.1481**	-2.6383	0.3133	0.9142
Wage	—	—	—	—	—	—
LN Export	1.1311***	3.5327	1.0327***	4.2539	0.7600***	9.3195
LN Interest	—	—	—	—	2.2369	0.4265
LN Tariff	—	—	—	—	-1.2413	-0.3905
LN Openness	—	—	—	—	-0.3510	-0.0672
EU	-0.6719	-0.7667	4.4052	1.5878	-764.4860	-0.1474
CUSFTA	—	—	5.8062*	2.0248	-0.9736	-1.3044
ASEAN	-1.0893	-0.8829	0.9212	0.5530	-1.0315**	-2.1451
CER	-1.8108	-1.6313	5.3843*	1.8254	-2.3907***	-3.0409
APECCHN	—	—	-0.3513	-0.2563	-763.4950	-0.1472
APEC	—	—	0.2615	0.2861	—	—
Year 1992	—	—	—	—	0.7915	0.2005
Year 1993	—	—	—	—	1.2077	0.3805
Year 1994	—	—	—	—	0.7911	0.6136
R-squared	0.6818	—	0.7585	—	0.7861	—
Adjusted R-squared	0.6200	—	0.6853	—	0.7645	—
F-statistic	11.0218	—	10.3630	—	36.5103	—
Probability (F-statistic)	0	—	0	—	0	—

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4-4 Major regression results



- Exports: positive impact on FDI stock changes in China
- Distance: negatively impacted China's FDI stocks
- China's market share, market growth, domestic capital investment, capital cost, labor cost, free trade approach – significantly impact China's FDI changes

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4-5 Major regression results



- Regional economic integration – has an effect on FDI changes of China
- EU & CUSFTA: decrease investment in China
- ASEAN: decrease investment in China
- CER: decrease investment in China
- APEC: no impact on China's FDI changes,

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5. Concluding remarks



- MNCs consider total economic factors to decide their investment in China, including China's large market size, higher market growth rate, lower labor cost, and China's continuing economic and trade reform.
- The inception and implementation of regional trade agreements have impacted China's FDI development negatively.
- In the future regional economic cooperation is a major trade strategy for China in order to diminish negative impact that current RTAs have on China.

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Thank you!