

# **Principles and modalities of regional integration: Contrasting stories of ASEAN and BIMSTEC**

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# **Why do countries want to be part of regional economic grouping in developing world?**

- ✓ **The Answer is not very difficult to search. The developing countries, especially the low income ones, are grappling with the problem of growth along with job creation**
- ✓ **Growth of the economy has both supply and demand side constraints. Regional groupings widens the market, thereby partially solving the limited demand issue. Similarly, supply constraints are also relaxed by complementary FDI**
- ✓ **Unfortunately, job creation in these economies, Myanmar included, are mostly in unorganised service sector, which does not create enough jobs for all levels of skills. One needs strong manufacturing sector as well**

# What makes a regional economic grouping successful?

- Regionalism in standard theory is Vinerian trade creation and trade diversion
- The recent theories stress on the dynamic gains in terms of economies of scale, product diversity and global value chains (GVC)
- The recent advances in technology has promoted fragmentation in a grand scale and has given rise to market led regionalism preceding treaty bound regional groupings- the most successful is the story of ASEAN
- All Regional groupings could not benefit from such a path since they could not try to promote intra regional investment along with trade. One such example is BIMSTEC
- Myanmar fortunately belongs to both the groups. The present lecture is aimed at flagging the underlying conditions which make a regional grouping either a prime mover or a laggard

## **The BIMSTEC Region**

“BIMSTEC provides a unique link between South Asia and Southeast Asia bringing together 1.3 billion people - 21 percent of the world population, a combined GDP of US\$750 bn, and a considerable amount of complementarities. A study shows the potential of US\$43-59bn trade creation under BIMSTEC FTA. When BIMSTEC was formed it had four members – Bangladesh, India, Thailand and Sri Lanka. In 1998, Myanmar joined and later in 2003, Nepal and Bhutan also became its members” (From CUTS briefing paper No. 12/2008)

**Table 7: Share of Parts and Components in Bilateral Trade Flows,  
1992/3 and 2006/7 (%)**

| Reporting country                                 |        | EA   | Japan | DEA  | PRC  | ASEAN | NAFTA | EU15 | World |
|---|--------|------|-------|------|------|-------|-------|------|-------|
| <b>(A) Exports</b>                                |        |      |       |      |      |       |       |      |       |
| East Asia (EA)                                    | 1992/3 | 23.6 | 13.9  | 24.9 | 18.5 | 32.1  | 21.1  | 17.7 | 20.2  |
|   | 2006/7 | 47.6 | 32.9  | 50.1 | 51.6 | 54.5  | 25.1  | 24.1 | 34.1  |
| Japan   | 1992/3 | 28.9 | 0.0   | 28.9 | 18.9 | 31.4  | 25.5  | 20.9 | 23.9  |
|   | 2006/7 | 42.0 | 0.0   | 42.0 | 41.5 | 47.9  | 31.5  | 30.4 | 34.4  |
| Developing East Asia (DEA)                        | 1992/3 | 20.1 | 13.9  | 21.6 | 17.8 | 32.8  | 17.0  | 14.7 | 17.3  |
|   | 2006/7 | 48.1 | 33.4  | 53.9 | 0.0  | 65.2  | 22.7  | 21.6 | 34.0  |
| People's Republic of<br>China (PRC)               | 1992/3 | 8.7  | 6.0   | 9.4  | 0.0  | 14.6  | 5.8   | 6.0  | 7.4   |
|   | 2006/7 | 36.2 | 25.2  | 40.6 | 0.0  | 49.1  | 17.1  | 16.3 | 25.6  |
| Republic of Korea                                 | 1992/3 | 19.2 | 15.6  | 21.0 | 9.5  | 25.6  | 20.6  | 16.3 | 18.1  |
|   | 2006/7 | 61.9 | 51.5  | 63.5 | 57.3 | 63.7  | 36.6  | 26.8 | 44.2  |
| Taipei, China                                     | 1992/3 | 24.1 | 19.5  | 25.3 | 22.8 | 29.8  | 23.9  | 31.9 | 24.7  |
|   | 2006/7 | 51.5 | 59.0  | 50.5 | 39.5 | 61.2  | 35.0  | 37.6 | 44.2  |
| Association of Southeast<br>Asian Nations (ASEAN) | 1992/3 | 29.4 | 18.0  | 32.6 | 7.7  | 34.6  | 21.1  | 17.3 | 22.7  |
|   | 2006/7 | 58.2 | 39.9  | 61.4 | 64.0 | 56.0  | 32.1  | 33.9 | 44.2  |
| North American Free Trade<br>Area (NAFTA)         | 1992/3 | 30.0 | 26.7  | 31.5 | 15.7 | 36.8  | 29.0  | 30.4 | 28.4  |
|   | 2006/7 | 46.7 | 36.5  | 49.8 | 34.8 | 67.9  | 28.8  | 30.6 | 31.2  |
| European Union (EU) 15                            | 1992/3 | 17.4 | 10.0  | 20.5 | 20.0 | 24.3  | 23.1  | 18.4 | 18.3  |
|   | 2006/7 | 31.4 | 18.7  | 34.8 | 30.4 | 46.5  | 22.1  | 22.0 | 22.4  |

