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by

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Abstract

This Working Paper is part of the project “WTO Negotiations and Changes in National Agricultural and Trade Policies: Consequences for Developing Countries”, which is carried out by the Agricultural Policy Research Division, SJFI, in co-operation with the International Food Policy Research Institute (IFPRI) in Washington DC, USA. The Working Paper reviews the trade between EU and developing countries, notably with regard to EU imports of agricultural products from developing countries.

It is found that developing countries as a whole account for a considerable and increasing share of global trade. Developing countries hold a strong position in export of fruits & vegetables, vegetable oils & fats, plant-based fibres, sugar and a large group of exotic product such as coffee, tea and spices, but also products like nursery plants and flowers. EU is the largest single trading partner for developing countries, and the EU is also the major export market for agricultural products from the Least Developing Countries. Imports of processed agricultural products accounted for one-fourth of the imports in 1997. 61% of agricultural exports from developing countries in Africa went to the EU, 34% from South & Central America, and 22% from Asian developing countries.

It is emphasised that the analysis provides a stocktaking of the trade between the EU and developing countries, reflecting differences in natural comparative advantages in production as well as trade policies. The impact on trade of changes in trade policies will be analysed elsewhere in the project.
1. Definition and overview

According to the World Bank definition, 157 countries out a total number of 207 countries were classified as developing countries (DCs) in 2000. Developing countries are defined as countries belonging to low- and middle-income economies (Box 1). Of the 157 DCs, 64 were low-income economies with a total population of 2.4 billion people, 55 countries belonged to lower-middle economies with 2.1 billion people, 38 to upper-middle with 0.6 billion people and 50 countries are classified as high-income economies (developed countries) representing 0.9 billion inhabitants (Table 1). Hence, of the global population of nearly 6 billion people, 5 billion or 85% live in developing countries.

**TABLE 1. Distribution of countries according to level of income**

<table>
<thead>
<tr>
<th>Low-income</th>
<th>Middle-income</th>
<th>High-income</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>Upper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of countries, 2000</td>
<td>64</td>
<td>55</td>
<td>38</td>
</tr>
<tr>
<td>Number of people, millions, 1999</td>
<td>2417</td>
<td>2094</td>
<td>573</td>
</tr>
</tbody>
</table>


**Box 1**

**World Bank definition of developing countries**

The World Bank classifies countries in income groups according to their GNP per capita. For 1999, the classification is based on the following groups:

- Low-income $755 or less
- Lower-middle-income $756 - $2,995
- Upper-middle-income $2,996 - $9,265
- High-income $9,266 or more

*Developing countries* are defined as countries belonging to the groups of low-income, lower-middle-income and upper-middle-income economies.

*Developed countries* are defined as countries belonging to the group of high-income economies.

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During the 1990s, the global population increased annually by about 1% with a slightly higher growth rate for middle-income economies, and double the growth rate for low-income countries (Table 2). The average per capita income of low-income countries was in 1999 US$1,790 corresponding to 28% of the global average (7% of the income of developed countries). In average, the middle-income group had an income of US$4,880, whereas high-income economies with 15% of the global population had an average income of US$24,430 per capita, corresponding to about 56% of the global GNP. The income figures are adjusted for differences in purchasing power (PPP-figures) and cannot be compared with the grouping criteria mentioned earlier.

**TABLE 2. Distribution of the world population by income and regions, 1999**

<table>
<thead>
<tr>
<th>Population</th>
<th>GNP (PPP)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Million</td>
<td>% of total</td>
</tr>
<tr>
<td>Low-income</td>
<td>2,417</td>
<td>40</td>
</tr>
<tr>
<td>Middle-income</td>
<td>2,667</td>
<td>45</td>
</tr>
<tr>
<td>- Lower-middle</td>
<td>2,094</td>
<td>35</td>
</tr>
<tr>
<td>- Upper-middle</td>
<td>573</td>
<td>10</td>
</tr>
<tr>
<td>High-income</td>
<td>891</td>
<td>15</td>
</tr>
<tr>
<td>World</td>
<td>5,975</td>
<td>100</td>
</tr>
</tbody>
</table>

1 Average annual growth rate 1990-99.

Note: Economies are classified according to GNP per capita (see Box 1). The classification criterion differs from the PPP-measure presented in column 4 where GNP is adjusted for difference in purchasing power of the currencies.


The lower part of Table 2 shows the regional distribution of low and middle-income countries, indicating that 31% of the global population is situated in low and middle-income economies in the East Asia & Pacific regions. The regions with the lowest average income are Sub-Saharan Africa and South Asia accounting for 11% and 22% of the global population, respectively. Among the middle-income economies, Latin America & the Caribbean Islands are, in general, best off with an average income of US$6,280 per capita.
The annual rate of growth in GNP was 1.4% during the 1980s and about 0.8 from 1990 to 1997 (Table 3). The growth rate for low-income countries has been about 2% per annum in the same period as compared with 2.5% for high-income countries during the 1980s and about 1.4% from 1990 to 1997. The growth rate for low and middle-income countries varies considerably among countries as the figures for the so-called “big five” (China, Indonesia, India, Brazil and Sub-Saharan Africa) shows. In the case of China and Indonesia, the growth rate has been way above that of developed countries for the last couple of decades whereas GNP per capita in Sub-Saharan Africa, on average has been falling. The latter is a result of an annual increase in GNP of 1.8% and a population growth of 2.8% per year for the period 1980-97.

