Policy Reversals, Lobby Groups and Economic Distortions

Rafaelita M. Aldaba

DISCUSSION PAPER SERIES NO. 2005-04

The PIDS Discussion Paper Series constitutes studies that are preliminary and subject to further revisions. They are being circulated in a limited number of copies only for purposes of soliciting comments and suggestions for further refinements. The studies under the Series are unedited and unreviewed.

The views and opinions expressed are those of the author(s) and do not necessarily reflect those of the Institute.

Not for quotation without permission from the author(s) and the Institute.

March 2005

For comments, suggestions or further inquiries please contact:
The Research Information Staff, Philippine Institute for Development Studies
3rd Floor, NEDA sa Makati Building, 106 Amorsolo Street, Legaspi Village, Makati City, Philippines
Tel Nos: 8924059 and 8935705; Fax No: 8939589; E-mail: publications@pidsnet.pids.gov.ph
Or visit our website at http://www.pids.gov.ph
Abstract

This paper aims to review the impact of the various tariff legislations passed from 1998 to 2003 on the structure of protection in the Philippines. The paper finds that while the overall level of effective protection has declined, it has remained uneven as some selected sectors have continued to receive relatively high effective rates of protection. As such, the economic distortions that characterize our tariff structure have continued to prevail and have led to the inefficient use of resources. The tariff structure continues to favor the manufacture of highly protected import substitutes at the expense of exportables. Oftentimes, the favored sectors are intermediate goods like sugar, petrochemicals, float glass, and steel which are inputs to a lot of products. Since the tariffs on the inputs are higher than the outputs, the cost of production has remained high affecting the competitiveness of the user sectors. The large disparities in tariff protection has provided incentives for lobbying. Thus, sustaining the trade reforms and encouraging competition to promote efficiency and consumer welfare has been very difficult.

Keywords: effective protection, tariff structure, trade policy
I. Introduction

Since the early 1980s, the Philippines has liberalized its trade policy by reducing statutory tariff rates and removing import quantitative restrictions. The first tariff reform program (TRP I) initiated in 1981 substantially reduced the average nominal tariff and the high rate of effective protection that characterized the Philippine industrial structure (see Box 1). TRP I also reduced the number of regulated products with the removal of import restrictions on 1,332 lines between 1986 and 1989.

The second phase of the tariff reform program (TRP II) was launched in 1991. TRP II introduced a new tariff code that further narrowed down the tariff range with the majority of tariff lines falling within the three to 30 percent tariff range. It also allowed the tariffication of quantitative restrictions for 153 agricultural products and tariff realignment for 48 commodities. With the country’s ratification of the World Trade Organization (WTO) in 1994, the government committed to remove import restrictions on sensitive agricultural products except rice and replace these with high tariffs.
### Box 1: Major Episodes of Trade Policy Reform in the Philippines

<table>
<thead>
<tr>
<th>Time Line</th>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>Marcos Administration Tariff Reform Program I EO 609 and EO 632-A (January 1981)</td>
<td>TRP 1 reduced the level and dispersion of tariff rates from a range of zero to 100 percent in 1980 to a range of 10 percent to 50 percent and removed quantitative restrictions beginning in 1981 and ending in 1985</td>
</tr>
<tr>
<td>1983</td>
<td>Assassination of Benigno Aquino Balance of payments crisis Suspension of the TRP I</td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td>EDSA I Aquino Administration Revival of import liberalization</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>EO 413 (July 1990)</td>
<td>EO 413 aimed to simplify the tariff structure by reducing the number of rates to four, ranging from 3 percent to 30 percent over a period of one year, but was not implemented.</td>
</tr>
<tr>
<td>1991</td>
<td>EO 470 (July 1991) Tariff Reform Program II</td>
<td>TRP II reduced the tariff range to within a three percent to 30 percent tariff range by 1995</td>
</tr>
<tr>
<td>1992</td>
<td>Ramos Administration EO 8 Tariff Reform Program II</td>
<td>EO 8 tariffed quantitative restrictions for 153 agricultural products and tariff realignment for 48 commodities</td>
</tr>
<tr>
<td>1994</td>
<td>Ratification of the GATT-WTO</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>EO 264 (August 1995) Tariff Reform Program III EO 288 (December 1995)</td>
<td>EO 264 further reduced the tariff range to three percent and ten percent levels, reduced the ceiling rate on manufacture goods to 30 percent while the floor remained at three percent, and created a four-tier tariff schedule: three percent for raw materials, 10 percent for locally available raw materials and capital equipment, 20 percent for intermediate goods, and 30 percent for finished goods EO 288 modified the nomenclature and import duties on non-sensitive agricultural products</td>
</tr>
<tr>
<td>1996</td>
<td>EO 313 (March 1996) RA 8178</td>
<td>EO 313 modified the nomenclature and increased the tariff rates on sensitive agricultural products RA 8178 lifted the quantitative restrictions on three products and defined minimum access volume for these products</td>
</tr>
<tr>
<td>1997</td>
<td>Asian financial crisis</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>EO 465 (January 1998) Estrada Administration EO 486 (June 1998) EO 63 (January 1999) EO 334 (January 2001) Tariff Reform Program IV</td>
<td>EO 465 corrected remaining distortions in the tariff structure and smoothed the schedule of tariff reduction in 23 industries identified as export winners EO 486 modified the rates on items not covered by EO 465 EO 63 adjusted the tariff rates on six industries Freezing of tariff rates at 2000 level until 2001 EO 334 adjusted the tariff structure towards a uniform tariff rate of 5 percent by the year 2004</td>
</tr>
<tr>
<td>2001</td>
<td>EDSA II Macapagal-Arroyo Administration EO 11 (April 2001) EO 84 (March 2002) EO 91 (April 2002)</td>
<td>EO 11 corrected the EO 334 tariff rates imposed on certain products EO 84 extended existing tariff rates from January 2002 to 2004 on various agricultural products EO 91 modified the tariff rates on imported raw materials, intermediate inputs, and machinery and parts</td>
</tr>
<tr>
<td>2003</td>
<td>EO 164 (January 2003) EO 241 (October 2003) EO 264 (December 2003)</td>
<td>EO 164 maintained the 2002 tariff rates for 2003 covering a substantial number of products EO 241 and EO 264 adjusted tariff rates on finished products and raw materials and intermediate goods, respectively.</td>
</tr>
</tbody>
</table>
In 1995, the government initiated another round of tariff reform (TRP III) as a first major step in its plan to adopt a uniform five percent tariff by 2005. This further narrowed down the tariff range for industrial products to within three and ten percent range. In 1996, the government legislated the tariffication of quantitative restrictions imposed on agricultural products and the creation of tariff quotas imposing a relatively lower duty up to a minimum access level (or in-quota rate) and a higher duty beyond this minimum level (or out-quota rate).

In 2001, another legislation (TRP IV) was passed to adjust the tariff structure towards a uniform tariff rate of 5 percent by the year 2004, except for a few sensitive agricultural and manufactured items. In October and December 2003, the Arroyo government issued Executive Orders 241 and 264, respectively, to modify the tariff structure such that the tariff rates on products that are not locally produced are as low as possible while the tariff rates on products that are locally produced are adjusted upward.

Except during the Ramos administration, the various liberalization episodes that the economy has gone through under different presidents have been characterized by reversals. The inability of the government to sustain trade reforms can be attributed not only to the crises that have incessantly plagued the country but also to intense lobbying by special interest groups to increase their tariffs and delay or exempt them from tariff restructuring. For instance, the Marcos administration suspended TRP I because of the 1983 economic and political crises that triggered the imposition of severe import restrictions and the re-regulation of previously liberalized commodities.

The Aquino administration signed EO 413 in July 1990 to simplify the tariff structure over a period of one year but was not implemented because of the vehement protests from domestic manufacturers of import substitutes. Various industry associations convened to oppose the issuance of EO 413 resulting in the formation of the Federation of Philippine Industries, a private sector group advocating protection of domestic industries. The business firms successfully persuaded then President Aquino to delay the tariff reform package for one year. In July 1991, EO 470 was legislated; it contained the same tariff cuts under EO 413, except that the reductions were spread over a period of six years instead of one year.

Amid a weak Estrada administration, the National Economic Development Authority (NEDA) struggled to continue the trade reforms initiated by the Ramos government. In 1998, EO 486, a comprehensive tariff reform package, was signed. However, this was strongly opposed by the local manufacturers of import-substitutes. After six months, EO 63 was issued to increase the tariff rates on textiles, garments, petrochemicals, pulp and paper, and pocket lighters. The same pattern emerged under the Arroyo administration, which also remained captured by various interest groups. Hence, TRP IV, which was legislated prior to the impeachment of Estrada never really took off the ground as intense pressure by lobby groups either resulted in tariff increases or postponement of scheduled tariff reductions.

The main objective of this paper is to assess the impact of the various tariff legislations from 1998 to 2003 on the overall structure of protection, highlighting those sectors where protection remains particularly high. After the introduction, the current structure and level of nominal protection will be assessed by comparing the changes in nominal tariff rates from
1998 to 2005. In the next section, EPR estimates will be used to analyze the impact of the tariff increases embodied by the tariff laws passed during the period 1998 to 2003 on the structure of effective protection. Then, a closer look and assessment of the favored sectors in terms of their economic performance and contribution will be made. Finally, lessons and policy implications will be drawn from the preceding analysis.

II. Changes in Structure and Level of Statutory Tariff Rates: 1998 to 2005

EO 465 (January 1998) signed by then President Ramos and EO 486 (June 1998) were part of a series of legislations that were meant to modify the tariff schedule defined by EO 264 of August 1995 that represented TRP III. In 2000, tariffs were frozen until 2001. EO 334 or TRP IV was signed in January 2001 with the aim of adopting a five percent tariff rate by 2004. In March 2002, EO 84 was passed to extend existing tariff rates from January 2002 to 2004 on various agricultural products. In January 2003, EO 164 was signed to maintain the 2002 tariff rates for 2003 covering a substantial number of products. Before 2003 ended, two legislations, EOs 241 and 264, were passed to adjust the tariff schedule resulting in tariff increases on a group of selected agricultural and manufactured products.

In this section, mean tariffs are used in the analysis of the structure of nominal protection. Simple arithmetic averages (unweighted) are calculated from 1998 to 2005 to trace the effects of the various legislations on the overall level of tariff protection. Table 1 and Figure 1 present the statutory tariff rates from 1998 to 2005 for the country’s major economic sectors. Each year reflects the changes in tariffs mandated by the different legislations passed from the Estrada administration (June 1998 to January 2001) until the Arroyo administration (February 2001 to the present).

It is evident from Table 1 that our overall level of tariff rates is already low. On the average, tariff rates were reduced from 33% to the current average rate of 6.82 percent. Agriculture has the highest average tariff rate of 11.3 percent. Manufacturing mimics the total industry average with its average tariff rate of 6.76 percent. Fishing and forestry has an average rate of six percent while mining and quarrying is the lowest at 2.5 percent. Unlike the rest of the sectors where ad valorem tariffs are used, tariff quotas are used in agriculture primarily because of the increased protection that they can provide against large reductions in import prices.

Note, however, that lower level of tariff protection does not always imply that the tariff schedule is less distorting. The economic and trade distortions associated with our tariff structure depend not only on the size of tariffs but also on the dispersion of these tariffs across all products. Two measures are estimated: the percentage of tariff peaks and the coefficient of variation. Tariff peaks are represented by the proportion of products with tariffs exceeding three times the mean tariff while the coefficient of variation is the ratio of the standard deviation to the mean. In general, the more dispersion in a country’s tariff schedule, the greater the distortions caused by tariffs on production and consumption patterns. Firms will tend to increase the production of those commodities protected by high tariffs while consumers will
tend to shift their consumption from products with high tariffs to competing products with lower costs.