| Reporter | Partner       | Indicator                | 2000   | 2005   | 2010   | 2014   | Source                             |
|----------|---------------|--------------------------|--------|--------|--------|--------|------------------------------------|
| ASEAN+3  | United States | Trade Share (%)          | 19.200 | 14.336 | 11.229 | 11.054 | IMF Directions of Trade Statistics |
| ASEAN+3  | Thailand      | Cumulative FDI Share (%) | 0.361  | 0.258  | 0.209  | 0.209  | UNCTAD FDI database                |
| ASEAN+3  | Thailand      | Trade Share (%)          | 2.286  | 2.470  | 2.583  | 2.452  | IMF Directions of Trade Statistics |
| ASEAN+3  | Sri Lanka     | Cumulative FDI Share (%) | 0.001  | 0.002  | 0.002  | 0.002  | UNCTAD FDI database                |
| ASEAN+3  | Sri Lanka     | Trade Share (%)          | 0.115  | 0.082  | 0.079  | 0.094  | IMF Directions of Trade Statistics |
| ASEAN+3  | Nepal         | Cumulative FDI Share (%) | 0.000  | 0.000  | 0.000  | 0.000  | UNCTAD FDI database                |
| ASEAN+3  | Nepal         | Trade Share (%)          | 0.019  | 0.007  | 0.013  | 0.027  | IMF Directions of Trade Statistics |
| ASEAN+3  | Myanmar       | Cumulative FDI Share (%) | 0.004  | 0.002  | 0.003  | 0.003  | UNCTAD FDI database                |
| ASEAN+3  | Myanmar       | Trade Share (%)          | 0.107  | 0.112  | 0.160  | 0.396  | IMF Directions of Trade Statistics |

|         |             |                          |        |        |        |        |                                    |
|---------|-------------|--------------------------|--------|--------|--------|--------|------------------------------------|
| ASEAN+3 | Middle East | Trade Share (%)          | 4.905  | 5.764  | 6.299  | 7.338  | IMF Directions of Trade Statistics |
| ASEAN+3 | India       | Cumulative FDI Share (%) | 0.018  | 0.022  | -0.003 | -0.003 | UNCTAD FDI database                |
| ASEAN+3 | India       | Trade Share (%)          | 0.854  | 1.286  | 2.075  | 1.878  | IMF Directions of Trade Statistics |
| ASEAN+3 | Bhutan      | Trade Share (%)          | 0.000  | 0.000  | 0.000  | 0.000  | IMF Directions of Trade Statistics |
| ASEAN+3 | Bangladesh  | Cumulative FDI Share (%) | 0.000  | 0.001  | 0.000  | 0.000  | UNCTAD FDI database                |
| ASEAN+3 | Bangladesh  | Trade Share (%)          | 0.149  | 0.135  | 0.200  | 0.240  | IMF Directions of Trade Statistics |
| ASEAN+3 | BIMSTEC     | Trade Share (%)          | 3.531  | 4.093  | 5.110  | 5.087  | IMF Directions of Trade Statistics |
| ASEAN+3 | ASEAN+3     | Cumulative FDI Share (%) | 18.863 | 20.135 | 18.489 | 18.489 | UNCTAD FDI database                |
| ASEAN+3 | ASEAN+3     | Trade Share (%)          | 45.012 | 47.382 | 46.545 | 45.465 | IMF Directions of Trade Statistics |

|         |               |                 |        |        |       |       |                                    |
|---------|---------------|-----------------|--------|--------|-------|-------|------------------------------------|
| BIMSTEC | United States | Trade Share (%) | 15.262 | 10.828 | 7.660 | 7.935 | IMF Directions of Trade Statistics |
| BIMSTEC | Thailand      | Trade Share (%) | 0.829  | 0.998  | 1.173 | 1.345 | IMF Directions of Trade Statistics |
| BIMSTEC | Sri Lanka     | Trade Share (%) | 0.354  | 0.512  | 0.420 | 0.550 | IMF Directions of Trade Statistics |
| BIMSTEC | Nepal         | Trade Share (%) | 0.162  | 0.240  | 0.246 | 0.367 | IMF Directions of Trade Statistics |
| BIMSTEC | Myanmar       | Trade Share (%) | 0.392  | 0.611  | 0.618 | 0.754 | IMF Directions of Trade Statistics |



|         |             |                 |        |        |        |        |                                    |
|---------|-------------|-----------------|--------|--------|--------|--------|------------------------------------|
| BIMSTEC | Middle East | Trade Share (%) | 7.055  | 8.816  | 16.803 | 16.825 | IMF Directions of Trade Statistics |
| BIMSTEC | India       | Trade Share (%) | 1.535  | 1.905  | 1.743  | 2.084  | IMF Directions of Trade Statistics |
| BIMSTEC | Bhutan      | Trade Share (%) | 0.011  | 0.038  | 0.036  | 0.036  | IMF Directions of Trade Statistics |
| BIMSTEC | Bangladesh  | Trade Share (%) | 0.486  | 0.440  | 0.434  | 0.596  | IMF Directions of Trade Statistics |
| BIMSTEC | BIMSTEC     | Trade Share (%) | 3.769  | 4.744  | 4.670  | 5.731  | IMF Directions of Trade Statistics |
| BIMSTEC | ASEAN+3     | Trade Share (%) | 35.744 | 37.291 | 37.934 | 37.726 | IMF Directions of Trade Statistics |

