Vertical & Horizontal Integration in South Asia

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Outline

- Introduction
- Intra-industry trade in South Asia
- Data Analysis
- Case Study: Textile and Clothing sector
- Lessons from ASEAN
- Comparisons between ASEAN and SAARC countries
- Conclusions
Introduction

- Intra-regional trade in South Asia remains very weak – and potential is bleak given the prognosis of standard trade theory
- Inter-industry trade based on comparative advantages suggests that trade within South Asia is likely to be perpetually low given similarities in comparative advantages
- New trade theory - Krugman 1980 and Krugman 1991 – relaxed traditional assumptions of constant returns to scale and homogenous product
- Trade in similar but differentiated products eg. Automobile trade in Europe
- Intra-industry trade provides scope for trade despite similarity in comparative advantages
- Objectives – to explore the extent of IIT in South Asia and to assess the scope for enhancing trade by invigorating the trade-investment nexus drawing on the lessons from existing sectors (garments and automobiles) and lessons from other regions (ASEAN).
Literature

• Three types of intra-industry trade identified in the literature

• Horizontal Intra-Industry Trade (HIIT) refers to the trade of different varieties of a particular good within the same production stage and in the same quality and price range.

• Vertical Intra-industry trade is used to describe two forms of trade. 1) Trade in vertically differentiated products in terms of quality and price (where one country exports a lower quality product and the other exports the higher quality product) 2) Vertical fragmentation and specialisation resulting in trade of the same product at different stages of production.

• In this study we focus on the second form of VIIT – production fragmentation.
Production Fragmentation

- Product fragmentation refers to cross border dispersion of component production/assembly
- Each country specialises in a particular stage of the production sequence and trade the value added components to result in a final product
- Product fragmentation first started in the electronics and the garment industries and has subsequently spread to many other industries (Sharpton, 1975; Feenstra 1998)
- The process can now be seen in industries such as automobiles, electrical machinery, telecommunications and television production
- Athukorala (2006) identifies rapid advancements in production technology, technological innovations in communication and transportation, and liberalization policy reforms in investment and trade in both home and host countries as the three mutually reinforcing developments over the last few decades which have expanded international product fragmentation.
Data and Methodology

- Whilst ASEAN has been quick to take advantage of product fragmentation, South Asia has not been able to do so. The first step is to assess the extent of IIT and product fragmentation in the region.
- Construction of a Grubel-Lloyd Index for South Asian industrial trade
- The GL index is an indicator of the intensity of intra-industry trade and gives the ratio of intra-industry trade to total trade

\[ IIT_{i,r} = 1 - \left( \frac{|Export_{i,r} - import_{i,r}|}{Export_{i,r} + import_{i,r}} \right) \]

- Where \( i \) is the product group and \( r \) is the trading partner. The index value will be, \( 0 \leq IIT_{i,r} \leq 1 \). While the index value of 1 shows pure intra-trade, the value of 0 depicts only inter-industry trade and no intra-industry trade.
Data and Methodology Continued

• Data is extracted from the Standard International Trade Classification, Revision 3 (SITC, Rev 3) data from the United Nations Commodity Trade Statistics Database (UNcomtrade).

• Data for the year 2005, the most recent year for which data are available for all reporting countries is used in the study. The analyses cover Bangladesh, India, Nepal, Pakistan and Sri Lanka.

• Afghanistan, Bhutan and the Maldives were excluded due to non-availability of data. Given the limited industrial trade integration of these three countries, their omission will not have a significant impact on the results.

• SITC 2 digit level for chapters 5 to 8 was used which covers all industrial trade for the five countries in question.