**Table 1: Structure of Nominal Tariff Protection, 1998-2005**

<table>
<thead>
<tr>
<th>Major Sectors</th>
<th>1990</th>
<th>EOs 465 &amp; 486</th>
<th>EO 63</th>
<th>Tariff freeze, EOs 334, 11, 84 &amp; 91</th>
<th>EO 164</th>
<th>EOs 241 &amp; 264</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1998</td>
<td>1999</td>
<td>2000</td>
<td>2001</td>
<td>2002</td>
<td>2003</td>
</tr>
<tr>
<td>All Industries</td>
<td>33.33</td>
<td>11.32</td>
<td>10.25</td>
<td>8.47</td>
<td>8.28</td>
<td>6.45</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.44</td>
<td>0.96</td>
<td>0.91</td>
<td>0.99</td>
<td>1.04</td>
<td>1.17</td>
</tr>
<tr>
<td>% of tariff peaks</td>
<td>-</td>
<td>2.24</td>
<td>2.24</td>
<td>2.48</td>
<td>2.50</td>
<td>2.69</td>
</tr>
<tr>
<td>Agriculture</td>
<td>36.73</td>
<td>15.9</td>
<td>13.2</td>
<td>11.5</td>
<td>12.3</td>
<td>10.4</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>-</td>
<td>1.07</td>
<td>1.14</td>
<td>1.3</td>
<td>1.31</td>
<td>1.22</td>
</tr>
<tr>
<td>Fishing &amp; forestry</td>
<td>29.24</td>
<td>9.4</td>
<td>8.9</td>
<td>6.7</td>
<td>6.7</td>
<td>5.8</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>18.21**</td>
<td>0.63</td>
<td>0.70</td>
<td>0.66</td>
<td>0.62</td>
<td>0.45</td>
</tr>
<tr>
<td>Mining &amp; quarrying</td>
<td>11.71</td>
<td>3.3</td>
<td>3.3</td>
<td>3.1</td>
<td>3.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>-</td>
<td>0.42</td>
<td>0.41</td>
<td>0.24</td>
<td>0.23</td>
<td>0.38</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>34.66</td>
<td>11.38</td>
<td>10.35</td>
<td>8.50</td>
<td>8.28</td>
<td>6.39</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>-</td>
<td>0.93</td>
<td>0.88</td>
<td>0.95</td>
<td>1.00</td>
<td>1.13</td>
</tr>
<tr>
<td>Number of product Lines</td>
<td>6193</td>
<td>7363</td>
<td>7363</td>
<td>7363</td>
<td>7363</td>
<td>7363</td>
</tr>
</tbody>
</table>

*Fishing, **forestry. 1990 figures are from Manasan & Pineda (1999).
As Table 1 shows, while the average tariff rate for all industries dropped from 33 percent in 1990 to 6.82 percent in 2004, tariff dispersion widened as the coefficient of variation went up from 0.44 to 1.07. The ad valorem tariffs for mining and quarrying as well as those for fishing and forestry show the most uniformity while those for agriculture and manufacturing exhibit the most dispersion. The number of tariff lines went up from 6,193 to 7,382 between 1990 and 2004.

Table 1 also indicates that the percentage of tariff peaks (tariffs that are greater than three times the mean tariff) went up from 2.24 percent in 1998 to 2.71 percent in 2004. An increase in tariff peaks occurs when high tariffs are reduced by less than the average reduction over all tariffs. The greater the percentage of tariff peaks in a country’s tariff schedule, the greater the potential economic distortions particularly when highly substitutable products are present in both domestic and world markets. The sectors with tariff peaks consisted mostly of agricultural products with in- and out- quota rates. The sectors with tariff peaks consisted of sugarcane, sugar milling and refining, palay, corn, rice and corn milling, vegetables like onions, garlic, and cabbage, roots and tubers, hog, cattle and other livestock, chicken, other poultry and poultry products, slaughtering and meat packing, coffee roasting and processing, meat and meat processing, canning and preserving fruits and vegetables, manufacture of starch and starch products, manufacture of bakery products excluding noodles, manufacture of animal feeds, miscellaneous food products, manufacture of drugs and medicines, manufacture of chemical products, and manufacture and assembly of motor vehicles.

Table 2 presents a more detailed tariff structure in the manufacturing sector. The table shows that within manufacturing, the average nominal tariff rates vary with food manufacturing receiving the highest level of average tariff rate of 13.8 percent in 2004 while machinery gets the lowest average tariff rate of three percent. The other manufacturing sectors enjoying relatively high average tariff rate include textile and garments with 11.7 percent and furniture and fixtures with 11.2 percent. The rubber and plastic products sector has an average tariff rate of nine percent while the beverages sector has an average rate of 8.6 percent. Based on the coefficient of variation, machinery, transportation, food processing, and chemicals and chemical products exhibit the largest dispersion of tariffs while tobacco, textiles and garments, and furniture and fixtures have relatively low dispersion. Note that manufacturing sectors with relatively high coefficient of variation such as machinery and chemical and chemical products are the same sectors with the lowest average tariff rates of three and 3.6 percent, respectively.

In terms of frequency distribution, figure 2 shows that 55 percent of the Philippine tariff lines are clustered around the 0-3 tariff levels. About 29 percent of the tariff or product lines are found in the 5-10 percent tariff levels. Between 1998 and 2004, the number of product lines in both tariff levels increased. The number of product lines in the 15-25 tariff level declined from 30 percent in 1998 to 13 percent in 2004. However, the number of lines in the 30-40 tariff level rose from 1.5 percent to 2.6 percent. Those in the 45-55 and 60-80 tariff levels seem to be negligible.
<table>
<thead>
<tr>
<th>Table 2: Structure of Average Nominal Tariff Protection in the Manufacturing Sector</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>11.4</td>
<td>10.3</td>
<td>8.5</td>
<td>8.3</td>
<td>6.4</td>
<td>6.6</td>
<td>6.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.93</td>
<td>0.88</td>
<td>0.95</td>
<td>1.00</td>
<td>1.13</td>
<td>1.03</td>
<td>1.03</td>
<td>1.03</td>
</tr>
<tr>
<td>Food manufacturing</td>
<td>20.8</td>
<td>18.2</td>
<td>16.1</td>
<td>16.5</td>
<td>14.4</td>
<td>12.9</td>
<td>13.8</td>
<td>13.8</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.98</td>
<td>0.92</td>
<td>1.06</td>
<td>1.08</td>
<td>1.02</td>
<td>1.08</td>
<td>1.01</td>
<td>1.01</td>
</tr>
<tr>
<td>Beverages</td>
<td>15.3</td>
<td>13.6</td>
<td>9.7</td>
<td>9.7</td>
<td>7</td>
<td>7</td>
<td>8.6</td>
<td>8.6</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.41</td>
<td>0.5</td>
<td>0.52</td>
<td>0.52</td>
<td>0.44</td>
<td>0.44</td>
<td>0.53</td>
<td>0.53</td>
</tr>
<tr>
<td>Tobacco</td>
<td>18.6</td>
<td>13.9</td>
<td>9.1</td>
<td>9.1</td>
<td>6.5</td>
<td>6.5</td>
<td>7.6</td>
<td>7.6</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.21</td>
<td>0.22</td>
<td>0.27</td>
<td>0.27</td>
<td>0.22</td>
<td>0.22</td>
<td>0.31</td>
<td>0.31</td>
</tr>
<tr>
<td>Textile &amp; garments</td>
<td>18.8</td>
<td>17.6</td>
<td>14.3</td>
<td>14.1</td>
<td>10.6</td>
<td>10.9</td>
<td>11.7</td>
<td>11.7</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.38</td>
<td>0.31</td>
<td>0.43</td>
<td>0.46</td>
<td>0.45</td>
<td>0.48</td>
<td>0.42</td>
<td>0.42</td>
</tr>
<tr>
<td>Leather &amp; leather prods</td>
<td>13</td>
<td>10.6</td>
<td>8.5</td>
<td>8.1</td>
<td>6.1</td>
<td>7.9</td>
<td>7.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.76</td>
<td>0.74</td>
<td>0.72</td>
<td>0.70</td>
<td>0.53</td>
<td>0.70</td>
<td>0.77</td>
<td>0.77</td>
</tr>
<tr>
<td>Wood &amp; wood products</td>
<td>13.8</td>
<td>12.3</td>
<td>9.9</td>
<td>9.9</td>
<td>7.1</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.59</td>
<td>0.56</td>
<td>0.64</td>
<td>0.64</td>
<td>0.66</td>
<td>0.66</td>
<td>0.66</td>
<td>0.66</td>
</tr>
<tr>
<td>Furniture &amp; fixtures</td>
<td>19.6</td>
<td>16.3</td>
<td>15</td>
<td>14.4</td>
<td>10.8</td>
<td>11.1</td>
<td>11.2</td>
<td>11.2</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.39</td>
<td>0.36</td>
<td>0.45</td>
<td>0.48</td>
<td>0.49</td>
<td>0.45</td>
<td>0.44</td>
<td>0.44</td>
</tr>
<tr>
<td>Paper &amp; paper products</td>
<td>14.2</td>
<td>12.1</td>
<td>9.4</td>
<td>8.9</td>
<td>6.0</td>
<td>6.6</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.64</td>
<td>0.6</td>
<td>0.56</td>
<td>0.59</td>
<td>0.64</td>
<td>0.67</td>
<td>0.72</td>
<td>0.72</td>
</tr>
<tr>
<td>Chemicals &amp; chemical</td>
<td>4.7</td>
<td>4.5</td>
<td>3.9</td>
<td>3.9</td>
<td>3.2</td>
<td>3.3</td>
<td>3.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.86</td>
<td>0.84</td>
<td>0.64</td>
<td>0.65</td>
<td>0.73</td>
<td>0.79</td>
<td>1.09</td>
<td>1.09</td>
</tr>
<tr>
<td>Rubber &amp; plastic prods</td>
<td>13.4</td>
<td>12.1</td>
<td>9.1</td>
<td>9.3</td>
<td>7.9</td>
<td>8.7</td>
<td>9.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.58</td>
<td>0.52</td>
<td>0.56</td>
<td>0.54</td>
<td>0.57</td>
<td>0.56</td>
<td>0.57</td>
<td>0.57</td>
</tr>
<tr>
<td>Non-metallic mineral</td>
<td>9.8</td>
<td>9</td>
<td>6.7</td>
<td>6.4</td>
<td>4.8</td>
<td>5.7</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.8</td>
<td>0.77</td>
<td>0.69</td>
<td>0.7</td>
<td>0.6</td>
<td>0.76</td>
<td>0.77</td>
<td>0.77</td>
</tr>
<tr>
<td>Basic metals</td>
<td>10.2</td>
<td>9</td>
<td>7.8</td>
<td>6.9</td>
<td>4.9</td>
<td>5.4</td>
<td>5.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.74</td>
<td>0.73</td>
<td>0.73</td>
<td>0.78</td>
<td>0.74</td>
<td>0.82</td>
<td>0.83</td>
<td>0.83</td>
</tr>
<tr>
<td>Machinery</td>
<td>6.2</td>
<td>5.9</td>
<td>4.8</td>
<td>4.5</td>
<td>3.0</td>
<td>3.1</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.99</td>
<td>0.96</td>
<td>1.03</td>
<td>1.01</td>
<td>1.16</td>
<td>1.23</td>
<td>1.27</td>
<td>1.27</td>
</tr>
<tr>
<td>Transportation</td>
<td>11.5</td>
<td>11.2</td>
<td>8.9</td>
<td>8.6</td>
<td>8.1</td>
<td>8.1</td>
<td>7.9</td>
<td>7.9</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>1.09</td>
<td>1.12</td>
<td>1.03</td>
<td>1.06</td>
<td>1.15</td>
<td>1.16</td>
<td>1.20</td>
<td>1.20</td>
</tr>
<tr>
<td>Miscellaneous products</td>
<td>8.5</td>
<td>7.5</td>
<td>6.0</td>
<td>5.8</td>
<td>4.4</td>
<td>4.9</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.89</td>
<td>0.81</td>
<td>0.80</td>
<td>0.82</td>
<td>0.76</td>
<td>0.83</td>
<td>0.90</td>
<td>0.90</td>
</tr>
</tbody>
</table>
III. Analysis of the Impact of Tariff Changes on Effective Protection

