

AGRICULTURAL SUBSIDIES VS. MARKET ACCESS

An important issue in world trade negotiations, in the Doha Round in particular but also in earlier rounds, is the support of the agricultural sector, not only in rich countries. This support is provided by domestic subsidies in various forms that are either coupled to or decoupled from production (domestic support), by export subsidies and by limiting the access of foreign producers to the home market via tariff and non-tariff barriers. The intended consequences are higher incomes for the domestic primary agricultural producers. Unintended – but consciously accepted – consequences are lower incomes of producers abroad, less world trade in agricultural production and a loss in global economic welfare. Moreover, there are positive consequences – whether intended or not – for the domestic food processing sector. A recent World Bank Policy Research Paper (Anderson, Martin and Valenzuela, 2006) provides new estimates on the extent of the support and its consequences.

Table 1 compares estimates of support to primary agriculture and processing sectors for 2001. The estimates of the OECD (column A) relate only to the support the OECD member countries provide their domestic producers. The estimates of the other columns (B to D) are the result of calculations that use the database on global trade and agricultural interventions by governments of the Global Trade Analysis Project (GTAP, Purdue University, In-

diana). This database permits the estimation of support measures by non-OECD countries as well as support to food processing sectors. The OECD estimates (A) are partly quite close to and partly considerably different from the GTAP estimates as far as support to primary agriculture is concerned (B, right column). Adding the (factual) support for food processing industries (C), the gap between the two total support estimates (A and D) is large: US\$228 billion compared to \$499 billion. There is also an important difference between the OECD and the GTAP estimates with regard to the relative importance of direct domestic subsidies and market price support.

The figure of \$499 billion is made up very differently by countries and type of support. Table 2 contains estimates of domestic subsidy rates, export subsidy rates and import tariff rates by countries. In OECD countries, domestic subsidy rates and import tariffs are high, while in non-OECD countries the focus is on import tariffs. There are, however, considerable differences in support instruments across OECD countries. Switzerland, for example, uses high production subsidies and high import tariffs. While the US and Canada rely much more on production subsidies than on import tariffs, in Japan it is the other way round. EU countries (EU-15) are second in production subsidies (behind Switzerland) but only sixth in import tariffs.

What would a full elimination of all agricultural subsidies, in whatever form, mean for net farm incomes, world agricultural trade and economic welfare? A computable general equilibrium model, using the

Table 1

Estimates of the support to agriculture and food sectors, by region and policy instrument, 2001
in US\$ billion

| | OECD estimates of support to primary agriculture | GTAP database price-based distortions (excluding non-tariff barriers) | | | | | | GTAP database estimates of support to all countries' agriculture and food |
|-------------------------------|--|---|--------------------|---------------|---|--------------------|---------------|---|
| | | GTAP database estimates of support to primary agriculture | | | GTAP database estimates of support to food processing | | | |
| | OECD countries | OECD countries | Non-OECD countries | All countries | OECD countries | Non-OECD countries | All countries | |
| | A | B | | | C | | | D |
| Direct domestic subsidies | 89 | 90 | 7 | 97 | 0 | 0 | 0 | 97 (19%) |
| – Fully coupled to production | 37 | | | | | | | |
| Market price support (MPS) | 139 | 46 | 76 | 122 | 198 | 82 | 280 | 402 (81%) |
| – Export subsidies | n.a. | 3 | 1 | 4 | 26 | 0.1 | 26 | 30 (6%) |
| – Import tariffs | n.a. | 43 | 75 | 118 | 172 | 82 | 254 | 372 (75%) |
| All support measures | 228 | 136 | 83 | 219 | 198 | 82 | 280 | 499 (100%) |

Source: Anderson et al. (2006). There is also information on further sources and notes.