• The Grubel-Lloyd index was then calculated between each bilateral pair of countries – making a total of ten bilateral pairs, covering the entirety of intra-regional trade between these five South Asian countries.
Data and Methodology Continued

• The pure G-L index was calculated along with a trade weighted G-L index where the weight was determined by the significance of trade in that particular chapter. Example trade between India and Sri Lanka in chapter x

\[
\frac{\text{SL Exports (x) to India} + \text{SL imports (x) from India}}{\text{Total Trade between Sri Lanka and India}} \times 100\% 
\]

• The G-L index was multiplied by the weight to map the extent of intra-industry trade in South Asia
## Weighted IIT in Chemical and Related Products (Ch 51-59)

<table>
<thead>
<tr>
<th>Chemicals and related products</th>
<th>In - Bn</th>
<th>In – Pk</th>
<th>In - Np</th>
<th>In - SL</th>
<th>Pk - Bn</th>
<th>Pk – Np</th>
<th>Pk - SL</th>
<th>SL - Bn</th>
<th>SL – NP</th>
<th>Bn - NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic chemicals</td>
<td>0</td>
<td>9.8</td>
<td>3</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0.1</td>
<td>0.1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Inorganic chemicals</td>
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<td>0</td>
<td>0</td>
<td>0.7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dyeing, tanning and colouring materials</td>
<td>0</td>
<td>0</td>
<td>1.5</td>
<td>0.1</td>
<td>0</td>
<td>1.3</td>
<td>0.1</td>
<td>0</td>
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<tr>
<td>Medicinal and pharmaceutical products</td>
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<td>0</td>
<td>1.7</td>
<td>3</td>
<td>0.6</td>
<td>1.3</td>
<td>0.1</td>
<td>1.9</td>
<td>0</td>
<td>0.1</td>
</tr>
<tr>
<td>Essential oils and resinoids, etc.</td>
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<td>0</td>
<td>4.3</td>
<td>0.3</td>
<td>0.1</td>
<td>0</td>
<td>0.1</td>
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<td>Fertilizers</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Plastics in primary forms</td>
<td>0</td>
<td>0.3</td>
<td>1.4</td>
<td>0.1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Plastics in non-primary forms</td>
<td>0</td>
<td>0</td>
<td>1.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chemical materials and products, etc</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0.1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.3</td>
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</table>
### Weighted IIT in Manufactured Goods (Ch 61-69)

<table>
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<tr>
<th>Manufactured goods classified chiefly by material</th>
<th>In - Bn</th>
<th>In – Pk</th>
<th>In - Np</th>
<th>In - SL</th>
<th>Pk - Bn</th>
<th>Pk – Np</th>
<th>Pk - SL</th>
<th>SL - Bn</th>
<th>SL – NP</th>
<th>Bn - NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leather, leather manufactures, etc.</td>
<td>0.1</td>
<td>0.1</td>
<td>0</td>
<td>0</td>
<td>0.3</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rubber manufactures, etc.</td>
<td>0</td>
<td>0</td>
<td>0.1</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cork and wood manufactures (excluding furniture)</td>
<td>0</td>
<td>0</td>
<td>0.4</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Paper, paperboard and articles of paper pulp, of paper or of paperboard</td>
<td>0</td>
<td>0</td>
<td>0.6</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.1</td>
<td>0</td>
</tr>
<tr>
<td>Textile yarn, fabrics, made-up articles, etc.</td>
<td>5.6</td>
<td>10.5</td>
<td>7.8</td>
<td>1.1</td>
<td>0.2</td>
<td>3.2</td>
<td>1.1</td>
<td>42.1</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Non-metallic mineral manufactures, n.e.s.</td>
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<td>0.2</td>
<td>0.2</td>
<td>2.3</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Iron and steel</td>
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<td>0</td>
<td>10.3</td>
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<td>0</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>Non-ferrous metals</td>
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<td>0</td>
<td>0</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Manufactures of metals, etc.</td>
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<td>0</td>
<td>2.6</td>
<td>3.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Machinery and transport equipment</td>
<td>In - Bn</td>
<td>In – Pk</td>
<td>In - Np</td>
<td>In - SL</td>
<td>Pk - Bn</td>
<td>Pk – Np</td>
<td>Pk - SL</td>
<td>SL - Bn</td>
<td>SL – NP</td>
<td>Bn - NP</td>
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<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Power-generating machinery and equipment</td>
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<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<td>Machinery specialized for particular industries</td>
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<td>0.100</td>
<td>0.300</td>
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<td>Metalworking machinery</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>General industrial machinery and equipment, etc.</td>
<td>0.000</td>
<td>0.000</td>
<td>0.600</td>
<td>0.400</td>
<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Office machines, etc.</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.400</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Electrical machinery, etc.</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>Road vehicles</td>
<td>0.000</td>
<td>0.000</td>
<td>0.200</td>
<td>0.200</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.100</td>
<td>0.000</td>
</tr>
<tr>
<td>Other transport equipment</td>
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<td>0.000</td>
<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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</tr>
</tbody>
</table>
## Weighted IIT in Machinery and Transport in ASEAN (Chapter 71-79)

