International Trade Policy: Import Tariffs & Export Subsidies

Thematic Area 3

MSc in ISFM

I. Import Tariffs

Introduction

- On September 11, 2009 President Barack Obama announced a tariff of 35% on imports of tires made in China.
- The tire tariffs are examples of a trade policy, a government action meant to influence the amount of international trade.
- Because the gains from trade are unevenly spread, industries, and labor unions often feel that the government should do something to help limit their losses (or maximize their gains) from international trade.
- That “something” is trade policy, which includes the use of import tariffs (taxes on imports), and export subsidies

A Brief History of the World Trade Organization

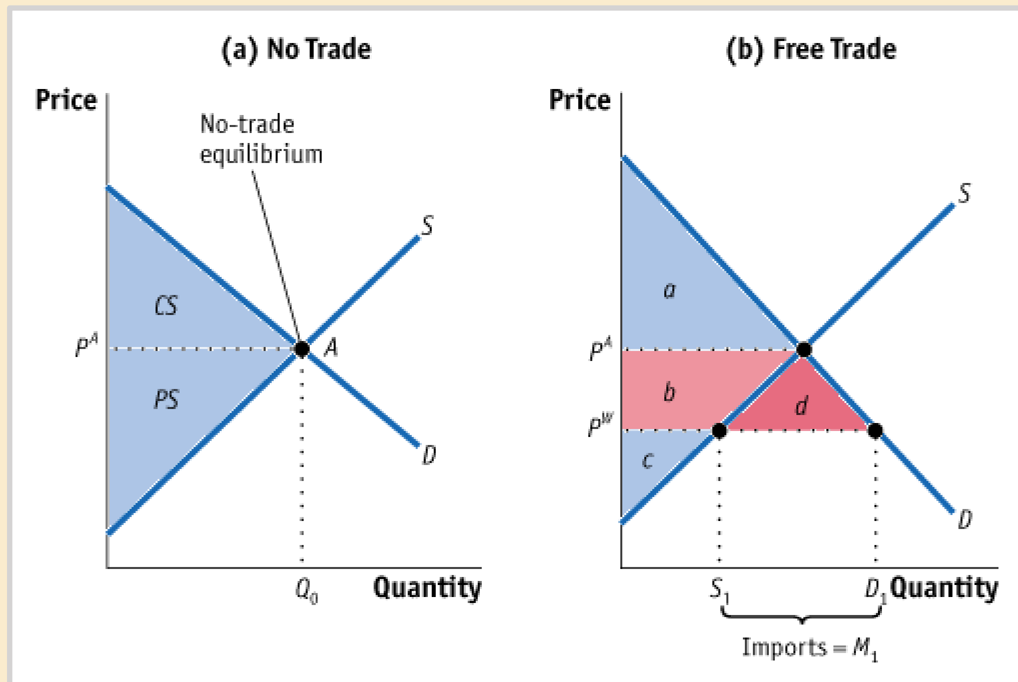
- After World War II, representatives of the Alliedcountries met on several occasions to discuss issues such as high trade barriers and unstable exchange rates.

- In 1947 the General Agreement on Tariffs and Trade (GATT) was established the purpose of which was to reduce barriers to international trade between nations.

Key Provisions of the GATT

Article I	General Most-Favored-Nation Treatment
Article VI	Anti-Dumping and Countervailing Duties
Article XI	General Elimination of Quantitative Restrictions
Article XVI	Subsidies
Article XIX	Emergency Action on Imports of Particular Products
Article XXIV	Territorial Application—Frontier Traffic—Customs Unions and Free-Trade Areas

Gains from Trade: The Consumer and Producer Surpluses



Rise in consumer surplus: + *(b + d)*

Fall in producer surplus: – *b*

Net effect on Home welfare: + *d*

The Gains from Free Trade at Home

With Home demand of *D* and supply of *S*, the no-trade equilibrium is at point A, at the price P^A producing Q_0.

