

# **Policies and Trade - Part I: Import Tariffs and Quotas**

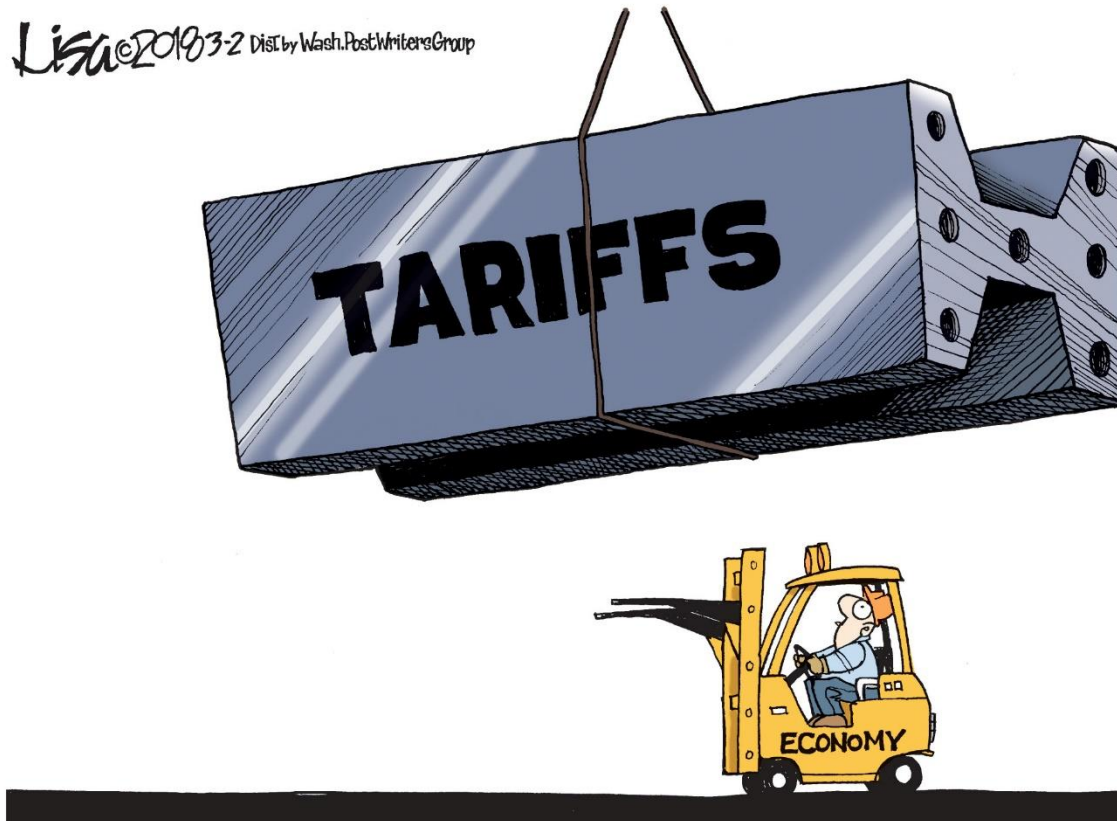


**AED/IS 4540  
International Commerce  
and the World Economy**

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# Tariffs as a Barrier to Trade