|         |               |                          |        |        |        |        |                                    |
|---------|---------------|--------------------------|--------|--------|--------|--------|------------------------------------|
| Myanmar | United States | Trade Share (%)          | 9.193  | 0.080  | 0.066  | 0.400  | IMF Directions of Trade Statistics |
| Myanmar | Thailand      | Cumulative FDI Share (%) | N/A    | 0.225  | 0.146  | 0.146  | UNCTAD FDI database                |
| Myanmar | Thailand      | Trade Share (%)          | 15.689 | 32.975 | 29.705 | 17.464 | IMF Directions of Trade Statistics |
| Myanmar | Sri Lanka     | Trade Share (%)          | 0.031  | 0.088  | 0.038  | 0.055  | IMF Directions of Trade Statistics |
| Myanmar | Nepal         | Trade Share (%)          | 0.000  | 0.000  | 0.000  | 0.000  | IMF Directions of Trade Statistics |
| Myanmar | Middle East   | Trade Share (%)          | 0.188  | 0.466  | 0.427  | 0.250  | IMF Directions of Trade Statistics |

|         |            |                          |        |        |        |        |                                    |
|---------|------------|--------------------------|--------|--------|--------|--------|------------------------------------|
| Myanmar | India      | Trade Share (%)          | 4.297  | 7.876  | 8.049  | 4.763  | IMF Directions of Trade Statistics |
| Myanmar | Bangladesh | Trade Share (%)          | 0.414  | 0.426  | 0.578  | 0.211  | IMF Directions of Trade Statistics |
| Myanmar | BIMSTEC    | Trade Share (%)          | 20.432 | 41.365 | 38.370 | 22.492 | IMF Directions of Trade Statistics |
| Myanmar | ASEAN+3    | Cumulative FDI Share (%) | N/A    | 1.012  | 0.656  | 0.656  | UNCTAD FDI database                |
| Myanmar | ASEAN+3    | Trade Share (%)          | 64.695 | 76.138 | 82.071 | 88.581 | IMF Directions of Trade Statistics |

**Intra-regional trade intensity index** is the ratio of intra-regional trade share to the share of world trade with the region, calculated using trade data. It is computed as:

$$(T_{ii}/T_i)/(T_i/T_w)$$

where  $T_{ii}$  is exports of region  $i$  to region  $i$  plus imports of region  $i$  from region  $i$ ;  $T_i$  is total exports of region  $i$  to the world plus total imports of region  $i$  from the world; and  $T_w$  is total world exports plus imports. It determines whether trade within the region is greater or smaller than should be expected on the basis of the region's importance in world trade. An index of more than one indicates that trade flow within the region is larger than expected given the importance of the region in world trade.

**Intra-regional trade share** is the percentage of intra-regional trade to total trade of the region, calculated using trade data. It is calculated as:

$$T_{ii}/T_i$$

where  $T_{ii}$  is exports of region  $i$  to region  $i$  plus imports of region  $i$  from region  $i$  and  $T_i$  is total exports of region  $i$  to the world plus total imports of region  $i$  from the world. A higher share indicates a higher degree of dependency on regional trade.

