

<ARTNeT Conference on Empirical and Policy Issues on Integration in Asia and the Pacific>

The Relationship between Trade and Investment: A Case Study of Korea and India

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Introduction

Economic Relationship between India and Korea: Progress and Challenges

- Economic relationship between India and Korea improved
 - ✓ Trade: USD 1.6 billion in 2001 → USD 20.5 billion in 2011
 - ✓ FDI from Korea to India: USD 1 billion from FY 2001 to FY 2012
 - ✓ Korea-India CEPA (Comprehensive Economic Partnership Agreement) effective in 2010
- Some problems and challenges in Korea-India trade and CEPA
 - ✓ Higher CEPA preferential rates than the MFN rate on a few items
 - ✓ Lower concessional rate compared to other FTAs
 - ✓ Trade imbalances: High trade deficits against Korea
 - ✓ Limited trading items and intra-industry trade

Introduction

Economic Relationship between India and Korea: Progress and Challenges

- Efforts to address challenges made, but not significant results yet
 - ✓ Upgrading CEPA preferential rates: Korea-India Joint Committee set up in 2011 - Agreed
 - ✓ Raising trade target: Korea-India Summit in March 2012 – USD 40 billion by 2015
- Harmonization and combination between trade and investment required!
 - ✓ Facilitating investment → Increasing trading items and intra-industry trade → Improving Trade imbalance

Introduction

Causality Relationship between trade and investment in the case of India and Korea

- Causality linkages between trade and investment
 - ✓ Understanding the dynamic of economic relationship or economic integration between countries (Lee and Song, 2007)
 - ✓ Identifying the progress and challenges in Korea-India economic cooperation
- Contribution of this study
 - ✓ Desirable policies to improve economic relationship between India and Korea suggested
 - ✓ Few studies on causality relationship between trade and India in the case of India

Literature Review

Relationship between trade and FDI

- Trade and FDI: Substitute or Complement
(depending on assumptions, and types of trade and FDI)
 - ✓ Under the Heckscher-Ohlin assumption - Substitute (Mundell, 1957)
 - ✓ Export and FDI can be alternative ways to enter foreign markets. – Substitute (Caves, 1957)
 - ✓ Market seeking FDI and trade - Substitute, Efficiency seeking FDI and trade - Complementary (Gray, 1998)

Literature Review

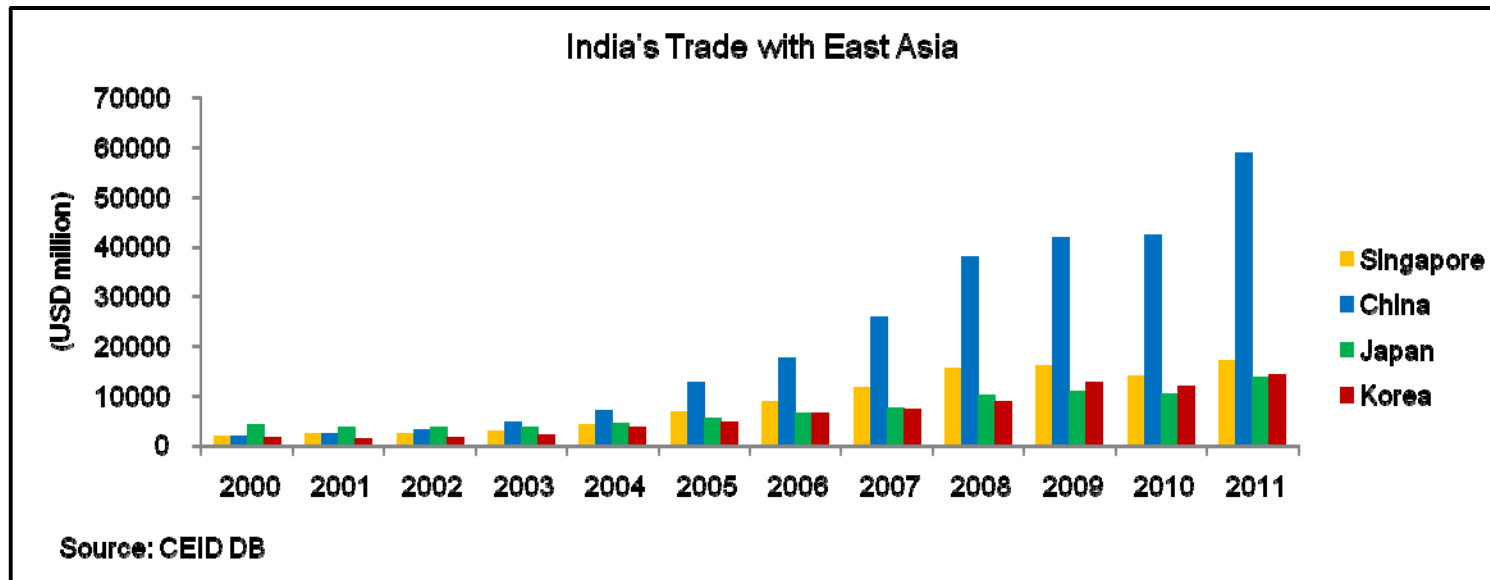
Causality Relationship between trade and FDI

