Public Affairs 856
Trade, Competition, and Governance in a Global Economy

Lecture 27

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Outline

- WTO Goals on Agricultural Export Subsidies
- Export Subsidies in a Small Home Country
- Export Subsidies in a Large Home Country
- Production Subsidies

1 WTO Goals on Agricultural Export Subsidies

TABLE 10-1 (1 of 2) Agreements Made at the Hong Kong WTO Meeting, December 2005

This table shows the agreements made at the 2005 WTO meeting in Hong Kong, which had as its major focus the subsidies provided to agricultural products. This meeting was part of the Doha Round of WTO negotiations, which have not yet been concluded.

Issue	Decision Made in Hong Kong	Unresolved in Hong Kong
Agricultural export subsidies	Abolition by end of 2013, with a "substantial part" scrapped before 2011, and parallel elimination of indirect subsidies.	Must agree [on] value of indirect subsidies and detailed phase-out programs.
Domestic farm supports	Agreement to classify WTO members in three bands based on their level of domestic farm support (top—European Union, middle—United States and Japan, bottom—everyone else).	Must agree [on] size of subsidy reduction and rules to stop countries from shifting trade-distorting subsidies into categories sheltered from deep cuts.
Agricultural tariffs	Agreement on four tiers (different for rich and poor countries) and on a mechanism allowing poor nations to raise duties to counter import surges.	Must decide size of tariff cuts and number and treatment of "sensitive" and "special" products.

1 WTO Goals on Agricultural Export Subsidies

TABLE 10-1 (2 of 2) Agreements Made at the Hong Kong WTO Meeting, December 2005 (continued)

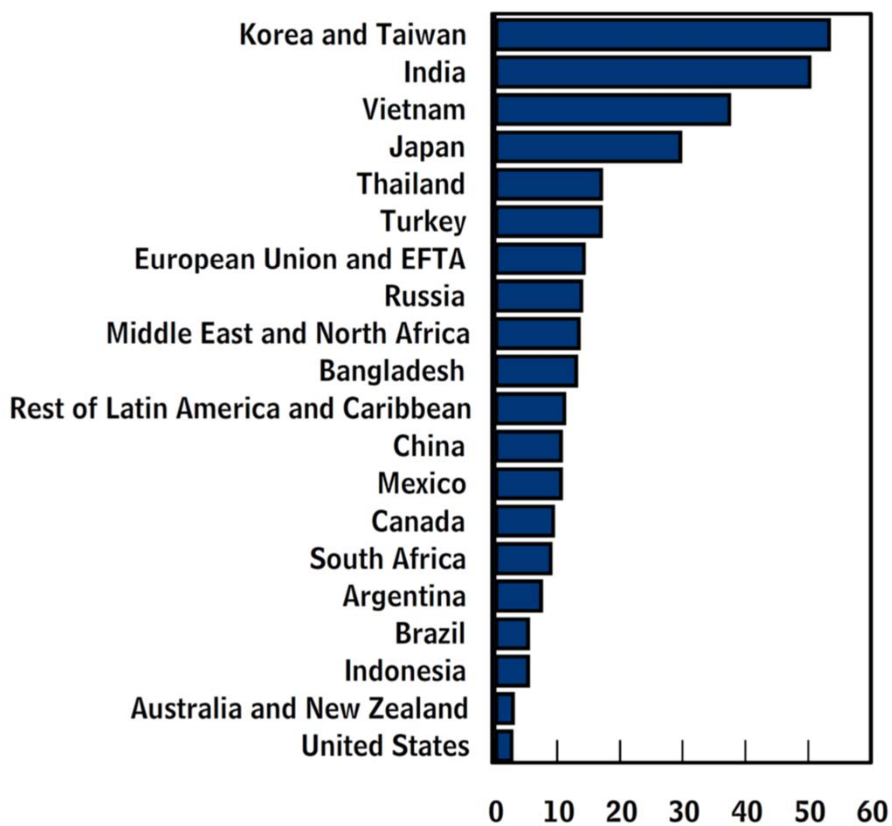
This table shows the agreements made at the 2005 WTO meeting in Hong Kong, which had as its major focus the subsidies provided to agricultural products. This meeting was part of the Doha Round of WTO negotiations, which have not yet been concluded.

Issue	Decision Made in Hong Kong	Unresolved in Hong Kong
Cotton Agreement	Agreement to eliminate export subsidies in 2006 and grant unrestricted access for cotton exports from West African producers and other least developed countries (LDCs).	United States will have the "objective" of cutting its $4 billion subsidies to cotton growers further and faster than the still-to-be-agreed-upon overall reduction for domestic farm supports.
Industrial goods	Agreement on formula and on a "comparably high level of ambition" for tariff cuts in agriculture and industrial goods so rich nations do not demand more cuts than they give.	Must agree [on] key elements of formula, how much to cut, flexibilities for developing countries, and role of sectoral negotiations.
Services	Some negotiating guidelines for trade in services agreed upon . . .	The European Union is pressing for liberalization timing targets opposed by developing countries; poor nations want rich ones to accept more temporary service workers.
Development	Duty-free, quota-free access extended to 97% of product[s] . . . from least developed countries by 2008, allowing significant exclusions (e.g., U.S. textiles imports). More pledges of aid for trade.	Must agree [on] other measures to strengthen special treatment provisions for poor countries.

Figure 1.

Average Tariff Rates for Agriculture and Processed Foods, 2005

(Percent)



Source: Kym Anderson, Will Martin, and Dominique van der Mensbrugghe, "Market and Welfare Implications of Doha Reform Scenarios," in Kym Anderson and Will Martin, eds., *Agricultural Trade Reform and the Doha Development Agenda* (New York: Palgrave Macmillan and the World Bank, 2006), Table 12.3, p. 345.