Effective protection rates (EPR) or rates of protection of value added are more meaningful than actual tariff rates since it is value added rather than the value of the product that is contributed by the domestic activity being protected. EPRs measure the net protection received by domestic producers from the protection of their outputs and the penalty from the protection of their inputs. The EPR formula is given by

\[ EPR = \frac{(V-V^*)}{V^*} \]

where \( V \) is the domestic value added per unit of the final good (including the tariffs on that good and on its inputs) and \( V^* \) is the value added under free trade. Value added per unit, in turn, is defined as the gross value of output minus the cost of inputs used in production. Domestic value added is

\[ V = (1 + t_j) - \sum a_{ij} \cdot (1 + t_i) \]

free trade value added is the same, except that in this case tariffs do not exist (the value of \( t \) is zero)

\[ V^* = 1 - \sum a_{ij} \]

where

\( a_{ij} \): technical coefficient derived from the 1994 input-output table indicating the amount of input from sector \( i \) needed to produce a unit of output \( j \)

\( t_j \): tariff on output from sector \( j \)

\( t_i \): tariff on input from sector \( i \).
<table>
<thead>
<tr>
<th>Sector</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Industries</td>
<td>8.59</td>
<td>7.80</td>
<td>7.06</td>
<td>7.09</td>
<td>6.14</td>
<td>5.89</td>
<td>6.33</td>
</tr>
<tr>
<td>Exportable</td>
<td>2.35</td>
<td>1.75</td>
<td>1.59</td>
<td>1.71</td>
<td>1.16</td>
<td>1.1</td>
<td>1.38</td>
</tr>
<tr>
<td>Importable</td>
<td>14.76</td>
<td>13.42</td>
<td>12.28</td>
<td>12.16</td>
<td>10.89</td>
<td>10.48</td>
<td>10.98</td>
</tr>
<tr>
<td>Agriculture</td>
<td>19.38</td>
<td>17.50</td>
<td>15.87</td>
<td>16.62</td>
<td>14.38</td>
<td>13.74</td>
<td>15.09</td>
</tr>
<tr>
<td>Exportable</td>
<td>6.96</td>
<td>6.45</td>
<td>5.22</td>
<td>5.67</td>
<td>4.26</td>
<td>4.04</td>
<td>4.93</td>
</tr>
<tr>
<td>Importable</td>
<td>12.42</td>
<td>11.05</td>
<td>10.65</td>
<td>10.95</td>
<td>10.12</td>
<td>9.70</td>
<td>10.16</td>
</tr>
<tr>
<td>Fishing &amp; forestry</td>
<td>8.52</td>
<td>8.05</td>
<td>5.97</td>
<td>5.78</td>
<td>4.67</td>
<td>4.63</td>
<td>5.15</td>
</tr>
<tr>
<td>Exportable</td>
<td>5.28</td>
<td>4.94</td>
<td>3.70</td>
<td>3.51</td>
<td>2.61</td>
<td>2.62</td>
<td>3.04</td>
</tr>
<tr>
<td>Importable</td>
<td>3.24</td>
<td>3.10</td>
<td>2.27</td>
<td>2.27</td>
<td>2.05</td>
<td>2.00</td>
<td>2.11</td>
</tr>
<tr>
<td>Mining &amp; quarrying</td>
<td>1.99</td>
<td>2.05</td>
<td>2.09</td>
<td>2.11</td>
<td>1.91</td>
<td>1.86</td>
<td>1.80</td>
</tr>
<tr>
<td>Exportable</td>
<td>1.15</td>
<td>1.22</td>
<td>1.34</td>
<td>1.38</td>
<td>1.30</td>
<td>1.27</td>
<td>1.24</td>
</tr>
<tr>
<td>Importable</td>
<td>0.84</td>
<td>0.83</td>
<td>0.75</td>
<td>0.73</td>
<td>0.60</td>
<td>0.59</td>
<td>0.56</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>7.01</td>
<td>6.36</td>
<td>5.86</td>
<td>5.79</td>
<td>5.04</td>
<td>4.82</td>
<td>5.13</td>
</tr>
<tr>
<td>Exportable</td>
<td>-0.38</td>
<td>-0.92</td>
<td>-0.48</td>
<td>-0.45</td>
<td>-0.52</td>
<td>-0.52</td>
<td>-0.53</td>
</tr>
<tr>
<td>Food processing</td>
<td>19.61</td>
<td>18.32</td>
<td>17.47</td>
<td>17.42</td>
<td>15.57</td>
<td>14.49</td>
<td>15.36</td>
</tr>
<tr>
<td>Exportable</td>
<td>0.89</td>
<td>0.91</td>
<td>0.67</td>
<td>0.63</td>
<td>0.29</td>
<td>0.29</td>
<td>0.35</td>
</tr>
<tr>
<td>Importable</td>
<td>18.72</td>
<td>17.40</td>
<td>16.80</td>
<td>16.79</td>
<td>15.28</td>
<td>14.20</td>
<td>15.01</td>
</tr>
<tr>
<td>Beverages</td>
<td>9.27</td>
<td>7.54</td>
<td>3.88</td>
<td>3.89</td>
<td>1.88</td>
<td>1.75</td>
<td>3.20</td>
</tr>
<tr>
<td>Exportable</td>
<td>-0.38</td>
<td>-0.34</td>
<td>-0.29</td>
<td>-0.29</td>
<td>-0.25</td>
<td>-0.26</td>
<td>-0.26</td>
</tr>
<tr>
<td>Importable</td>
<td>9.65</td>
<td>7.88</td>
<td>4.18</td>
<td>4.18</td>
<td>2.13</td>
<td>2.01</td>
<td>3.46</td>
</tr>
<tr>
<td>Tobacco</td>
<td>10.83</td>
<td>7.88</td>
<td>5.01</td>
<td>5.04</td>
<td>3.56</td>
<td>3.50</td>
<td>6.06</td>
</tr>
<tr>
<td>Exportable</td>
<td>-0.31</td>
<td>-0.24</td>
<td>-0.18</td>
<td>-0.17</td>
<td>-0.12</td>
<td>-0.12</td>
<td>-0.12</td>
</tr>
<tr>
<td>Importable</td>
<td>11.14</td>
<td>8.12</td>
<td>5.18</td>
<td>5.21</td>
<td>3.68</td>
<td>3.62</td>
<td>6.18</td>
</tr>
<tr>
<td>Textile</td>
<td>5.97</td>
<td>5.58</td>
<td>4.51</td>
<td>4.51</td>
<td>3.28</td>
<td>3.6</td>
<td>3.82</td>
</tr>
<tr>
<td>Exportable</td>
<td>-0.48</td>
<td>-0.86</td>
<td>-0.3</td>
<td>-0.25</td>
<td>-0.24</td>
<td>-0.09</td>
<td>-0.26</td>
</tr>
<tr>
<td>Importable</td>
<td>6.37</td>
<td>6.24</td>
<td>4.76</td>
<td>4.69</td>
<td>3.49</td>
<td>3.7</td>
<td>4.02</td>
</tr>
<tr>
<td>Garments</td>
<td>-2.11</td>
<td>-2.76</td>
<td>-1.42</td>
<td>-1.31</td>
<td>-0.99</td>
<td>-1.01</td>
<td>-1.34</td>
</tr>
<tr>
<td>Exportable</td>
<td>-2.95</td>
<td>-3.39</td>
<td>-2.11</td>
<td>-2.01</td>
<td>-1.51</td>
<td>-1.52</td>
<td>-1.84</td>
</tr>
<tr>
<td>Importable</td>
<td>0.84</td>
<td>0.63</td>
<td>0.69</td>
<td>0.69</td>
<td>0.52</td>
<td>0.52</td>
<td>0.5</td>
</tr>
<tr>
<td>Leather &amp; leather products</td>
<td>-0.42</td>
<td>-0.70</td>
<td>-0.36</td>
<td>-0.37</td>
<td>-0.49</td>
<td>-0.28</td>
<td>-0.27</td>
</tr>
<tr>
<td>Exportable</td>
<td>-2.65</td>
<td>-2.46</td>
<td>-1.78</td>
<td>-1.72</td>
<td>-1.38</td>
<td>-1.58</td>
<td>-1.59</td>
</tr>
<tr>
<td>Importable</td>
<td>2.24</td>
<td>1.76</td>
<td>1.42</td>
<td>1.35</td>
<td>0.89</td>
<td>1.30</td>
<td>1.33</td>
</tr>
<tr>
<td>Wood &amp; wood products</td>
<td>1.62</td>
<td>1.48</td>
<td>0.85</td>
<td>0.77</td>
<td>0.37</td>
<td>0.49</td>
<td>0.50</td>
</tr>
<tr>
<td>Exportable</td>
<td>-0.68</td>
<td>-0.59</td>
<td>-0.60</td>
<td>-0.64</td>
<td>-0.59</td>
<td>-0.58</td>
<td>-0.59</td>
</tr>
<tr>
<td>Importable</td>
<td>2.30</td>
<td>2.07</td>
<td>1.45</td>
<td>1.41</td>
<td>0.96</td>
<td>1.07</td>
<td>1.09</td>
</tr>
<tr>
<td>Exportable</td>
<td>18.41</td>
<td>14.61</td>
<td>14.45</td>
<td>14.28</td>
<td>10.48</td>
<td>10.70</td>
<td>10.73</td>
</tr>
<tr>
<td>Importable</td>
<td>0.13</td>
<td>0.09</td>
<td>0.09</td>
<td>0.08</td>
<td>0.06</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>Paper &amp; paper products</td>
<td>3.10</td>
<td>2.36</td>
<td>1.78</td>
<td>1.77</td>
<td>1.18</td>
<td>1.31</td>
<td>1.01</td>
</tr>
<tr>
<td>Exportable</td>
<td>-1.94</td>
<td>-1.73</td>
<td>-1.37</td>
<td>-1.33</td>
<td>-0.90</td>
<td>-0.96</td>
<td>-0.85</td>
</tr>
<tr>
<td>Importable</td>
<td>5.04</td>
<td>4.09</td>
<td>3.15</td>
<td>3.10</td>
<td>2.09</td>
<td>2.26</td>
<td>1.86</td>
</tr>
<tr>
<td>Chemicals &amp; chemical products</td>
<td>2.69</td>
<td>2.49</td>
<td>1.96</td>
<td>1.88</td>
<td>1.55</td>
<td>1.82</td>
<td>1.86</td>
</tr>
</tbody>
</table>
Table 3 and figure 3 present the EPR weighted averages implied by the statutory tariff rates discussed in the previous section. In general, the overall level of effective protection declined between 1998 and 2004. The average EPR for all industries is relatively low and does not differ much from the rates of nominal tariffs. However, protection continues to be uneven with the coefficients of variation remaining at very high levels. Table 4 shows that while the coefficient of variation was on a decline between 1998 and 2001, it has increased from 2.05 to 2.91 between 2002 and 2004. This indicates that the twin executive orders of 2003 did not alter the substantial dispersion of protection reflecting a wide variation in incentives within the economy. Manufacturing exhibits the highest coefficient of variation rising from 2.61 in 2001 to 3.85 in 2004 (see Table 4).
The structure of protection also indicates that the bias for agriculture has remained as it enjoys the highest level of protection from 1998 to 2005. Given the obvious bias of the system of protection against manufacturing, the gap between manufacturing and agriculture widened between 2003 and 2004.