- FDI → The pattern of production changing to manufacturing sector → Facilitating trade or export
 - ✓ Hsiao and Hsiao (2006): 8 East and Southeast Asian countries from 1986 to 2004
 - ✓ Min (2005): A Case Study of Malaysia
- The growth of Imports → The growth in inward FDI from home countries
→ The growth of exports from China to the home country → The growth of imports
 - ✓ Liu et al. (2001): A Case Study of China
 - ✓ Internationalization Process of MNCs (Su and Poisson, 2008)
- Bi-directional relationship between export and FDI, and between import and FDI
 - ✓ Pacheco-Lopez (2005): A Case Study of Mexico
- Few studies on the case of India
 - ✓ Jayachandran and Seilan (2010) – Not a significant result between trade and FDI

Trend of Trade and Investment

Trade

- Trade Volume between India and East Asia
 - ✓ India and Korea: USD 1.5 billion in 2000 to USD 15 billion in 2011
 - ✓ India and China: USD 1.8 billion in 2000 to USD 75.6 billion in 2011
 - ✓ India and Singapore: USD 1.8 billion in 2000 to USD 25.4 billion in 2011
 - ✓ India and Japan: USD 3.6 billion in 2000 to USD 18.4 billion in 2011

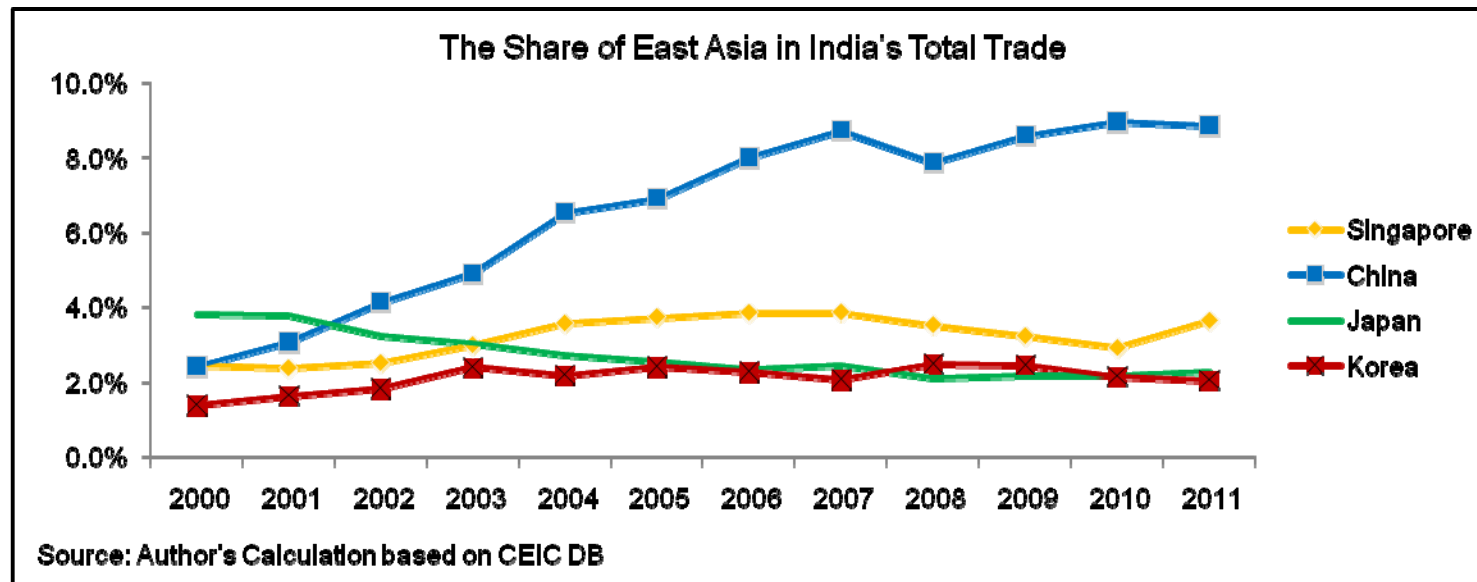


Trend of Trade and Investment

Trade

- The Share of East Asia in India's Total Trade

- ✓ Korea: 1.9% in 2000 to 2.1% in 2011
- ✓ China: 2.4% in 2000 to 8.9% in 2011
- ✓ Singapore: 2.5% in 2000 to 3.7% in 2011
- ✓ Japan: 3.8% in 2000 to 2.3% in 2011