<table>
<thead>
<tr>
<th>Population million</th>
<th>Annual change in real GNP/capita, 1995-US$, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1999</td>
</tr>
<tr>
<td>World</td>
<td>5,975</td>
</tr>
<tr>
<td>Low income countries</td>
<td>2,417</td>
</tr>
<tr>
<td>Middle income countries</td>
<td>2,667</td>
</tr>
<tr>
<td>High income countries</td>
<td>891</td>
</tr>
<tr>
<td>China</td>
<td>1 250</td>
</tr>
<tr>
<td>Indonesia</td>
<td>207</td>
</tr>
<tr>
<td>India</td>
<td>998</td>
</tr>
<tr>
<td>Brazil</td>
<td>168</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>642</td>
</tr>
</tbody>
</table>


The United Nations has designated 48 countries as Least Developed Countries (LDCs) for which special consideration is to be given. The definition of LDCs is outlined in Box 2 giving attention not only to the level of income but also to physical quality of life, economic diversification and size of population. Only countries with population less than 75 million can qualify for special treatment. The 48 LDC countries are listed in the box, indicating that Africa – notably Sub Saharan Africa – is strongly represented in the group. Many of the countries are small economies with few natural resources, however, some of the countries are very rich in natural resources but have been ravaged by civil war (e.g. Dem. Republic of Congo, Rwanda, Uganda). Annex Table 1 presents an overview of the size of population, level of income per capital and annual growth rates for LDCs.
The World Trade Organisation (WTO) does not have a definition of a developing country per se. Instead, members of the WTO can proclaim by themselves that they belong to this group, however, this does not automatically entail the advantages members of developing countries in WTO are eligible for (WTO, 2000c). Countries classified as developing countries are eligible for a set of preference schemes, notably the Generalised System of Preferences. Other members of the WTO can challenge a country’s claim of being a developing country, the dispute eventually being settled by negotiations.

The United Nations Conference on Trade and Development (UNCTAD) designates countries that meet a set of criteria as Least Developed Countries (LDCs). Determination of a country as LDC is based not only on income, but also on the “potentials” for development of the country. Thus, countries with particular disadvantages are given priority by being included on the LDC list, whereas a country with similar income may not be included. The LDC list is based on the following criteria (UNCTAD, 2000c):

- GDP per capita.
- Augmented Physical Quality of Life Index (APQLI), which consists of indicators of life expectancy at birth, calorie intake per capita, combined primary and secondary school enrolment, and adult literacy.
- Economic Diversification Index (EDI), which is based on the share of manufacturing in total GDP, share of the labour force in industry, annual per capita commercial energy consumption, and UNCTAD’s merchandise export concentration index.
- Population of 75 million or less.

To be granted LDC status, a potential country has to pass established thresholds for each of the four criteria. Countries listed as Least Developed Countries by the UNCTAD are recognised as such by WTO.

**Least Developed Countries**

<table>
<thead>
<tr>
<th>Angola</th>
<th>Djibouti</th>
<th>Liberia</th>
<th>Sao Tome &amp; Principe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghan</td>
<td>Dem. Republic Congo</td>
<td>Madagascar</td>
<td>Sierra Leone</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Equatorial Guinea</td>
<td>Malawi</td>
<td>Solomon Islands</td>
</tr>
<tr>
<td>Benin</td>
<td>Eritrea</td>
<td>Mali</td>
<td>Somalia</td>
</tr>
<tr>
<td>Bhutan</td>
<td>Ethiopia</td>
<td>Maldives</td>
<td>Sudan</td>
</tr>
<tr>
<td>Burundi</td>
<td>Gambia</td>
<td>Mauritania</td>
<td>Tanzania</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>Guinea</td>
<td>Mozambique</td>
<td>Togo</td>
</tr>
<tr>
<td>Cambodia</td>
<td>Guinea Bissau</td>
<td>Myanmar</td>
<td>Tuvalu</td>
</tr>
<tr>
<td>Cape Verde</td>
<td>Haiti</td>
<td>Nepal</td>
<td>Uganda</td>
</tr>
<tr>
<td>Chad</td>
<td>Laos</td>
<td>Rwanda</td>
<td>Yemen</td>
</tr>
<tr>
<td>Comoros</td>
<td>Lesotho</td>
<td>Samoa</td>
<td>Zambia</td>
</tr>
</tbody>
</table>

Source: (UNCTAD, 2000c)
2. Trade of developing countries – an overview

Developing countries accounted for 65% of total exports and for 43% of the exports of agricultural products in 1999 (Table 4). For agricultural trade, this is slightly higher than in 1990 when developing countries contributed to the world export with 40%. The change is reflected in the trend of agricultural exports that have increased in value terms by 6.0% per year as compared with 5.2% for the world as a whole. Developing countries’ exports of manufactures have increased even more (10.3% as compared with 7.8% for the world total).

| TABLE 4. Distribution of merchandise exports, World and Developing Countries (DC), 1999 |
|-----------------------------------------------|---------------------------------|-----------------|------------------|------------------|
| | US$ billion | DC % of world | Annual change % 1990-99 | World | DC |
|-----------------|---------------|-----------------|------------------|------------------|
| Agricultural products | 289 | 125 | 43 | 5.2 | 6.0 |
| Mining products | 486 | 290 | 60 | 3.1 | 2.3 |
| Manufactures | 3 313 | 1 115 | 34 | 7.8 | 10.3 |
| Total | 4 088 | 2 660 | 65 | - | - |

1 Own calculations.

Source: WTO (2000b, p. 3).