**Table 4: Coefficient of Variation based on weighted averages of EPRs**

<table>
<thead>
<tr>
<th>Sectors</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Industries</td>
<td>2.19</td>
<td>2.09</td>
<td>2.08</td>
<td>2.04</td>
<td>2.05</td>
<td>3.09</td>
<td>2.91</td>
</tr>
<tr>
<td>Agriculture</td>
<td>0.78</td>
<td>0.74</td>
<td>0.78</td>
<td>0.84</td>
<td>0.88</td>
<td>0.82</td>
<td>0.77</td>
</tr>
<tr>
<td>Fishing &amp; forestry</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Mining &amp; quarrying</td>
<td>1.0</td>
<td>0.9</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2.83</td>
<td>2.72</td>
<td>2.64</td>
<td>2.61</td>
<td>2.59</td>
<td>4.04</td>
<td>3.85</td>
</tr>
</tbody>
</table>

The system of protection also reveals that it has remained bias for importables. The EPR of import-substituting activities, though it has declined from 15 percent to 11 percent between 1998 and 2004, has remained higher than the EPR of export-oriented activities which declined from 2.4 percent in 1998 to 1.4 percent in 2004. Manufacturing importables exhibit the highest EPRs at 10 percent in 2004. While a reduction in the protection of importables is evident between 1998 to 2005, the average EPRs of manufacturing exportables have remained negative since 1998. Note that in the other major economic sectors consisting of agriculture, fishing and forestry, and mining and quarrying; exportables have positive EPRs from 1998 to 2004, though still smaller than their respective EPRs for importables. This indicates that manufacturing exportables are penalized by the system of protection. To address this penalty, manufacturing exportables are allowed duty free raw material importation through export processing zones, bonded manufacturing warehouses, and tax credit programs. As a result, in
Within manufacturing, average EPRs range from -1.34 to 15.36 percent in 2004 and 2005. The most highly protected sectors include food manufacturing (15.36%), furniture and fixtures (10.8%), tobacco (6.1%), transport equipment (3.9%) and textile (3.8%). Garments, leather, and leather products, and machinery and electrical products have small negative EPRs indicating that they are penalized by the system of protection.

IV. A Second Look at the Country’s Most Favored Sectors

The previous section noted the high nominal tariffs and high effective protection of the agriculture sector relative to manufacturing. Table 5A shows that the average share of agriculture value added declined in the last two decades. While its average share slightly increased from 21.7 percent to 22.5 percent in the 1980s, the nineties witnessed a continuous decline in its share. The average share of manufacturing value added also fell from 26.7 percent to 25.9 percent during the eighties and remained almost constant thereafter. In terms of growth, Table 5B indicates that agriculture grew slower than manufacturing up to 1997, but in the recent years 1998-2000, agriculture registered a higher growth rate of 4.8 percent while manufacturing posted only 3.5 percent. In terms of employment generation, the average share of agriculture to total employment continued to decline from 51 percent during the period 1981-85 to 37.7 percent in 1998-02. The average share of manufacturing remained almost constant at 9.9 percent for all years under review.

| Table 5A: Distribution of Gross Value Added by Sector |
|-----------------------------------------------|----------|----------|----------|----------|----------|
| AGRI.FISHERY, & FORESTRY                     | 81-85    | 86-90    | 91-95    | 96-97    | 98-00    |
| a. Agriculture industry                      | 21.69    | 22.49    | 21.57    | 19.91    | 18.64    |
| b. Forestry                                  | 2.08     | 1.59     | 0.46     | 0.18     | 0.15     |
| INDUSTRY SECTOR                              | 40.07    | 35.90    | 34.06    | 34.31    | 32.91    |
| a. Mining & Quarrying                        | 1.60     | 1.81     | 1.44     | 1.13     | 1.07     |
| b. Manufacturing                             | 26.73    | 25.89    | 24.63    | 24.15    | 23.42    |
| c. Construction                              | 9.12     | 5.42     | 5.14     | 5.87     | 5.20     |
| d. Elect, Gas and Water                      | 2.62     | 2.77     | 2.84     | 3.16     | 3.23     |
| SERVICE SECTOR                               | 38.64    | 42.24    | 42.09    | 41.60    | 42.97    |

| Table 5B: Growth Rates of Gross Value Added by Sector |
|------------------------------------------------------|----------|----------|----------|----------|----------|
| AGRI.FISHERY, & FORESTRY                           | 81-85    | 86-90    | 91-95    | 96-97    | 98-00    |
| a. Agriculture industry                            | 1.02     | 3.1      | 2.3      | -1.6     | 4.8      |
| (0.39)                                              |          |          |          |          |          |
Table 5C: Structure of Employment

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Fishery and Forestry</td>
<td>51.1</td>
<td>47.0</td>
<td>44.9</td>
<td>41.8</td>
<td>37.7</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>9.7</td>
<td>9.9</td>
<td>10.3</td>
<td>9.9</td>
<td>9.9</td>
</tr>
</tbody>
</table>

Table 6 gives a more detailed glimpse on the most highly protected sectors in the economy. In the agriculture sector, the sub-sectors with the highest EPRs consist of coffee (an exportable product) and hogs with EPRs of 38 percent and 35 percent in 2004, respectively. Corn comes next with an EPR of 26 percent.

In manufacturing, there are two outlier sectors: coffee roasting and processing and manufacture of pesticides and insecticides. Both sectors have very high EPRs with coffee roasting having a very large negative EPR while pesticides and insecticides have an EPR of over 200 percent in 2004. Under transport, the manufacture and assembly of motor vehicles also has a relatively high protection with its EPR of 76 percent. Meat and meat processing and rice and corn milling have EPRs slightly above 40 percent. Bicycles and motorcycles, carpets and rugs, rebuilding of motor vehicles, wire nails, and sugar milling and refining, have EPRs ranging from 30 to 35 percent. Hardboard and particle board, ready-made clothing, structural concrete products, bakery products excluding noodles, manufacture and repair of metal furniture and fixture, hosiery, underwear and outer knitting, wearing apparel except footwear, leather and leather substitutes, articles made up of native materials, metal stamping, coating, and engraving mills, and flat glass have EPRs greater than or equal to 20 percent but less than 30 percent. Annex 1 contains a complete list of EPRs.

Table 6: Highly Protected Sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>Ave</th>
<th>Classification</th>
<th>Food processing</th>
<th>Chemicals &amp; chemical products</th>
<th>Transport equipment</th>
<th>Food processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee roasting &amp; processing</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>Food processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of pesticides, insecticides</td>
<td>109</td>
<td>-71</td>
<td>-96</td>
<td>96</td>
<td>110</td>
<td>237</td>
<td>238</td>
<td>89</td>
<td>Chemicals &amp; chemical products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr and assembly of motor vehicles</td>
<td>97</td>
<td>98</td>
<td>77</td>
<td>75</td>
<td>78</td>
<td>77</td>
<td>76</td>
<td>82</td>
<td>Transport equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>51</td>
<td>49</td>
<td>53</td>
<td>52</td>
<td>41</td>
<td>41</td>
<td>50</td>
<td>Food processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Meat and meat products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice &amp; corn milling</td>
<td>51</td>
<td>47</td>
<td>47</td>
<td>47</td>
<td>43</td>
<td>40</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of wire nails</td>
<td>74</td>
<td>48</td>
<td>44</td>
<td>45</td>
<td>28</td>
<td>32</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee</td>
<td>48</td>
<td>38</td>
<td>38</td>
<td>48</td>
<td>43</td>
<td>38</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of carpets &amp; rugs</td>
<td>52</td>
<td>36</td>
<td>43</td>
<td>44</td>
<td>32</td>
<td>35</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hog</td>
<td>40</td>
<td>37</td>
<td>37</td>
<td>38</td>
<td>36</td>
<td>34</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rebuilding &amp; major alteration of motor vehicles</td>
<td>43</td>
<td>44</td>
<td>33</td>
<td>32</td>
<td>34</td>
<td>33</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr, assembly of motorcycles &amp; bicycles</td>
<td>45</td>
<td>43</td>
<td>31</td>
<td>31</td>
<td>32</td>
<td>32</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of hardboard &amp; particle board</td>
<td>38</td>
<td>38</td>
<td>40</td>
<td>39</td>
<td>29</td>
<td>29</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of ready made clothing</td>
<td>45</td>
<td>34</td>
<td>37</td>
<td>37</td>
<td>28</td>
<td>27</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of structural products</td>
<td>59</td>
<td>43</td>
<td>28</td>
<td>28</td>
<td>16</td>
<td>26</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of made up textile goods ex apparel</td>
<td>40</td>
<td>31</td>
<td>32</td>
<td>34</td>
<td>26</td>
<td>30</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar milling and refining</td>
<td>36</td>
<td>32</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>36</td>
<td>31</td>
<td>31</td>
<td>32</td>
<td>31</td>
<td>26</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of radio and TV receiving sets, sound recording &amp; reproducing eq. incl records and tapes</td>
<td>37</td>
<td>37</td>
<td>37</td>
<td>29</td>
<td>22</td>
<td>21</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of bakery prods exc noodles</td>
<td>35</td>
<td>35</td>
<td>29</td>
<td>31</td>
<td>23</td>
<td>21</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr &amp; repair of furniture &amp; fixtures, made primarily of metal</td>
<td>37</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>23</td>
<td>24</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hosiery, underwear, &amp; outer knitting</td>
<td>36</td>
<td>26</td>
<td>30</td>
<td>29</td>
<td>22</td>
<td>22</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of other wearing apparel ex footwear</td>
<td>35</td>
<td>25</td>
<td>29</td>
<td>29</td>
<td>22</td>
<td>23</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood &amp; wood products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non metallic mineral products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery &amp; electrical equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of veneer &amp; plywood</td>
<td>35</td>
<td>29</td>
<td>27</td>
<td>27</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of leather &amp; leather substitutes ex footwear &amp; apparel</td>
<td>37</td>
<td>30</td>
<td>23</td>
<td>23</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of articles made up of native materials</td>
<td>31</td>
<td>23</td>
<td>25</td>
<td>25</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal stamping, coating, engraving mills</td>
<td>36</td>
<td>30</td>
<td>24</td>
<td>24</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of rubber footwear</td>
<td>37</td>
<td>29</td>
<td>26</td>
<td>22</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of other fabricated wire &amp; cable prods exc insulated wire &amp; cable</td>
<td>33</td>
<td>29</td>
<td>25</td>
<td>24</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture &amp; repair of furniture</td>
<td>33</td>
<td>24</td>
<td>25</td>
<td>21</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of flat glass</td>
<td>30</td>
<td>29</td>
<td>22</td>
<td>22</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of leather footwear &amp; footwear parts</td>
<td>33</td>
<td>25</td>
<td>22</td>
<td>20</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial &amp; job printing &amp; allied industries</td>
<td>36</td>
<td>28</td>
<td>21</td>
<td>21</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood &amp; wood products</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leather &amp; leather products</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textile</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non metallic mineral products</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubber &amp; plastic products</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non metallic mineral products</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furniture &amp; fixtures</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non metallic mineral products</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leather &amp; leather products</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper &amp; paper products</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* negative free trade value added