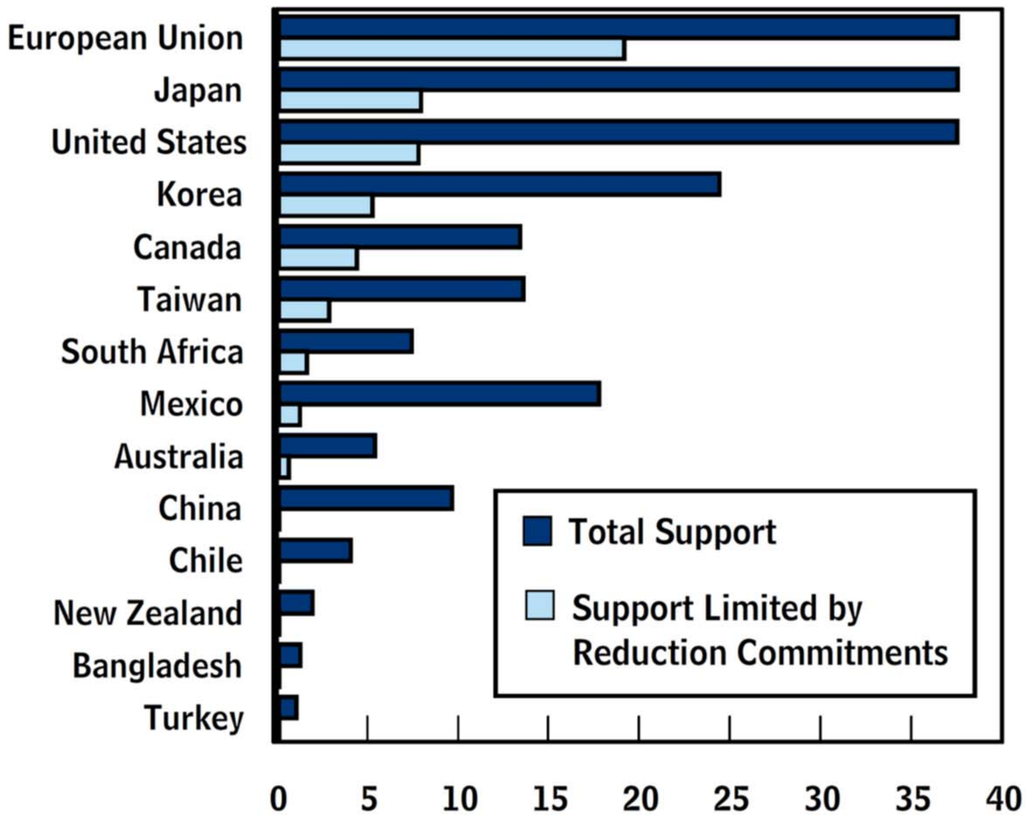
Notes: Tariff-rate averages are weighted by imports.
EFTA = European Free Trade Association.

Source: CBO (2006)

Figure 2.

Average Annual Rates of Reported Domestic Support, 1998 to 2005

(Percentage of the value of agricultural output)



Source: Congressional Budget Office based on subsidy data reported to the World Trade Organization (WTO) by the countries in question as of July 31, 2006, and dollar-denominated value-of-production data from *Producer and Consumer Support Estimates,* OECD Database 1986-2003, on the Web site of the Organisation for Economic Co-operation and Development, and exchange-rate data from International Monetary Fund, *International Financial Statistics.*

Notes: "Support limited by reduction commitments" refers to the category of trade-distorting support that was limited and that countries made commitments to reduce in the Uruguay Round Agreement on Agriculture. It is often referred to as amber-box support.

Some countries' most recent reports of their subsidies are for some year earlier than 2005. Of particular interest, the most recent reports by the European Union and the United States are for 2001. That year is before the European Union expanded from 15 member countries to 25.

Some small developed countries have substantially higher rates of domestic support for their agricultural sectors than any of the countries shown in the figure.

1 WTO Goals on Agricultural Export Subsidies

Agricultural Export Subsidies

- An **export subsidy** is payment to firms for every unit exported (either a fixed amount or a fraction of the sales price). Governments give subsidies to encourage domestic firms to produce more in particular industries.
- Europe maintains a system of agricultural subsidies known as the **Common Agricultural Policy (CAP).**
- Other countries maintain similarly generous subsidies. For example, the U.S. pays cotton farmers to grow more cotton and subsidizes agribusiness and manufacturers to buy the American cotton.

1 WTO Goals on Agricultural Export Subsidies

Agricultural Export Subsidies

Indirect Subsidies

Included in the Hong Kong export subsidy agreement is the parallel elimination of **indirect subsidies** to agriculture.

Domestic Farm Supports

Another item mentioned in the Hong Kong agreement is **domestic farm supports**, which refers to any assistance given to farmers, even if it is not directly tied to exports.

Cotton Subsidies

Finally, export subsidies in cotton received special attention because that crop is exported by many low-income African countries and is highly subsidized in the United States.

1 WTO Goals on Agricultural Export Subsidies

Other Matters from the Hong Kong WTO Meeting

Tariffs in Agriculture

- Export subsidies applied by large countries depress world prices, so that exporting countries can expect tariffs to be imposed on the subsidized products when they are imported by other countries.

- The agriculture-exporting developing countries pushed for a dramatic reduction in these and other agriculture related tariffs.

Issues Involving Trade in Industrial Goods and Services

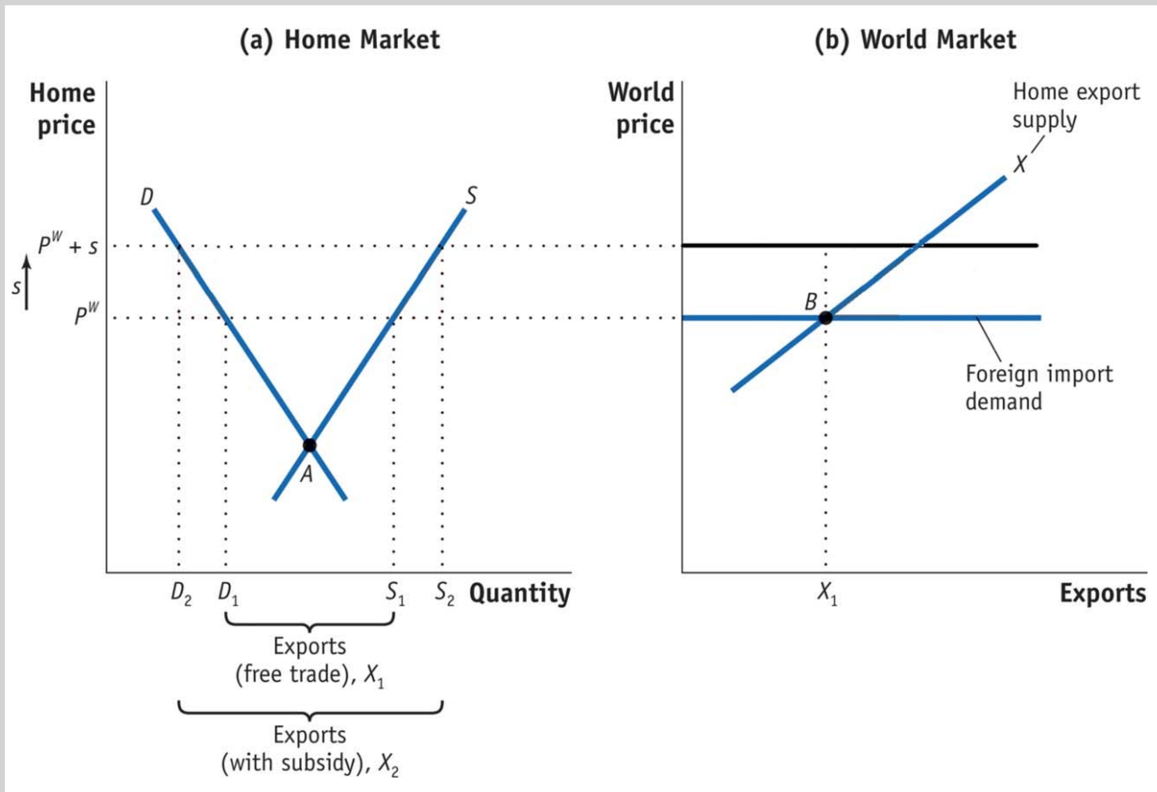
- There was discussion about trade in service sectors, which would benefit the industrial countries and their large service industries.

