

APPENDIX A

Definition of Selected Indicators

Trade (MFN) Tariff Restrictiveness Index (MFN TTRI)	<p>This index summarizes the trade restrictiveness of the MFN tariff schedule of a country. It is equivalent to the uniform tariff that would maintain the country's aggregate import volume at its current level (given heterogeneous tariffs). Expressed in percent (as if it were a tariff rate).</p> <p><i>Source:</i> As calculated by the World Bank Development Economics Research Group (DECRG) using UNCTAD TRAINS and the United Nations Commodity Trade (COMTRADE) Statistics Database through WITS. See paper by Kee, Nicita, and Olarreaga (2008).</p>
Trade Tariff Restrictiveness Index (TTRI)	<p>This indicator is calculated as the MFN TTRI described above, but including preferential rates. Expressed in percent (as if it were a tariff rate).</p> <p><i>Source:</i> Same as above.</p>
Overall Tariff Restrictiveness Index (OTRI)	<p>This indicator is calculated as the TTRI described above, but including nontariff measures. Expressed in percent (as if it were a tariff rate).</p> <p><i>Source:</i> Same as above.</p>
MFN applied tariff	<p>This indicator is calculated as the average of the MFN applied (as opposed to bound) tariff rates available at the Harmonized Schedule (HS) 6-digit product level in a country's customs schedule. Reported as a simple average (includes lines where there are no trade flows), a trade weighted average (weighted by</p>

	<p>trade import values at 6-digit level), dispersion (coefficient of variation), and maximum rate. These are all reported disaggregated for agricultural goods and nonagricultural goods.</p> <p><i>Source:</i> As calculated by the World Bank Institute WTI 2008 team using the UNCTAD TRAINS tariff database and the UN COMTRADE database through WITS until 2004. For 2005–7, ITC calculated the indicator based on their tariff and trade flow databases, including at the tariff line level when available information exists. For the trade weighted average reported trade data at the HS 6-digit level have been used in most cases, but, for some countries mirror data from trading partners have been used (2006 or latest trade flows have been used for in most cases, the estimation of the 2007 indicator).</p>
Applied tariff	<p>This indicator is calculated in the same way as the MFN applied tariff, but including preferential rates.</p> <p><i>Source:</i> Same as above.</p>
MFN duty-free imports/exports	<p>This indicator reflects the value of goods imported/exported duty free (based on the country's HS tariff structure) or under MFN-0 as a percentage share of total merchandise imports/exports. In cases where tariff lines include both duty free and non-duty free rates at the HS 8-digit level, exports are treated as non-duty free.</p> <p><i>Sources:</i> As calculated by the World Bank Institute WTI 2008 team using UNCTAD TRAINS and the UN COMTRADE database through WITS until 2004. For a number of countries WITS uses mirror data from COMTRADE for estimating MFN-0 imports/exports. From 2005–07 we used the ITC database. ITC linked tariffs and trade at the tariff line level when data were available for the same year, but when trade data were not available at the tariff line level, ITC used COMTRADE data.</p>
Tariff escalation ratios	<p>These indicators are calculated as (i) the percentage point difference between the applied tariffs for finished (or fully processed) goods and the applied tariffs for raw materials (or primary products) and as (ii) the percentage change between the applied tariffs for finished (or fully processed) goods and the applied tariffs for raw materials (or primary products).</p>

	<p><i>Sources:</i> As calculated by the World Bank Institute WTI 2008 team using UNCTAD TRAINS and the UN COMTRADE database through WITS until 2004. From 2005–07 we used the ITC database, using WTO classification of tariff lines for primary, intermediate, and finished product categories.</p>
<p>Import duties as percent of imports</p>	<p>This indicator reflects a country's customs and other import duties as a percentage of total imports, evaluated in local national currency.</p> <p><i>Sources:</i> World Bank WDI database and International Monetary Fund (IMF) Government Finance Statistics database.</p>
<p>Specific tariffs frequency ratio (percent of total tariff lines)</p>	<p>This indicator reflects the number of HS 6-digit level tariff lines with at least one specific tariff as a percentage share of the total number of HS tariff lines. A specific tariff is a duty based on unit quantity and not linked to the product's unit price.</p> <p><i>Source:</i> As calculated by the World Bank Institute WTI 2008 team using UNCTAD TRAINS and the UN COMTRADE database through WITS until 2004. From 2005–7 we used the ITC database.</p>
<p>Nontariff measures frequency ratio (percent)</p>	<p>This indicator reflects the simple average of import coverage in the percentage of products within a category that is affected by at least one nontariff measure at the HS 6-digit level. The nontariff barriers covered are only those that include various price control measures, variable charges, anti-dumping and countervailing actions, quantitative restrictions, nonautomatic licensing, or other prohibitions. Latest year for which information is available is 2001.</p> <p><i>Source:</i> As calculated by the World Bank Institute WTI 2008 team using UNCTAD TRAINS and the UN COMTRADE database through WITS until 2004. From 2005–07 we used the ITC database.</p>
<p>Overall GATS commitments index</p>	<p>This indicator measures the extent of GATS commitments for all 155 services subsectors and in the four modes as classified by the GATS. Each entry in the country's schedule is assigned scores based on its relative restrictiveness, using a criteria set out by Bernard Hoekman's methodology. Scores range from 0 (unbound or no commitments) to 100 (completely liberalized), with an intermediate value of 50 for partial commitments. Simple averages of the subsectoral scores were</p>

