16.D

Agricultural Export Subsidies

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16.D.1 Introduction

Agricultural export subsidies are treated differently in the GTAP data base version 5 than in GTAP data base version 4. In the latter version, agricultural export subsidy rates were computed on the basis of price comparisons between domestic and world prices of exportables (Tsigas, 1998). This price gap methodology implies that the same levels of tariffs also apply to export taxes/subsidies.[1] This approach presents several limitations for trade policy analysis. The most serious limitation is the allocation of large export subsidies in the data when in fact they do not apply. A second problem with this approach is that high export subsidies are shown in cases where exports are minimal, an example of which is Japanese rice exports. Consequently, the implications for trade liberalization scenarios involving reduction in export subsidies may lead to erroneous outcomes.

[1] The price gap method computes the gap between the market price, P_M,,and the world price, P_W. The resulting ad-valorem import tariff or export subsidy equivalent is: $100*[P_M - P_W]/P_W$.

16.D.2 WTO Notifications

In GTAP 5, export taxes/subsidies for agricultural commodities are based on country submissions to the WTO of export subsidy expenditures. While country notifications may not be all-inclusive, the WTO data nevertheless represents the best available compilation of agricultural export subsidies. Under the Uruguay Round Agreement on Agriculture, twenty-five members of the WTO are committed to reduce their export subsidies. Each year, starting in 1995, WTO members are required to notify the WTO Secretariat about the volume of and expenditures on export subsidies, by commodity, as specified in their country schedules.

Table 16.D.1 shows the 1998 notification of export subsidy expenditures as reported by WTO members. The European Union accounts for the lion's share of all notified export subsidies. Based on the value of notified export subsidies in 1998, the EU share of global export subsidies is 100 percent for wheat and rice, 98.81 percent for coarse grains, 97.1 percent for sugar, 99.4 percent for non-bovine meat, and 80 percent for dairy. The USA employs export subsidies for dairy products (5 percent of all global export subsidies on dairy products in 1998) and, at much lower rates, for poultry products. The other countries that continue to use export subsidies include Switzerland (mostly for dairy products, fruits and vegetables, and other processed food) and Norway (for dairy and, to a lesser extent, for non-bovine livestock).

Table 16.D.1 Summary Data on Export Notifications to the WTO for 1998

Agricultural Commodities	Value of Notified Export Subsidies ($US million)	Percent Value of WTO Commitments	Percent Volume of WTO Commitments
Wheat			
European Union	560.3	29.5	83.3
Hungary	0.0	0.1	0.1
South Africa	0.0	0.0	0.0
Rice			
European Union	28.7	58.3	99.0
Other grain			
European Union	855.8	60.1	123.3
Hungary	9.8	412.6	81.3
Oilseeds			
Hungary	0.0	0.0	0.0
Oilseed Products			
European Union	0.0	0.0	0.0
Turkey	1.0	--	5.1
Sugar			
Colombia	4.4	--	80.6
European Union	890.2	134.1	111.5
Poland	13.0	34.2	119.0
Slovakia	0.6	24.3	100.0

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Table 16.D.1 Summary Data on Export Notifications to the WTO for 1998 (continued)

Agricultural Commodities	Value of Notified Export Subsidies ($US million)	Percent Value of WTO Commitments	Percent Volume of WTO Commitments
Dairy			
Canada	0.0	0.0	0.0
Czech Republic	59.4	--	41.6
European Union	2271.7	--	73.9
Norway	80.0	--	121.5
Slovakia	11.7	--	76.7
Switzerland	275.6	78.8	79.7
United States	145.3	--	90.3
Bovine Livestock			
Hungary	0.0	0.0	0.0
Switzerland	0.3	1.1	4.0
Non-bovine Livestock			
European Union	720.0	42.3	76.1
Iceland	0.0	0.0	0.0
Norway	14.2	--	808.6
Non-bovine Meat			
European Union	3662.2	--	11.0
Hungary	18.0	--	--
Switzerland	0.0	–	78.2
Fruits and Vegetables			
Colombia	14.8	--	126.7
European Union	35.4	50.4	93.0
South Africa	0.0	--	0.0
Switzerland	21.3	--	69.1
Turkey	5.2	--	10.5
Other Processed Food			
Colombia	0.9	--	91.4
Cyprus	--	91.7	181.5
European Union	815.8	--	56.8
Hungary	1.1	12.9	1.5
Norway	6.2	--	--
South Africa	0.0	--	--
Switzerland	141.8	--	--

Source: WTO Notifications
"--" Not notified

16.D.3 Export Subsidy Calculations

In GTAP 5, agricultural export subsidies are reported as effective export subsidy rates using the 1998 value of export subsidy expenditures, as reported to the WTO, and the FOB value of exports for 1998 using UNCTAD trade data. At the time that these export subsidies were calculated, 1998 was the latest year with notification data available for all subsidizing countries. However, in some cases like the US, the EU and Israel, export subsidy notifications were taken from the 1997 GATT year, in order to insure a better matching with the 1998 UNCTAD trade data. For each of the reporting countries, export subsidy expenditures were converted to a common currency, the $US dollar, and were aggregated up to the GTAP commodity classification.