- Finally, there was agreement to allow 97% of imported products from the world's 50 least developed countries (LDCs) to enter WTO member markets tariff-free and duty-free.

2 Export Subsidies in a Small Home Country

Impact of an Export Subsidy

FIGURE 10-1 (1 of 2) Export Subsidy for a Small Country



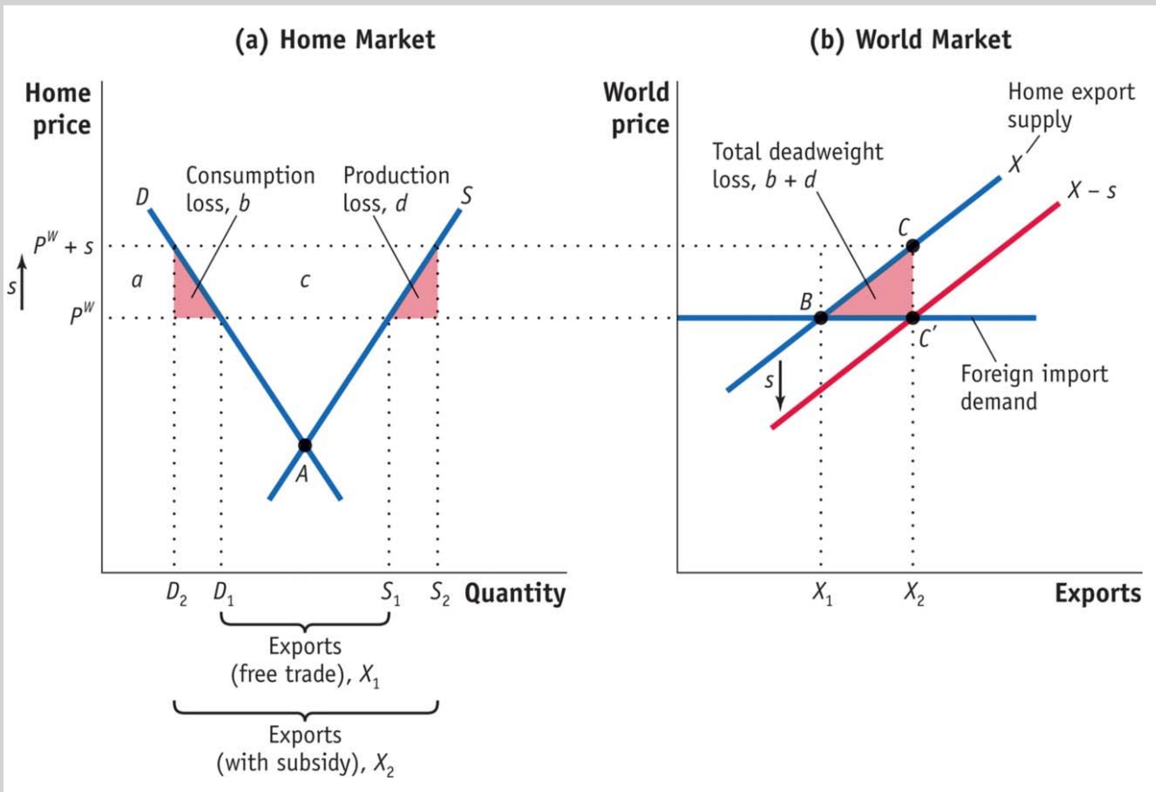
Applying a subsidy of s dollars per unit exported will increase the price that Home exporters receive from P^W to $P^W + s$.

As a result, the domestic price of the similar good will also rise by that amount. This price rise leads to an increase in Home quantity supplied from S_1 to S_2 and a decrease in Home quantity demanded from D_1 to D_2, in panel (a).

2 Export Subsidies in a Small Home Country

Impact of an Export Subsidy

FIGURE 10-1 (2 of 2) Export Subsidy for a Small Country (continued)



Exports rise as a result of the subsidy, from X_1 to X_2 in panel (b).

The Home export supply curve shifts down by exactly the amount of the subsidy since the marginal cost of a unit of exports decreases by exactly *s*.

As in the case of a tariff, the **deadweight loss** as a result of the subsidy is the triangle (*b* + *d*), the sum of consumer loss *b* and producer loss *d*.

2 Export Subsidies in a Small Home Country

Impact of an Export Subsidy

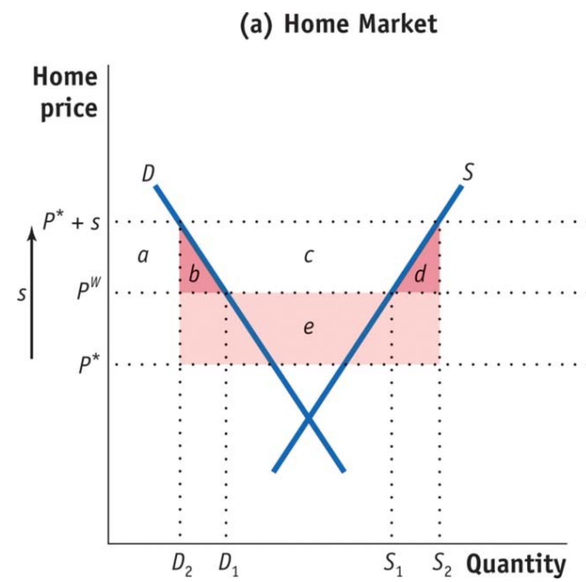
Impact of the Subsidy on Home Welfare

- The rise in Home price lowers consumer surplus by the amount ($a + b$).
- The price increase raises producer surplus by the amount ($a + b + c$).
- The export subsidy costs the government s per unit exported, shown by the area ($b + c + d$).
- The triangle ($b + d$) is the net loss or deadweight loss due to the subsidy in a small country.