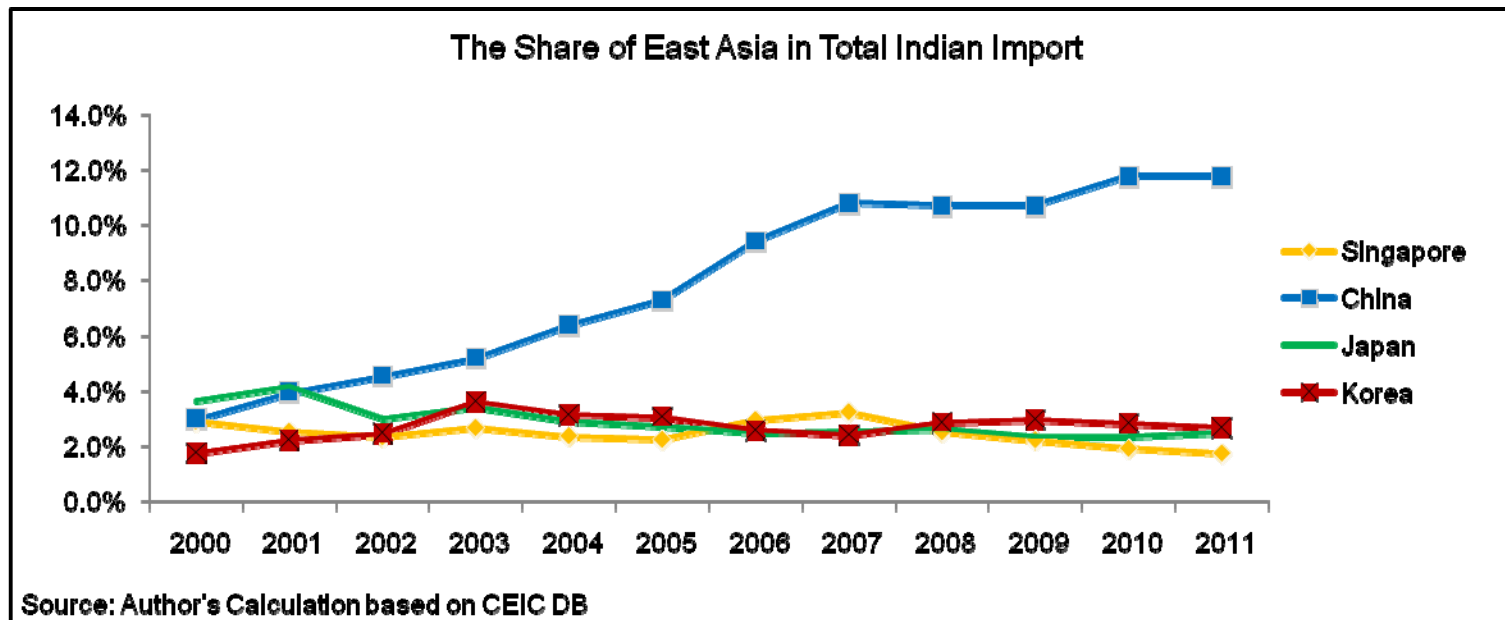


Trend of Trade and Investment

Trade

- The Share of East Asia in India's Total Import

- ✓ Korea: 1.8% in 2000 to 2.7% in 2011
- ✓ China: 3% in 2000 to 12% in 2011
- ✓ Singapore: 3.0% in 2000 to 1.8% in 2011
- ✓ Japan: 3.6% in 2000 to 2.7% in 2011