**Source: ARIC, ADB database**

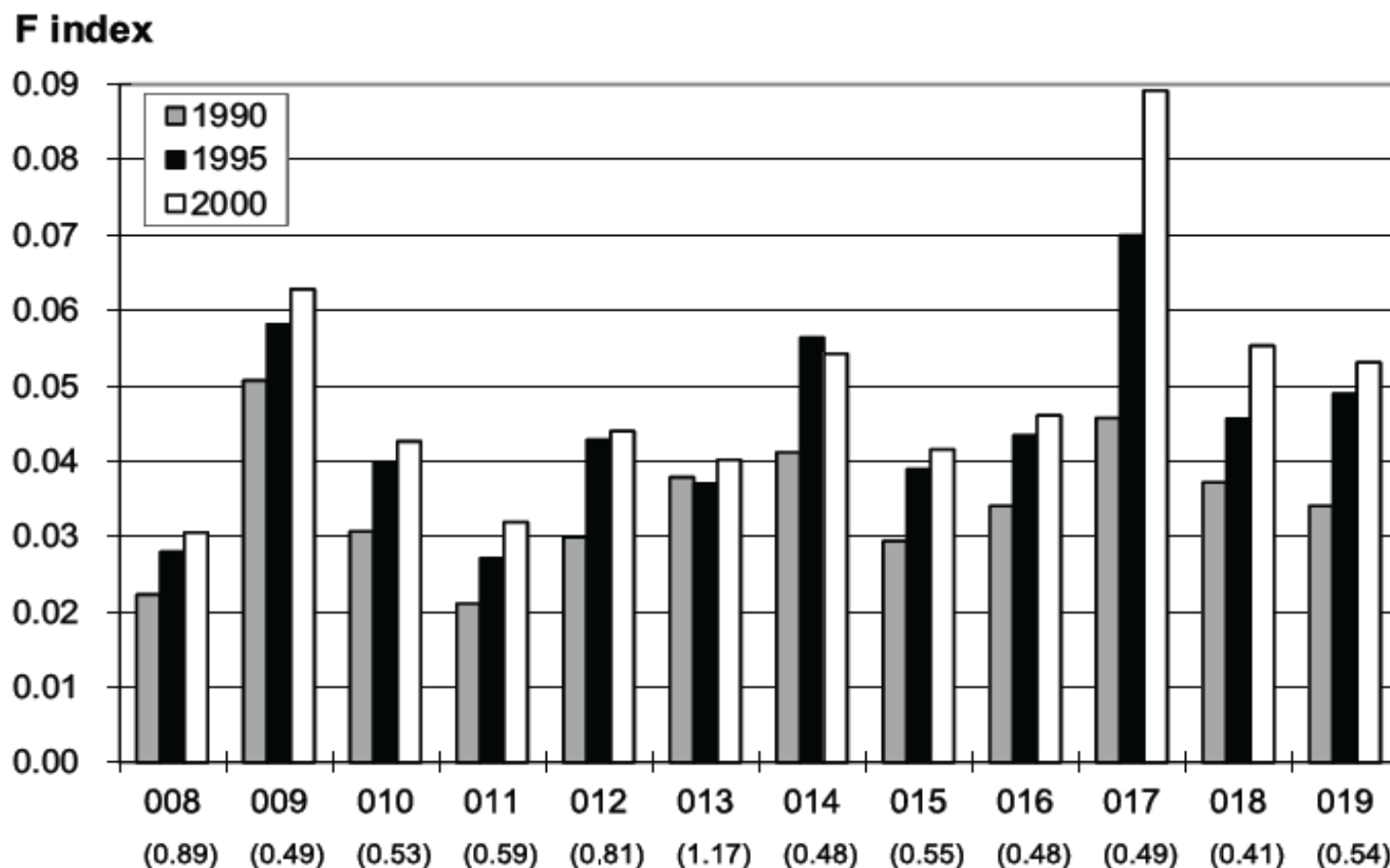
## **Trade Facilitation and Transaction Costs**

“The benefits of trade facilitation can be evaluated in terms of its effect on trade transaction costs. Estimates of such costs vary significantly, and it is useful to distinguish between direct and indirect costs. Direct costs include the cost of preparing documentation, and complying with various customs and other regulations. These may also include the cost of moving goods from factory to port, handling costs at the port, finance and insurance, and international transport costs. Indirect costs include the opportunity costs associated with time and delays in moving the goods from the buyer to the seller. These have been estimated to account for about 80% of total trade transaction costs.” (From Designing and Implementing Trade Facilitation in Asia and the Pacific, UNESCAP, 2013, p.6)

| Commodity Composition of India's Exports                  |       |       |       |       | (in per cent) |       |      |      |
|---|-------|-------|-------|-------|---------------|-------|------|------|
| Commodity   | 1980  | 1985  | 1990  | 1995  | 2000          | 2005  | 2010 | 2013 |
| Manufacturing   | 58.89 | 58.50 | 71.60 | 74.70 | 77.10         | 70.40 | 69.0 | 63.5 |
| of which:   |       |       |       |       |               |       |      |      |
| Organic chemicals   | 0.20  | 0.28  | 1.28  | 2.31  | 3.59          | 4.39  | 3.48 | 3.87 |
| Dyeing, tanning and colouring material                    | 0.77  | 0.70  | 1.28  | 1.10  | 1.16          | 0.82  | 0.72 | 0.83 |
| Medicinal and pharmaceutical products                     | 1.28  | 1.46  | 2.50  | 2.32  | 3.02          | 0.55  | 0.61 | 0.74 |
| Essential oils and perfume materials, soap, cleansing etc | 1.01  | 0.63  | 1.32  | 0.54  | 0.52          | 0.49  | 0.52 | 0.66 |
| Chemical materials and product n.e.s.                     | 0.09  | 0.31  | 0.42  | 0.72  | 1.05          | 1.12  | 0.96 | 1.13 |
| Leather, leather manufactures and dressed fur skin        | 4.77  | 6.00  | 4.59  | 2.30  | 1.94          | 0.75  | 0.41 | 0.50 |
| Textile yarn, fabrics, made up articles                   | 13.49 | 11.65 | 12.02 | 13.99 | 14.44         | 8.18  | 5.77 | 6.01 |
| Woven cotton fabrics                                      | 4.14  | 3.67  | 3.15  | 3.08  | 2.66          | 0.83  | 0.47 | 0.58 |
| Woven fabric of man-made fibres                           | 0.52  | 0.22  | 0.86  | 1.35  | 1.22          | 0.95  | 0.89 | 0.68 |
| Woven fabric other than of cotton and man-made fibre      | 2.40  | 1.88  | 1.07  | 0.65  | 0.89          | 0.48  | 0.23 | 0.11 |
| Articles of apparel and clothing accessories              | 6.95  | 9.96  | 12.19 | 13.23 | 17.07         | 8.92  | 5.05 | 5.35 |