3 Export Subsidies in a Large Home Country

Effect of the Subsidy

FIGURE 10-2 (1 of 2) Export Subsidy for a Large Country



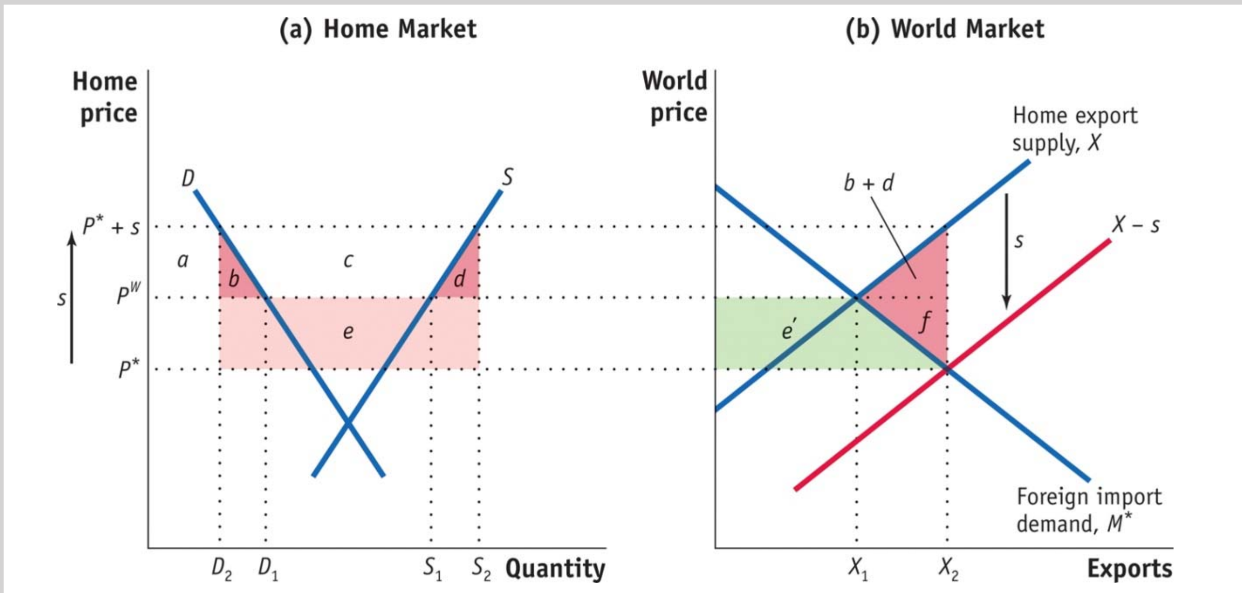
Panel (a) shows the effects of the subsidy at Home. The Home price increases from P^W to $P^* + s$, Home quantity demanded decreases from D_1 to D_2, and Home quantity supplied increases from S_1 to S_2.

The deadweight loss for Home is the area of triangle $(b + d)$, but Home also has a terms-of-trade loss of area e.

3 Export Subsidies in a Large Home Country

Effect of the Subsidy

FIGURE 10-2 (2 of 2) Export Subsidy for a Large Country (continued)



In the world market, the Home subsidy shifts out the export supply curve from X to $X - s$, reflecting the lower marginal cost of exports. As a result, the world price falls from P^W to P^*.

The Foreign country gains the consumer surplus area e', so the world deadweight loss due to the subsidy is the area $(b + d + f)$. The extra deadweight loss f arises because only a portion of the Home terms-of-trade loss is a Foreign gain.

J.Baker4

3 Export Subsidies in a Large Home Country

Effect of the Subsidy

Home Welfare

- The increase in the Home price from P^W to $P^* + s$ reduces consumer surplus by the amount $(a + b)$ and increases producer surplus by the amount $(a + b + c)$.

- Due to the terms-of-trade effect, the revenue cost of the subsidy to the government is the area $(b + c + d + e)$, which equals $s \cdot X_2$. The net effect on welfare is $-(b + d + e)$,

Foreign and World Welfare

- While there is a terms-of-trade gain of e' for the foreign country there is still an overall deadweight loss for the world, measured by the area $(b + d + f)$.

Slide 15

J.Baker4 The Notes under this slide are the same as the notes under slide 9. Accurate?
JNB, 7/17/2014

APPLICATION

Who Gains and Who Loses?

We return to the agreements of the Hong Kong meeting of the WTO in December 2005 and ask: Which countries will gain and which will lose when export subsidies (including the "indirect" subsidies) are eliminated?

Gains

Current agricultural exporters will gain from the rise in world prices as agricultural subsidies by the industrialized countries—especially Europe and the United States—are eliminated.

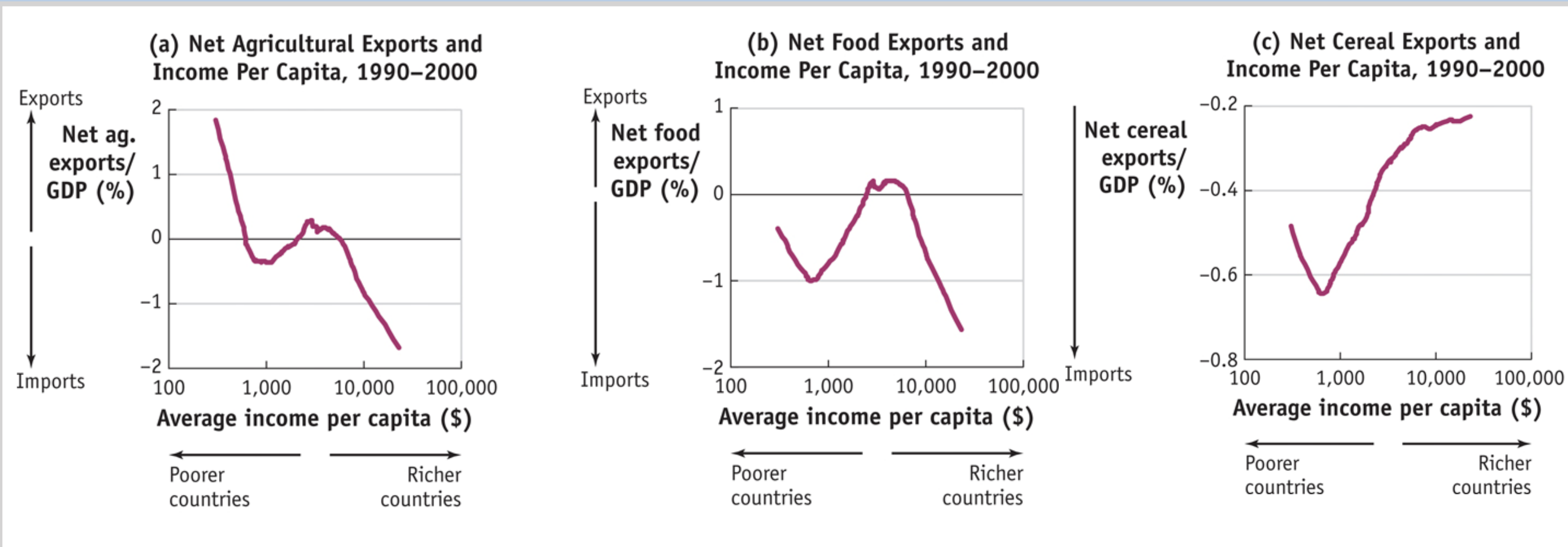
Losses

The food-importing countries, typically the poorer non-food-producing countries, will lose. This theoretical result is confirmed by several empirical studies.