<table>
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<th>Chapter</th>
<th>Singapore - Malaysia W.GLI</th>
<th>Singapore - Thailand W.GLI</th>
<th>Malaysia - Thailand W.GLI</th>
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<tr>
<td>71</td>
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<td>1.28</td>
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<td>72</td>
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<td>0.68</td>
<td>1.02</td>
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<td>73</td>
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<td>0.38</td>
<td>0.36</td>
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<td>74</td>
<td>1.93</td>
<td>4.02</td>
<td>3.71</td>
</tr>
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<td>75</td>
<td>10.20</td>
<td>17.06</td>
<td>17.36</td>
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<td>76</td>
<td>7.48</td>
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<tr>
<td>78</td>
<td>1.02</td>
<td>1.96</td>
<td>1.51</td>
</tr>
<tr>
<td>79</td>
<td>0.08</td>
<td>0.05</td>
<td>0.06</td>
</tr>
</tbody>
</table>
## Potential for IIT in South Asia

<table>
<thead>
<tr>
<th>Partner Country</th>
<th>India</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
<th>Bangladesh</th>
<th>Nepal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter</td>
<td>Sri Lanka</td>
<td>77</td>
<td>65</td>
<td>77</td>
<td>65</td>
</tr>
<tr>
<td>GLI Value</td>
<td>0.95</td>
<td>0.88</td>
<td>0.95</td>
<td>0.93</td>
<td>0.92</td>
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<tr>
<td>Chapter</td>
<td>Sri Lanka</td>
<td>69</td>
<td>77</td>
<td>69 &amp; Bangladesh</td>
<td>77</td>
</tr>
<tr>
<td>GLI Value</td>
<td>0.93</td>
<td>0.87</td>
<td>0.93</td>
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<td>0.88</td>
</tr>
<tr>
<td>Chapter</td>
<td>Nepal</td>
<td>51</td>
<td>72</td>
<td>75, 61 &amp; 72</td>
<td>51</td>
</tr>
<tr>
<td>GLI Value</td>
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<td>0.85</td>
<td>0.85</td>
<td>0.79</td>
<td>0.86</td>
</tr>
<tr>
<td>Chapter</td>
<td>Pakistan &amp; Nepal</td>
<td>65 &amp; 89</td>
<td>81</td>
<td>81</td>
<td>55/67</td>
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<td>GLI Value</td>
<td>0.88</td>
<td>0.84</td>
<td>0.84</td>
<td>0.77</td>
<td>0.79</td>
</tr>
<tr>
<td>Chapter</td>
<td>Nepal</td>
<td>53</td>
<td>51</td>
<td>51</td>
<td>56</td>
</tr>
<tr>
<td>GLI Value</td>
<td>0.86</td>
<td>0.79</td>
<td>0.72</td>
<td>0.74</td>
<td>0.77</td>
</tr>
<tr>
<td>Chapter</td>
<td>Sri Lanka</td>
<td>75 &amp; 61</td>
<td>89</td>
<td>89</td>
<td>69 &amp; 54</td>
</tr>
<tr>
<td>GLI Value</td>
<td>0.85</td>
<td>0.77</td>
<td>0.71</td>
<td>0.70</td>
<td>0.71</td>
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<td>Chapter</td>
<td>Nepal</td>
<td>55 &amp; 67</td>
<td>87</td>
<td>83</td>
<td>69</td>
</tr>
<tr>
<td>GLI Value</td>
<td>0.79</td>
<td>0.73</td>
<td>0.68</td>
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<td>0.69</td>
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<td>Bangladesh</td>
<td>82</td>
<td>51</td>
<td>81</td>
<td>73</td>
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<tr>
<td>GLI Value</td>
<td>0.77</td>
<td>0.72</td>
<td>0.66</td>
<td>0.62</td>
<td>0.69</td>
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<tr>
<td>Chapter</td>
<td>Nepal &amp; Sri Lanka</td>
<td>56</td>
<td>54 &amp; 89</td>
<td>66</td>
<td>72</td>
</tr>
<tr>
<td>GLI Value</td>
<td>0.74</td>
<td>0.71</td>
<td>0.64</td>
<td>0.61</td>
<td>0.62</td>
</tr>
<tr>
<td>Chapter</td>
<td>Nepal</td>
<td>69</td>
<td>54</td>
<td>72</td>
<td>55</td>
</tr>
<tr>
<td>GLI Value</td>
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<td>0.70</td>
<td>0.61</td>
<td>0.61</td>
<td>0.6</td>
</tr>
</tbody>
</table>
Results