Source: Economic Survey, GOI, various issues

|  |      |       |       |       |       |       |       |      |
|--|------|-------|-------|-------|-------|-------|-------|------|
| <b>Iron and steel and manufactures thereof</b>                                       | 1.03 | 0.52  | 1.60  | 3.30  | 3.56  | 4.80  | 4.77  | 4.04 |
| <b>Manufactures of metals n.e.s.</b>   | 2.60 | 1.40  | 1.88  | 1.82  | 2.81  | 2.68  | 1.87  | 2.36 |
| <b>Power generating machinery and equipment</b>                                      | 1.04 | 0.66  | 0.69  | 0.56  | 0.52  | 0.90  | 1.05  | 1.12 |
| <b>Machinery specialized for particular industry</b>                                 | 0.77 | 1.09  | 1.30  | 0.77  | 0.83  | 0.90  | 1.00  | 1.25 |
| <b>Metal-working machinery</b>   | 0.38 | 0.62  | 0.32  | 0.19  | 0.28  | 1.09  | 0.17  | 0.18 |
| <b>General industrial machinery etc.</b>   | 0.79 | 0.67  | 0.72  | 0.50  | 0.19  | 0.27  | 1.75  | 2.00 |
| <b>Telecommunication and sound recording and reproducing apparatus and equipment</b> | 0.13 | 0.044 | 0.17  | 0.44  | 0     | 0.45  | 1.08  | 1.32 |
| <b>Electrical machinery, apparatus and appliances</b>                                | 1.34 | 1.36  | 1.33  | 1.16  | 0.22  | 2.06  | 2.48  | 1.98 |
| <b>Road vehicles</b>   | 2.45 | 1.42  | 1.90  | 2.80  | 0.89  | 2.99  | 3.93  | 4.09 |
| <b>Other transport equipment</b>   | 0.38 | 0.30  | 0.08  | 0.04  | 0.03  | 0.99  | 2.61  | 2.52 |
| <b>Pearls, precious &amp; Semi-precious stones</b>                                   | 6.82 | 13.08 | 14.94 | 15.25 | 15.59 | 11.54 | 10.15 | 9.60 |



**Figure 5.2.** International fragmentation in East Asia by industry, 1990–2000.

*Note:* F index refers to the international fragmentation index.

*Source:* Calculated by the author using the Asian International Input–Output Tables, 1990–2000.

**Source:** Uncovering Value Added in Trade, edited by Yuqing Xing, ADB and World Scientific, 2016

**Note:** Figs in brackets are capital-labour ratios



| Code | Industry                                   | L/K  |
|------|--|------|
| 008  | Food, beverage and tobacco                 | 1.12 |
| 009  | Textile, leather, and the products thereof | 2.04 |
| 010  | Timber and wooden products                 | 1.89 |
| 011  | Pulp, paper, and printing                  | 1.69 |
| 012  | Chemical products                          | 1.23 |
| 013  | Petroleum and petro products               | 0.85 |
| 014  | Rubber products                            | 2.08 |
| 015  | Non-metallic mineral products              | 1.82 |
| 016  | Metal products                             | 2.08 |
| 017  | Machinery                                  | 2.04 |
| 018  | Transport equipment                        | 2.44 |
| 019  | Other manufacturing products               | 1.85 |

## Revealed Comparative Advantage in Gross Exports of Manufacturing Goods

|                |            | Leather    | Paper      | Non-metal<br>minerals | metal      | & equipment<br>nec | & optical<br>equipment | equipment  | uring<br>nec;<br>recycling |
|----------------|------------|------------|------------|-----------------------|------------|--------------------|------------------------|------------|----------------------------|
| Australia      | 3.1        | 0.3        | 0.7        | 0.7                   | 3.8        | 0.7                | 0.2                    | 0.4        | 0.5                        |
| Japan          | 0.1        | 0.1        | 0.2        | 0.7                   | 1.1        | 1.2                | 1.4                    | 1.9        | 0.9                        |
| Korea          | 0.2        | 0.5        | 0.2        | 0.8                   | 0.9        | 0.8                | 1.7                    | 1.6        | 0.2                        |
| New<br>Zealand | 6.6        | 1.0        | 3.2        | 0.5                   | 0.9        | 0.3                | 0.2                    | 0.2        | 0.4                        |
| Brunei         | 0.3        | 13.4       | 0.1        | 0.1                   | 0.0        | ..                 | 0.1                    | 0.0        | 0.3                        |
| Cambodi<br>a   | 3.9        | 6.4        | 1.4        | 0.2                   | 0.3        | 0.3                | 0.3                    | 0.1        | 0.8                        |
| China          | 0.3        | 2.6        | 0.5        | 0.5                   | 0.8        | 0.8                | 1.8                    | 0.3        | 1.6                        |
| <b>India</b>   | <b>0.6</b> | <b>1.9</b> | <b>0.3</b> | <b>0.7</b>            | <b>0.9</b> | <b>0.4</b>         | <b>0.8</b>             | <b>0.5</b> | <b>6.9</b>                 |
| Indonesia      | 2.8        | 1.9        | 1.5        | 1.2                   | 0.7        | 0.6                | 0.5                    | 0.3        | 0.9                        |