APPLICATION

Who Gains and Who Loses?

FIGURE 10-3



Agriculture, Food, and Cereal Exports Panel (a) shows net agricultural exports graphed against countries' income per capita. The poorer countries export more agricultural products overall and would thus benefit from a rise in the prices due to the removal of subsidies. On the other hand, panel (b) shows that it is middle-income countries that export the most food. Panel (c) shows that poor countries are net importers of essential food items (cereals) such as corn, rice, and wheat and would be harmed by an increase in their world price.

APPLICATION

Who Gains and Who Loses?

Food Aid

Even though the proposals from the Hong Kong talks were never ratified, and the Doha Round of negotiations is still ongoing, some recent progress has been made toward the goal of replacing food aid with efforts to increase production.

- In 2009, the Group of Eight (G8) countries pledged to increase funding for agricultural development by $14 billion per year.
- This pledge represents a shift in focus away from food aid and toward agricultural sustainability in developing countries.
- Despite this announcement, however, many observers remain skeptical that the funding will be forthcoming.

4 Production Subsidies

Suppose the government provides a subsidy of *s* dollars for *every unit* that a Home firm produces. This is a **production subsidy** because it is a subsidy to every unit produced and not just to units that are exported.

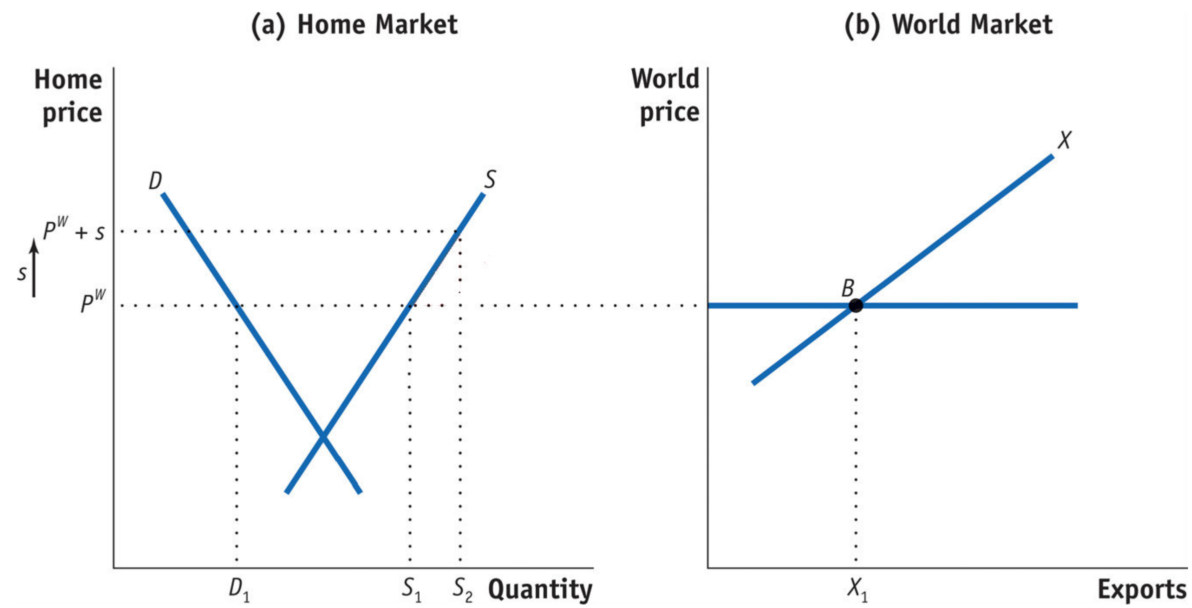
There are several ways that a government can implement such a subsidy.

- The government might guarantee a minimum price to the farmer, and make up the difference between the minimum price and any lower price for which the farmer sells.
- Alternatively, it might provide subsidies to users of the crop to purchase it, thus increasing demand and raising market prices; this would act like a subsidy to every unit produced.