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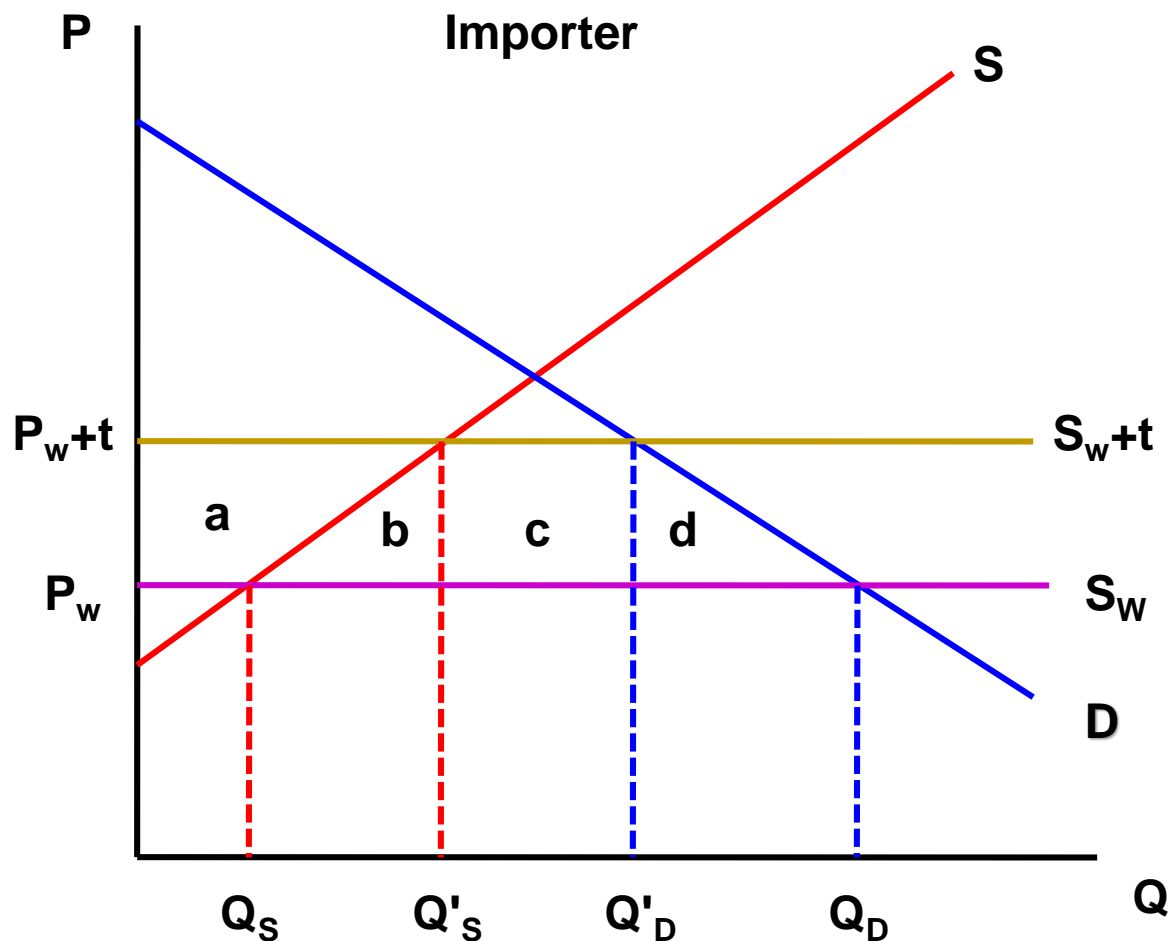
- ◇ Consensus among economists on benefits of trade
- ◇ Critical of policies that either create *barriers* to trade or *distort* international markets
- ◇ A *tariff* is classic barrier to trade, i.e., a tax on importing a good or service, usually collected by customs officials at place of entry
- ◇ Two types of tariff:
  - *specific* tariff, i.e., \$ amount per imported unit
  - *ad valorem* tariff, i.e., % of \$ value of imported unit

# Tariffs as a Barrier to Trade

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- ❖ **For developed countries, tariffs on non-agricultural products successively reduced post-1945**
- ❖ **2004, tariff rates averaged 2.5 to 4% on non-agricultural imports into US, Canada, European Union (EU), and Japan**
- ❖ **Average tariff rates higher for most developing countries, e.g., China's average tariff on non-agricultural imports was 10% in 2004**
- ❖ **Tariff rates on agricultural imports still high, with average rates of 25% (North America), 30% (EU), 34% (Asia-Pacific), and 39% (South America)**

# Effect of a Tariff: Small Country



# Economic Effects of a Tariff

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- ◆ Small importer faces flat (perfectly elastic) world supply curve  $S_w$ , which shifts to  $S_w + t$  with a tariff  $t$
- ◆ Domestic supply increases to  $Q_s'$ , domestic demand falls to  $Q_d'$ , and imports fall to  $(Q_s' \text{ to } Q_d')$
- ◆ Effect of tariff:
  - loss of consumer surplus =  $-(a+b+c+d)$
  - gain in producer surplus =  $+(a)$
  - increased variable costs =  $-(b)$
  - tariff revenue =  $+(c)$
  - “deadweight” loss =  $-(d)$
  - overall loss from tariff =  $-(b+d)$

# Non-Tariff Barriers

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- ❖ **A non-tariff barrier (NTB), is any policy used to reduce imports that is not a simple tariff**
- ❖ **NTBs can take many forms, e.g., import quotas, voluntary export restraints (VERs), product standards etc.**
- ❖ **Best-known NTB is an import quota, i.e., a limit on amount of imports allowed over a set time period**
- ❖ **In principle, impact of import quotas is the same as a simple import tariff**

# Non-Tariff Barriers

US exempts South Korea from steel tariffs - Google Chrome

← → ↺ https://www.cnbc.com/2018/03/25/us-exempts-south-korea-from-steel-tariffs.html ☆ ⓘ ⌵ ⋮


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## US exempts South Korea from steel tariffs, but imposes import quota

- South Korea's trade ministry said on Monday that United States agreed to exempt the country from steel tariffs.
- South Korea has received a quota of about 2.68 million tonnes of steel exports, or 70 percent of the annual average Korean steel exports to the U.S. between 2015 to 2017, that will be exempt from the new tariffs, the ministry said in a statement.