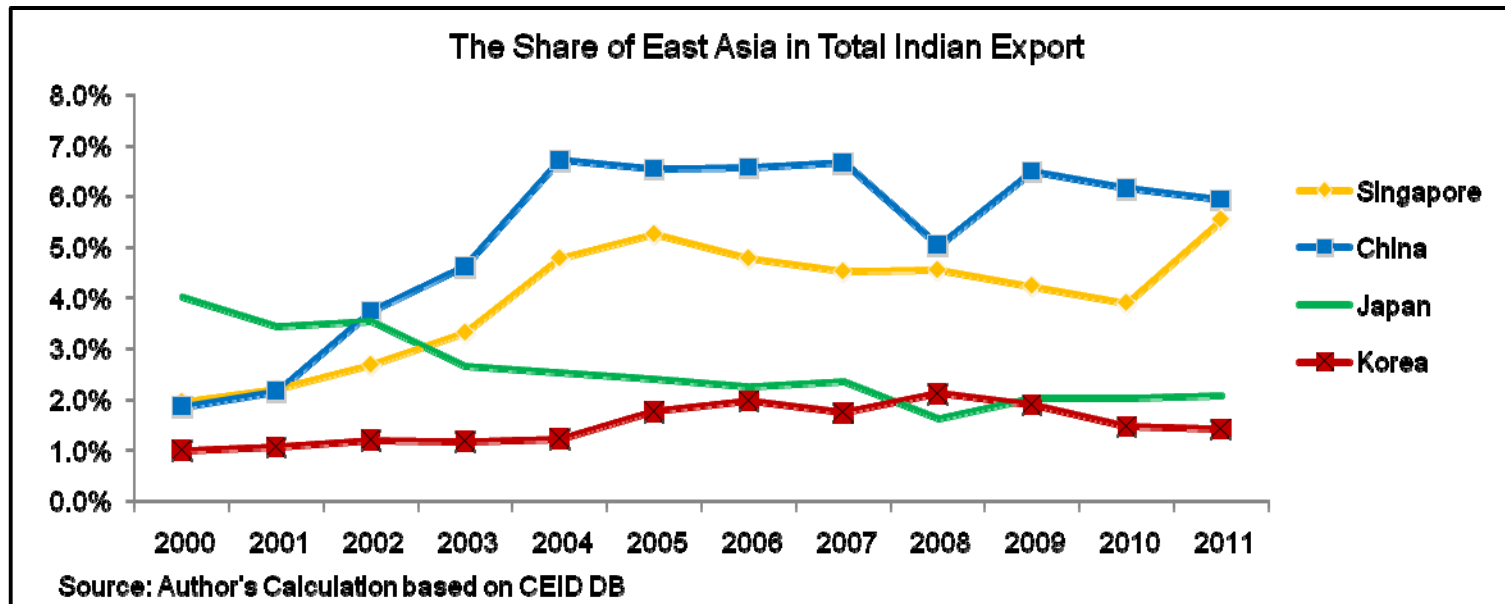


Trend of Trade and Investment

Trade

- The Share of East Asia in India's Total Export

- ✓ Korea: 1.0% in 2000 to 1.4% in 2011
- ✓ China: 1.9% in 2000 to 6.0% in 2011
- ✓ Singapore: 4.0% in 2000 to 2.1% in 2011
- ✓ Japan: 3.8% in 2000 to 2.3% in 2011



Trend of Trade and Investment

Investment

- Cumulative Country-wise FDI Inflows from FY2001 to FY2012
 - ✓ Korea: USD 1 billion (14th)
 - ✓ Singapore: USD 17 billion (2nd)
 - ✓ Japan: USD 12 billion (4th)
 - ✓ China: USD 126 million (34th)

Cumulative Country-wise FDI Inflows From FY 2001 to FY 2012

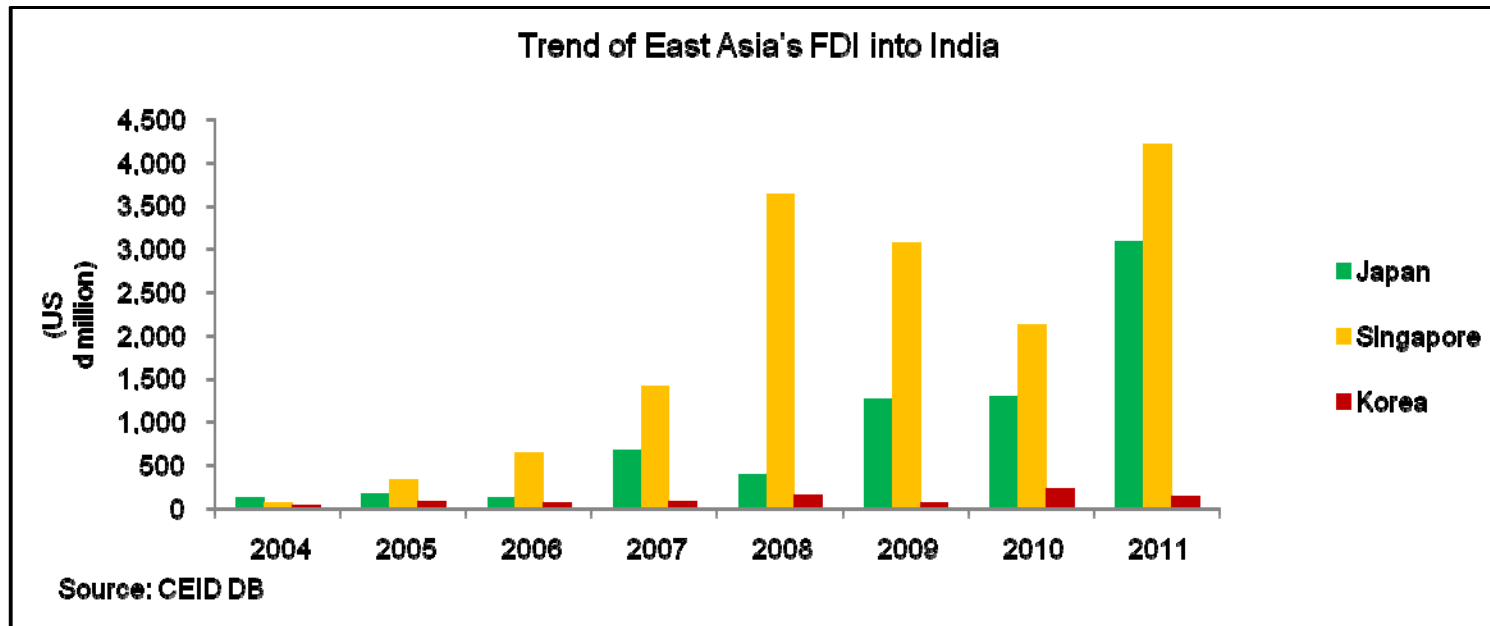
Rank	Country	FDI Inflows (Rs. Crore)	FDI Inflows (US\$ million)	Share in Total FDI Inflows
1	Mauritius	289,470.99	64,168.95	37.7
2	Singapore	77,587.82	17,152.51	10.1
3	United Kingdom	74,661.24	15,896.06	9.3
4	Japan	57,851.03	12,313.08	7.2
5	USA	47,889.21	10,563.87	6.20
14	South Korea	4,601.5	1,007.6	0.6
15	Hong Kong	4,407.51	961.99	0.6
34	China	615.96	126.45	0.1