Table 7A: Distribution of Manufacturing Gross Value Added

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moderate to High</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food manufactures</td>
<td>45</td>
<td>33</td>
<td>36</td>
<td>35</td>
<td>36</td>
</tr>
<tr>
<td>Furniture &amp; fixtures</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tobacco manufactures</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Beverage industries</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Textile manufactures</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>59</td>
<td>46</td>
<td>49</td>
<td>46</td>
<td>47</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical &amp; chemical products</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Products of petroleum &amp; coal</td>
<td>10</td>
<td>12</td>
<td>17</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Paper &amp; paper products</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Moderate to High</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food manufactures</td>
<td>-3</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Furniture &amp; fixtures</td>
<td>-8</td>
<td>9</td>
<td>-1</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Tobacco manufactures</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Beverage industries</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>8</td>
<td>-1</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>-35</td>
<td>14</td>
<td>10</td>
<td>-5</td>
<td>-3</td>
</tr>
<tr>
<td>Textile manufactures</td>
<td>-8</td>
<td>5</td>
<td>-4</td>
<td>-3</td>
<td>-5</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>-7</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood &amp; cork products</td>
<td>-17</td>
<td>8</td>
<td>-7</td>
<td>1</td>
<td>-8</td>
</tr>
<tr>
<td>Rubber products</td>
<td>-8</td>
<td>8</td>
<td>-3</td>
<td>-9</td>
<td>-5</td>
</tr>
<tr>
<td>Metal industries</td>
<td>-6</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Basic metal industries</td>
<td>10</td>
<td>2</td>
<td>2</td>
<td>-3</td>
<td>-6</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>5</td>
<td>8</td>
<td>11</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Machinery except electrical</td>
<td>-11</td>
<td>9</td>
<td>6</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Leather &amp; leather products</td>
<td>-7</td>
<td>0</td>
<td>3</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Miscellaneous manufactures</td>
<td>0</td>
<td>13</td>
<td>2</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Footwear &amp; wearing apparel</td>
<td>-5</td>
<td>11</td>
<td>5</td>
<td>-3</td>
<td>2</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>-4</td>
<td>8</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

Source of value added data: National Income Accounts

### Table 7B: Growth Rates of Manufacturing Gross Value Added

Tables 7A and 7B summarize the performance of the different manufacturing sectors in terms of their contribution to manufacturing value added and their corresponding growth rates. Based on their average EPRs for the period 1998 to 2004, the manufacturing sectors were ranked according to their degree of protection: high, moderate, and low (2% and below).

In terms of contribution to manufacturing value added, food manufacturing has remained the most important manufacturing sector although its share considerably dropped
from 45 percent till the mid-1980s (see Table 7A). On the average, its share constituted 36 percent of total manufacturing value added during the period 1998-2002. Petroleum and coal and electrical machinery followed with average shares of 16 percent and 11 percent, respectively during the same period.

Note that in a span of about two decades, the electrical machinery showed quite a strong and consistent performance as its value added continuously grew from a mere 4.89 percent in 1981-1985 to 8.3 percent in the succeeding period (see Table 7B). In the recent periods, 1996-1997 and 1998-2002, the sector registered the highest manufacturing growth rates of 20 percent and 12.8 percent, respectively. In contrast, the average shares of chemical and chemical products and footwear and wearing apparel hardly moved during the last two decades. The average share of chemical and chemical products even dropped from 7 percent in 1981-1985 to about 6 percent from 1991-1995 to 1998-2002. The average share of footwear and wearing apparel showed moderate increases till the 1991-1995 period, but declined from 6.2 percent in 1991-1995 to 5.6 percent in 1996-97 and to 5.3 percent in 1998-2002. The weak performance of these sectors is manifested in their relatively lackluster growth over the last two decades. Textiles and transport equipment are the other low growth sectors. Falling in the same group are rubber products, paper and paper products, and wood and wood products (see Table 7B).

It is evident from Tables 7A and 7B that the total contribution of sectors receiving relatively less protection increased almost steadily from 41 percent during the period 1981-85 to 53 percent during the period 1998-02. The share of moderately and highly protected sectors declined from 59 percent in the period 1981-85 to 47 percent in 1998-02 period.

In terms of growth, the sectors receiving very little protection have grown more rapidly than the moderately to highly protected sectors. Overall average manufacturing growth rate has trailed behind the average growth rate of the low protection group for all periods under study. Prior to the Asian financial crisis, the sectors registered a growth rate of about 5 percent and managed to attain a 2 percent growth rate percent after the crisis.

To measure the correlation between protection and growth, the correlation coefficient between the EPR and value added growth rate was estimated. The correlation analysis yielded a correlation coefficient of -0.006 indicating that protection and growth are negatively correlated.

Table 8 compares the performance of the manufacturing vis-à-vis other economic sectors from the 70s to the 20s. The share of the industrial sector in total output saw a reduction from its peak of about 38 percent from the 1970s till the 1980s. This dropped to 34.1 percent during the 1990s with very little improvement in the period 2001-2003. The manufacturing sub-sector represents the most important industrial sector. It registered its highest contribution of about 28 percent in the 1970s. Its share fell to 26 percent in the 1980s and to 24 percent in the 1990s. This has remained unchanged in the most recent period under review.
Since the 1980s, industrial growth has been very slow with virtually no growth in the 1980s. In the 1990s, the sector posted an average annual growth rate of 3 percent and 2.5 percent in the period 2001-2003. Manufacturing registered an average annual growth rate of 0.9 percent in the 1980s, this went up to 2.5 percent in the 1990s and in the recent period, this improved to 3.5 percent.

Table 9 compares the performance of the Philippine manufacturing with other Asian developing countries. It is evident from the data that our neighboring countries registered reductions in the share of agriculture and substantial increases in the size of industry during the period 1990 to 1999. During this period, the share of Philippine agriculture dropped from 22 percent to 18 percent, industry declined from 34 percent to 30 percent while services, which constituted a large portion of Philippine output, rose sharply from 44% in 1990 to 52% in 1999.
In contrast, the share of agriculture in Thailand dropped from 12 percent in 1990 to 10 percent in 1999. The same trend was witnessed in Malaysia and China. In Malaysia, agriculture declined from 15% to 11%. In China, the share of agriculture fell from 27% to 18%. In Indonesia, it remained constant at 19%. In terms of industry share, in Thailand this went up from 37% to 40%, in Indonesia, it increased from 39% to 43%, in Malaysia, it rose from 42% to 46% and in Thailand, from 42% to 49%. The bulk of industry, manufacturing, witnessed significant increases in its share for all the countries under review except for the Philippines. In services, Thailand’s share remained unchanged at 50% in both years. In Indonesia, Malaysia, and China reduction in the share of services were observed.

V. Conclusions and Policy Recommendations

In the last ten years or so, the high rates of nominal protection have been reduced considerably. But despite our generally low average import duties, the total number of tariff headings (8-digit level of the 2002 Harmonised Commodity Description and Coding System or HS) increased from 7,366 tariff lines in 1998 to 7,382 in 2004. Most countries average about 6,000 tariff headings. The nominal tariff variance increased from 96 percent in 1998 to 107 percent in 2004 implying a wide dispersion of tariff lines. The number of tariff peak products went up from 165 product lines (or 2.24 percent of total number of HS lines) to 200 lines (2.7 percent of total HS lines) during the same period. The tariffs for peak products range from 25 percent to 65 percent in 2004. These tariff peaks are concentrated in agricultural staple food products such as palay, corn, sugarcane, onions, garlic, cabbage, roots and tubers, hog, cattle and other livestock, chicken, other poultry and poultry products. Tariff peaks are also present in manufactured food products such as milled and refined sugar, milled rice and corn, processed and roast coffee, processed meat, canned and preserved fruits and vegetables, starch and starch products, bakery products excluding noodles, and miscellaneous food products. They can also be found in non-food manufactures like animal feeds, drugs and medicines, chemical products, and motor vehicles.

In terms of effective protection, the current average EPR for all industries is relatively low and does not differ much from the rates of nominal tariffs. However, protection continues to be uneven with the coefficients of variation remaining at very high levels. Manufacturing exhibits the most dispersion with a coefficient of variation of 385 percent in 2004. The EPR estimates also show that the bias for agriculture has remained as the sector enjoys the highest level of protection from 1998 to 2005. The high tariff schedule resulting from the tariffication under the WTO is a main problem in agriculture. The structure of protection has also remained biased for importables as they continue to receive higher levels of protection than exportables.

On the overall, the recent tariff review conducted by the Tariff and Related Matters Committee resulting in the legislation of EOs 241 and 264 did not lead to any substantial increases in both average nominal and effective protection. However, since many of the tariff increases were made selectively to favor particular interest groups, the twin EOs hardly made a significant contribution in reducing our highly dispersed tariffs. Though our average nominal tariffs are already low, it should be noted that economic and trade distortions associated with a
tariff schedule depend not only on the size of the tariffs but also on the dispersion of these tariffs across all products. The more dispersion in a country’s tariff schedule, the greater the distortions caused by tariffs on production and consumption patterns. There are also many dangers in providing differentiated tariff protection to various sectors of industry and agriculture. A large dispersion of tariff structure encourages lobbying for high protection by industry groups. Experience has shown that it is very difficult for a government to select sectors that are most likely to satisfy the conditions justifying protection, to be immune to pressures from special interest groups, and to prevent any protection from becoming permanent.

Our long history of protection has illustrated how import lobbies with political clout are able to ensure that their sectors remain protected. But despite the protection that these sectors have enjoyed, their growth has been sluggish and their contribution to total value added has even declined. In contrast, sectors that have received very little protection have registered increases in their share in total value added and their growth rates have been consistently higher than the relatively more protected sectors. The various policy reversals indicate how the government is driven by vested interest groups that lobby for protection to the goods that they produce and duty-free access to their inputs. Tariffs on these products have remained relatively high. On the other hand, tariffs on products where there is no or small domestic industry have relatively low tariffs because there is no opposing lobbying influence advocating tariffs on these sectors.

As a consequence of the selective protection policy that the government has adopted, tariffs have been changed on an ad hoc basis. As such, efficiency considerations are not taken into account. Effective protection in the economy becomes uneven and the protection becomes incompatible with the country’s stated development objectives. Unorganized groups or sectors who do not have the capacity to engage in lobbying, fall prey to these lapses as the duties on their inputs are higher than the tariff rates that apply to their finished products. Petrochemicals, float glass, and steel are prominent examples of intermediate inputs receiving higher duties than the final user products. This increases the cost of production and greatly affects the competitiveness of user products.

Given the tariff distortions, problems of inefficient resource allocation arise that tends to favor highly protected importables at the expense of exportables which encourages the production of import-substituting goods but discourages the production of export-oriented goods. This partly explains the lack of backward linkages in our economy.