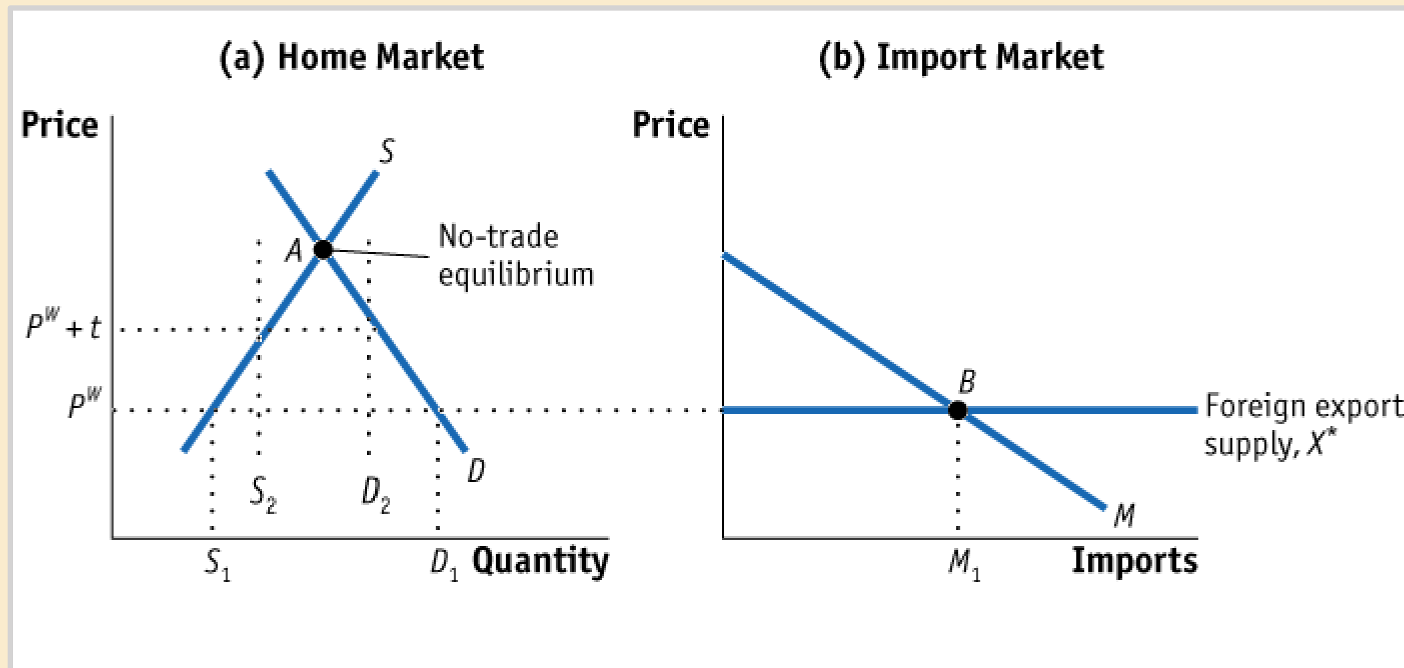
With free trade, the world price is P^W, so quantity demanded increases to D_1 and quantity supplied falls to S_1.

Since quantity demanded exceeds quantity supplied, Home imports $D_1 - S_1$.

Consumer surplus increases by the area *(b + d)*, and producer surplus falls by area *b*.