Source: Ministry of Commerce and Industry, Government of India

Trend of Trade and Investment

Investment

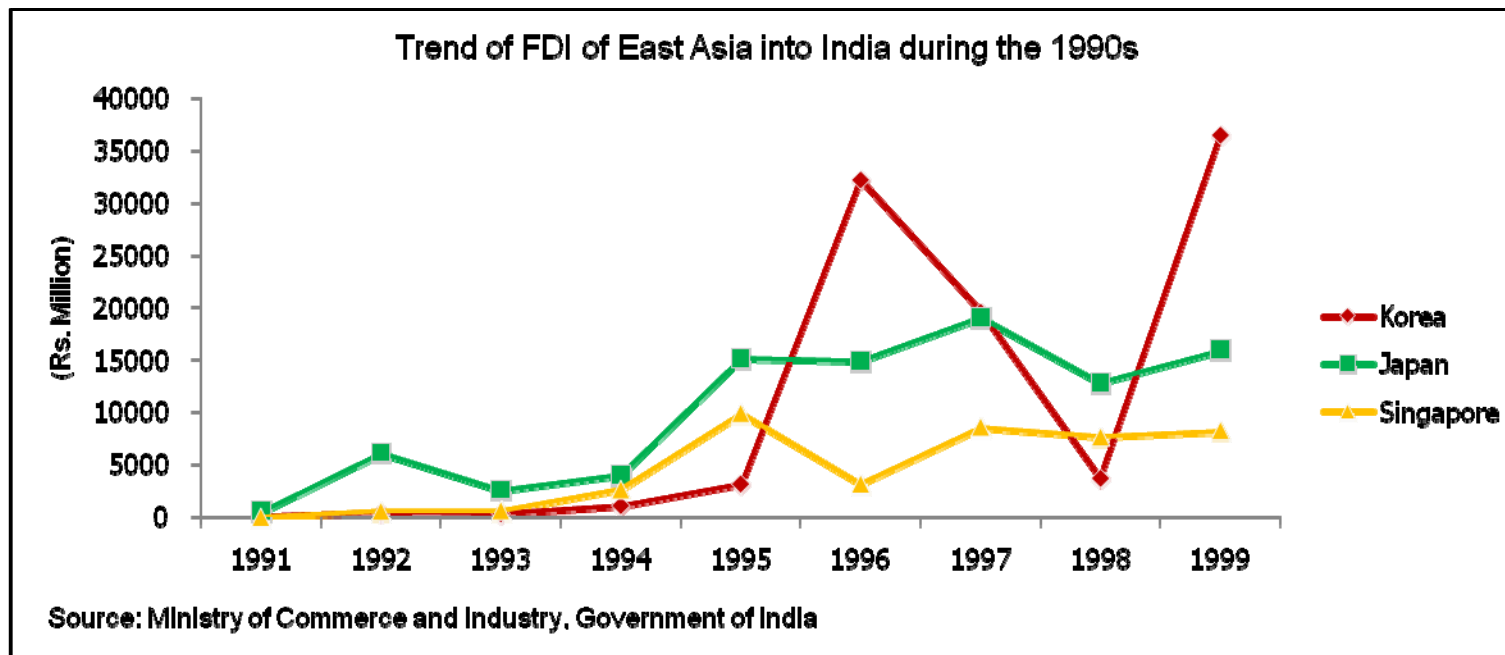
- Trend of East Asia's FDI into India
 - ✓ Korea: USD 27 million in 2004 to USD 132 million in 2011
 - ✓ Singapore: USD 63 million in 2004 to USD 4.2 billion in 2011
 - ✓ Japan: USD 118 million in 2004 to USD 3.7 billion in 2011