- The data suggests that overall intra-industry trade within South Asia is very low – particularly when compared to ASEAN

- The indices show that the highest level of intra-industry trade within the region takes place in the textile yarn, fabrics, made-up articles and related products category (chapter 65)

- Trade between India and Sri Lanka and between India and Nepal have a higher propensity for IIT

- The next step in the study is to examine in further detail through case studies the nature of IIT in these three areas and identify the conditions that have led to success in this area
Intra-regional imports in textiles is low compared to overall imports of textiles (Ch 65).

Bangladesh has maintained a similar level of South Asian imports over much of the last 2 decades however Sri Lanka’s imports from South Asia were just 6% in 1990.
Trade in Textiles and Apparel in South Asia

- One reason Sri Lanka’s low level of imports from South Asia is the reliance on East Asia as a source of textile imports for due to the early investment in the country by quota hopping manufacturers from East Asia.
- With regard to apparel there is even less intra-regional trade as most exports from South Asia are destined for the United States and Europe. Tewari 2007 suggests that only about 0.6% of apparel exports from South Asia are traded intra-regionally.
- Nonetheless there is scope for intra-regional specialisation in the sector despite each country having overall comparative advantage in the aggregate textiles and apparel sector.
- A clear divide in South Asia is that India and Pakistan play the role of suppliers of textiles (and also apparel) whilst Sri Lanka and Bangladesh focus more on export of apparel using imported textiles.
- Furthermore, based on buyer surveys, Tewari 2007 postulates substantial differences between perceived strengths of South Asian exporters.
## Buyer Preferences in South Asia

### Comparative Advantage of South Asia’s leading players in the T&C Sector

<table>
<thead>
<tr>
<th>Country</th>
<th>Comparative advantage from the perspective of global buyers</th>
<th>Share of top 5 items in total T&amp;C exports*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan</td>
<td>Mid-to-course gauge cotton yarn, Bed Linen, Home furnishings, Carpets, basic menswear and hosiery</td>
<td>54%</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Lingerie, swimwear of man-made fibres and cotton blends, formals</td>
<td>30%</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Knit and woven Menswear - sports and casual wear (shirts, trousers, T-shirts), pullovers</td>
<td>46%</td>
</tr>
<tr>
<td>India**</td>
<td>Cotton knit and woven women’s tops, blouses and skirts, embellished and embroidered, fine-guage yarn</td>
<td>44%</td>
</tr>
</tbody>
</table>
Constraints to intra-regional sourcing in the textile and garment sector

- Despite the potential vertical trade in the garments and textiles sector, several constraints have ensured that Sri Lankan and Bangladeshi apparel exporters seek textiles and other inputs from East Asia and China.

- Entrenched sourcing relations and buyer preferences.

- Price – China is cheaper than India and Pakistan across most textile sectors despite proximity.

- Energy – cost and reliability of energy is substantial particularly in India.

- Lack of diversity of fibre range and product variety – India and Pakistan rooted in cotton with limited man made fibre yarn and fabric.
Constraints to intra-regional sourcing in the textile and garment sector

• Tariffs – Despite reductions in tariffs over time, in India in particular customs duties were cited as eroding labour cost advantages in the country.