used to generate aggregate sectoral scores (for the 12 main services sectors as classified by the GATS), modes scores, and market access and national treatment scores. The overall GATS commitment index is a simple average of the sectoral indices.

Source: GATS commitment schedules in the WTO, as scored by the World Bank Institute WTI 2008 team. Scoring scale and criteria and sectoral weights follow Bernard Hoekman, *Tentative First Steps: An Assessment of the Uruguay Round Agreement on Services*, Finance and Private Sector Development Team— Technical Department, ECA/MNA Regions, The World Bank. Presented at a World Bank Conference, The Uruguay Round and the Developing Economies, January 26–27, 1995.

ITU Competition
Index in Telecom
Sector

This index reflects the level of competition in a country's telecommunications sector for international long distance calls, mobile phones, and Internet service providers. Based on the most recent industry competition level (monopoly, partial competition, or competition), each subsector is assigned a value of 0 to 2 (with the higher value representing greater competition in the market). The index is then calculated as the simple average of the three subsector indicator values.

Source: 2006 ITU World Telecom Regulatory database.

Market Access Trade
Tariff Restrictiveness
Index (MA-TTRI)

This index summarizes the trade restrictiveness of the tariff schedules (including preferences) of a country's trading partners. It is equivalent to the uniform tariff that would maintain a country's aggregate export volume at its current level (given heterogeneous tariffs), including preferential rates. Expressed in percent (as if it were a tariff rate).

Source: As calculated by the World Bank's Development Economics Research Group (DECRG) using UNCTAD TRAINS and the United Nations Commodity Trade (COMTRADE) Statistics Database through WITS. See paper by Kee, Nicita, and Olarreaga (2008).

Market Access Overall
Tariff Restrictiveness
Index (MA-OTRI)

This indicator is calculated as the MA-TTRI described above, but including nontariff measures. Expressed in percent (as if it were a tariff rate).

Source: Same as above.

Rest-of-the-world applied tariff	<p>This indicator is calculated as the average of the applied tariff rates imposed by a country's export partners, including preferences, available at the HS 6-digit product level in a country's customs schedule. Reported as simple and trade weighted averages.</p> <p><i>Source:</i> As calculated by the World Bank Institute WTI 2008 team using UNCTAD TRAINS and the UN COMTRADE database through WITS until 2004. From 2005–07 we used the ITC database. ITC linked tariffs and trade at the tariff line level when data were available for the same year, but when trade data were not available at the tariff line level, ITC used COMTRADE data. For the trade weighted average, reported trade data at the HS 6-digit level have been used in most cases, but, for some countries, mirror data from trading partners have been used. The online database for the WTI 2008 Web site includes also ITC estimates (as of March 13) for 2007 (2006 or latest trade flows have been used for the estimation of the 2007 indicator).</p>
Share of trade with regional trade agreement (RTA) partners (percent of total exports)	<p>This indicator is the ratio of the total value of merchandise exports/imports with RTA partners (including but not limited to free trade and customs union partners) to the total value of exports/imports. Expressed as a percentage of total merchandise exports/imports. This indicator was calculated according to the year each country accessed to the RTA.</p> <p><i>Sources:</i> As calculated by the World Bank Institute's WTI 2008 team. WTO Regional Trade Agreements Division, WTO Web site, and COMTRADE.</p>
Preferences utilization rate (percent, actual/potential value)	<p>The ratio between the value of actually utilized U.S. or EU preferences and the value of potential U.S. and EU preferences, expressed in percentage terms.</p> <p><i>Sources:</i> As calculated by the World Bank Institute's WTI 2008 team, based on USITC Trade DataWeb and USITC Tariff Database Tables for U.S. imports; UNCTAD TRAINS and Comext for EU imports.</p>
Preferences, potential value (percent of exports)	<p>This is calculated by taking the difference between the MFN duty and the preferential duty (if applicable), regardless whether or not</p>