**Source:** Regional Supply Chains in Asia by Amritendu Palit, CWS/WP/200/20, NUS, Singapore

|              |            |            |            |            |            |            |            |            |            |
|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Cambodia     | 3.9        | 6.4        | 1.4        | 0.2        | 0.3        | 0.3        | 0.3        | 0.1        | 0.8        |
| China        | 0.3        | 2.6        | 0.5        | 0.5        | 0.8        | 0.8        | 1.8        | 0.3        | 1.6        |
| <b>India</b> | <b>0.6</b> | <b>1.9</b> | <b>0.3</b> | <b>0.7</b> | <b>0.9</b> | <b>0.4</b> | <b>0.8</b> | <b>0.5</b> | <b>6.9</b> |
| Indonesia    | 2.8        | 1.9        | 1.5        | 1.2        | 0.7        | 0.6        | 0.5        | 0.3        | 0.9        |
| Malaysia     | 0.7        | 0.5        | 1.2        | 1.2        | 0.4        | 1.6        | 1.8        | 0.1        | 0.2        |
| Philippines  | 0.1        | 0.8        | 0.1        | 0.1        | 0.1        | 0.1        | 4.2        | 0.2        | 0.1        |
| Singapore    | 0.2        | 0.1        | 0.2        | 1.9        | 0.3        | 0.8        | 1.7        | 0.4        | 0.2        |
| Thailand     | 2.1        | 1.8        | 0.5        | 0.6        | 0.5        | 0.2        | 1.9        | 0.3        | 1.5        |
| Vietnam      | 4.3        | 6.6        | 1.4        | 0.2        | 0.2        | 0.2        | 0.3        | 0.1        | 0.8        |

Source: OECD WTO TIVA Database

# Growth Rates of Major Industrial Groups

| <b>Industries</b>                               | <b>Mean Growth Rate for 40 yrs</b> | <b>Conclusions for 40 yrs</b> | <b>Mean Growth Rate for 10 yrs from '96 to '05</b> | <b>Conclusions for 10 yrs</b> |
|---|------------------------------------|-------------------------------|--|-------------------------------|
| <b>Basic Chemical and Chemical Products</b>     | <b>0.155451391</b>                 | <b>Low</b>                    | <b>0.120531083</b>                                 | <b>High</b>                   |
| <b>Basic metals</b>                             | <b>0.173911054</b>                 | <b>High</b>                   | <b>0.20542626</b>                                  | <b>High</b>                   |
| <b>Beverages and tobacco</b>                    | <b>0.151121869</b>                 | <b>Low</b>                    | <b>0.116564167</b>                                 | <b>Low</b>                    |
| <b>Coke, Refined petroleum and Nuclear Fuel</b> | <b>0.277392537</b>                 | <b>High</b>                   | <b>0.313585814</b>                                 | <b>High</b>                   |
| <b>Electric machineries</b>                     | <b>0.158587038</b>                 | <b>Low</b>                    | <b>0.034625913</b>                                 | <b>Low</b>                    |
| <b>Food products</b>                            | <b>0.130010193</b>                 | <b>Low</b>                    | <b>0.065093787</b>                                 | <b>Low</b>                    |
| <b>Leather and fur</b>                          | <b>0.161293585</b>                 | <b>Low</b>                    | <b>0.080757236</b>                                 | <b>Low</b>                    |
| <b>Metal Products except machineries</b>        | <b>0.152829874</b>                 | <b>Low</b>                    | <b>0.116582461</b>                                 | <b>Low</b>                    |

**Source: Annual Survey of Industries, CSO, Various Years**

|  |                    |             |                    |             |
|--|--------------------|-------------|--------------------|-------------|
| <b>Non-electric machineries</b>              | <b>0.172751794</b> | <b>High</b> | <b>0.114426517</b> | <b>Low</b>  |
| <b>Non-metallic mineral products</b>         | <b>0.173872006</b> | <b>High</b> | <b>0.161821149</b> | <b>high</b> |
| <b>Others</b>                                | <b>0.192382728</b> | <b>High</b> | <b>0.254279325</b> | <b>high</b> |
| <b>Paper, Printing and Publishing</b>        | <b>0.156515322</b> | <b>Low</b>  | <b>0.187388573</b> | <b>high</b> |
| <b>Professional and Scientific tools</b>     | <b>0.268158868</b> | <b>High</b> | <b>0.039782663</b> | <b>Low</b>  |
| <b>Rubber</b>                                | <b>0.166132838</b> | <b>High</b> | <b>0.13758323</b>  | <b>high</b> |
| <b>Textiles and wearing apparels</b>         | <b>0.101721642</b> | <b>Low</b>  | <b>0.046355851</b> | <b>Low</b>  |
| <b>Transports and Automobile parts, etc.</b> | <b>0.164096185</b> | <b>High</b> | <b>0.234710736</b> | <b>high</b> |
| <b>Wood</b>                                  | <b>0.123150036</b> | <b>Low</b>  | <b>0.055946026</b> | <b>Low</b>  |
| <b>Med of Mean</b>                           | <b>0.161293585</b> |             | <b>0.116582461</b> |             |