Trend of Trade and Investment

Investment

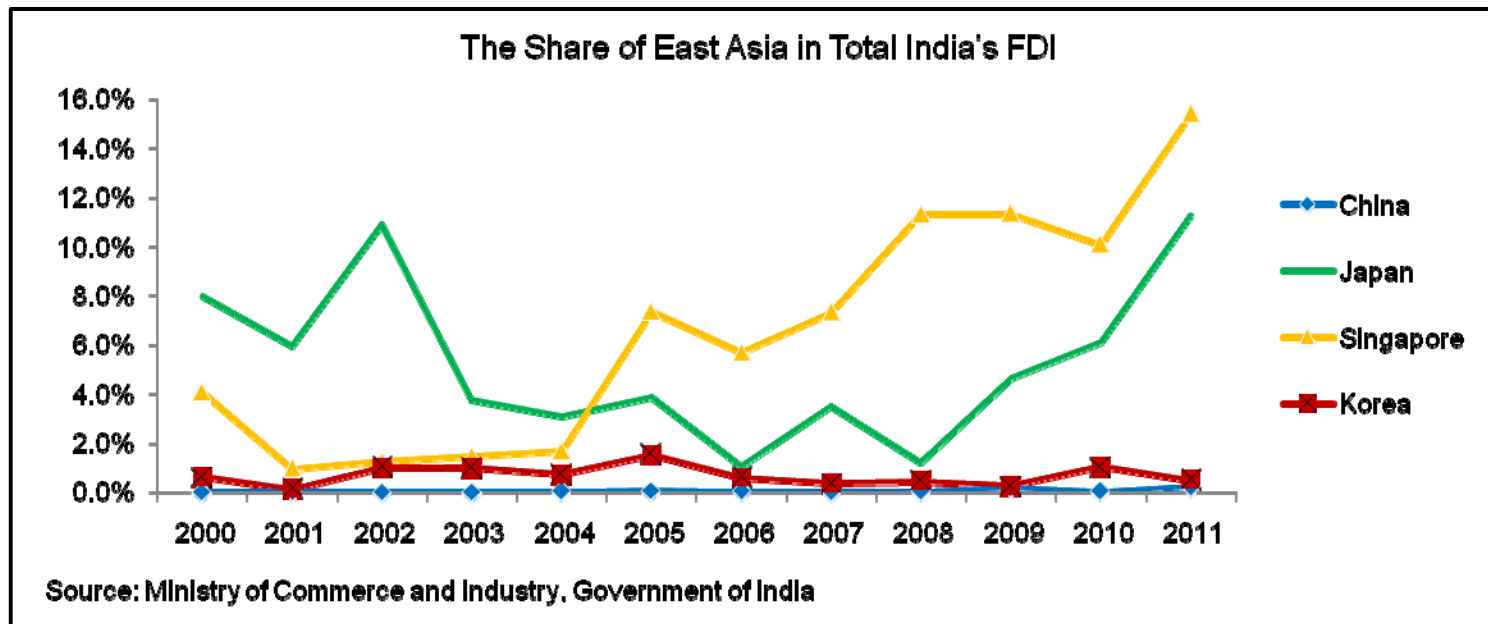
- Trend of FDI of East Asia into India during the 1990s
 - ✓ Korea: Rs. 96 billion
 - ✓ Singapore: Rs. 41 billion
 - ✓ Japan: Rs. 91 billion



Trend of Trade and Investment

Investment

- The Share of East Asia in Total India's FDI
 - ✓ Korea: 0.6% in 2000 to 0.5% in 2011
 - ✓ Singapore: 4.1% in 2000 to 15.4% in 2011
 - ✓ Japan: 8% in 2000 to 11.3% in 2011



Estimation and Results

Granger Causality Test

- **TRADE → FDI / FDI → TRADE / TRADE ↔ FDI**

- ✓ FDI: FDI flows from Korea to India
- ✓ Trade: Sum of Export and Import between India and Korea
- ✓ From 4th Quarter in 2004 to 4th Quarter in 2011

- **IMPORT → FDI / FDI → IMPORT / IMPORT ↔ FDI**

- **EXPORT → FDI / FDI → EXPORT / EXPORT ↔ FDI**

- ✓ Import: Import volume from Korea to India
- ✓ Export: Export volume from India to Korea

Estimation and Results

Granger Causality Test

Estimation Results

The Relationship between FDI and Trade	
Null Hypothesis	Results
FDI does not cause trade.	Not rejected
Trade does not cause FDI	Rejected***
The Relationship between FDI and Imports	
Null Hypothesis	Results
FDI does not cause imports.	Not Rejected
imports do not cause FDI	Rejected**
The Relationship between FDI and Exports	
Null Hypothesis	Results
FDI does not cause exports.	Not Rejected
Exports do not cause FDI	Rejected**

***: Statistically significant at 1%, **: Statistically significant at 5%

Estimation and Results

OLS Estimation

Estimation Results

Dependent Variable: FDI from Korea to India

	Coefficient (a)	Coefficient (b)
Trade	1.974***	2.227***
GDP		-.626
Constant	-10.835***	-2.555
No. of Observation	29	29
R-Squared	.352	.353

	Coefficient (a)	Coefficient (b)
Import	2.200***	3.526***
GDP		-3.450
Constant	-11.831***	33.935
No. of Observation	29	29
R-Squared	.452	.483

	Coefficient (a)	Coefficient (b)
Export	1.073***	-.922
GDP		6.286***
Constant	-2.466	-90.705***
No. of Observation	29	29
R-Squared	.132	.3255