• Transportation bottlenecks – Port inefficiency and time taken to ship in the Indian subcontinent is substantially higher than that in other regions. This raises inventory cost and increases lead time.

• Customs delays – Whilst 6 digit HS classification is standardized internationally, 8 and 10 digit HS is not so. This leads to substantial delays due to mismatch between regional and local regulations.

• Political economy issues – In Bangladesh there has been a clash between the interests of nascent domestic textiles producers and apparel exporters, particularly with regard to SAARC cumulation in the EU GSP.
Intra-regional Investment in Textiles and Apparel in South Asia

<table>
<thead>
<tr>
<th>Name</th>
<th>Ownership Structure</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jay Jay Mills (Pvt) Ltd (India in Sri Lanka)</td>
<td>Joint venture</td>
<td>Manufacture of Textiles and Fabric</td>
</tr>
<tr>
<td></td>
<td>FDI: Sri Lankan Rs. 42 Mn</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Local Investment: Rs. 40 Mn</td>
<td></td>
</tr>
<tr>
<td>Victory Enterprises (Pvt) Ltd (India in Sri Lanka)</td>
<td>100% foreign owned Rs. 10 Mn</td>
<td>Bed Linen</td>
</tr>
<tr>
<td>Hitex International (Pvt) Ltd (Pakistan in Sri Lanka)</td>
<td>100% foreign owned Rs. 14.775 Mn</td>
<td>Bed Linen</td>
</tr>
<tr>
<td>Arvind Mills (India in Bangladesh)</td>
<td>Under negotiation</td>
<td>Manufacture of Textiles and Fabric</td>
</tr>
<tr>
<td></td>
<td>FDI: Not available</td>
<td></td>
</tr>
<tr>
<td>Prime Textiles (Pakistan in Bangladesh)</td>
<td>Not available</td>
<td>Bed Linen</td>
</tr>
<tr>
<td></td>
<td>FDI: Not available</td>
<td>And Fabric</td>
</tr>
<tr>
<td>Bexim Co. (Pakistan in Bangladesh)</td>
<td>Not available</td>
<td>Bed Linen and Textile fabric</td>
</tr>
<tr>
<td></td>
<td>FDI: Not available</td>
<td></td>
</tr>
<tr>
<td>Brandix (Sri Lanka in India)</td>
<td>100% foreign owned</td>
<td>Apparel park</td>
</tr>
<tr>
<td></td>
<td>FDI: US$ 750 million</td>
<td>Including facilities to Manufacture fabric</td>
</tr>
</tbody>
</table>

Source: Tewari 2007
Intra-regional Investment in Textiles and Apparel in South Asia

• Despite the potential for intra-regional product fragmentation, intra-regional investment in this sector has been very limited.
• Many reasons have been cited for this;
  • Security situation in Sri Lanka and Pakistan
  • Bias against Indian investment in Bangladesh
  • Focus on markets outside the region

• Overcoming such barriers, both to investment and to intra-regional trade in textiles and apparel will be critical towards remaining competitive in the global market

• The need for trade facilitation, tariff reduction and infrastructural development (energy and transport) is highlighted in this regard
Automobile Industry in South Asia

- Automobile sector growing rapidly led by India and to a lesser extent Pakistan.

- Automobile parts and components sector has also grown rapidly in India – particularly engine parts, drive and transmission and braking parts. These manufacturers supply international producers who have set up in India and around 15% of the produce is exported.

- Rapid growth in Pakistan as well, particularly in commercial vehicle production. But largely linked with Japanese and Korean producers.

- Bajaj and Tata interest in investing in Pakistan had not worked out.

- Pakistan also relies on relatively expensive imported components.