Developing countries in Latin America & the Caribbean, accounting for 17.5% of world agricultural exports in 1999, have had the largest increase in exports during the 1990s (Table 5), whereas agricultural exports of Developing Asia have increased by merely 0.3% on an annual basis. Developing Africa has increased exports by an annual rate of 0.8%.

| TABLE 5. Developing countries’ share in World Agricultural Exports by Region, 1999 |
|-----------------------------------------------|-----------------|------------------|------------------|
| Region | World export % | Annual change (%) 1990-99 1 |
|-----------------|---------------|------------------|------------------|
| Africa | 5.5 | 0.8 |
| Developing Asia | 16.5 | 0.3 |
| Latin America and the Caribbean | 17.5 | 2.0 |
| Middle East | 2.0 | 0.0 |
| Other | 1.5 | -3.3 |
| All Developing countries | 43.0 | 0.3 |

1 Change in the share of world export, own calculations.

Source: WTO (2000b, p. 4)

Exports from developing countries cover a wide range of agricultural products, the major commodities being fruit & vegetables, vegetable oils & fats and exotic products like coffee, tea, cocoa & spices (Table 6). Developing countries in Asia and Latin America & Caribbean have also a considerable export of meat, cereals, sugar and feeding stuffs. Exports of
Fruits & vegetables and sugar from African countries have increased considerably during the 1990s. Likewise, Latin American and Caribbean developing countries have expanded their exports, notably of cereals, sugar and fruit & vegetables. Asian exports of meat, cereals and vegetable oils have increased by 5-6% annually during the latter part of the 1990s.

**TABLE 6. Agricultural exports of selected products by Developing Countries**

<table>
<thead>
<tr>
<th>Description</th>
<th>African countries ¹</th>
<th>Asian countries ²</th>
<th>Latin American and Caribbean countries ³</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Meat</td>
<td>n.a.</td>
<td>n.a.</td>
<td>3,797</td>
</tr>
<tr>
<td>04 Cereals (incl. Rice)</td>
<td>n.a.</td>
<td>n.a.</td>
<td>6,367</td>
</tr>
<tr>
<td>05 Fruit &amp; vegetables</td>
<td>2,051</td>
<td>6.0</td>
<td>6,953</td>
</tr>
<tr>
<td>06 Sugar</td>
<td>849</td>
<td>7.5</td>
<td>n.a.</td>
</tr>
<tr>
<td>07 Coffee, tea, cocoa &amp; spices</td>
<td>1,021</td>
<td>3.0</td>
<td>4,472</td>
</tr>
<tr>
<td>08 Feeding stuffs</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>12 Tobacco</td>
<td>714</td>
<td>-1.5</td>
<td>n.a.</td>
</tr>
<tr>
<td>23 Rubber</td>
<td>n.a.</td>
<td>n.a.</td>
<td>4,469</td>
</tr>
<tr>
<td>26 Natural fibres</td>
<td>498</td>
<td>-2.0</td>
<td>3,097</td>
</tr>
<tr>
<td>42 Vegetable oils and fats</td>
<td>n.a.</td>
<td>n.a.</td>
<td>7,170</td>
</tr>
<tr>
<td>Subtotal</td>
<td>5,133</td>
<td>n.a.</td>
<td>36,325</td>
</tr>
<tr>
<td>Other products</td>
<td>3,987</td>
<td>n.a.</td>
<td>31,656</td>
</tr>
<tr>
<td>Total</td>
<td>9,120</td>
<td>n.a.</td>
<td>67,981</td>
</tr>
</tbody>
</table>

¹ The data represent Algeria; Egypt; Kenya; Madagascar; Mauritius; Morocco; Seychelles; South Africa; Tunisia; and Zimbabwe.
² The data represent China, Chinese Taipei; Hong Kong, China; India; Indonesia; Macau, China; Malaysia; Pakistan; Philippines; Republic of Korea; Singapore; and Thailand.
³ The data represent Argentina; Barbados; Bolivia; Brazil; Chile; Colombia; Ecuador; Jamaica; Mexico; Paraguay; Peru; Trinidad and Tobago; Uruguay; and Venezuela.


The LeastDeveloped Countries (LDCs) account for a small and declining share of the total agricultural export. In 1999, LDCs’ agricultural exports amounted to US$2.2 billion of which 74% went to the EU (Table 7). In 1990 the figure was US$ 2.4 billion, of which 76% went to the EU, the remaining export for the most part going to the US and Japan.