Table 2

Agricultural subsidy rates and applied import tariffs, by region, 2001
in %

| | Primary agriculture | | | Processed agriculture | |
|---------------------------------------|-------------------------------|------------------|----------------|-----------------------|----------------|
| | Domestic production subsidies | Export subsidies | Import tariffs | Export subsidies | Import tariffs |
| OECD countries | 13.5 | 0.8 | 16.9 | 3.3 | 17.0 |
| Australia | 2.9 | 0.0 | 1.0 | 0.0 | 9.1 |
| New Zealand | 0.3 | 0.0 | 0.4 | 0.0 | 2.7 |
| United States | 16.2 | 0.0 | 1.1 | 0.2 | 3.2 |
| Canada | 10.6 | 0.0 | 1.3 | 0.0 | 13.6 |
| Mexico | 8.8 | 0.0 | 10.7 | 0.0 | 12.2 |
| European Union (EU-15) | 17.7 | 4.4 | 7.4 | 8.6 | 17.9 |
| Switzerland-Iceland-Norway | 39.8 | 4.2 | 29.5 | 3.9 | 31.4 |
| Other European members | 10.7 | 0.0 | 6.2 | 1.4 | 17.0 |
| Turkey | 3.1 | 0.2 | 15.9 | 1.6 | 18.0 |
| Japan | 6.0 | 0.0 | 27.8 | 0.0 | 31.4 |
| Korea | 3.6 | 3.3 | 146.4 | 0.0 | 26.1 |
| Non-OECD countries | 0.7 | 0.0 | 14.9 | 0.0 | 17.5 |
| <i>East Europe & Central Asia</i> | <i>0.5</i> | <i>0.0</i> | <i>8.9</i> | <i>0.2</i> | <i>18.0</i> |
| thereof: Russia | 0.6 | 0.0 | 5.1 | 0.0 | 16.7 |
| <i>East Asia & Pacific</i> | <i>0.0</i> | <i>0.0</i> | <i>32.9</i> | <i>0.0</i> | <i>19.8</i> |
| thereof: China | 0.0 | 0.0 | 50.8 | 0.0 | 18.3 |
| <i>South Asia</i> | <i>3.0</i> | <i>0.0</i> | <i>17.8</i> | <i>0.0</i> | <i>50.9</i> |
| thereof: India | 3.4 | 0.0 | 25.5 | 0.0 | 76.4 |
| <i>Middle East & North Africa</i> | <i>0.0</i> | <i>0.6</i> | <i>10.3</i> | <i>0.0</i> | <i>16.4</i> |
| <i>Sub-Saharan Africa</i> | <i>0.2</i> | <i>0.0</i> | <i>9.3</i> | <i>0.0</i> | <i>21.3</i> |
| <i>Latin America & Caribbean</i> | <i>0.4</i> | <i>0.0</i> | <i>6.7</i> | <i>0.0</i> | <i>11.1</i> |
| thereof: Argentina | 0.0 | 0.0 | 4.7 | 0.0 | 7.6 |
| Brazil | 1.3 | 0.0 | 2.4 | 0.0 | 8.6 |

Source: Anderson et al. (2006). The source also provides detailed notes.

Table 3

Impact of the elimination of agricultural support measures – model calculations for 2001
in %

| | Agricultural liberalization component | | | | | | | | | |
|---|---------------------------------------|------------------|----------------------|--|------------------|----------------------|-----------------------------------|------------------|----------------------|--------------|
| | OECD countries' liberalization of: | | | Non-OECD countries' liberalization of: | | | All countries' liberalization of: | | | |
| | Domestic support | Export subsidies | Import market access | Domestic support | Export subsidies | Import market access | Domestic support | Export subsidies | Import market access | All measures |
| Contribution to net farm incomes (agricultural value added) | | | | | | | | | | |
| % loss OECD countries | 45 | 3 | 55 | -1 | -0.1 | -2 | 44 | 3 | 53 | 100 |
| % gain Non-OECD countries | 54 | 10 | 120 | -16 | -0.3 | -68 | 38 | 10 | 52 | 100 |
| (% loss) World | 42 | -0.3 | 31 | 4 | 0 | 23 | 46 | -0.3 | 54 | 100 |
| Contribution to world agricultural trade (by value) | 15 | -2 | 55 | 2 | -0 | 30 | 17 | -2 | 85 | 100 |
| Contribution to economic welfare (equivalent variation in income) | | | | | | | | | | |
| OECD countries | 6 | 5 | 78 | 0.2 | -0.1 | 11 | 6 | 5 | 89 | 100 |
| Non-OECD countries | 2 | -10 | 84 | -0.8 | 0.2 | 25 | 1 | -10 | 109 | 100 |
| World | 5 | 2 | 79 | -0.1 | 0.0 | 14 | 5 | 2 | 93 | 100 |

Source: Anderson et al.(2006).

GTAP database, provides an answer (Table 3). Full import market access has by far the largest effect in all three fields of interest: net farm incomes, world trade and economic welfare, while domestic support is of secondary importance. Net farm incomes in OECD countries would, of course, decline, while producers in non-OECD countries would gain substantially. World trade in agricultural goods would increase because the offsetting effect of reduced export subsidies is small. Economic welfare would increase in the group of non-OECD but also in that of OECD countries.

R.O.

Reference

Anderson, K., W. Martin and E. Valenzuela (2006), "The Relative Importance of Global Agricultural Subsidies and Market Access", *World Bank Policy Research Paper* 3900.