The gains from trade are measured by area *d.*

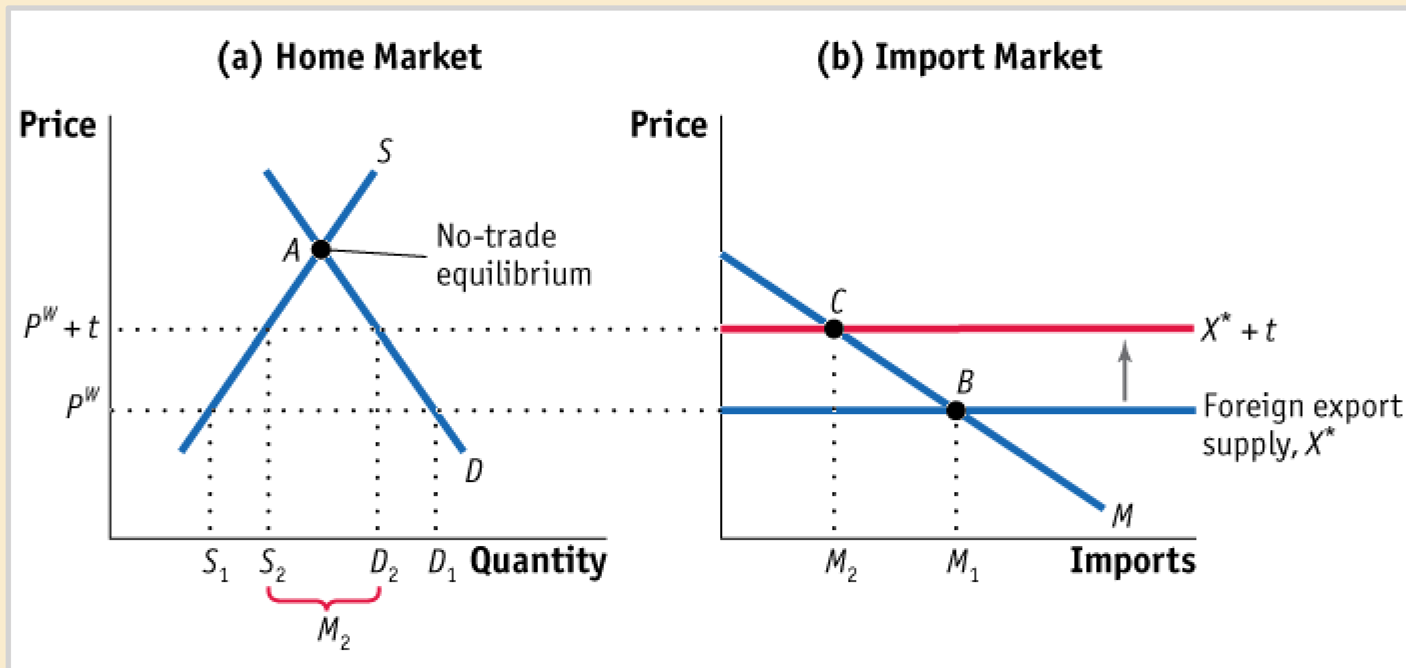
Import Tariffs for a Small Country



Tariff for a Small Country : **Applying a tariff of *t* euros will increase the import price from P^W to $P^W + t$.**

The domestic price of that good also rises to $P^W + t$. This price rise leads to an increase in Home supply from S_1 to S_2, and a decrease in Home demand from D_1 to D_2, in panel (a).

Import Tariffs for a Small Country

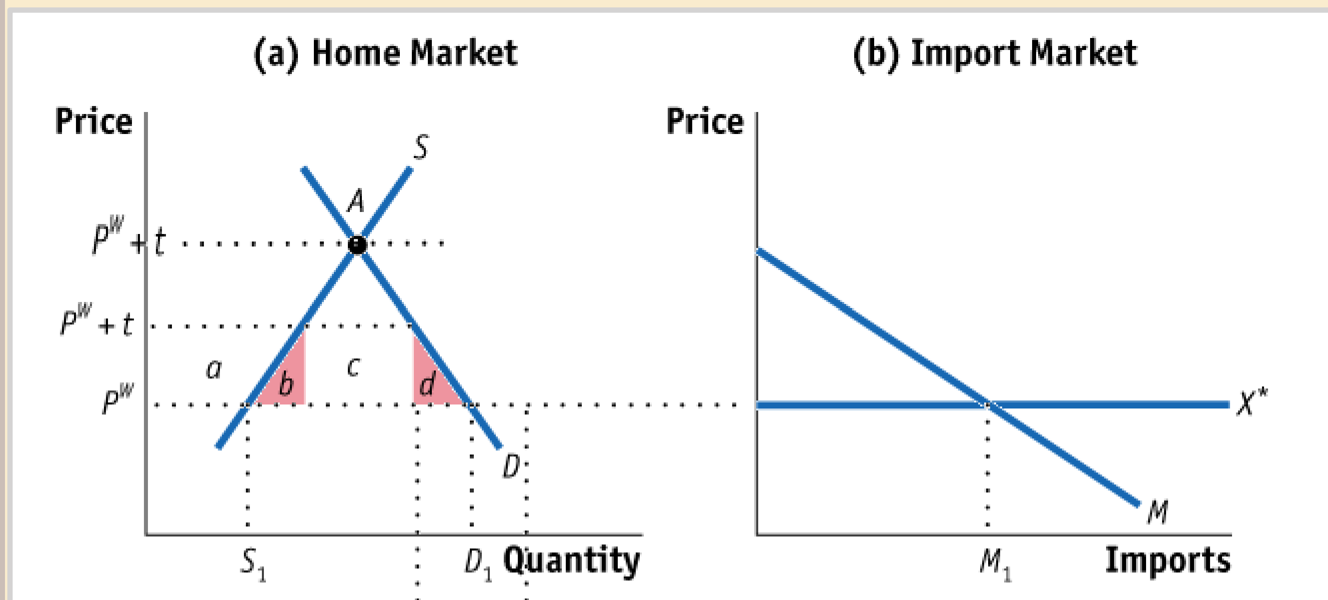


Tariff for a Small Country (continued)