To address the problem of exporters being disadvantaged by the system of protection, the government has provided incentive mechanisms such as duty drawbacks, bonded manufacturing warehouses, and export processing zones to allow exporters duty-free importation of inputs. Our experience, though, has shown that that the duty drawback and bonded manufacturing warehouse systems are both costly to administer leading to cumbersome procedures, delays, and corruption. Note that the success of these systems depends on a technically efficient government bureaucracy that is immune to corrupt practices; these

---

institutions, however, are missing in our country. Export processing zones are relatively successful in terms of generating exports, however, the lack of backward integration with the rest of the economy has meant greater dependency of our exports on imported inputs. Addressing this problem would require economy-wide reforms.

The present analysis strongly suggests that there is little economic justification in providing diverse tariff protection. Engaging in tariff reforms that do not reduce the level of dispersion of the tariff structure will convey relatively small benefits. The government should therefore give priority to:

- Reducing the highest tariffs as the costs in terms of inefficiencies in resource allocation rise more than proportionately with the height of the tariff. This requires strong political will as this would involve a lot of agricultural products.
- Raising the low rates, although this might be more controversial particularly for intermediate and capital goods. For revenue generation, tariffs on certain products such as alcohol and tobacco products may be raised but these must be accompanied by equivalent taxes on domestic production.
- Simplifying the tariff structure by limiting the number of tariffs and reducing both tariff levels and dispersion of the tariff structure. A tariff structure that is low and has a small variance will be beneficial especially in discouraging lobbying activities and incentives for corruption.

If the administration finds it inevitable for political or other reasons to reverse its tariff policy, then it should avoid a sector-by-sector approach as this lends itself most easily to lobbying and selective requests for protection. Instead, a broader approach say, an across the board increase should be adopted rather than selective increases to individual sectors.

The promotion of competition and the transition from a highly distorted trade regime to a more liberal one is a long term process. The fruits of trade liberalization may be wiped out by a variety of circumstances such as currency depreciation, economic crisis, imposition of antidumping and countervailing duties to limit competition, and anti-competitive business practices like cartels and price fixing. And more often, domestic producers may put up a strong resistance as they may be unable to adapt quickly to new market conditions and may find themselves vulnerable to competition from more efficient foreign producers. At the same time, foreign investors in emerging markets may also demand protection against competing imports. Powerful business groups engage not only in restrictive business practices but also in lobbying activities for the government to re-impose protectionist measures.

In light of these conditions, it becomes very difficult to sustain trade reforms and competition as mechanisms to promote efficiency and consumer welfare. In most cases, given our weak institutional and regulatory framework, the government simply tends to be inconsistent and soon after, a policy reversal is evident. Indeed, there may be some valid

---

reasons, particularly social concerns for temporary protection such as to preserve employment. It should be emphasized, however, that substantial care must be taken in proving that competition from imports has been too fierce to allow the transition process to be socially sustainable. Protection should be awarded as long as import growth is the cause of serious injury to domestic import-competing industries. It must be temporary and strictly related to a restructuring program. It must also be noted that the preservation of jobs as a social policy often results in tremendous costs to consumers. A tariff artificially increases prices, reduces imports and increases domestic production, but leads to a decline in consumption. The impact on the competitiveness of the export industries must also be considered. If the costs are disproportionate relative to the expected benefits, then the social policy embodied in protectionism should be addressed in a more efficient manner. For example, through direct government assistance to individuals who lose their jobs as imports increase or tax relief to firms that are less efficient than foreign competitors.

Allowing backsliding and the continuous use of protection may dampen firms’ incentives to become efficient and may foster rent-seeking behavior. Backsliding substantially reduces the credibility of trade reforms. As Rodrik (1989)\(^5\) points out, the primary need for a government engaged in trade liberalization is to establish and bolster its credibility. Allowing the possibility of providing protection amidst the transition process sends a signal to firms that the government will not commit itself to a given policy reform. This can negatively affect the performance of firms and can lead to so-called time-inconsistency problems. The firms do not adjust because they expect to obtain further protection in the future. When the future comes, it may not be politically optimal for the government not to grant such protection.

References:


Based on Input-Output Sectors

<table>
<thead>
<tr>
<th>Description</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>35.83</td>
<td>30.76</td>
<td>30.78</td>
<td>31.61</td>
<td>30.77</td>
<td>26.00</td>
<td>26.02</td>
</tr>
<tr>
<td>Vegetables</td>
<td>15.68</td>
<td>12.89</td>
<td>9.78</td>
<td>10.35</td>
<td>8.04</td>
<td>11.91</td>
<td>13.64</td>
</tr>
<tr>
<td>Banana</td>
<td>22.72</td>
<td>22.84</td>
<td>17.03</td>
<td>16.99</td>
<td>11.19</td>
<td>11.19</td>
<td>17.10</td>
</tr>
<tr>
<td>Pineapple</td>
<td>22.23</td>
<td>22.28</td>
<td>16.59</td>
<td>16.66</td>
<td>10.98</td>
<td>11.01</td>
<td>10.97</td>
</tr>
<tr>
<td>Mango</td>
<td>21.10</td>
<td>21.13</td>
<td>15.80</td>
<td>15.80</td>
<td>10.47</td>
<td>10.49</td>
<td>15.83</td>
</tr>
<tr>
<td>Citrus fruits</td>
<td>23.56</td>
<td>19.04</td>
<td>12.95</td>
<td>11.43</td>
<td>7.84</td>
<td>7.85</td>
<td>11.62</td>
</tr>
<tr>
<td>Coconut</td>
<td>15.20</td>
<td>14.57</td>
<td>11.00</td>
<td>11.00</td>
<td>7.85</td>
<td>7.87</td>
<td>9.98</td>
</tr>
<tr>
<td>Abaca</td>
<td>5.40</td>
<td>5.52</td>
<td>3.03</td>
<td>2.94</td>
<td>2.98</td>
<td>3.00</td>
<td>5.57</td>
</tr>
<tr>
<td>Coffee</td>
<td>48.37</td>
<td>37.57</td>
<td>37.60</td>
<td>48.42</td>
<td>43.03</td>
<td>37.64</td>
<td>37.63</td>
</tr>
<tr>
<td>Cacao</td>
<td>2.87</td>
<td>2.94</td>
<td>2.98</td>
<td>2.94</td>
<td>2.98</td>
<td>3.00</td>
<td>3.01</td>
</tr>
<tr>
<td>Rubber</td>
<td>2.86</td>
<td>2.92</td>
<td>2.96</td>
<td>2.93</td>
<td>2.99</td>
<td>3.00</td>
<td>3.01</td>
</tr>
<tr>
<td>Other agricultural production, n.e.c.</td>
<td>5.89</td>
<td>4.18</td>
<td>3.35</td>
<td>4.36</td>
<td>3.84</td>
<td>3.15</td>
<td>3.20</td>
</tr>
<tr>
<td>Hog</td>
<td>40.38</td>
<td>37.02</td>
<td>37.21</td>
<td>37.94</td>
<td>35.67</td>
<td>33.78</td>
<td>35.11</td>
</tr>
<tr>
<td>Ocean, coastal and inland fishing</td>
<td>11.25</td>
<td>10.86</td>
<td>7.82</td>
<td>7.69</td>
<td>6.94</td>
<td>6.83</td>
<td>7.21</td>
</tr>
<tr>
<td>Aquaculture and other fishery activities</td>
<td>15.44</td>
<td>14.44</td>
<td>10.86</td>
<td>10.33</td>
<td>7.71</td>
<td>7.75</td>
<td>8.95</td>
</tr>
<tr>
<td>Forestry</td>
<td>3.15</td>
<td>2.69</td>
<td>2.60</td>
<td>3.11</td>
<td>2.91</td>
<td>2.60</td>
<td>2.65</td>
</tr>
<tr>
<td>Gold and silver mining</td>
<td>2.24</td>
<td>2.38</td>
<td>2.57</td>
<td>2.64</td>
<td>2.91</td>
<td>2.86</td>
<td>2.82</td>
</tr>
<tr>
<td>Copper mining</td>
<td>2.14</td>
<td>2.30</td>
<td>2.54</td>
<td>2.62</td>
<td>1.44</td>
<td>1.38</td>
<td>1.29</td>
</tr>
<tr>
<td>Nickel mining</td>
<td>1.53</td>
<td>1.69</td>
<td>2.10</td>
<td>2.28</td>
<td>1.31</td>
<td>1.24</td>
<td>1.28</td>
</tr>
<tr>
<td>Chromite mining</td>
<td>2.35</td>
<td>2.43</td>
<td>2.65</td>
<td>2.72</td>
<td>3.02</td>
<td>2.99</td>
<td>2.97</td>
</tr>
<tr>
<td>Other metal mining</td>
<td>2.26</td>
<td>2.40</td>
<td>2.59</td>
<td>2.67</td>
<td>2.50</td>
<td>2.47</td>
<td>2.22</td>
</tr>
<tr>
<td>Coal mining</td>
<td>5.32</td>
<td>5.40</td>
<td>4.31</td>
<td>4.36</td>
<td>4.14</td>
<td>4.13</td>
<td>4.10</td>
</tr>
<tr>
<td>Crude petroleum and natural gas</td>
<td>2.71</td>
<td>1.03</td>
<td>1.12</td>
<td>2.87</td>
<td>2.98</td>
<td>2.96</td>
<td>2.97</td>
</tr>
<tr>
<td>Stone quarrying and clay and sandpits</td>
<td>3.40</td>
<td>3.39</td>
<td>3.10</td>
<td>3.14</td>
<td>2.97</td>
<td>2.88</td>
<td>2.62</td>
</tr>
<tr>
<td>Salt mining</td>
<td>3.89</td>
<td>3.92</td>
<td>3.97</td>
<td>2.91</td>
<td>0.84</td>
<td>0.82</td>
<td>0.82</td>
</tr>
<tr>
<td>Other non-metallic mining and quarrying</td>
<td>2.92</td>
<td>2.96</td>
<td>2.98</td>
<td>3.00</td>
<td>2.56</td>
<td>2.44</td>
<td>1.88</td>
</tr>
<tr>
<td>Meat &amp; meat products processing</td>
<td>60.14</td>
<td>50.70</td>
<td>49.48</td>
<td>53.47</td>
<td>51.72</td>
<td>40.88</td>
<td>41.17</td>
</tr>
<tr>
<td>Milk processing</td>
<td>1.97</td>
<td>2.42</td>
<td>1.43</td>
<td>0.90</td>
<td>0.74</td>
<td>0.77</td>
<td>-0.50</td>
</tr>
<tr>
<td>Butter and cheese manufacturing</td>
<td>11.59</td>
<td>9.65</td>
<td>6.22</td>
<td>6.32</td>
<td>5.76</td>
<td>5.70</td>
<td>5.93</td>
</tr>
<tr>
<td>Other dairy products</td>
<td>8.28</td>
<td>9.13</td>
<td>8.26</td>
<td>8.31</td>
<td>5.88</td>
<td>5.70</td>
<td>4.48</td>
</tr>
<tr>
<td>Canning &amp; preserving of fruits and vegetables</td>
<td>11.76</td>
<td>9.97</td>
<td>7.70</td>
<td>7.69</td>
<td>6.66</td>
<td>7.01</td>
<td>7.41</td>
</tr>
<tr>
<td>Fish canning</td>
<td>34.58</td>
<td>31.33</td>
<td>25.11</td>
<td>25.82</td>
<td>16.04</td>
<td>15.95</td>
<td>24.30</td>
</tr>
<tr>
<td>Fish drying, smoking &amp; mfg of other seafood products</td>
<td>31.02</td>
<td>30.27</td>
<td>23.18</td>
<td>22.58</td>
<td>14.76</td>
<td>14.78</td>
<td>18.67</td>
</tr>
<tr>
<td>Prod’n of crude coconut oil, copra cake and meal</td>
<td>31.05</td>
<td>32.16</td>
<td>23.87</td>
<td>23.87</td>
<td>14.90</td>
<td>14.86</td>
<td>11.38</td>
</tr>
<tr>
<td>Other crude vegetable oil exc coconut oil, fish and other marine oils and fats</td>
<td>4.76</td>
<td>6.34</td>
<td>5.45</td>
<td>5.29</td>
<td>4.96</td>
<td>3.16</td>
<td>3.45</td>
</tr>
<tr>
<td>Manufacture of refined coconut and vegetable oil</td>
<td>0.36</td>
<td>-1.20</td>
<td>0.29</td>
<td>-1.46</td>
<td>0.43</td>
<td>0.22</td>
<td>0.28</td>
</tr>
<tr>
<td>Rice and corn milling</td>
<td>50.96</td>
<td>47.41</td>
<td>46.64</td>
<td>46.57</td>
<td>43.01</td>
<td>40.21</td>
<td>42.27</td>
</tr>
<tr>
<td>Flour, cassava &amp; other grains milling</td>
<td>23.28</td>
<td>23.13</td>
<td>17.85</td>
<td>16.00</td>
<td>11.03</td>
<td>12.16</td>
<td>14.71</td>
</tr>
<tr>
<td>Mfr of bakery prods exc noodles</td>
<td>34.85</td>
<td>35.36</td>
<td>28.55</td>
<td>31.17</td>
<td>22.74</td>
<td>21.18</td>
<td>27.51</td>
</tr>
<tr>
<td>Noodles mfg</td>
<td>24.05</td>
<td>27.38</td>
<td>17.43</td>
<td>15.29</td>
<td>6.43</td>
<td>7.81</td>
<td>18.13</td>
</tr>
<tr>
<td>Sugar milling and refining</td>
<td>35.62</td>
<td>31.91</td>
<td>31.00</td>
<td>31.02</td>
<td>30.61</td>
<td>30.60</td>
<td>29.53</td>
</tr>
<tr>
<td>Mfr of cocoa, chocolate and sugar confectionery</td>
<td>10.82</td>
<td>10.38</td>
<td>5.59</td>
<td>5.64</td>
<td>2.23</td>
<td>2.18</td>
<td>5.76</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Coffee roasting and processing</td>
<td>605.59</td>
<td>580.74</td>
<td>589.82</td>
<td>366.59</td>
<td>301.37</td>
<td>222.68</td>
<td>270.42</td>
</tr>
<tr>
<td>Mfr of animal feeds</td>
<td>-1.42</td>
<td>-1.04</td>
<td>-0.58</td>
<td>0.09</td>
<td>-2.74</td>
<td>-3.35</td>
<td>-3.73</td>
</tr>
<tr>
<td>Mfr of starch &amp; starch prods</td>
<td>9.35</td>
<td>9.10</td>
<td>7.59</td>
<td>7.38</td>
<td>5.81</td>
<td>5.83</td>
<td>10.05</td>
</tr>
<tr>
<td>Mfr of flavoring extracts, mayonnaise and food coloring products</td>
<td>10.02</td>
<td>9.52</td>
<td>6.12</td>
<td>5.87</td>
<td>3.56</td>
<td>4.26</td>
<td>5.79</td>
</tr>
<tr>
<td>Miscellaneous food products</td>
<td>7.98</td>
<td>3.67</td>
<td>2.77</td>
<td>5.60</td>
<td>5.02</td>
<td>3.69</td>
<td>2.13</td>
</tr>
<tr>
<td>Malt and malt liquors</td>
<td>11.99</td>
<td>11.25</td>
<td>8.46</td>
<td>8.46</td>
<td>5.18</td>
<td>4.96</td>
<td>7.94</td>
</tr>
<tr>
<td>Softdrinks &amp; carbonated water</td>
<td>22.06</td>
<td>16.57</td>
<td>6.51</td>
<td>6.55</td>
<td>2.46</td>
<td>2.23</td>
<td>4.53</td>
</tr>
<tr>
<td>Cigarette mfg</td>
<td>27.87</td>
<td>20.30</td>
<td>12.95</td>
<td>13.03</td>
<td>9.18</td>
<td>9.04</td>
<td>15.66</td>
</tr>
<tr>
<td>Cigar, chewing &amp; smoking tobacco</td>
<td>19.15</td>
<td>14.23</td>
<td>8.87</td>
<td>8.87</td>
<td>6.55</td>
<td>6.52</td>
<td>7.67</td>
</tr>
<tr>
<td>Tobacco leaf flue-curing and redrying</td>
<td>20.34</td>
<td>15.24</td>
<td>10.14</td>
<td>10.14</td>
<td>7.09</td>
<td>7.09</td>
<td>7.09</td>
</tr>
<tr>
<td>Textile, spinning, weaving, texturizing and finishing</td>
<td>18.80</td>
<td>22.25</td>
<td>12.94</td>
<td>11.98</td>
<td>8.86</td>
<td>9.10</td>
<td>11.47</td>
</tr>
<tr>
<td>Fabric knitting mills</td>
<td>23.70</td>
<td>32.65</td>
<td>15.68</td>
<td>16.11</td>
<td>10.84</td>
<td>10.14</td>
<td>12.90</td>
</tr>
<tr>
<td>Hosiery, underwear &amp; outerwear knitting</td>
<td>36.21</td>
<td>26.27</td>
<td>29.52</td>
<td>29.48</td>
<td>22.07</td>
<td>21.84</td>
<td>20.98</td>
</tr>
<tr>
<td>Mfr of made-up textile goods exc. wearing apparel</td>
<td>39.88</td>
<td>31.20</td>
<td>31.94</td>
<td>33.78</td>
<td>25.82</td>
<td>30.44</td>
<td>29.44</td>
</tr>
<tr>
<td>Mfr of carpets and rugs</td>
<td>52.22</td>
<td>36.40</td>
<td>43.36</td>
<td>43.93</td>
<td>32.33</td>
<td>34.97</td>
<td>32.99</td>
</tr>
<tr>
<td>Cordage, rope, twine and net mfg</td>
<td>30.90</td>
<td>23.45</td>
<td>24.74</td>
<td>25.23</td>
<td>19.70</td>
<td>22.74</td>
<td>22.25</td>
</tr>
<tr>
<td>Mfr of articles made of native materials</td>
<td>27.40</td>
<td>23.37</td>
<td>20.71</td>
<td>20.76</td>
<td>14.72</td>
<td>19.07</td>
<td>18.94</td>
</tr>
<tr>
<td>Mfr of fiber batting, padding, upholstery fillings incl. coir,linoleum</td>
<td>17.34</td>
<td>15.66</td>
<td>13.47</td>
<td>13.59</td>
<td>10.04</td>
<td>10.93</td>
<td>11.38</td>
</tr>
<tr>
<td>and other hard surfaced floor coverings</td>
<td>45.14</td>
<td>33.65</td>
<td>36.78</td>
<td>37.05</td>
<td>27.78</td>
<td>27.42</td>
<td>26.56</td>
</tr>
<tr>
<td>Mfr of ready-made clothing</td>
<td>35.03</td>
<td>25.32</td>
<td>28.67</td>
<td>28.84</td>
<td>21.67</td>
<td>23.09</td>
<td>22.31</td>
</tr>
<tr>
<td>Embroidery establishments</td>
<td>28.46</td>
<td>20.68</td>
<td>22.19</td>
<td>21.86</td>
<td>16.58</td>
<td>17.44</td>
<td>17.11</td>
</tr>
<tr>
<td>Mfr of other wearing apparel exc footwear</td>
<td>6.40</td>
<td>4.69</td>
<td>4.05</td>
<td>3.87</td>
<td>4.02</td>
<td>4.52</td>
<td>3.73</td>
</tr>
<tr>
<td>Tanneries and leather finishing</td>
<td>37.29</td>
<td>29.56</td>
<td>22.76</td>
<td>22.53</td>
<td>14.32</td>
<td>21.45</td>
<td>22.51</td>
</tr>
<tr>
<td>Mfr of leather footwear &amp; footwear parts</td>
<td>32.54</td>
<td>25.31</td>
<td>22.01</td>
<td>19.53</td>
<td>12.94</td>
<td>18.84</td>
<td>18.76</td>
</tr>
<tr>
<td>Sawmills and planing mills</td>
<td>17.20</td>
<td>15.80</td>
<td>10.00</td>
<td>9.60</td>
<td>6.42</td>
<td>7.14</td>
<td>7.41</td>
</tr>
<tr>
<td>Mfr of veneer and plywood</td>
<td>34.70</td>
<td>29.20</td>
<td>26.88</td>
<td>26.57</td>
<td>19.43</td>
<td>19.62</td>
<td>19.47</td>
</tr>
<tr>
<td>Mfr of hardboard and particle board</td>
<td>37.77</td>
<td>37.75</td>
<td>39.52</td>
<td>38.88</td>
<td>29.21</td>
<td>29.05</td>
<td>28.91</td>
</tr>
<tr>
<td>Millwork plants</td>
<td>17.35</td>
<td>16.06</td>
<td>10.68</td>
<td>10.86</td>
<td>7.36</td>
<td>7.20</td>
<td>7.48</td>
</tr>
<tr>
<td>Mfr of wooden and cane containers and small cane wares</td>
<td>28.45</td>
<td>24.45</td>
<td>17.34</td>
<td>17.29</td>
<td>11.43</td>
<td>15.84</td>