Published 10:39 PM ET Sun, 25 March 2018 | Updated 7:51 AM ET Mon, 26 March 2018

 REUTERS






Seong Joon Cho | Worldsteel | Getty Images

The [United States](#) and [South Korea](#) agreed to revise a trade pact sharply criticized by U.S. President [Donald Trump](#), Seoul said on Monday, with U.S. automakers winning improved market access and Korean steelmakers hit with quotas but avoiding hefty tariffs.

The planned changes in the U.S.-Korea Free Trade Agreement

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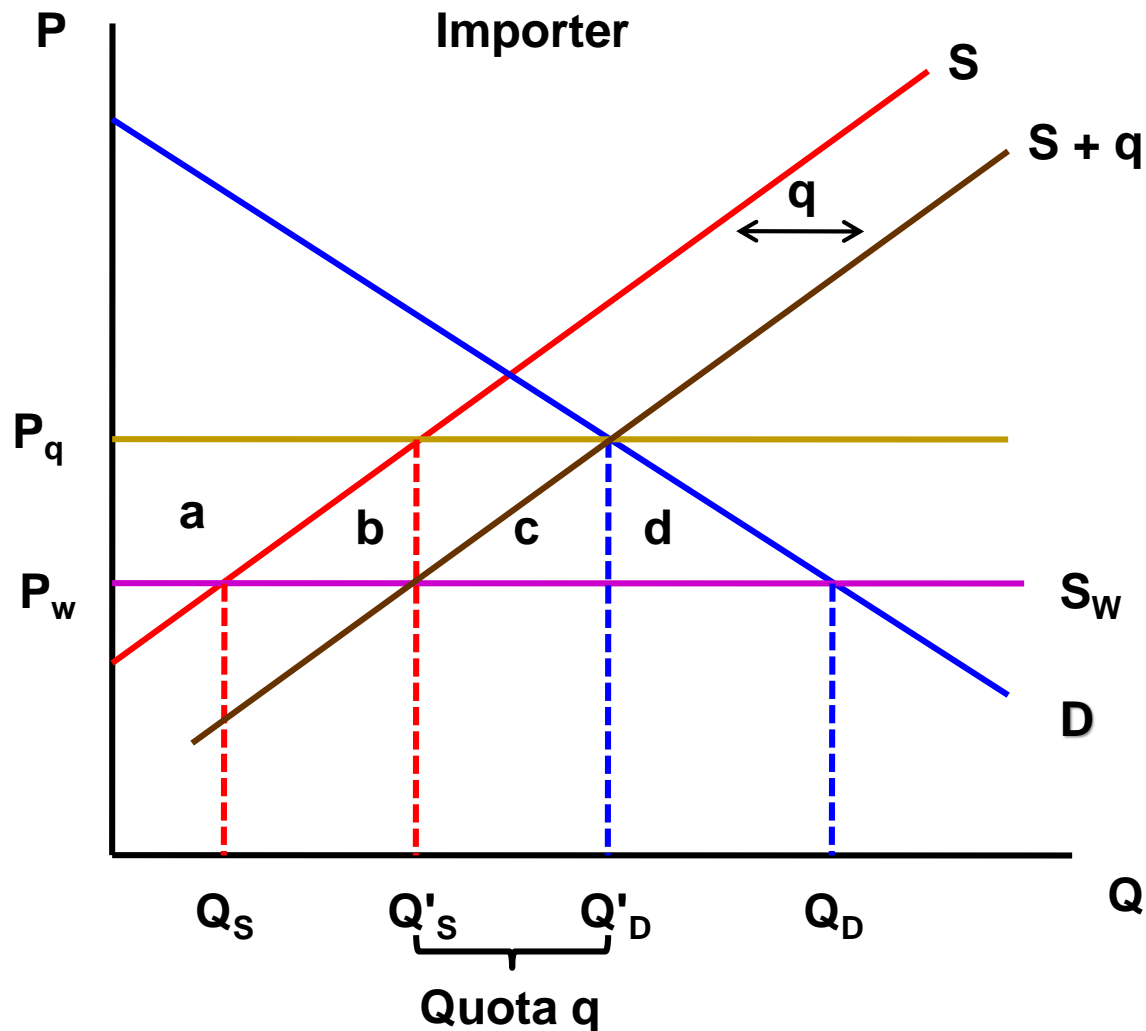
Presidents' Day Sale  
\$1 for 2 Months

