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Economic Relationship between India and Korea: Progress and Challenges

• Economic relationship between India and Korea improved

✓ Trade: USD 1.6 billion in 2001 → USE 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
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 Hecksher-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

Source: Author’s Calculation based on CEIC DB
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

Source: Author's Calculation based on CEID DB
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)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>FDI Inflows (Rs. Crore)</th>
<th>FDI Inflows (US$ million)</th>
<th>Share in Total FDI Inflows</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mauritius</td>
<td>289,470.99</td>
<td>64,168.95</td>
<td>37.7</td>
</tr>
<tr>
<td>2</td>
<td>Singapore</td>
<td>77,587.82</td>
<td>17,152.51</td>
<td>10.1</td>
</tr>
<tr>
<td>3</td>
<td>United Kingdom</td>
<td>74,661.24</td>
<td>15,896.08</td>
<td>9.3</td>
</tr>
<tr>
<td>4</td>
<td>Japan</td>
<td>57,851.03</td>
<td>12,313.08</td>
<td>7.2</td>
</tr>
<tr>
<td>5</td>
<td>USA</td>
<td>47,889.21</td>
<td>10,563.87</td>
<td>6.20</td>
</tr>
<tr>
<td>14</td>
<td>South Korea</td>
<td>4,601.5</td>
<td>1,007.6</td>
<td>0.6</td>
</tr>
<tr>
<td>15</td>
<td>Hong Kong</td>
<td>4,407.51</td>
<td>961.99</td>
<td>0.6</td>
</tr>
<tr>
<td>34</td>
<td>China</td>
<td>615.96</td>
<td>126.45</td>
<td>0.1</td>
</tr>
</tbody>
</table>

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

Source: Ministry of Commerce and Industry, Government of India
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

Source: Ministry of Commerce and Industry, Government of India
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 4\textsuperscript{th} Quarter in 2004 to 4\textsuperscript{th} 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

<table>
<thead>
<tr>
<th>The Relationship between FDI and Trade</th>
<th>Null Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FDI does not cause trade.</td>
<td>Not rejected</td>
</tr>
<tr>
<td></td>
<td><em>Trade does not cause FDI</em></td>
<td><strong>Rejected</strong>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Relationship between FDI and Imports</th>
<th>Null Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FDI does not cause imports.</td>
<td>Not Rejected</td>
</tr>
<tr>
<td></td>
<td><em>Imports do not cause FDI</em></td>
<td><strong>Rejected</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Relationship between FDI and Exports</th>
<th>Null Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FDI does not cause exports.</td>
<td>Not Rejected</td>
</tr>
<tr>
<td></td>
<td><em>Exports do not cause FDI</em></td>
<td><strong>Rejected</strong></td>
</tr>
</tbody>
</table>

***: Statistically significant at 1%, **: Statistically significant at 5%
# Estimation and Results

## OLS Estimation

### Estimation Results

**Dependent Variable: FDI from Korea to India**

<table>
<thead>
<tr>
<th></th>
<th>Coefficient (a)</th>
<th>Coefficient (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade</td>
<td>1.974***</td>
<td>2.227***</td>
</tr>
<tr>
<td>GDP</td>
<td>-.626</td>
<td>-.626</td>
</tr>
<tr>
<td>Constant</td>
<td>-10.835***</td>
<td>-2.555</td>
</tr>
<tr>
<td>No. of Observation</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>R-Squared</td>
<td>.352</td>
<td>.353</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Coefficient (a)</th>
<th>Coefficient (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import</td>
<td>2.200***</td>
<td>3.526***</td>
</tr>
<tr>
<td>GDP</td>
<td>-3.450</td>
<td>-3.450</td>
</tr>
<tr>
<td>Constant</td>
<td>-11.831***</td>
<td>33.935</td>
</tr>
<tr>
<td>No. of Observation</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>R-Squared</td>
<td>.452</td>
<td>.483</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Coefficient (a)</th>
<th>Coefficient (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>1.073***</td>
<td>-.922</td>
</tr>
<tr>
<td>GDP</td>
<td>6.286***</td>
<td>6.286***</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.466</td>
<td>-90.705***</td>
</tr>
<tr>
<td>No. of Observation</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>R-Squared</td>
<td>.132</td>
<td>.3255</td>
</tr>
</tbody>
</table>

### Notes

***: 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.
### Doing Business of India

<table>
<thead>
<tr>
<th>Topic Rankings</th>
<th>DB 2012 Rank</th>
<th>DB 2011 Rank</th>
<th>Change in Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting a Business</td>
<td>166</td>
<td>166</td>
<td>No change</td>
</tr>
<tr>
<td>Enforcing Contracts</td>
<td>182</td>
<td>182</td>
<td>No change</td>
</tr>
<tr>
<td>Resolving Insolvency</td>
<td>128</td>
<td>140</td>
<td>12 ranks up</td>
</tr>
<tr>
<td>Paying Taxes</td>
<td>147</td>
<td>165</td>
<td>18 ranks up</td>
</tr>
</tbody>
</table>

Source: World Bank
Intra-Industry Trade Index between India and Korea from 2002 to 2011

KIEP Korea Institute for International Economic Policy
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
### Comparison between the MFN Rate and the CEPA Preferential Rate on Korea's Top 50 Export Commodities to India (As of Jan.-Aug. 2011)

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

**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.
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</tr>
<tr>
<td>840690</td>
<td>Parts</td>
<td>E-8</td>
<td>0.7</td>
<td>7.5</td>
<td>7.8</td>
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<td>842952</td>
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<tr>
<td>850423</td>
<td>Having a power handling capacity exceeding 10,000kVA</td>
<td>E-8</td>
<td>0.5</td>
<td>7.5</td>
<td>7.8</td>
</tr>
<tr>
<td>853720</td>
<td>For a voltage exceeding 1,000V</td>
<td>E-8</td>
<td>0.4</td>
<td>7.5</td>
<td>7.8</td>
</tr>
</tbody>
</table>

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.

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<Appendix 5>
Thank you!