Measured in current US$, EU imports of manufactures from LDCs have been increasing steadily during the 1990s (Figure 1), whereas imports of agricultural products have been falling. The EU exports of agricultural products to LDCs, also measured in current US$, have been quite stable during the same period indicating a fall in quantities. EU exports of manufactures to LDCs have also declined (Figure 2).
TABLE 7. **Developed countries’ imports of agricultural products from LDCs**

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th></th>
<th>1999</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Million US$</td>
<td>%</td>
<td>Million US$</td>
<td>%</td>
</tr>
<tr>
<td>European Union (15)</td>
<td>1812</td>
<td>76</td>
<td>1617</td>
<td>74</td>
</tr>
<tr>
<td>United States</td>
<td>269</td>
<td>11</td>
<td>260</td>
<td>12</td>
</tr>
<tr>
<td>Japan</td>
<td>211</td>
<td>9</td>
<td>213</td>
<td>10</td>
</tr>
<tr>
<td>Other developed countries</td>
<td>87</td>
<td>4</td>
<td>90</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>2379</td>
<td>100</td>
<td>2180</td>
<td>100</td>
</tr>
</tbody>
</table>


FIGURE 1. **EU imports from LDCs**


FIGURE 2. **EU exports to LDCs**

3. Developing countries’ export to the EU – focus on countries and products

The previous section investigated the general structure of agricultural trade showing that more than 40% of the global exports of agricultural products come from developing countries and that the share of these countries in total exports is gradually increasing. It is also found that developing countries in Asia and Latin America & the Caribbean are major exporters of agricultural products whereas African DCs participate in world trade on a smaller scale. Furthermore, it is shown that the EU is a major trading partner for developing countries, accounting for three-quarters of all imports from the LDCs. We now turn to the distribution and composition of trade in agricultural products in order to identify countries and major categories of products traded with the EU.

The basis for analysis in this section is the GTAP database 5, pre-release 3 (GTAP, 2000) that represents 66 countries all over the world and 57 production sectors of which agriculture accounts for 12 (8 primary sectors and 4 processing sectors). The database contains information on input-output data, trade and protection data for each sector and country. The country and sector representation is reviewed in Annex A, where also the main economic indicators are presented for these countries. It should be noted that the statistics derived from the GTAP-database is developed for the use of general equilibrium analysis, and that the data on trade may deviate from the official trade statistics.

Of the above 66 countries, 27 are classified as developing countries according to the World Bank definition. These are grouped in three major regions: (a) Africa and Turkey with 10 countries (plus 3 rest-groups); (b) South and Central America with 8 countries, South America & Caribbean being one sub-group (plus 2 rest-groups); and (c) Asia with 10 countries (plus 1 rest-group). Within each region, the countries are ranked according to the Atlas-criteria, starting with the country with the lowest income in 1999 (see Table A3 of Annex A). Six out of the 27 developing countries are classified as LDCs: Malawi, Mozambique, Tanzania, Uganda, Zambia and Bangladesh.

The data refer to 1997 unless specified otherwise.

3.1 Structure of trade

Table 8 shows total exports and imports for the selected countries together with their share of agricultural trade in total trade in 1997. Keeping in mind that the countries are ranked according to income per capita within each region, low-income countries appear to be more dependent on trade in agricultural products than middle-income countries. This is in par-
particular true for Malawi and Uganda, where agricultural products count for more than 70%.

### TABLE 8. Structure of Trade in developing countries\(^1\), 1997

<table>
<thead>
<tr>
<th></th>
<th>Export</th>
<th>Import</th>
<th>Total export + import % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total US$</td>
<td>Agriculture %</td>
<td>Total US$</td>
</tr>
<tr>
<td>Africa and Turkey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malawi</td>
<td>620</td>
<td>73.8</td>
<td>720</td>
</tr>
<tr>
<td>Mozambique</td>
<td>402</td>
<td>43.7</td>
<td>467</td>
</tr>
<tr>
<td>Tanzania</td>
<td>1108</td>
<td>54.7</td>
<td>1271</td>
</tr>
<tr>
<td>Rest of Sub Saharan Africa</td>
<td>41034</td>
<td>20.0</td>
<td>44672</td>
</tr>
<tr>
<td>Uganda</td>
<td>708</td>
<td>71.5</td>
<td>781</td>
</tr>
<tr>
<td>Zambia</td>
<td>1073</td>
<td>7.5</td>
<td>1181</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>2480</td>
<td>47.3</td>
<td>2891</td>
</tr>
<tr>
<td>Rest of Southern Africa</td>
<td>7563</td>
<td>7.6</td>
<td>8285</td>
</tr>
<tr>
<td>Morocco</td>
<td>8386</td>
<td>15.8</td>
<td>10440</td>
</tr>
<tr>
<td>Rest of Northern Africa</td>
<td>42146</td>
<td>3.0</td>
<td>46926</td>
</tr>
<tr>
<td>South Africa(^3)</td>
<td>33339</td>
<td>80.</td>
<td>37396</td>
</tr>
<tr>
<td>Turkey</td>
<td>40885</td>
<td>10.4</td>
<td>45214</td>
</tr>
<tr>
<td>Botswana</td>
<td>1417</td>
<td>28.4</td>
<td>1666</td>
</tr>
<tr>
<td>South and Central America</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rest of Andean Pact</td>
<td>6822</td>
<td>47.0</td>
<td>8392</td>
</tr>
<tr>
<td>Central America and Caribbean</td>
<td>38794</td>
<td>23.2</td>
<td>45204</td>
</tr>
<tr>
<td>Rest of South America</td>
<td>4517</td>
<td>28.8</td>
<td>4986</td>
</tr>
<tr>
<td>Peru</td>
<td>7732</td>
<td>26.9</td>
<td>9066</td>
</tr>
<tr>
<td>Colombia</td>
<td>15091</td>
<td>26.9</td>
<td>17529</td>
</tr>
<tr>
<td>Uruguay</td>
<td>4103</td>
<td>32.6</td>
<td>4836</td>
</tr>
<tr>
<td>Venezuela</td>
<td>23422</td>
<td>2.6</td>
<td>26227</td>
</tr>
<tr>
<td>Mexico</td>
<td>115186</td>
<td>5.6</td>
<td>119800</td>
</tr>
<tr>
<td>Brazil</td>
<td>54.615</td>
<td>23.1</td>
<td>67969</td>
</tr>
<tr>
<td>Chile</td>
<td>18775</td>
<td>22.1</td>
<td>21630</td>
</tr>
<tr>
<td>Argentina</td>
<td>285.75</td>
<td>44.1</td>
<td>35851</td>
</tr>
<tr>
<td>Asia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>8569</td>
<td>21.3</td>
<td>10575</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>5120</td>
<td>9.3</td>
<td>6209</td>
</tr>
<tr>
<td>India</td>
<td>44037</td>
<td>16.3</td>
<td>51438</td>
</tr>
<tr>
<td>Rest of South Asia</td>
<td>10896</td>
<td>8.9</td>
<td>12911</td>
</tr>
<tr>
<td>Indonesia</td>
<td>56624</td>
<td>9.9</td>
<td>64913</td>
</tr>
<tr>
<td>China</td>
<td>235954</td>
<td>5.6</td>
<td>287945</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>4548</td>
<td>11.3</td>
<td>5460</td>
</tr>
<tr>
<td>Philippines</td>
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Note: Countries in italic are Least Developed Countries.