Imports fall due to the tariff, from M_1 to M_2 in panel (b).

As a result, the equilibrium shifts from point *B* to *C*.

Import Tariffs for a Small Country



Effect of Tariff on Welfare

The tariff increases the price from P^W to $P^W + t$.

As a result, consumer surplus falls by *(a + b + c + d)*. Producer surplus rises by area *a*, and government revenue increases by the area *c*.

Fall in consumer surplus: − *(a + b + c + d)*

Rise in producer surplus: + *a*

Rise in government revenue: + c

Net effect on Home welfare: − *(b + d)*

Import Tariffs for a Small Country

Why and How Are Tariffs Applied?

- If a small country suffers a loss when it imposes a tariff, why do so many have tariffs as part of their trade policies?

- One answer is that a developing country does not have any other source of government revenue. Import tariffs are "easy to collect."

- A second reason is politics. The benefits to producers (and their workers) are typically more concentrated on specific firms and states than the costs to consumers, which are spread nationwide.

Import Tariffs for a Large Country

- Unlike small countries, large countries have the ability to influence the world price of the product, i.e. a tariff by a large country can reduce the world price.
- If the tariff is chosen wisely (i.e. optimally), it can increase the home country's welfare by lowering the price the domestic country pays to buy the good from abroad.

II. Export Subsidies

On July 21, 2008, representatives of the 152 countries belonging to the WTO met in Geneva, Switzerland to discuss reforms of the world trading system. Like earlier meetings in Seattle (1999), and Cancún, Mexico (2003), and Hong Kong (2005), this meeting was marked by large-scale protests.

WTO Goals on Export Subsidies

Agreements Made at the Hong Kong WTO Meeting, December

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.

WTO Goals on Export Subsidies

Agreements Made at the Hong Kong WTO Meeting, December 2005

Issue	Decision Made in Hong Kong	Unresolved in Hong Kong
Cotton	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 services 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.

WTO Goals on Agricultural and Industrial Export Subsidies

An export subsidy is payment to firms for every unit exported (either a fixed amount per unit 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.

Issues on Trade of Industrial Goods and Services

There was also an agreement to discuss opening 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.

High-Technology Export Subsidies

Governments subsidize high-technology industries because they may create benefits that spill over to other firms in the economy.

That is, governments believe that high-tech industry produces a positive externality.

High-Technology Export Subsidies

"Strategic" Use of High-Tech Export Subsidies

Payoff Matrix for Boeing and Airbus, each of which has to decide whether to produce the new aircraft.

Boeing \ Airbus	Produce	Not produce
Produce	Boeing: –$5 million; Airbus: –$5 million	Boeing: $100 million; Airbus: $0
Not produce	Boeing: $0; Airbus: $100 million	Boeing: $0; Airbus: $0

Payoff Matrix between Two Firms

The lower-left number in each quadrant shows the profits of Boeing, and the upper-right number shows the profits of Airbus. Each firm must decide whether to produce a new type of aircraft. Each firm is making its best decision, given the action of the other.

High-Technology Export Subsidies

“Strategic” Use of High-Tech Export Subsidies

		Airbus	
		Produce	Not produce
Boeing	Produce	−$5 million (Airbus) −$5 million (Boeing)	$0 (Airbus) $100 million (Boeing)
	Not produce	$100 million (Airbus) $0 (Boeing)	$0 (Airbus) $0 (Boeing)

Strategy for Boeing:

If Airbus produces, then Boeing is better off *not producing.*

If Airbus does not produce, then Boeing is better off by producing.

Thus, there is no *dominant* strategy (i.e. to do one thing irrespective of what the other firm is doing) for Boeing.