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# Effect of a Quota: Small Country



# Economic Effects of a Quota

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◇ If importer sets quota  $q$  at imports of  $(Q_s'$  to  $Q_D')$ , supply curve is  $(S+q)$ , internal price increases to  $P_q$ , domestic supply increases to  $Q_s'$ , and domestic demand falls to  $Q_D'$

◇ Effect of quota:

- loss of consumer surplus	=	$-(a+b+c+d)$
- gain in producer surplus	=	$+(a)$
- increased variable costs	=	$-(b)$
- quota rents	=	$(c)$
- “deadweight” loss	=	$-(d)$
- overall loss from quota	=	<u><math>?</math></u>

# Economic Effects of a Quota

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- ❖ Whether or not effects of a quota are equivalent to those of a tariff depends on what happens to the *quota rents* (c)
- ❖ Under a tariff, (c) is tariff revenue, which clearly stays in importing country
- ❖ With a quota, each unit of the good imported is purchased at world price  $P_w$  but is sold at internal price  $P_q$ , so amount of quota rents is  $q(P_q - P_w)$
- ❖ Who gets the quota rents is determined by how quota is allocated by government

# Economic Effects of a Quota

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## ◆ Methods of Quota Allocation:

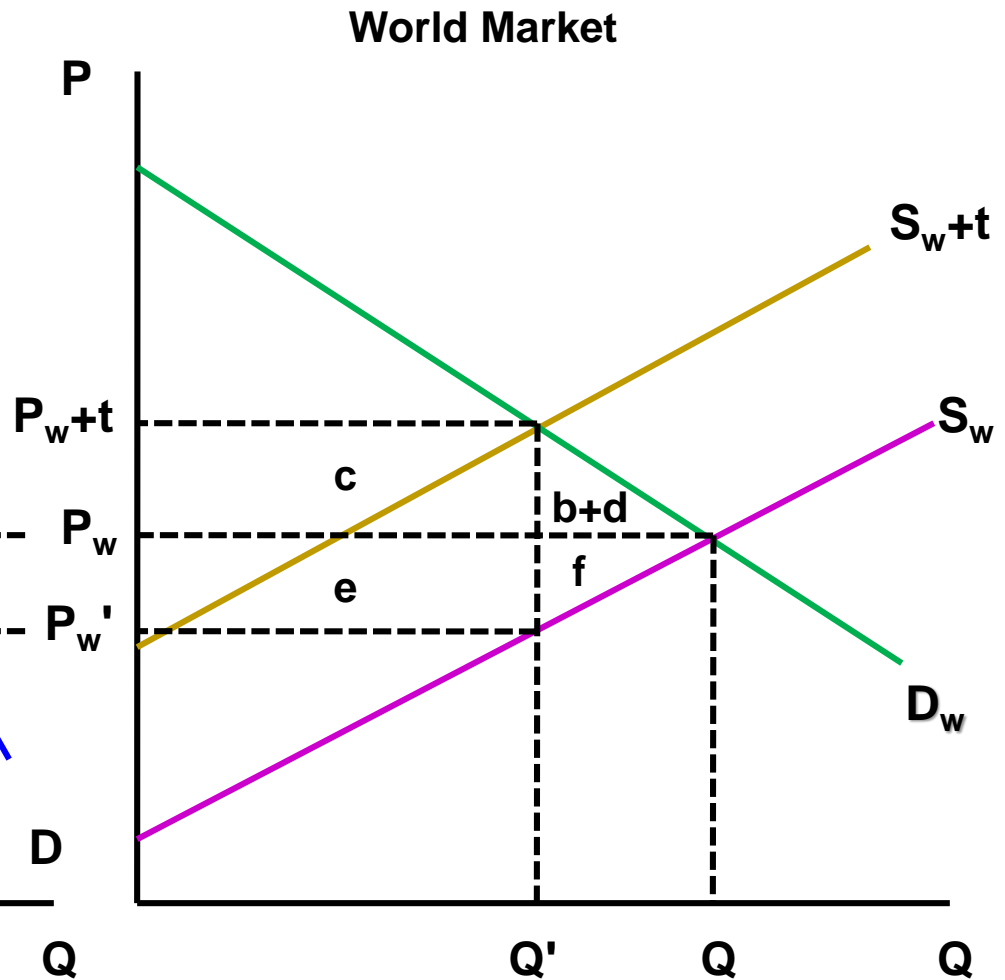
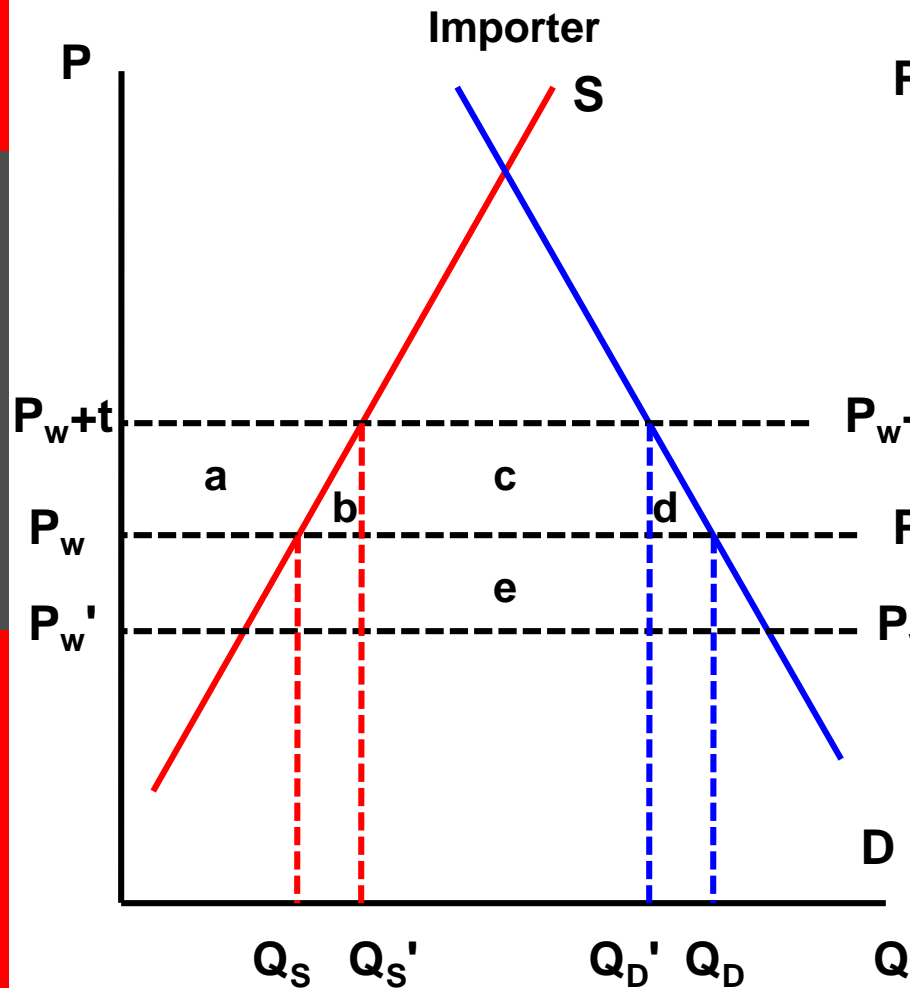
- ***Auction*** of import licenses – firms bid ( $P_q - P_w$ ) in auction, government getting quota rents (c)