\(^1\) Countries grouped according to GNP/capita, 1999 (See Annex A, Table A3).

\(^2\) Import and Export are measured at market prices.

\(^3\) Including Lesotho, Namibia and Swaziland (South African Customs Union excl. Botswana).

Sources: GTAP-database version 5, pre release 3.
of total trade, whereas agricultural trade is less important for countries in the upper-middle income group such as Korea, Malaysia, Venezuela and Mexico, but also in the Philippines, belonging to lower-middle income economies. Taking the sum of export and import in per cent of GDP as proxy for the openness of the economy, the mentioned countries are taking the highest scores in international trade relations whereas the majority of LDCs are more closed economies.

It also appears that the share of agricultural trade in total trade is quite close for exports and imports, whereas in Denmark (included in the Table as reference) agricultural exports count for double the share of imports. Thus, although agricultural trade is of considerable importance to developing countries, none of these countries seem to be as strongly oriented towards agricultural exports as Denmark.

### 3.2 Destination of trade

The destination of developing countries’ trade is investigated in Table 9 for total trade as well as for agricultural trade. The total trade balance of the DCs appears to be negative for Africa and South & Central America, i.e. imports exceed exports, whereas it is positive for Asia (right hand column). African and Asian developing countries have positive trade balance with the US and Canada, notably for Asia where exports exceed imports by 61% (US$138,825 million relative to US$86,320 million). In general, developing countries in Asia appear to hold the strongest trade position among the three regions.

The structure of agricultural trade differs somewhat from total trade. Taking all destinations together (right hand column), African and Asian developing countries have negative trade balance in agricultural products, whereas the DCs in South & Central America earned more than twice as much on agricultural exports as they spend on imports in 1997 (US$46,940 million relative to US$21,989 million). This is the result of a positive trade balance in several destinations but primarily on trade with the EU. Agricultural exports coming from developing countries in South & Central America and destined for the EU was 3.6 times the imports from the EU, measured in value terms.

The figures support the previous observation that EU is a major trading partner in agricultural products in all tree regions, exceeded only by Japan that takes the largest single share of agricultural exports from Asian developing countries (US$9,339 million out of US$30,145 million). The share of the EU in total agricultural exports from developing countries was for Africa 61% (US$11,641 million out of US$19,151 million), for South &
Central America 34% (US$15,920 million relative to US$46,940 million) and for Asia 22% (US$6,654 million relative to US$30,145 million). The EU market is therefore of particular importance for African DCs.


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<th>Japan</th>
<th>Austr. &amp; N.Z.</th>
<th>Africa</th>
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<td>-</td>
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</table>

Note: All values are at market prices.

Figure 3 shows the destination of primary and processed agricultural exports (measured by value) coming from African DCs, stressing the importance of the EU as trading partner. The exports of processed products exceed in this case exports of primary products, whereas the opposite is the case for EU trade with developing countries in the South & Central American and Asian regions (Figure 4 and 5). The analysis supports the previous observation that
Japan has close trade relations with developing countries in Asia and that the US is a major trading partner for developing countries in the South & Central America as well as in Asia.

**FIGURE 3. Regional distribution of agricultural exports originating in African DCs**

Source: GTAP Database version 5, pre release 3.

**FIGURE 4. Regional distribution of agricultural exports originating in S. & C. American DCs**

Source: GTAP Database version 5, pre release 3.
The composition and destination of agricultural exports are analysed in Annex Tables 2, 3 and 4 for developing countries in Africa, South & Central America and Asia, respectively. The overall picture is that developing countries hold a strong position in exports of fruits & vegetables, vegetable oils & fats, sugar, and “crops nec” representing a large group of exotic products such as coffee, tea and spices, but also products like nursery plants and flowers.

African DCs have a large export of plant-based fibres going to the EU and Asia (Annex Table 2) and the EU is also the largest market in sugar and in fruits and vegetables coming from developing countries in Africa (Figure 6).