## **Unregistered Manufacturing Sector's share in Employment and GVA, 1999-2000**

| <b>Sectors</b>   | <b>Unregistered sector's share in total employment (%)</b> | <b>Unregistered sector's share in total Gross Value Added (GVA) (%)</b> |
|--|--|---|
| <b>Manufacture of Beverages</b>  | <b>88</b>  | <b>52</b>   |
| <b>Manufacture of tobacco prods.</b>   | <b>90</b>  | <b>81</b>   |
| <b>Manufacture of spinning, weaving and finishing of textiles</b>                        | <b>80</b>  | <b>58</b>   |
| <b>Manufacture of wearing apparel, except for apparel &amp; Tailoring</b>                | <b>90</b>  | <b>63</b>   |
| <b>Manufacture of tanning and dressing of leather, fur &amp; fur products</b>            | <b>92</b>  | <b>54</b>   |
| <b>Manufacture of wood and wood products except furniture</b>                            | <b>99</b>  | <b>73</b>   |
| <b>Manufacture of furniture</b>  | <b>98</b>  | <b>51</b>   |
| <b>Manufacture of paper and paper products, publishing, printing etc</b>                 | <b>83</b>  | <b>48</b>   |
| <b>Manufacture of coke, refined petro products, nuclear, rubber and plastic products</b> | <b>79</b>  | <b>40</b>   |

**Source: Contribution of the Unorganised Sector to GDP Report of the Sub-Committee of a NCEUS Task Force. WP #2, by K.P. Kannan et al, NCEUS, June 2008**

|  |           |           |
|--|-----------|-----------|
| <b>Manufacture of chemical &amp; chemical products</b>   | <b>71</b> | <b>27</b> |
| <b>Manufacture of other non-metallic mineral products</b>  | <b>91</b> | <b>58</b> |
| <b>Manufacture of basic iron &amp; steel and non-ferrous metals</b>                                  | <b>58</b> | <b>32</b> |
| <b>Manufacture of recycling of metal waste, scrap &amp; non-metal scrap</b>                          | <b>99</b> | <b>32</b> |
| <b>Manufacture of fabricated metal products, Manufacture of machinery and apparatus n.e.c.</b>       | <b>86</b> | <b>43</b> |
| <b>Manufacture of electrical machinery &amp; apparatus, radio, TV &amp; communication equipments</b> | <b>79</b> | <b>44</b> |
| <b>Manufacture of medical, precision &amp; optical instruments, watches, clocks etc</b>              | <b>95</b> | <b>75</b> |
| <b>Manufacture of motor vehicles, trailers &amp; semi-trailers &amp; other transport equipments</b>  | <b>45</b> | <b>41</b> |

# Types of Participation in Global Value Chain (GVC):

As per the definitions used by OECD -WTO TIVA database:

- ❑ *Forward participation* - presents the domestic value added content of gross exports / final demand of foreign countries by domestic industry  $i$  in country  $c$ . In other words this means supplying goods for use in foreign country exports / final demand
- ❑ *Backward participation* - presents the foreign value added content of gross exports / final demand by domestic industry  $i$  in country  $c$ . In other words this means sourcing imported inputs for their exports / final demand

Clearly *Forward Participation* exhibits the opportunity of any country to use GVC as a driver of growth of industries



# Forward Participation in Final Demand (% of GVA)

| SI No | Country   | Wood and paper | Total Manufg | Rubber & Plastic | Chemicals & Non-metallic minerals | Computer, Electronics & Optical Equipments | Basic & Fabricated Metals | Manufacturing n.e.c; Recycling | Motor Vehicles Trailers & Semi-trailers | Textiles, Textile products, Leather & Footwear |
|-------|-----------|----------------|--------------|------------------|-----------------------------------|--|---------------------------|--------------------------------|---|--|
| 1     | China     | 0.3            | 7.6          | 0.4              | 1.6                               | 1.2  | 1.1                       | 0.5                            | 0.3                                     | 1.0  |
| 2     | India     | 0.1            | 4.1          | 0.2              | 1.7                               | 0.2  | 0.6                       | 0.2                            | 0.2                                     | 0.3  |
| 3     | Indonesia | 0.6            | 5.9          | 0.2              | 1.6                               | 0.4  | 0.5                       | 0.1                            | 0.2                                     | 0.7  |
| 4     | Malaysia  | 0.8            | 16.1         | 1.2              | 5.9                               | 4.0  | 1.6                       | 0.4                            | 0.3                                     | 0.3  |
| 5     | Taiwan    | 0.3            | 17.5         | 0.6              | 3.6                               | 8.6  | 2.1                       | 0.1                            | 0.3                                     | 0.5  |
| 6     | Thailand  | 0.9            | 15.5         | 0.8              | 4.1                               | 1.2  | 1.2                       | 0.6                            | 1.1                                     | 1.1  |
| 7     | Vietnam   | 0.5            | 11.1         | 0.6              | 2.0                               | 1.0  | 1.2                       | 0.6                            | 0.2                                     | 2.7  |
| 8     | Korea     | 0.4            | 17.4         | 0.8              | 3.5                               | 3.9  | 3.1                       | 0.1                            | 2.0                                     | 0.5  |
| 9     | Japan     | 0.2            | 5.4          | 0.3              | 1.0                               | 1.0  | 1.0                       | 0.1                            | 0.7                                     | 0.1  |