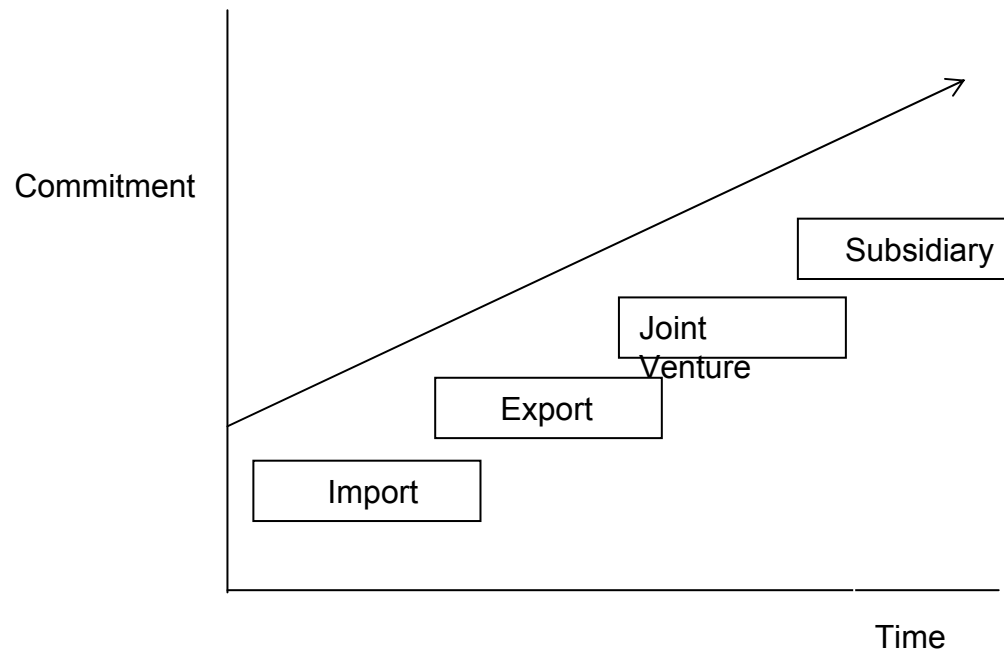
***: Statistically significant at 1%, **: Statistically significant at 5%

Estimation and Results

Results Analysis: Trade *Granger* caused FDI from Korea into India.

- Market uncertainty in India is still high for Korea firms.
 - ✓ Internationalization Process of MNCs
 - India's unfavorable business environment for foreign firms
 - ✓ Doing Business rank (World Bank, 2012): 132 rank out of 182 countries
 - Weak dynamic relationship between trade and FDI in the case of India and Korea
 - ✓ Low Intra-Industry Index
 - ✓ FDI during the 2000s much smaller than during the 1990s
- The economic relationship between India and Korea is not mature yet.