Exotic products (coffee being an example) is a major export item for the developing countries in South and Central America, the exports going for the largest part to the US, Canada and the EU (Annex Table 3). The exports of fruits and vegetables are mainly destined for the same markets. Nearly 60% of the exports of oil seeds go to the EU (Figure 7), and two-thirds of the exports of beef, also being an important export item in that region, go to the EU market as well (Annex Table 3).
Apart from the products mentioned above, Asian DCs have a considerable export of “other meat” (mainly poultry meat), and of rice. Processed rice is exported to a large number of countries including Africa (Figure 8).
FIGURE 8. Destination of export of processed rice Asian DCs, 1997

Source: GTAP Database version 5, pre release 3.

The composition of EU imports from individual developing countries are summarised in Table 10. As indicated before, fruits and vegetables is a major import item of which more than the half comes from Turkey, South Africa, Argentina, Chile and Central America & the Caribbean. Other important items are oil seeds and vegetable oils & fats coming largely from the same regions.

Nursery plants & flowers come for a large part from South America (Bolivia), whereas, coffee, tea and spices (grouped as “crops nec”) have origin in a broad range of developing countries. EU imports of beef & veal are mainly coming from Brazil and Argentina, whereas mutton comes almost entirely from New Zealand and Australia (not shown in the table). Wheat is imported on a small scale from Mexico and Argentina. Other cereals, comprising “exotic” cereals as Sorghum and Millet, are imported mainly from South America and China.

Least developed countries (LDCs), represented in the table by Malawi, Mozambique, Tanzania, Uganda, Zambia and Bangladesh, account for only a small share of the total EU imports. Plant based fibres is an important item (sisal and cotton) coming mainly from Zimbabwe, Turkey and India. Zambia, Malawi, Zimbabwe and Tanzania export sugar on a small scale to the EU. However, by far the largest part of imported sugar have origin in South Africa and India.
Annex Table 5 shows the destination of imports from DCs by Member countries of the EU. The main share of imported bulk products such as cereals, oil seeds and plant based fibres, but also other commodities, appears to be imported by ports in the Mediterranean area, or by the Netherlands and Germany and re-distributed to other parts of the EU. Internal trade in the EU is not recorded in this analysis.

The composition of developing countries’ exports of agricultural commodities to the EU is shown in Table 11. Fruits & vegetables are major items of exports in most developing countries, notable in Turkey and African countries as South Africa, Morocco and Botswana. Together with other food products (mainly processed food) these items count for more than 70% of the export of agricultural products to the EU coming from these countries. Vegetable oils & fats account for 54% of Malaysia’s export to the EU, 44% in Indonesia, 36% in Argentina and one-fifth or more of the exports from Brazil and the Philippines. Beef is a major export item in Uruguay and Argentina whereas Mexico is exporting wheat to the EU on a small scale. Nearly all developing countries are exporting products classified as “crops nec”, including coffee, tea, spices and other exotic products. Nursery plants and flowers are also grouped under this heading.

Exports from the Least Developed Countries’ exports consist mainly of the just mentioned products, for Uganda as much as 89% in 1997, the largest single export item being coffee. Sugar takes the largest share of exports to the EU from Zambia.
TABLE 10. Composition of EU imports of agricultural products from developing countries, by product, 1997, per cent.

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<th>Country</th>
<th>Paddy</th>
<th>Rice</th>
<th>Wheat</th>
<th>Other grains</th>
<th>Veg &amp; fruits</th>
<th>Oil &amp; seeds</th>
<th>Plant-based</th>
<th>Crops nec.</th>
<th>Meat cattle &amp; sheep</th>
<th>Other meat</th>
<th>Veg oil &amp; fats</th>
<th>Dairy products</th>
<th>Processed rice</th>
<th>Sugar</th>
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<td>12</td>
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<td>1</td>
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<td>0</td>
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<td>4</td>
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<td>27</td>
<td>4</td>
<td>3</td>
<td>11</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>23</td>
</tr>
</tbody>
</table>

Selection criteria: Countries represented in the GTAP-database version 5, pre release 3. The countries are grouped according to GNP/Capita, 1999, (Atlas Method).

4. Summary and conclusions

In 1999, developing countries (DC) accounted for about 65% of the global merchandise exports and for 43% of all exports of agricultural products. Measured in current prices, the value of developing countries’ agricultural exports have increased by an annual rate of about 6.0% during the 1990s compared with 5.2% for the world as a whole. Developing countries’ exports of manufactures have increased even more (10.3% as compared with 7.8% for the world total).

The Least Developed Countries (LDCs) account for only a small and a declining share of total trade. In 1999, developed countries’ imports of agricultural products from the LDCs amounted to US$2.1 billion, 74% of which went to the EU, as compared with US$2.4 billion in 1990 and 76%.

The overall picture is that developing countries hold a strong position in exports of fruits & vegetables, vegetable oils & fats, plant-based fibres, sugar, and a large group of exotic products such as coffee, tea and spices, but also products like nursery plants and flowers.

*African DCs* have large exports of fruits & vegetables, plant-based fibres and the exotic products mentioned above going to the EU. The EU is also the largest market in sugar coming from African DCs.

*South and Central American DCs* have large exports of fruits & vegetables, oil seeds, cereals, vegetable oils & fats, sugar and exotic products (coffee being an example), the largest share of the latter products going to the US and to the EU. Exports of fruits and vegetables are mainly destined for the same markets, and nearly 60% of the exports of oil seeds go to the EU. Two-thirds of the exports of beef, also being an important export item in that region, go to the EU market as well.