Source: OECD-WTO TIVA Dataset

| <b>Sl No</b> | <b>Country</b>         | <b>Wood and Paper</b> | <b>Total Manufg</b> | <b>Rubber &amp; Plastic</b> | <b>Chemicals &amp; Non-metallic minerals</b> | <b>Computer, Electronics &amp; Optical Equipments</b> | <b>Basic &amp; Fabricated Metals</b> | <b>Manufacturing n.e.c; Recycling</b> | <b>Motor Vehicles Trailers &amp; Semi-trailers</b> | <b>Textiles, Textile products, Leather &amp; Footwear</b> |
|--------------|------------------------|-----------------------|---------------------|-----------------------------|--|---|--------------------------------------|---------------------------------------|--|---|
| <b>10</b>    | <b>Poland</b>          | <b>0.8</b>            | <b>9.9</b>          | <b>0.8</b>                  | <b>2.4</b>                                   | <b>0.5</b>  | <b>1.5</b>                           | <b>0.5</b>                            | <b>1.1</b>   | <b>0.4</b>  |
| <b>11</b>    | <b>Hungary</b>         | <b>0.8</b>            | <b>16.9</b>         | <b>1.1</b>                  | <b>4.0</b>                                   | <b>2.2</b>  | <b>1.5</b>                           | <b>0.4</b>                            | <b>2.6</b>   | <b>0.4</b>  |
| <b>12</b>    | <b>Czech Republic</b>  | <b>1.2</b>            | <b>17.2</b>         | <b>1.6</b>                  | <b>3.4</b>                                   | <b>1.1</b>  | <b>2.9</b>                           | <b>0.6</b>                            | <b>3.0</b>   | <b>0.5</b>  |
| <b>13</b>    | <b>Slovak Republic</b> | <b>1.4</b>            | <b>16.6</b>         | <b>1.1</b>                  | <b>2.9</b>                                   | <b>1.5</b>  | <b>3.6</b>                           | <b>0.4</b>                            | <b>2.9</b>   | <b>0.7</b>  |
| <b>14</b>    | <b>Slovenia</b>        | <b>1.3</b>            | <b>14.6</b>         | <b>1.2</b>                  | <b>4.1</b>                                   | <b>0.7</b>  | <b>2.9</b>                           | <b>0.7</b>                            | <b>1.1</b>   | <b>0.6</b>  |
| <b>15</b>    | <b>Romania</b>         | <b>0.8</b>            | <b>11.8</b>         | <b>0.4</b>                  | <b>1.3</b>                                   | <b>0.8</b>  | <b>1.6</b>                           | <b>0.7</b>                            | <b>1.9</b>   | <b>1.9</b>  |
| <b>16</b>    | <b>Russia</b>          | <b>0.3</b>            | <b>6.9</b>          | <b>0.1</b>                  | <b>3.5</b>                                   | <b>0.2</b>  | <b>1.8</b>                           | <b>0.1</b>                            | <b>0.1</b>   | <b>0.0</b>  |

| Rank Correlation Dataset  |         |        |      |          |          |             |          |             |
|---------------------------|---------|--------|------|----------|----------|-------------|----------|-------------|
| Sector                    | forward | growth | RCA  | Shareexp | fragment | labcapratio | Unorgemp | unorgoutput |
| Textile plus leather      | 0.3     | 6.85   | 1.9  | 25.85    | 0.062    | 2.04        | 0.89     | 0.583       |
| Chemical and non-metallic | 1.7     | 14.1   | 0.7  | 1.09     | 0.042    | 1.53        | 0.81     | 0.425       |
| Basic Metals              | 0.6     | 20.54  | 0.9  | 6.93     | 0.046    | 2.08        | 0.58     | 0.32        |
| Machinery                 | 0.3     | 8.85   | 0.4  | 3.86     | 0.089    | 2.04        | 0.825    | 0.435       |
| Transport equipments      | 0.2     | 23.47  | 0.5  | 2.45     | 0.055    | 2.44        | 0.45     | 0.41        |
| Wood and Paper            | 0.1     | 18.74  | 0.3  | 0.63     | 0.037    | 1.8         | 0.93     | 0.573       |
| Rubber and Plastics       | 0.2     | 13.76  | 0.72 | 4.9      | 0.055    | 2.08        | 0.79     | 0.4         |
| Other Mnfg                | 0.2     | 25.43  | 6.9  | 13.57    | 0.524    | 1.85        | 0.946    | 0.96        |

## Rank Correlation Coefficient (Kendall's Tau)

[illegible]

# Some inferences

- ❑ India has not taken much advantage of either international fragmentation of products or Participation in GVC- arguably the two are interrelated.
- ❑ Given strong association of output and employment in unorganised sector, this sector generates jobs but contributes little in enhancing India's competitiveness
- ❑ Thus, within BIMSTEC, Thailand has exploited this trend of parts and components production , integration in GVC through small scale sector producing jobs as well. But they have aligned themselves with the spirit and dynamics of ASEAN.
- ❑ Given India's rather weak integration in GVC and Thailand's orientation towards ASEAN, BIMSTEC shows little prospect in medium term. However, one may look forward to significant gains in the long run if orientation within the group changes.
- ❑ Myanmar, having good scope of restructuring its manufacturing sector, could get some good lessons from this to exploit its membership in regional groupings.

Thank you