Internationalization Process of MNCs



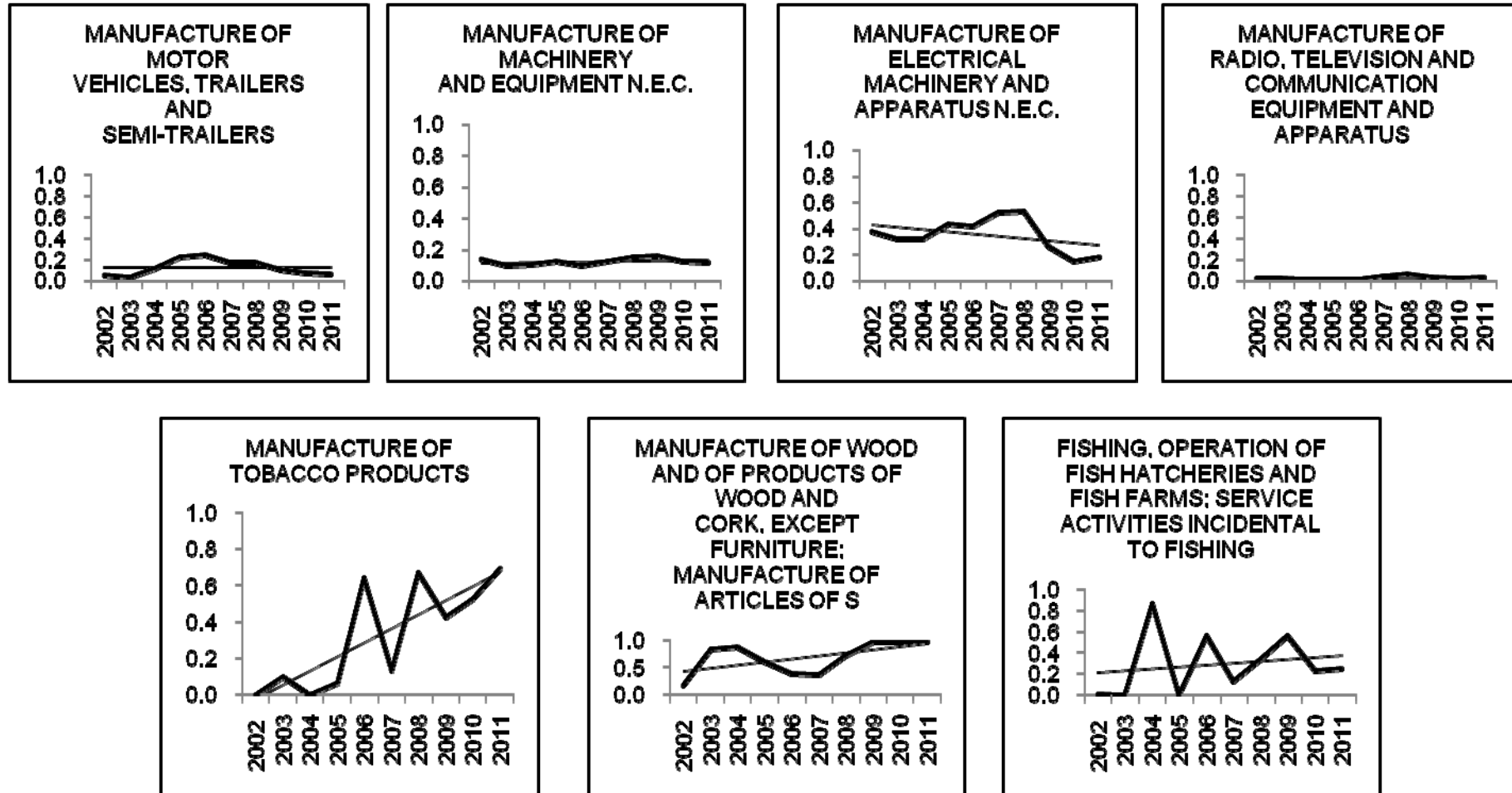
<Appendix 2>

Doing Business of India

Topic Rankings	DB 2012 Rank	DB 2011 Rank	Change in Rank
Starting a Business	166	166	No change
Enforcing Contracts	182	182	No change
Resolving Insolvency	128	140	12 ranks up
Paying Taxes	147	165	18 ranks up

Source: World Bank

Intra-Industry Trade Index between India and Korea from 2002 to 2011



Conclusion

Policy Suggestions: To improve economic cooperation between India and Korea

- Upgrading CEPA preferential rates
- Introducing Korea and India to each other through frequent IR
- Encouraging Korea's investment into India
- Solving India's political bottlenecks and Reducing market uncertainty

<Appendix 4>

**Comparison between the MFN Rate and the CEPA Preferential Rate
on Korea's Top 50 Export Commodities to India (As of Jan.-Aug. 2011)**

HS		Commodity	CEPA Concession Type	Import Share	Tariff Rate	
					MFN Rate in 2012	CEPA Preferential Rate in 2012
Organic Chemicals	291736	Terephthalic acid and its salts	SEN	3.37	10	11.3
Nuclear Reactors, Boilers, and Machinery, and Their Parts	840290	Of steam and other vapour generating boilers	E-5	0.63	7.5	7.5
	842952	Machinery with a 360° revolving superstructure	E-8	0.86	7.5	9.4
	843149	Of derricks, Of road rollers, mechanically propelled Of ships derricks and cranes, Of other excavating, leveling , tamping or excavating machinery for earth, mineral or ores, Of pile driver, snow plough, not self-propelled	E-5	1.06	7.5	7.5
Electric Equipment and its Parts	850423	Having a power handling capacity exceeding 10,000kVA	E-8	0.63	7.5	9.4
Motor Vehicles	870840	Gear boxes	SEN	0.45	10	11.3
	870899	Other Parts	RED	10.27	10	10.6

Note: 1) E-5 (To be abolished within 5 years), E-8 (to be abolished within 8 years), SEN (to be reduced by 50% within 10 years), RED (to be reduced to 1-5% within 8 years).

2) The share of the aforementioned commodities in the total exports is 17.3%. Korea's exports to India from Jan. to Aug. of 2011 totaled around USD 8.6 billion. (The share of top 50 export commodities to India in total trade is 64%.)

Source: KITA.net Trade Statistics, Tariff Concessions in the Korea-India CEPA, Tariff rates from the Customs Offices of Korea and India.

<Appendix 5>

**Comparison between the MFN Rate and the CEPA Preferential Rate
on Korea's Top 50 Export Commodities to India (As of Jan.-Aug. 2012)**

HS		Commodity	CEPA Concession Type	Import Share	Tariff Rate	
					MFN Rate in 2012	CEPA Preferential Rate in 2012
Organic Chemicals	291736	Terephthalic acid and its salts	SEN	2.7	10	10.6
Nuclear Reactors, Boilers, and Machinery, and Their Part	840690	Parts	E-8	0.7	7.5	7.8
	842952	Machinery with a 360°revolving superstructure	E-8	0.7	7.5	7.8
Electric Equipment and its Parts	850423	Having a power handling capacity exceeding 10,000kVA	E-8	0.5	7.5	7.8
	853720	For a voltage exceeding 1,000V	E-8	0.4	7.5	7.8

1) E-5 (To be abolished within 5 years), E-8 (to be abolished within 8 years), SEN (to be reduced by 50% within 10 years), RED (to be reduced to 1-5% within 8 years).

2) The share of the aforementioned commodities in the total exports is 5.0%. Korea's exports to India from Jan. to Aug. of 2012 totaled around USD 8.0 billion. (The share of top 50 export commodities in total trade is almost 62%.)

Source: KITA.net Trade Statistics, Tariff Concessions in the Korea-India CEPA, Tariff rates from the Customs Offices of Korea and India.

Thank you!