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High-Technology Export Subsidies

“Strategic” Use of High-Tech Export Subsidies

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		Produce	Not produce
Boeing	Produce	–$5 million (Boeing); –$5 million (Airbus)	$100 million (Boeing); $0 (Airbus)
	Not produce	$0 (Boeing); $100 million (Airbus)	$0 (Boeing); $0 (Airbus)

The fact that each of the two firms would prefer to do a different thing depending on what the other firm does implies that there is no way on the basis of this model to determine what will happen.

Can, e.g. the EU governments intervene to change the game in such a way that the dominant strategy for Airbus is to produce (i.e. independently of what Boeing is going to do)?.

High-Technology Export Subsidies

Effect of a Subsidy to Airbus

		Airbus	
		Produce	Not produce
Boeing	Produce	$20 million / –$5 million	$0 / $100 million
	Not produce	$125 million / $0	$0 / $0

Rise in producer profits: + 125

Fall in government revenue: – 25

Net effect on European welfare: + 100

Payoff Matrix with Subsidy

When the EU governments provide a subsidy of $25 million to Airbus, its profits increase by that much when it produces a new aircraft. Now, no matter what Boeing does, the best action for Airbus is to produce. As a result, Boeing will not produce.

The profits for Airbus will now be $125 million, while the subsidy cost only $25 million, so there can be a net gain of $100 million in European welfare.

High-Technology Export Subsidies

Subsidy with Cost Advantage for Boeing

Another Payoff Matrix, with Boeing Cost Advantage

Boeing \ Airbus	Airbus: Produce	Airbus: Not produce
Boeing: Produce	Boeing: $5 million; Airbus: –$5 million	Boeing: $125 million; Airbus: $0
Boeing: Not produce	Boeing: $0; Airbus: $100 million	Boeing: $0; Airbus: $0

If Boeing has a cost advantage in the production of aircraft, the payoffs are as shown here. Boeing earns profits of $5 million when both firms are producing and profits of $125 million when Airbus does not produce. Now the equilibrium, is in the upper-right quadrant, where Boeing produces and Airbus does not.

High-Technology Export Subsidies

Subsidy with Cost Advantage for Boeing

Another Payoff Matrix with Foreign Subsidy

Boeing \ Airbus	Produce	Not produce
Produce	Airbus: $20 million; Boeing: $5 million	Airbus: $0; Boeing: $125 million
Not produce	Airbus: $125 million; Boeing: $0	Airbus: $0; Boeing: $0

When the European governments provide a subsidy of $25 million to Airbus, its profits increase by that much when it produces. Now the equilibrium is in the upper-left quadrant, where both firms produce. The profits for Airbus have increased from 0 to $20 million, but the subsidy costs $25 million, so there is a net loss of $5 million in European welfare.

APPLICATION

Subsidies to Commercial Aircraft

Subsidies for the large commercial aircraft industry include:

- indirect subsidies that arise in the production of civilian and military aircraft; direct subsidies for R&D, and
- subsidies of the interest rates that aircraft buyers pay when they borrow money to purchase aircraft.

APPLICATION

Subsidies to Commercial Aircraft

If both firms stay in the market and are subsidized by their governments, then it is unlikely that the subsidies are in the national interest of either the United States or the European Union.

The countries purchasing the aircraft gain because of the lower price, while the United States and Europe lose as a result of the costs of the subsidies.

HEADLINES

W.T.O. Says Aid to Airbus for A380 Was Illegal

A preliminary report by the World Trade Organization has found that Airbus received illegal subsidies.

- The report was in response to the United States filing a complaint on behalf of Boeing, arguing that the European Union and its governments funneled billions of dollars in illegal subsidies to Airbus from 1970 to 2004.

Boeing lawyers had said that a ruling against Airbus could mean that it will be required to either refinance those loans on commercial terms or otherwise restructure them.

HEADLINES

Dreamliner Production Gets Closer Monitoring

Previously Boeing had designed and built its planes in-house, bearing the whole expense.

But early this decade, when air traffic plunged after the Sept. 11 terrorist attacks, top Boeing executives balked at investing more than $10 billion to develop a new plane.

As a solution, suppliers independently bankrolled their parts of the project, sharing costs and risk.

When factory workers here started assembling the first Dreamliner, the system's flaws became clear as quality suffered and major components weren't completed.