- Bangladesh, Nepal and Sri Lanka are largely dependent on imports but with small scale assembly units emerging.
Potential for Production Sharing in Automobiles

• Given India’s success in parts and components production and the rest of South Asia’s reliance on assembly – there is scope for using Indian parts and components in assembly.
• However high tariffs undermine this
• We examined intra-regional tariffs on important components in automobile assembly;
• Bumpers and parts thereof (HS870810), Parts and other accessories of bodies for motor vehicles excluding bumpers and safety belts (HS 870829), Radiators (HS 870891) Road wheels and parts and accessories thereof (HS 870870)
• Bangladesh and Nepal maintain a 12% and 15%
• Pakistan maintains a 35% but Sri Lanka (11.5-23.1%) due to the PSFTA
• Sri Lanka maintains a 20% tariff on imports from India and Pakistan due to the preferential tariff for SAFTA (MFN is 28%) and a 8.4% tariff for imports from Bangladesh and Nepal
Potential for Production Sharing in Automobiles

- India charges no duty on parts and components imports from SL, Nepal and Bangladesh but charges 10% on Pakistani imports.

- Engines and chassis are charged at elevated rates – Pakistan 50%, Bangladesh 25%, Nepal 40-80%. India charges 0 duty except 10% on Pakistani imports and SL charges 15% MFN.

- In the medium term as costs increase in India the prospects for production fragmentation will become attractive – with India shifting to higher end production processes within automobile production.

- Possibility of PF based on comparative advantages eg. SL rubber tyres.

- However the high tariffs act as a major hindrance in this regard.

- Hostility towards intra-regional investment will also hamper this process.
Lessons from ASEAN

- Role of individual country policies outweighed the role of collective regional policies
- Rapid export oriented policies following import substitution experimentation
- Trade and investment liberalisation, creation of FTZs and simplification of administrative procedures and creating a stable macroeconomic environment were key measures.
- Lot of incentives as well – tax breaks, subsidized credit, duty free inputs
- However these are easily replicated – more emphasis on fundamental attractions of skilled labour force and infrastructure
- Singapore placed emphasis on upgrading labour skills - Vocational and Industrial Training Board and National Productivity Board (Role for effective government intervention).
- Singapore understood its role in the supply chain as a supplier high value goods, services, R&D and management
Lessons from ASEAN

- Sub-regional growth triangles (Singapore, Malaysia and Indonesia) combined the diverse comparative advantages and resource endowments of the 3 countries to create attractive investment niches – linked through high quality connective infrastructure.

- The asymmetries in factor endowments and comparative advantages and factor costs helped create the environment for production fragmentation based on comparative advantage.

- External factors contributed to the success, specially with rising factor costs in East Asian production centres. Role of Japanese investment in S.E. Asia

- Linking local firms with global supply chains – financial and technical support from the Singapore EDB to local firms, Malaysian sub-contract exchange scheme (computerised system linking local suppliers and MNEs)
Lessons from ASEAN

• Useful to note the drawbacks in investment climate in Indonesia (cost of doing business, inflation and political instability) and the failure to link in with production networks to the same extent as other ASEAN countries – despite low wage rates and extensive natural resource endowments.

• Also important to note the required economic flexibility and dynamism to adapt to changing comparative advantages and the resultant shifts in production focus – Singapore is a case in point.

• ASEAN FTA supplemented the unilateral policies on trade and investment in combination with locational advantages in the region. The FTA would have provided greater visibility and also transparency and security to the policy environment.
Comparisons between ASEAN and SAARC - Inflation

- Inflation – 5-10% in S.Asia, 0-5% in ASEAN

![Graph showing inflation trends in ASEAN and SAARC countries from 2000 to 2007. The graph compares Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka, Malaysia, Thailand, Singapore, and Indonesia.]
Exchange Rates

• Most ASEAN countries maintained ER pegs in order to create stability to support exports
• However this occurred whilst maintaining liberal capital market accounts and when the S.E. Asian asset bubble burst in 1997, the fixed exchange rate contributed to the economic crisis that occurred.
• Whilst stability in exchange rate is beneficial for production fragmentation, there are reasons for South Asian countries to be cautious when considering such an approach.
• This is particularly true of countries with a tendency to have high inflation – such as Pakistan and Sri Lanka in South Asia.
• Overall macroeconomic stability has not been a strong point in South Asia – particularly Sri Lanka and Pakistan. There has been recent improvement but still too early to indicate a fundamental long term change.
## Trade Protection - Motors and Generators