<td>15.75</td>
</tr>
<tr>
<td>Mfr of wood carvings</td>
<td>31.50</td>
<td>24.01</td>
<td>17.05</td>
<td>17.03</td>
<td>9.80</td>
<td>13.68</td>
<td>13.63</td>
</tr>
<tr>
<td>Mfr of misc. wood, cork &amp; cane prods</td>
<td>17.32</td>
<td>13.54</td>
<td>10.63</td>
<td>10.18</td>
<td>6.49</td>
<td>8.00</td>
<td>7.97</td>
</tr>
<tr>
<td>Mfr and repair of rattan furniture incl upholstery</td>
<td>36.88</td>
<td>29.19</td>
<td>29.65</td>
<td>29.64</td>
<td>22.08</td>
<td>22.09</td>
<td>22.06</td>
</tr>
<tr>
<td>Mfr and repair of other furnitures and fixtures, n.e.c.</td>
<td>32.84</td>
<td>24.50</td>
<td>24.50</td>
<td>21.29</td>
<td>16.71</td>
<td>17.43</td>
<td>16.81</td>
</tr>
<tr>
<td>Pulp, paper and paperboard</td>
<td>16.18</td>
<td>14.42</td>
<td>11.30</td>
<td>10.94</td>
<td>7.05</td>
<td>7.54</td>
<td>6.30</td>
</tr>
<tr>
<td>Paper and paperboard containers</td>
<td>19.06</td>
<td>10.65</td>
<td>10.57</td>
<td>11.02</td>
<td>7.60</td>
<td>7.61</td>
<td>8.62</td>
</tr>
<tr>
<td>Mfr of articles of paper and paperboard</td>
<td>23.71</td>
<td>19.10</td>
<td>13.87</td>
<td>11.95</td>
<td>8.19</td>
<td>9.61</td>
<td>8.93</td>
</tr>
<tr>
<td>Newspapers and periodicals</td>
<td>9.58</td>
<td>10.86</td>
<td>6.71</td>
<td>6.93</td>
<td>5.23</td>
<td>4.89</td>
<td>5.54</td>
</tr>
<tr>
<td>Printing and publishing of books and pamphlets</td>
<td>10.38</td>
<td>9.84</td>
<td>7.10</td>
<td>7.22</td>
<td>5.49</td>
<td>5.69</td>
<td>6.17</td>
</tr>
<tr>
<td>Industry Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of basic ind'l chemicals</td>
<td>2.77 2.80 2.87 2.89 2.17 2.07 1.98</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of fertilizer</td>
<td>2.76 2.81 2.95 2.96 3.81 2.50 2.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of synthetic resins, plastic materials &amp; other man-made fibers excl glass</td>
<td>9.41 9.66 7.29 6.88 7.20 7.17 8.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of pesticides, insecticides, etc</td>
<td>108.62 -71.09 -96.46 95.97 110.42 236.74 237.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr. of paints, varnish &amp; lacquers</td>
<td>15.31 14.27 12.40 12.60 9.44 9.33 8.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of drugs &amp; medicines</td>
<td>2.96 2.86 2.82 2.87 2.62 2.63 2.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of soap &amp; detergents</td>
<td>15.10 14.67 11.09 9.95 8.10 10.14 9.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of perfumes, cosmetics &amp; other toilet preparations</td>
<td>20.74 17.44 12.10 11.54 7.14 9.68 10.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of/misc chemical products</td>
<td>5.32 4.91 4.16 3.96 3.36 3.70 6.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubber tire &amp; tube mfg</td>
<td>19.31 13.72 11.90 11.94 8.41 8.82 8.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of rubber footwear</td>
<td>37.45 29.01 25.61 21.89 14.29 19.00 18.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of other rubber products, n.e.c</td>
<td>18.68 15.97 10.94 10.68 7.23 9.24 10.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr. of paints, varnish &amp; lacquers</td>
<td>21.22 18.61 11.74 11.79 8.05 11.89 11.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of glass container</td>
<td>17.96 17.65 12.44 12.47 8.12 11.51 11.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of other glass &amp; glass products</td>
<td>11.86 11.93 8.66 8.02 6.27 6.99 6.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement mfr</td>
<td>8.06 6.37 3.51 3.54 4.37 4.31 4.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of structural clay products</td>
<td>22.22 20.06 12.50 10.88 6.84 8.37 8.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of structural concrete prods</td>
<td>59.02 42.68 27.65 27.70 16.34 25.67 25.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blast furnace and steel making furnace, steel works and rolling mills</td>
<td>16.07 14.20 11.79 10.26 7.58 8.06 8.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron and steel foundries</td>
<td>14.02 12.01 9.95 8.62 5.00 6.16 5.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-ferrous smelting &amp; refining plants, rolling, drawing and extrusion mills</td>
<td>7.49 6.69 6.07 5.74 3.97 4.10 3.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-ferrous foundries</td>
<td>7.65 7.41 5.58 5.57 4.52 4.33 3.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cutlery, handtools, general hardware</td>
<td>18.01 16.69 15.48 10.20 7.35 7.90 8.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural metal prods</td>
<td>19.41 19.49 15.70 15.56 11.44 12.94 12.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of metal containers</td>
<td>24.26 19.65 17.13 17.19 13.18 15.90 16.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal stamping, coating, engraving mills</td>
<td>36.03 29.73 24.48 23.98 15.98 20.65 19.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of wire nails</td>
<td>73.83 48.34 43.57 44.81 27.57 31.56 31.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of other fabricated wire &amp; cable prods exc insulated wire &amp; cable</td>
<td>32.79 28.69 25.49 24.10 16.14 16.26 16.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of non-electric lighting and heating fixtures</td>
<td>19.77 16.73 16.97 15.56 10.83 10.39 10.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of fabricated metal prods exc machinery &amp; equipment</td>
<td>18.76 15.39 13.63 11.21 7.79 9.05 8.98</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of agricultural machinery and equipment</td>
<td>1.53 -0.18 0.77 3.16 3.97 2.08 1.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of metal and wood-working machinery</td>
<td>0.90 1.32 1.40 1.67 0.30 0.11 0.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of engines nd turbines exc. for transport eq. &amp; special ind. mach'y and equipment</td>
<td>1.31 1.70 1.90 1.91 0.38 0.01 -0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr, assembly &amp; repair of office, computing and acctg machines</td>
<td>3.53 3.49 1.24 0.97 0.67 0.72 0.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of pumps, compressors, blowers and airconditioners</td>
<td>6.16 6.38 5.52 5.67 2.82 3.09 3.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machine shops &amp; mfr of non-electrical mach'y and eq. n.e.c.</td>
<td>7.68 7.78 6.09 5.44 3.07 3.59 3.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of electrical ind'l mach'y and apparatus</td>
<td>5.04 5.20 4.04 4.29 2.75 2.60 2.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mfr of radio and TV receiving sets, sound recording &amp; reproducing eq. incl records and tapes</td>
<td>37.42 37.44 37.16 29.03 21.80 21.39 19.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Mfr of communication and detection equipment</td>
<td>5.28</td>
<td>5.17</td>
<td>6.08</td>
<td>6.67</td>
<td>5.70</td>
<td>4.40</td>
<td>2.73</td>
</tr>
<tr>
<td>Mfr of parts and supplies for radio, TV &amp; communication (semi-conductors)</td>
<td>5.91</td>
<td>6.09</td>
<td>3.25</td>
<td>3.04</td>
<td>2.33</td>
<td>2.51</td>
<td>2.34</td>
</tr>
<tr>
<td>Mfr of appliances and housewares</td>
<td>16.96</td>
<td>14.35</td>
<td>8.79</td>
<td>7.59</td>
<td>5.48</td>
<td>4.91</td>
<td>4.33</td>
</tr>
<tr>
<td>Mfr of primary cells and batteries and electric accumulators</td>
<td>29.30</td>
<td>18.11</td>
<td>12.51</td>
<td>9.05</td>
<td>6.81</td>
<td>8.84</td>
<td>8.65</td>
</tr>
<tr>
<td>Insulated wires and cables</td>
<td>14.73</td>
<td>15.20</td>
<td>16.72</td>
<td>16.91</td>
<td>11.31</td>
<td>12.12</td>
<td>12.16</td>
</tr>
<tr>
<td>Mfr of current-carrying wiring devices, conduits &amp; fittings</td>
<td>6.43</td>
<td>6.24</td>
<td>4.86</td>
<td>5.30</td>
<td>2.82</td>
<td>2.96</td>
<td>2.61</td>
</tr>
<tr>
<td>Mfr of electrical lamps, fluorescent tubes and other electrical apparatus &amp; supplies, n.e.c.</td>
<td>10.43</td>
<td>8.57</td>
<td>8.18</td>
<td>7.44</td>
<td>5.97</td>
<td>6.04</td>
<td>6.21</td>
</tr>
<tr>
<td>Shipyards and boatyards</td>
<td>4.84</td>
<td>4.29</td>
<td>3.71</td>
<td>3.82</td>
<td>3.31</td>
<td>3.19</td>
<td>2.89</td>
</tr>
<tr>
<td>Mfr and assembly of motor vehicles</td>
<td>97.45</td>
<td>97.60</td>
<td>76.87</td>
<td>74.58</td>
<td>77.88</td>
<td>76.70</td>
<td>76.13</td>
</tr>
<tr>
<td>Rebuilding &amp; major alteration of motor vehicles</td>
<td>42.54</td>
<td>43.65</td>
<td>32.98</td>
<td>32.14</td>
<td>33.57</td>
<td>33.35</td>
<td>33.14</td>
</tr>
<tr>
<td>Mfr of motor vehicles parts and accessories</td>
<td>9.69</td>
<td>10.46</td>
<td>8.15</td>
<td>8.35</td>
<td>8.90</td>
<td>8.45</td>
<td>7.43</td>
</tr>
<tr>
<td>Mfr, assembly of motorcycles &amp; bicycles</td>
<td>44.80</td>
<td>43.36</td>
<td>30.76</td>
<td>30.88</td>
<td>31.96</td>
<td>31.91</td>
<td>34.92</td>
</tr>
<tr>
<td>Mfr, assembly, rebuilding &amp; major alteration of railroad equipment, aircraft, and animal and hand-drawn vehicle</td>
<td>3.56</td>
<td>3.26</td>
<td>3.17</td>
<td>2.86</td>
<td>2.18</td>
<td>2.13</td>
<td>2.13</td>
</tr>
<tr>
<td>Mfr of professional, scientific measuring &amp; controlling eq</td>
<td>3.42</td>
<td>2.81</td>
<td>2.74</td>
<td>2.93</td>
<td>2.34</td>
<td>1.91</td>
<td>2.07</td>
</tr>
<tr>
<td>Mfr of photographic and optical instruments</td>
<td>4.22</td>
<td>4.03</td>
<td>3.07</td>
<td>3.00</td>
<td>2.72</td>
<td>2.68</td>
<td>2.37</td>
</tr>
<tr>
<td>Mfr of watches and clocks</td>
<td>7.54</td>
<td>6.76</td>
<td>5.10</td>
<td>5.19</td>
<td>3.83</td>
<td>4.16</td>
<td>4.11</td>
</tr>
<tr>
<td>Mfr &amp; repair of furniture &amp; fixtures, made primarily of metal</td>
<td>36.53</td>
<td>30.85</td>
<td>30.74</td>
<td>30.70</td>
<td>22.93</td>
<td>23.69</td>
<td>24.04</td>
</tr>
<tr>
<td>Mfr of jewelry &amp; related articles</td>
<td>8.40</td>
<td>8.61</td>
<td>6.79</td>
<td>6.83</td>
<td>5.27</td>
<td>6.05</td>
<td>6.03</td>
</tr>
<tr>
<td>Mfr of musical instruments</td>
<td>6.19</td>
<td>5.75</td>
<td>4.66</td>
<td>4.61</td>
<td>3.99</td>
<td>4.78</td>
<td>4.89</td>
</tr>
<tr>
<td>Mfr of sporting and athletic goods</td>
<td>7.68</td>
<td>5.42</td>
<td>4.68</td>
<td>3.37</td>
<td>2.85</td>
<td>3.78</td>
<td>2.94</td>
</tr>
<tr>
<td>Mfr of surgical, dental, medical and orthopedic supplies</td>
<td>5.48</td>
<td>4.84</td>
<td>4.94</td>
<td>5.02</td>
<td>5.00</td>
<td>4.80</td>
<td>6.21</td>
</tr>
<tr>
<td>Mfr of ophthalmic goods</td>
<td>12.32</td>
<td>9.68</td>
<td>6.99</td>
<td>6.48</td>
<td>4.70</td>
<td>4.59</td>
<td>4.15</td>
</tr>
<tr>
<td>Mfr of stationers', artists' and office supplies</td>
<td>11.01</td>
<td>9.29</td>
<td>6.67</td>
<td>6.19</td>
<td>4.44</td>
<td>4.83</td>
<td>4.71</td>
</tr>
<tr>
<td>Miscellaneous mfg</td>
<td>14.27</td>
<td>11.21</td>
<td>9.06</td>
<td>8.67</td>
<td>6.35</td>
<td>8.11</td>
<td>8.07</td>
</tr>
</tbody>
</table>