*Asian DCs*, holding a strong position in exports of agricultural products in general, have Japan as their largest market, but large quantities of exports are also destined for the EU and for the US and Canada. In addition to fruits & vegetables, vegetable oils & fasts and exotic products (spices), processed rice are important export items, going to a large number of countries including the EU.

EU is the largest single trading partner for developing countries taking about one-third of their total exports and about 36% of their exports of agricultural products in 1997. The share of agricultural exports from DCs going to the EU varies from region to region. 22%
of agricultural exports from the Asian region went to the EU market, for the South & Central America region the figure was 34%, and as much as 61% of the agricultural exports of African DCs went to the EU. Processed products accounted for one-fourth of the imports of agricultural products from developing countries. The EU is taking about three-quarters of all agricultural imports from the Least Developed Countries.

Looking at EU imports from developing countries, fruits & vegetables is an important item, a large part of the imports coming from Turkey, South Africa, and Central America & the Caribbean. Other important items are oilseeds, three-quarters of the imports coming from Brazil and Argentina, and oils and fats coming largely from the same regions and from Indonesia and South Africa. Nursery plants & flowers, coffee, tea, and spices are also important items. Nursery plants & flowers come for a large part from South America whereas coffee, tea and spices come from a broad range of developing countries. Imports of beef from developing countries come mainly from Argentina and Brazil. A few African LDCs export sugar, bananas and rice on a small scale to the EU.

The recorded trade structure is a function of natural comparative advantages in production and trade policies. A large share of EU imports may be the result of favourable natural production conditions in the exporting country, giving the country comparative advantage in trade, or it may reflect the effect of trade policies, providing preferential terms for imports in the EU for that particular product or country of origin. The present analysis provides only a stocktaking of the trade structures, not an analysis of the causes for the observed trade structures. The impact of changes in trade policies is the subject for analysis elsewhere in the project\(^1\).

\(^1\) For further discussion see Walter-Jørgensen & Jensen (2001).

GTAP (2000), *The Global Trade Analysis Project*  
(http://www.agecon.purdue.edu/gtap.htm)


UNCTAD (2000a), *Criteria for identifying LDCS*,  

UNCTAD (2000b), *Generalized System of Preferences*  

UNCTAD (2000c), *Handbook on the GSP Scheme of the European Community*  


World Bank (2000b), *World Development Indicators 1999*.


WTO (2000c), *Export subsidies and competition*, Agriculture negotiations: Backgrounder  
ANNEX TABLE 1. Economic Indicators Least Developed Countries, 1999

<table>
<thead>
<tr>
<th>Country</th>
<th>Population Million</th>
<th>Population density People per sq.km</th>
<th>GNP per capita PPP</th>
<th>Annual average growth rate, GDP</th>
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</thead>
<tbody>
<tr>
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<td>632</td>
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</tr>
<tr>
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<td></td>
<td></td>
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</tr>
<tr>
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<td>981</td>
<td>1475</td>
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</tr>
<tr>
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<td>55</td>
<td>886</td>
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</tr>
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<td>67</td>
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<td>Central African Rep.</td>
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<td>Chad</td>
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<td>Comoros</td>
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<td>40</td>
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<td>4.2</td>
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<td>766</td>
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<td>797</td>
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<td></td>
<td>-1.5</td>
</tr>
<tr>
<td>Sao Tome &amp; Principe</td>
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</tr>
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</table>

Figures in Italic are from 1997.
### ANNEX TABLE 2. Destination of developing countries’ agricultural exports, Africa, 1997, percent

<table>
<thead>
<tr>
<th></th>
<th>Total export Mio. $US</th>
<th>United States and Canada</th>
<th>EU</th>
<th>Japan</th>
<th>Australia and New Zealand</th>
<th>Asia</th>
<th>South and Central America</th>
<th>Rest of the World</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>Paddy rice</td>
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<td>31</td>
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<td>8</td>
<td>0</td>
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<td>14</td>
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<td>14</td>
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<td>8</td>
</tr>
<tr>
<td>Cereals grains</td>
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<td>29</td>
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<td>6</td>
<td>24</td>
<td>14</td>
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<tr>
<td>Veg. &amp; fruit</td>
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<td>0</td>
<td>17</td>
<td>0</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>Oil seeds</td>
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<td>37</td>
<td>25</td>
<td>0</td>
<td>26</td>
<td>2</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Plant based fibers</td>
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<td>34</td>
<td>2</td>
<td>0</td>
<td>45</td>
<td>15</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>Crops nec.</td>
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<td>63</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>13</td>
<td>100</td>
</tr>
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<td>Wool</td>
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<td>8</td>
<td>70</td>
<td>6</td>
<td>0</td>
<td>10</td>
<td>1</td>
<td>5</td>
<td>100</td>
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<td>74</td>
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<td>3</td>
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<td>14</td>
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<td>6</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>20</td>
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<tr>
<td>Veg. oil and fats</td>
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<td>86</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>6</td>
<td>100</td>
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<td>8</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>Processed rice</td>
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<td>16</td>
<td>8</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>57</td>
<td>100</td>
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<td>0</td>
<td>9</td>
<td>0</td>
<td>6</td>
<td>100</td>
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<td>8</td>
<td>1</td>
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<td>100</td>
</tr>
<tr>
<td>Total</td>
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<td>60</td>
<td>8</td>
<td>1</td>
<td>12</td>
<td>2</td>
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<td>100</td>
</tr>
</tbody>
</table>

