# Topic 6: basic theory of taxes on trade

# Introduction

We have now studied the primary theories of what determines comparative advantage and which products are exported and imported by countries of different types.

And we saw there are numerous gains from trade of various types (these are listed in the text along with the class notes). These gains suggest that countries are made better off by engaging in trade, even if there are some people who lose real income inside each country.

*So why limit trade with tariffs?*

Countries are virtually never in autarky, nor do we really observe fully free trade. So it's important to spend some time understanding how *partial restrictions or barriers on trade affect the economy and welfare*. So now we will essentially compare free trade with restricted trade.

# Introduction

General concept

*Commercial Policy* is our term for *official government discrimination in favor of domestic interests over foreign interests.* Typically this discrimination is enacted on behalf of domestic producers and tends to harm domestic consumers.

There are many kinds of commercial policy and we will study a few of them. Here is a partial list:

- import taxes (called tariffs), export taxes, import and export subsidies;
- Quotas on imports or exports;
- Domestic preference laws, domestic content requirements;
- Production standards imposed on imports that are more costly than those on domestic goods;
- Restrictions on inward investments (e.g., in banking, farming, strategic goods, universities), higher taxes on the domestic operations of foreign firms than domestic firms
- Failure to protect the intellectual property of foreign firms;
- Many others.

For something to be commercial policy, it must discriminate in favor of domestic interests. The immediate question is why would countries do this?

# Introduction

It's not hard to believe that free trade is better than no trade (autarky).

But is free trade better than trade partially limited by trade barriers?

Economists overwhelmingly think so. But it could depend on your viewpoint:

*Global:* Free trade is the opportunity for foreign producers and consumers to compete on equal terms with domestic producers and consumers. Thus, supply and demand operate on a global basis and competition should ensure that each good seeks out its location of comparative advantage and resources should be allocated efficiently.

The international relations argument: strong trade relations reduce the likelihood of conflict.

*National:* It may be that what is best for the world may not be best for a country. We will see some cases but here are a few opening examples:

1. Suppose a country is "large" in that it has the ability to influence world prices of a good with taxes or quotas. Should it not do so to turn the terms of trade in its favor?

2. Small, developing countries may need to put taxes on trade just to raise government revenues.

# Introduction

*National* arguments for restricting trade, continued:

3. Foreign firms may “dump” their goods in your market (sell below cost), which puts pressure on your own firms. Should the import country react with a tariff?

4. We’ve already seen that free trade worsens the incomes of scarce factors and they would be expected to argue for protection from imports. Is it wise to use tariffs for this purpose?

5. If a country has reason to believe that having domestic production of a declining industry is important for national security reasons, does it make sense to impose tariffs?

6. Should a country be permitted to place limits on imports of goods produced under weaker environmental or labor regulations abroad?

*Globalist* and *national* interests in policy restrictions sometimes may be aligned. For example, if trade worsens environmental quality, should there be a global set of rules on when countries can limit trade?

These are tough and interesting questions, which we turn to now.

# Import tariff: preliminaries

Start with the basics. An import tariff is a tax on imports. It is levied at the port and must be paid before a good can be released (interesting question: what about internet trade?).

A tariff operates much like a sales tax in that the consumer ends up paying it in addition to the basic price. But it is different because it is discriminatory: it is not levied on goods produced and sold at home.

Some definitions: tariff types.

- *Specific tariff* refers to some $ amount levied per physical unit of a good imported. (Per car, pound of cheese, etc.).
- *Ad valorem (AV) tariff* refers to some percentage of the value (or price) imported.
- *Compound tariff* is a combination of these.
- A *tariff-rate quota* is a low ad valorem tariff rate up to some level of imports and then a very high ad valorem tariff after that.

The 2 main types are specific and AV. Clearly they can be equated. For example, let the price of an imported good be $50. If a specific tariff of $20 is imposed, its AV equivalent tariff is 40%.

There is an important economic difference: the burden of a specific tariff falls with inflation of prices (given amount so the charge as a % of the price falls) but an AV tariff retains its strength (given % so tax collected rises with prices). When prices are falling (deflation) the burden of the specific tariff gets larger.

# Import tariff: preliminaries

Purposes of tariffs:

*Revenue tariff* is enacted to generate revenues.

*Protective tariff* has its main objective to protect a domestic industry. The extreme version of this is a *prohibitive* tariff.