4 Production Subsidies

Effect of a Production Subsidy in a Small Home Country

FIGURE 10-4 (1 of 2) Production Subsidy for a Small Country

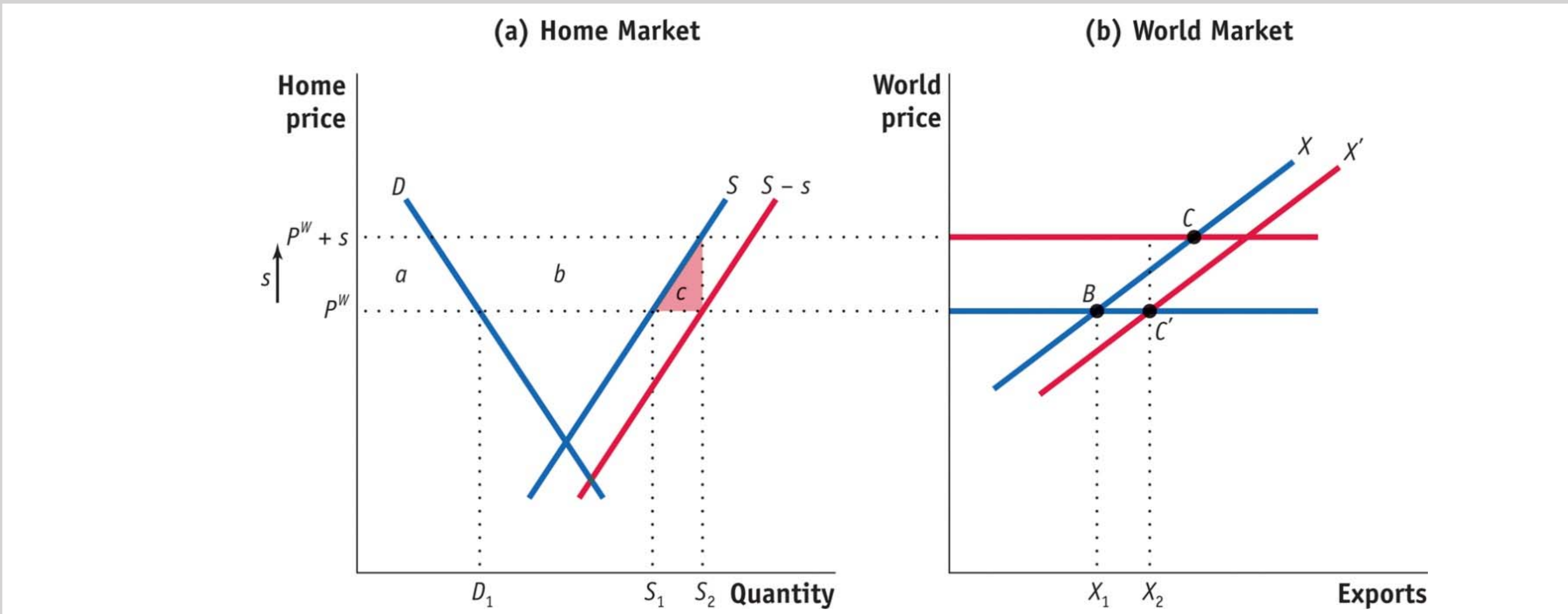


In panel (a), applying a production subsidy of s dollars per unit produced will increase the price that Home firms receive from P^W to $P^W + s$. This price rise leads to an increase in Home quantity supplied from S_1 to S_2. The consumer price at Home is not affected because the production subsidy does not distinguish between items sold at Home or exported (firms therefore continue to charge the world price at Home), so the quantity demanded stays at D_1.

4 Production Subsidies

Effect of a Production Subsidy in a Small Home Country

FIGURE 10-4 (2 of 2) Production Subsidy for a Small Country (continued)



The deadweight loss of the subsidy for a small country is the area *c*. In panel (b), exports rise as a result of the production subsidy, from X_1 to X_2, though the increase in exports is less than for the export subsidy because, for the production subsidy, quantity demanded does not change at Home.

4 Production Subsidies

Effect of a Production Subsidy in a Small Home Country

Targeting Principle

Our finding that the deadweight loss is lower for the production subsidy makes it a better policy than the export subsidy to increase Home supply. This finding is an example of the **targeting principle**: *to achieve some objective, it is best to use the policy instrument that achieves the objective most directly.*

There are many examples of using a targeting principle in economics:

- Taxes on cigarettes and gasoline.
- To use an example from this book, it is better to provide trade adjustment assistance directly to those affected, than to impost a tariff or quota.

4 Production Subsidies

Effect of a Production Subsidy in a Large Home Country

Figure 10-1 (b) World Market

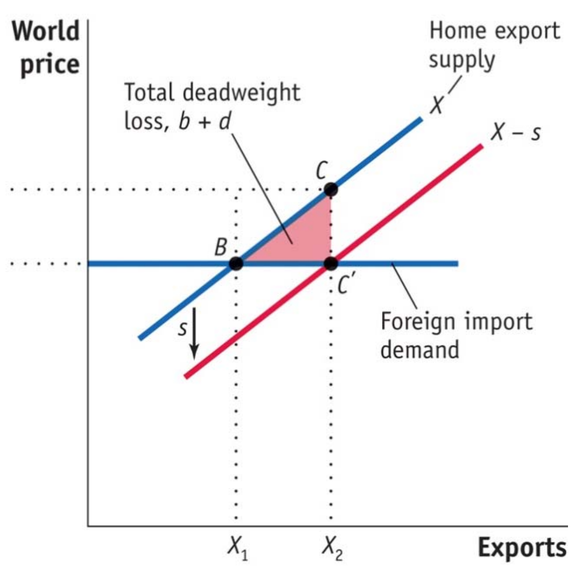
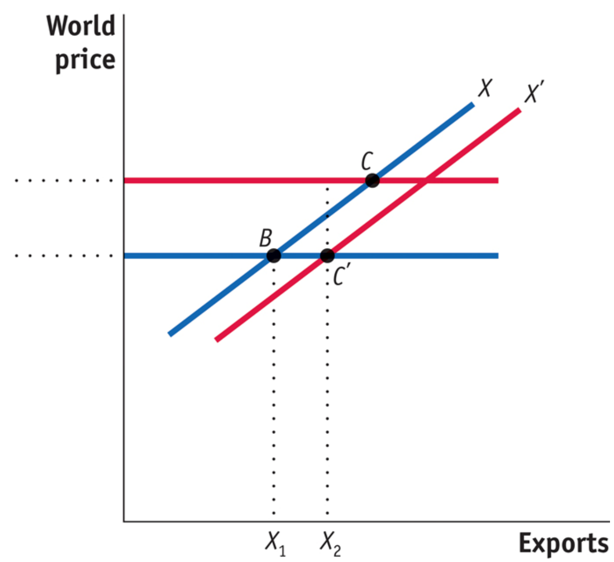


Figure 10-4(b) World Market



- Notice that the rise in the quantity of exports due to the production subsidy, from point B to C' in Figure 10-4, is *less than* the increase in the quantity of exports for the export subsidy, from point B to C' shown in Figure 10-1.

- With the export subsidy, the price for Home producers *and* consumers rose to $P^W + s$, so exports increased because of both the rise in quantity supplied and the drop in quantity demanded.

4 Production Subsidies

Effect of a Production Subsidy in a Large Home Country

Figure 10-1 (b) World Market

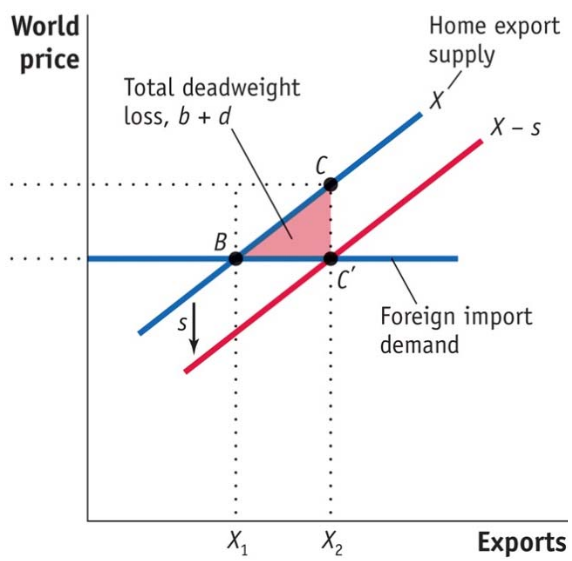
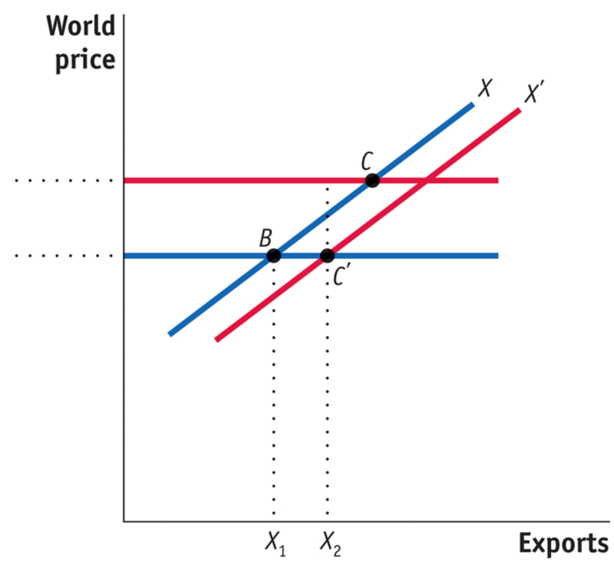