Note: Trade is recorded in market prices.
Source: GTAP database version 5, pre release 3.
**ANNEX TABLE 3**  
*Destination of developing countries’ agricultural exports, South and Central America, 1997, percent*

<table>
<thead>
<tr>
<th>Total export Mio $US</th>
<th>United States and Canada</th>
<th>EU</th>
<th>Japan</th>
<th>Australia and New Zealand</th>
<th>Asia</th>
<th>Africa</th>
<th>Rest of the World</th>
<th>Total</th>
</tr>
</thead>
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<td>0</td>
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<td>10</td>
<td>0</td>
<td>0</td>
<td>19</td>
<td>37</td>
<td>34</td>
</tr>
<tr>
<td>Cereals grains</td>
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<td>5</td>
<td>13</td>
<td>8</td>
<td>0</td>
<td>26</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>Veg. &amp; fruit</td>
<td>7278</td>
<td>54</td>
<td>34</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Oil seeds</td>
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<td>6</td>
<td>59</td>
<td>12</td>
<td>0</td>
<td>13</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Plant based fibers</td>
<td>171</td>
<td>4</td>
<td>27</td>
<td>15</td>
<td>0</td>
<td>49</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Crops nec.</td>
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<td>8</td>
<td>0</td>
<td>2</td>
<td>1</td>
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<td>0</td>
<td>7</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
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<td>20</td>
<td>0</td>
<td>13</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td>Veg. oil and fats</td>
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<td>34</td>
<td>2</td>
<td>0</td>
<td>35</td>
<td>10</td>
<td>17</td>
</tr>
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<td>Dairy products</td>
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<td>29</td>
<td>8</td>
<td>1</td>
<td>10</td>
<td>3</td>
<td>15</td>
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<td>1</td>
<td>10</td>
<td>40</td>
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<td>2</td>
<td>0</td>
<td>7</td>
<td>23</td>
<td>31</td>
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<td>16</td>
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<td>34</td>
<td>8</td>
<td>0</td>
<td>12</td>
<td>5</td>
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</table>

Note: Trade is recorded in market prices.  
Source: GTAP database version 5, pre release 3.
<table>
<thead>
<tr>
<th>Product</th>
<th>Total export Mio $US</th>
<th>United States and Canada</th>
<th>EU</th>
<th>Japan</th>
<th>Australia and New Zealand</th>
<th>South and Central America</th>
<th>Africa</th>
<th>Rest of Asia</th>
<th>Rest of the World</th>
<th>Total</th>
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<td>52</td>
<td>9</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>Wheat</td>
<td>48</td>
<td>15</td>
<td>29</td>
<td>10</td>
<td>2</td>
<td>4</td>
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Source: GTAP-database version 5, pre release 3.
## Annex A

**TABLE A1. Countries represented in the GTAP database, grouped according to region**

### Africa
- Morocco
- Rest of North Africa
- Botswana
- Rest of SACU
- Malawi
- Mozambique
- Tanzania
- Zambia
- Zimbabwe
- Other Southern Africa
- Uganda
- Rest of Sub-Saharan Africa

### Middle East
- Turkey
- Rest of Middle East

### Asia
- China
- Hong Kong
- Japan
- Taiwan
- Indonesia
- Malaysia
- Philippines
- Singapore
- Thailand
- Vietnam
- Bangladesh
- India
- Sri Lanka
- Rest of South Asia

### South and Central America
- Mexico
- Central America and the Caribbean
- Colombia
- Peru
- Venezuela
- Rest of Andean Pact
- Argentina
- Brazil
- Chile
Uruguay
Rest of South America

Rest of NAFTA
USA
Canada

EU-15
Austria
Denmark
Finland
France
Germany
United Kingdom
Greece
Ireland
Italy
Netherlands
Portugal
Spain
Sweden
Belgium
Luxembourg

EFTA
Switzerland
Rest of EFTA

Central European Associates
Hungary
Poland
Rest of Central European Associates

Former Soviet Union

Other regions
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New Zealand
Rest of The World
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**Transport**

- Transport nec
- Sea transport
- Air transport

**Services**

- Communication
- Financial services nec
- Insurance
- Business services nec
- Recreation and other services
- Public administration/ Defense/ Health/ Education
- Dwellings
- Electricity
- Gas manufacture, distribution
- Water
- Construction
- Trade

1 nec: Not elsewhere classified

TABLE A3. Basic and macroeconomic indicators for developing countries

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Note: Countries in italic are Least Developed Countries.
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3 Grouped according to The World Bank criteria.
4 Including Lesotho, Namibia and Swaziland (South African Customs Union excl. Botswana).
5 Data from 1997 from The Development Indicators, The World Bank, 1999.
### TABLE A4. Real GDP growth, 1993-97\(^1\)

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Note: Countries in italic are Least Developed Countries.
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Note: Countries in italic are Least Developed Countries.
1 Countries grouped according to GNP/capita, 1999 (see Table A3).
2 GDP at market prices (Current US$).
3 Including Lesotho, Namibia and Swaziland (South African Customs Union excl. Botswana).
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¹ Countries grouped according to GNP/capita in 1999.  
² Including Lesotho, Namibia and Swaziland (South African Customs Union excl. Botswana).  
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