Note that if tariffs are generally high on labor-intensive imports they would tend to raise real wages and reduce real capital incomes. Often countries have higher tariffs like this to protect the real incomes of scarce factors.

Clear (and extreme) example: import restrictions against agricultural goods generally exist to protect the value of farm assets by keeping domestic crop prices high.

# Effects of a tariff: small-country importer

Define the idea of a small country: it gets to import a good at a constant world price. Its decisions on how much to import have no impact on that price. A similar definition could be made for a small exporter.

Next, our example above suggests we can write these price effects:

Specific tariff: $p_D = p^* + T$

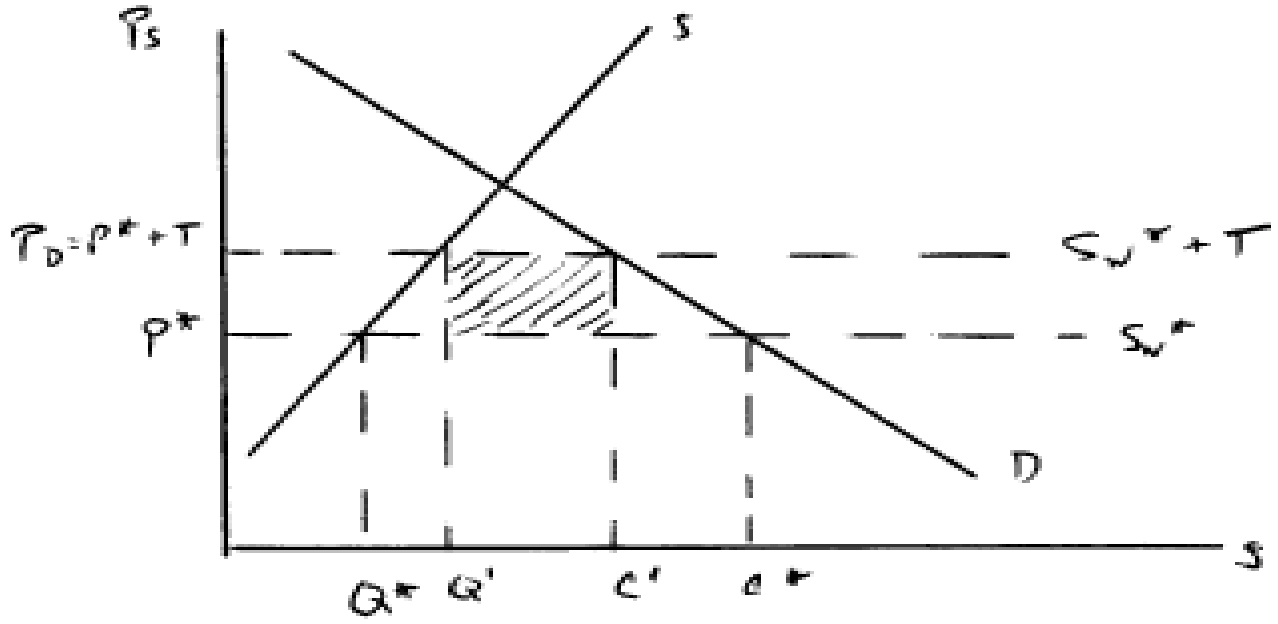
Ad valorem tariff: $p_D = p^* + tp^* = (1 + t)p^*$

Note these relationships make the strong assumption that domestic goods and imports are *perfect substitutes.*

For most of our analysis we will simply use partial-equilibrium analysis of a single good. That's fine because earlier we were focused on how countries decide which good is exported or imported, so we needed to do a general-equilibrium analysis. Here we are more concerned with seeing what goes on with a tariff in a particular good that we import.

*Graphical analysis*

Consider a specific tariff of $T per unit on imported sweatshirts.




Imports in free trade (before tariff) were the distance $Q^*C^*$. With the tax of \$T we see that $p_D$ is the higher domestic price. This price goes up by the full amount of the tariff (this must be the case for a small economy).