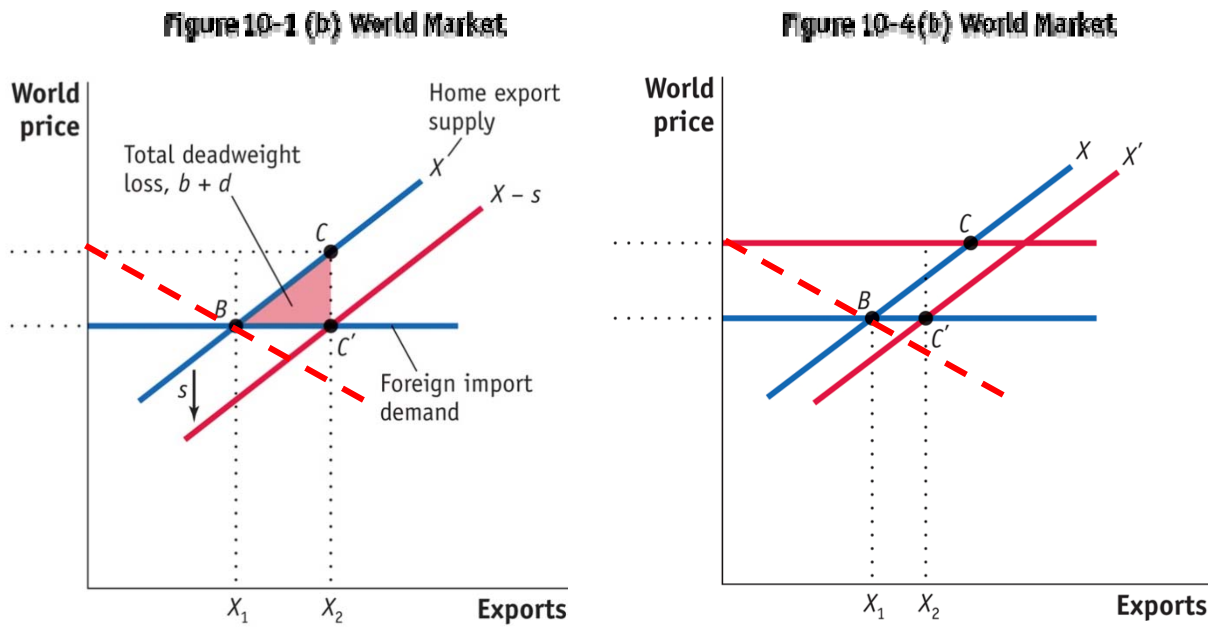
Figure 10-4(b) World Market



- As a result, the export subsidy shifted the Home export supply curve down by exactly the amount *s* in Figure 10-1.
- In contrast, with a production subsidy, exports rise only because Home quantity supplied increases so that export supply shifts down by an amount less than *s* in Figure 10-4.

4 Production Subsidies

Effect of a Production Subsidy in a Large Home Country



- If we drew a downward-sloping Foreign import demand curve in panel (b), then the increase in supply as a result of the production subsidy would lower the world price.
- But that drop in world price would be *less than* the drop that occurred with the export subsidy because the increase in exports under the production subsidy is less.

Trade Barriers and Subsidies

Figure 1.

Average Tariff Rates for Agriculture and Processed Foods, 2005

(Percent)

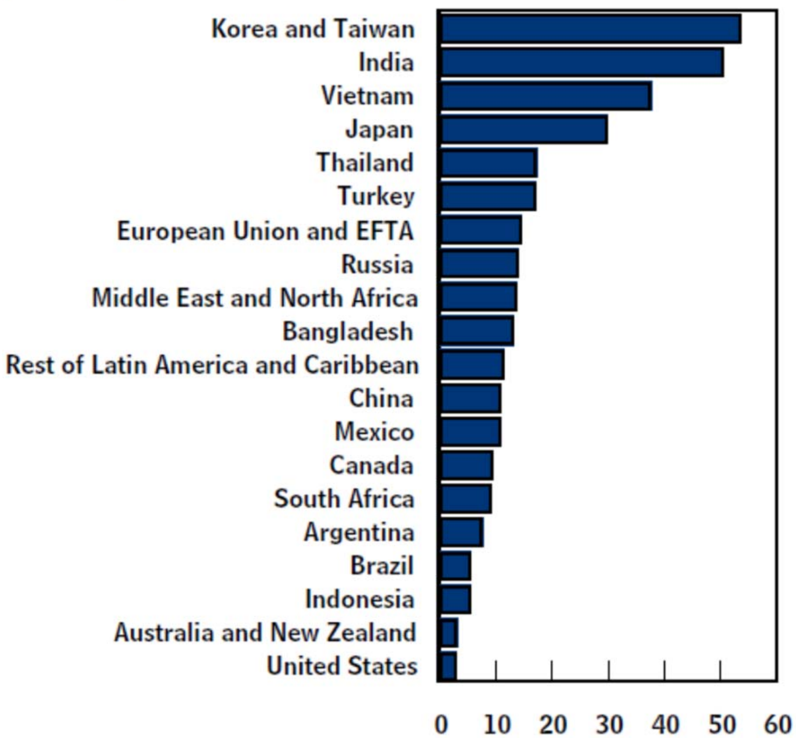
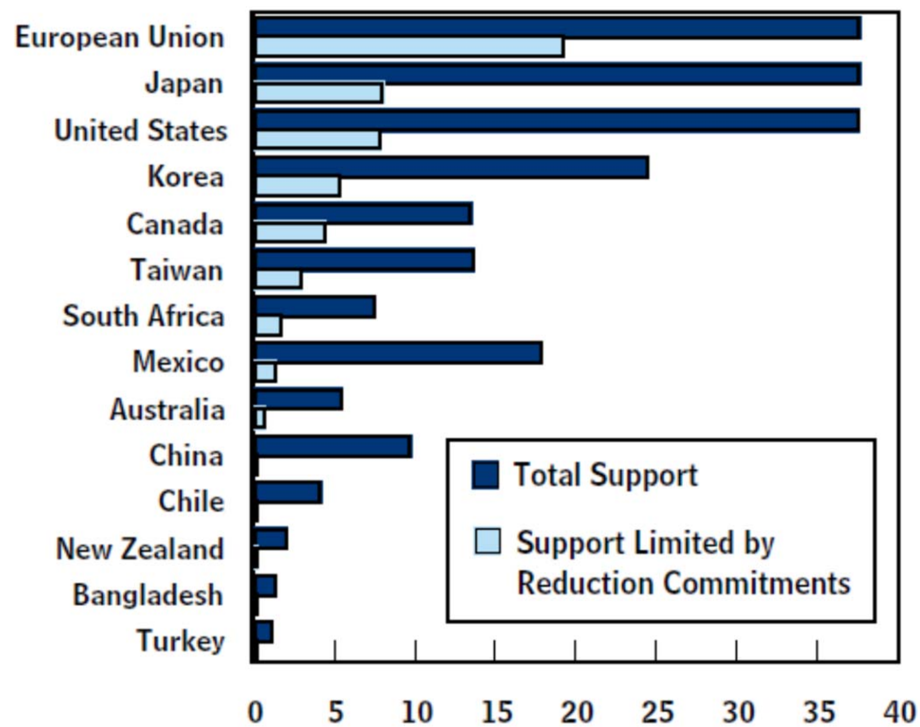