### HS 850300 – Parts of Motors and Generators

<table>
<thead>
<tr>
<th>HS 850300</th>
<th>MFN</th>
<th>Sri Lanka</th>
<th>India</th>
<th>Pakistan</th>
<th>Bangladesh</th>
<th>Nepal</th>
</tr>
</thead>
<tbody>
<tr>
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<td>-</td>
<td>0</td>
<td>1</td>
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<td>0.75</td>
</tr>
<tr>
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<td>-</td>
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</tr>
<tr>
<td>Pakistan</td>
<td>5-15</td>
<td>1.65-4.95</td>
<td>5-15</td>
<td>-</td>
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<td>5-15</td>
</tr>
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<td>5</td>
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<table>
<thead>
<tr>
<th>HS 850300</th>
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<th>Thailand</th>
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<th>Singapore</th>
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</thead>
<tbody>
<tr>
<td>Thailand</td>
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</tr>
<tr>
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<td>0</td>
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<tr>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

[1] (Except HS85030010 which relates to fan motors in vehicles and is taxed at 28% MFN, 11.2% for PSFTA, 0% for ISFTA and 8.4% SAFTA LDC).

[2] Except HS 850300A MFN 10%
# Trade Protection - Transmission Apparatus

**HS 852990** Parts of Transmission Apparatus, Radar Apparatus or Television Receivers (other than aerials)

<table>
<thead>
<tr>
<th>HS 852990</th>
<th>MFN</th>
<th>Sri Lanka</th>
<th>India</th>
<th>Pakistan</th>
<th>Bangladesh</th>
<th>Nepal</th>
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<tbody>
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<tr>
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<tr>
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<td>0</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Singapore</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</table>
## Trade Protection - Integrated Circuits

### HS 854290 – Integrated Circuit Parts

<table>
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<tr>
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<th>India</th>
<th>Pakistan</th>
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<tbody>
<tr>
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<td>-</td>
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<tr>
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<td>Pakistan</td>
<td>5</td>
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<td>5</td>
<td>-</td>
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<thead>
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<tr>
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<td>0</td>
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<tr>
<td>Philippines</td>
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<tr>
<td>Singapore</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>
## Trading Across Borders

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Bangladesh</th>
<th>India</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
<th>Cambodia</th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Philippines</th>
<th>Singapore</th>
<th>Thailand</th>
<th>Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hidden barriers to trade (1)*</td>
<td>4.5</td>
<td>3.8</td>
<td>4.7</td>
<td>na</td>
<td>3.8</td>
<td>4.9</td>
<td>na</td>
<td>4.1</td>
<td>4.5</td>
<td>3.2</td>
<td>6.3</td>
<td>4.0</td>
<td>3.1</td>
</tr>
<tr>
<td>Burden of customs procedure (2)</td>
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<td>2.4</td>
<td>3.7</td>
<td>2.8</td>
<td>3.5</td>
<td>3.7</td>
<td>2.8</td>
<td>3.3</td>
<td>4.8</td>
<td>2.9</td>
<td>6.5</td>
<td>4.1</td>
<td>3.3</td>
</tr>
<tr>
<td>Overall infrastructure quality (3)</td>
<td>3.8</td>
<td>2.2</td>
<td>2.9</td>
<td>1.9</td>
<td>3.1</td>
<td>3.8</td>
<td>3.1</td>
<td>2.8</td>
<td>5.6</td>
<td>2.9</td>
<td>6.7</td>
<td>4.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Transparency of Government policymaking (4)</td>
<td>4.2</td>
<td>3.5</td>
<td>4.2</td>
<td>3.2</td>
<td>3.4</td>
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<td>3.8</td>
<td>6.3</td>
<td>4.2</td>
<td>4.2</td>
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<tr>
<td>Global Competitiveness Index (rank)</td>
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<td>50</td>
<td>126</td>
<td>101</td>
<td>77</td>
<td>109</td>
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<td>21</td>
<td>71</td>
<td>5</td>
<td>34</td>
<td>70</td>
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</tr>
</tbody>
</table>

*Note: The numbers represent scores or indices for each country, with higher values generally indicating better performance in the respective areas.*
Human Resource Availability