- ***Free allocation*** of import licenses – firms do not have to pay for license and gain all rents, i.e., redistribution of (c) from consumers to import license-holders
- ***VERs*** – exporter agrees to “voluntarily” restrict exports, thereby gaining all quota rents, i.e., all (c) is lost

# Economic Effects of a Quota

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- ◆ **Comparing economic effects of tariff and quota:**
  - **Auction:**  $-(b+d) = -(b+d)$
  - **Free allocation:**  $-(b+d) = -(b+d)$
  - **VERs:**  $-(b+d+c) > -(b+d)$
- ◆ **For importer, quotas only equivalent to tariffs when import licenses freely allocated or auctioned**
- ◆ **With free allocation, some of (c) may be lost through “rent-seeking”**
- ◆ **In case of VERs, quota rents (c) lost by importer, but not lost to world**

# Effect of a Tariff: Large Country



# Terms of Trade Effects

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- ❖ Large importer faces (elastic) supply curve,  $S_w$
- ❖ With  $t$ , imports fall to  $(Q_s'$  to  $Q_d')$  or equivalently  $Q'$
- ❖ Importer deadweight loss is  $-(b+d)$ , tariff revenue is  $(c+e)$ , where  $e$  is *terms of trade* effect due to world price falling to  $P_w'$
- ❖ For importer, terms of trade effect outweighs deadweight costs, i.e.,  $(e) > |(b+d)|$ , but exporter loses producer surplus of  $-(e+f)$
- ❖ Even without retaliation by exporter, world is worse off by global inefficiency of  $-\{(b+d) + f\}$