Figure 2.

Average Annual Rates of Reported Domestic Support, 1998 to 2005

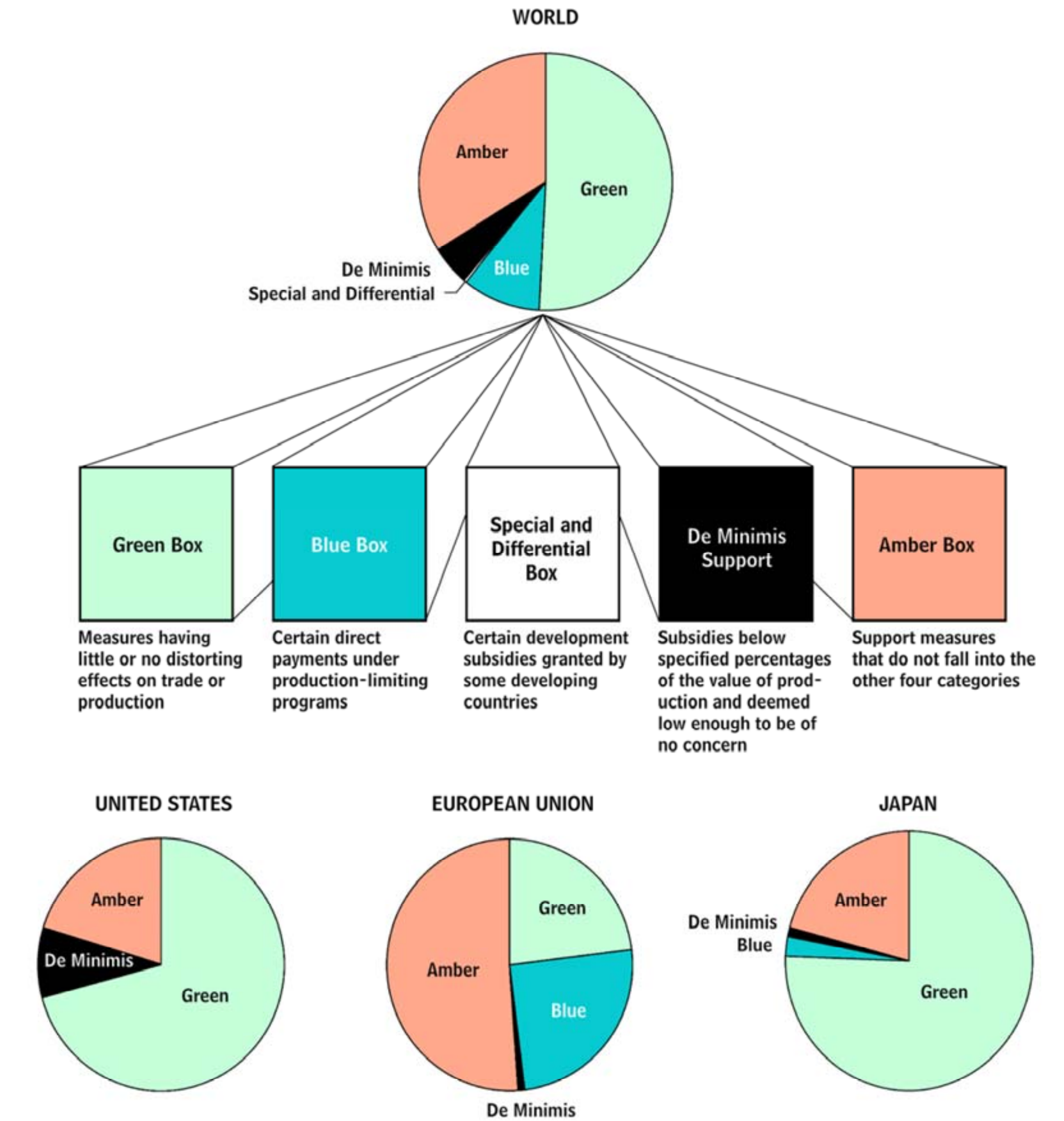
(Percentage of the value of agricultural output)



CBO, 2006, Agricultural Trade Liberalization

Summary Figure 3.

Breakdown of Domestic Support by Categories in the Uruguay Round Agreement on Agriculture: Average Annual Reported Values, 1998 to Present



Note: Numbers are based on subsidy data reported to the World Trade Organization by the countries in question as of June 30, 2005. The most recent reports by most countries are for 2002 or earlier. See Table 13 in the main text for source and additional notes.

CBO, 2005, Policies That Distort World Agricultural Trade: Prevalence and Magnitude

Full Ag. Trade Liberalization

- From CBO (2006)
- Biggest ag sector benefits: Australia, New Zealand, Canada, Brazil, and Argentina.
- Biggest ag sector losses: members of the European Union and the European Free Trade Association and high-income Asian countries
- If phase-out by 2010, then by 2015: resulting efficiency gains and investment growth would be in the range of $50 billion to $185 billion, or 0.1 percent to 0.4 percent of the value of world output of all goods and services, or roughly 3 percent to 13 percent of the value added by world agriculture.