- Quality of Maths and Science Education
- Local Specialised Research and Training
- Availability of Scientists and Engineers
## Transport Infrastructure Quality

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Bangladesh</th>
<th>India</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
<th>Cambodia</th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Philippines</th>
<th>Singapore</th>
<th>Thailand</th>
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</thead>
<tbody>
<tr>
<td>Road quality (1)</td>
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<td>1.9</td>
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<td>2.5</td>
<td>5.7</td>
<td>2.8</td>
<td>6.6</td>
<td>5.0</td>
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<tr>
<td>Railroad infrastructure quality (2)</td>
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<td>4.4</td>
<td>1.3</td>
<td>3.0</td>
<td>3.2</td>
<td>1.6</td>
<td>2.8</td>
<td>5.0</td>
<td>1.8</td>
<td>5.6</td>
<td>3.1</td>
</tr>
<tr>
<td>Port infrastructure quality (3)</td>
<td>4.1</td>
<td>2.6</td>
<td>3.3</td>
<td>2.9</td>
<td>3.7</td>
<td>4.5</td>
<td>3.4</td>
<td>3.0</td>
<td>5.7</td>
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<td>Air transport infrastructure quality (4)</td>
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<td>4.2</td>
<td>4.4</td>
<td>6.0</td>
<td>4.1</td>
<td>6.9</td>
<td>5.8</td>
</tr>
</tbody>
</table>
Conclusions

• Tariffs in the region remain relatively high. In terms of product fragmentation where the slightest margins become critical in terms of ensuring competitiveness of the flow of parts and components between borders, high tariff levels undermine the prospects for slicing the value chain. Implications for SAFTA – negative list and 0-5% tariff allowance.

• Transport bottlenecks both within and between countries are a major problem in South Asia in terms of adding transaction costs to production and undermining the reliability and predictability of delivery. The frequency of cross border transfers involved in product fragmentation means that delays in transfer and additional costs can not be afforded.

• Trade facilitation measures are a related issue, particularly in terms of minimizing delays in port and customs clearance. Trade Facilitation is addressed in SAFTA but there needs to be some form of prioritization and binding commitments in implementation of such commitments.
Conclusions

• High energy costs have been cited as a concern in many South Asian countries. This is despite the fact that countries such as Bhutan and Nepal have extensive (often untapped) energy resources in hydropower. Greater economic cooperation and trade in energy in the region is essential to reduce cost and improve reliability of energy supply.

• Importance of trade and investment policies and climate in individual countries is highlighted in the ASEAN case. The ASEAN FTA and regional growth triangles were largely supportive in nature rather than driving forces themselves.

• The role of large firms was emphasized in the ASEAN case. It was the large multinationals that have the scale to be able to effectively engage in and organize production fragmentation. However the ability to link in local suppliers is critical to long term sustainability.
Conclusions

- The role of EPZs that link countries in the region is also very important not just in terms of providing access to subsidized infrastructure, duty free inputs and fiscal incentives – but most importantly in terms of providing relatively smooth bureaucratic processes.

- The EPZs provided the ideal environment for agglomeration and benefits of increasing returns to scale as firms took advantage of shared infrastructure that was a common requirement of several firms engaged in the same or similar stages of the value chain.

- Whilst the fiscal incentives and subsidized inputs are attractive to investors, the role of these has been downplayed in recent years. In the short term these may prove to be carrots that attract investors, however, since these incentives can easily be imitated, in the medium to long term what is more important is the quality of human resources, macroeconomic stability and quality of infrastructure.
Conclusions

- Macroeconomic stability is of particular importance since fluctuations in exchange rates and inflation could undermine competitiveness to a great extent when components cross borders several times in a short period before final assembly and export. Whilst ASEAN countries maintained a high level of macroeconomic stability, South Asia has fared relatively poorly in this regard.

- Diversity, particularly in quality of factors of production, was important in the success of product fragmentation in ASEAN. The shift in production through various “generations” of comparative advantage is illustrative of this. South Asia has potential to benefit through this situation given the varying levels of economic maturity in the region. It is essential that countries have the flexibility to adapt to changing comparative advantages.
Thank You

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