	<p>trade occurred at that preferential rate, multiplying by eligible exports for each tariff line at the HS 8-digit level, then summing across all lines. Expressed as a share of the value of the country's bilateral exports to the U.S. and E.U.</p> <p><i>Sources:</i> Same as above.</p>
<p>Preferences, actual value (percent of exports)</p>	<p>The value of actually utilized US or EU preferences, expressed as a share of the value of the country's exports to the US and EU. It is equivalent to the following: taking the difference between the MFN duty rates of those goods that entered under preferential rates (as if they entered under MFN rates), multiplied by the total value of the corresponding exports claiming preferences, and the preferential duties that were actually paid. Expressed as a percentage of total bilateral exports. It represents the actual savings in terms of duties paid with respect to the MFN duties that would otherwise be collected.</p> <p>It is also reported disaggregated for E.U. only and U.S. only exports for each country.</p> <p><i>Sources:</i> Same as above.</p>
<p>Real effective exchange Rate change (percent, += appreciation)</p>	<p>The real effective exchange rates are calculated using geometric weighted averages of the seasonally adjusted consumer price index and the exchange rate index, U.S. dollar per national currency, period average. It is calculated for those countries having consumer prices data. Countries with high inflation rates are not seasonally adjusted.</p> <p><i>Source:</i> Compiled by the IMF Information Notice System.</p>
<p>Ease of doing business rank (1–178)</p>	<p>The ease of doing business rank represents a country's overall business environment based on ten indicators, three of which are reported here: starting a business, enforcing contracts, and closing a business, each ranked out of 178 countries.</p> <p><i>Source:</i> World Bank Doing Business, various years.</p>
<p>Logistics Performance Index (1 to 5)</p>	<p>The LPI reflects the overall perception of a country's seven key logistics based on over 1,000 surveys of logistic information. Logistics</p>

categories include efficiency of customs and other border procedures, quality of transport and information technology infrastructures, international and domestic transportation costs, ease of shipments and logistics competence, and tracking ability and timeliness of shipments. The value of the index ranges from 1 to 5, with a higher score representing a better performance.

Source: Global Facilitation Partnership for Transportation and Trade.

Real growth in total trade of goods and services (in percent)

It is calculated as the average annual growth rate of the total exports and imports in goods and services at constant 2000 U.S. dollars. This indicator shows the trade expansion of a country over the period. Also reported are the disaggregated percentages for exports and imports.

Source: World Bank Development Economics and Data Group (DECDG), as reflected also in the Development Data Platform through 2006. Development Economics and Prospects Group (DECPCG) estimates (as of December 2007) were used for 2007. Also, missing year values in the DECDG historical series were interpolated using DECPCG estimates.

Trade integration, trade share in GDP (in percent)

It is the sum of exports and imports in goods and services divided by the value of GDP in current U.S. dollars.

Source: Same as above.

Import/export product concentration index (0 to 100, max.)

This index, also called the Herfindahl-Hirschmann index, is calculated as

$$H_{ij} = 100 * \left[\frac{\sqrt{\sum_i \left(\frac{X_{ij}}{X_j} \right)^2} - \sqrt{\frac{1}{n}}}{1 - \sqrt{\frac{1}{n}}} \right]$$

where X_{ij} is the country j 's exports of product i (at SITC 3-digit level), X_j is country j 's total exports, and n is the total number of 3-digit products. Note that this type of concentration indicator tends to be quite vulnerable to cyclical

fluctuations in relative prices, in a way that commodity price rises make commodity exporters look more concentrated.

Source: UNCTAD Statistical Office, also reported in the UNCTAD *Handbook of Statistics*, various issues.

Import/export market concentration index (0 to 100, max.)

This index, also called the Herfindahl-Hirschmann index, is calculated as

$$H_{ij} = 100 * \left[\sqrt{\sum_j \left(\frac{X_{ij}}{X_i} \right)^2} \right]$$

where X_{ij} is the country i 's exports to country j (at SITC 3-digit level) and X_i is country i 's total exports to all trading partners. Note that this type of concentration indicator tends to be quite vulnerable to cyclical fluctuations in relative prices, in a way that commodity price rises make commodity exporters look more concentrated.

Source: As calculated by the World Bank Institute's WTI 2008 team using COMTRADE database.