In the context of multilateral reforms, reductions in export subsidies are likely to raise world prices, offsetting the reduction in export volume implied by the reduction in export subsidies. Thus, treating the subsidy reductions in terms of reductions in export subsidy rates could be used as an approximation of the effects of the commitments. The per-unit export subsidy rate for sector *i* is calculated as follows:

$$S_I = \frac{XR_i}{XT_i \, T_i}$$

where *S* is the subsidy rate, *XR* is value of export refund in 1998 $US millions, *XT* is the total value of exports (excluding intra-European trade in the case of the European Union), and *T* is the share of exports that is subsidized. In order to be consistent across commodities and regions, a simplifying assumption of setting $T = 1$ for all commodities and regions in the model was employed. The export subsidy rates for 1998 are reported in table 16.D.2 at the disaggregate level of GTAP version 5 data base.

As stated above, WTO notifications may not be inclusive of all export subsidies. A country's notifications reflect its delegation's understanding of its government policies at the time. The WTO has identified some omissions. In two cases, WTO panels have ruled certain policies to be export subsidies even though they were not notified. In one case, the WTO panel of appellate body found Canada's price arrangement for dairy products to provide subsidies to exports, even though they are not submitted by Canada in the notifications. The second case is the WTO ruling that the United States' Food Sales Corporation (*FSC*) confers a benefit to exporters and therefore constitutes an export subsidy. The United States legislation is currently in the process of changing the tax code to eliminate this subsidy and comply with the WTO ruling. Another example is the under-reporting of EU's export subsidies for sugar. The EU's WTO notifications do not include additional export subsidies on imported preferential sugar from ACP countries and India which are re-exported by the EU.

Table 16.D.2 Export Subsidy Rates: Ratio of Export Subsidy Outlays as Notified to the WTO over the FOB Value Exports

Regions	GTAP Commodities						
	rice	wht	gro	v_f	osd	pfb	ocr
Australia	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brazil	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulgaria	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Columbia	0.00	0.00	0.00	2.72	0.00	0.00	0.00
Cyprus	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Czech Republic	0.00	0.00	0.00	0.00	0.00	0.00	0.00
European Union*	13.81	9.11	34.22	0.81	0.00	0.00	0.38
Hungary	0.00	0.00	0.00	2.29	0.00	0.00	0.00
Island	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Israel	0.00	0.00	0.00	1.46	0.00	0.00	0.00
Mexico	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Norway	0.00	0.00	0.00	0.00	0.00	0.00	26.89
Poland	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Romania	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Slovakia	0.00	0.00	0.00	0.00	0.00	0.00	0.00
South Africa	0.00	0.00	0.00	1.04	0.00	0.00	0.01
Switzerland	0.00	0.00	0.00	65.59	0.00	0.00	0.00
Turkey	0.00	0.00	0.00	0.93	0.00	0.00	0.05
Uruguay	0.00	0.00	0.00	0.00	0.00	0.00	0.00
United States	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Venezuela	0.00	0.00	0.00	1.69	0.00	0.00	1.51

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Table 16.D.2 Export Subsidy Rates: Ratio of Export Subsidy Outlays as Notified to the WTO over the FOB Value Exports (continued)

Regions	GTAP Commodities							
	ctl	oap	cmt	omt	vol	mil	sgr	ofd
Australia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brazil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulgaria	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Columbia	0.00	0.00	0.00	0.00	0.00	0.00	1.61	0.17
Cyprus	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01
Czech Republic	0.00	0.00	65.42	0.00	0.00	27.99	0.00	0.37
European Union*	0.00	0.00	27.14	4.16	0.14	24.24	54.41	4.48
Hungary	7.37	0.00	0.47	1.80	0.00	0.00	0.00	0.02
Island	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00
Israel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mexico	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Norway	0.00	0.00	32.60	56.88	0.00	97.35	0.00	0.26
Poland	0.00	0.00	0.00	0.00	0.00	0.00	6.21	0.00
Slovakia	0.00	0.00	45.19	0.00	0.00	26.74	1.88	0.62
South Africa	0.00	0.00	0.00	0.00	0.00	0.00	2.61	1.33
Switzerland	3.93	0.00	0.00	0.00	0.00	80.12	0.00	10.41
Turkey	0.00	0.00	0.00	0.33	0.09	0.05	0.00	2.03
Uruguay	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
United States	0.00	0.00	0.00	0.02	0.00	18.59	0.00	0.00
Venezuela	0.00	0.00	0.00	0.00	0.00	0.00	7.52	0.00

NOTE: Country notifications are reported by the WTO Secrateriat on the basis of GATT year. In order to harmonize these 1998 WTO notifications with 1998 trade data from (UNCTAD) we used 1997 notifications for the following cases: US, EU and Israel.

*: for EU export subsidy rates, intra-EU trade is excluded; for sugar, notifications for sugar export subsidy were augmented with expenditures for sugar from ACP and India

16.D.4 Concluding Remarks

Overall, the treatment of agricultural export subsidies in GTAP 5, based on WTO notifications, represents a significant improvement over the previous versions. Nevertheless, there may be cases where the analyst should take into account other export subsidies/taxes not covered by the data before embarking on trade policy analysis.

References

Tsigas, Marinos.1998. "Agricultural Protection: OECD Countries," Section 13.2 in *Global Trade, Assistance, and Protection: The GTAP 4 Data Base*, Robert A. McDougall, Aziz Elbehri, and Truong P. Truong (Editors), Center for contd Global Trade Analysis, Purdue University.