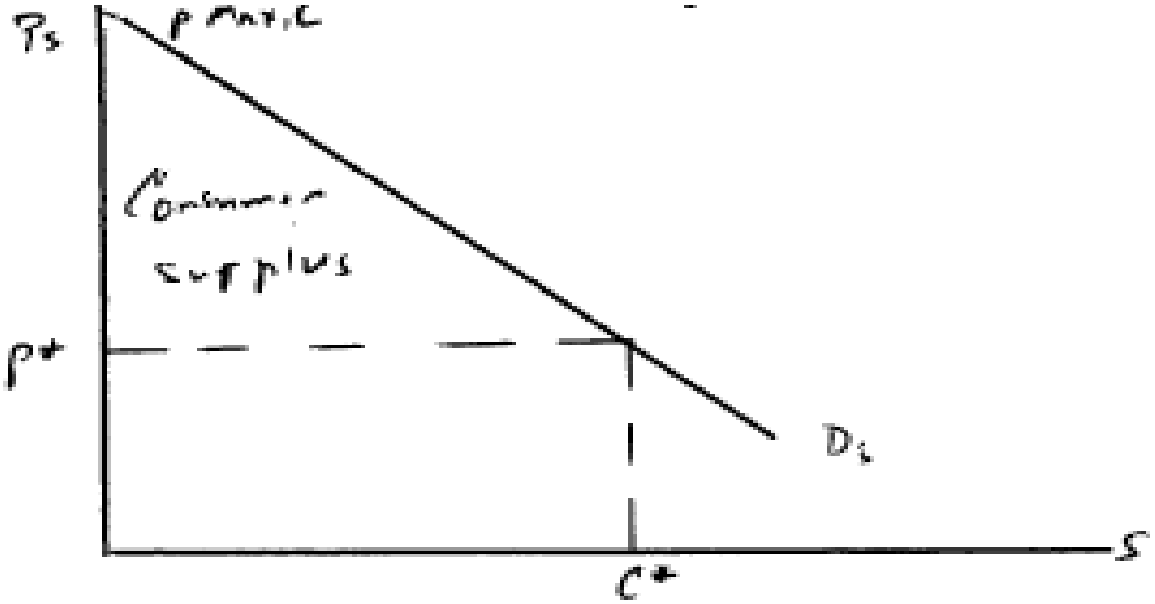
Production rises (production effect), consumption falls (consumption effect) and imports (now equal to distance $Q^1C^1$) are lower. No surprise there: if you tax something you should expect less of it to happen.

The government gets tax revenue equal to the shaded box, which is import quantity times the tariff.

# Welfare analysis: who gains and loses?

Rather than focus on labor and capital incomes it is more direct to think of 3 agents: consumers, producers, and the government.

**Behind the demand curve: consumer surplus**

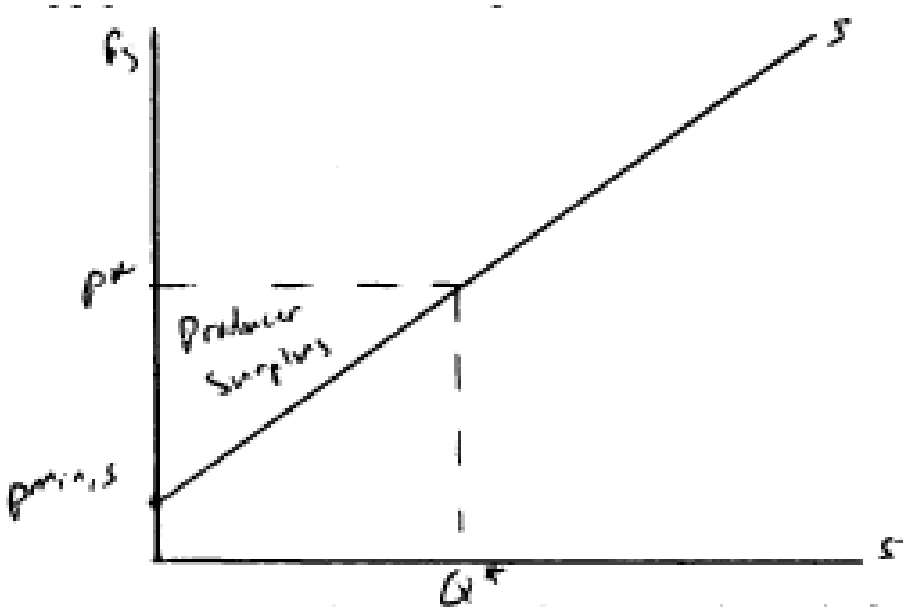



In this domestic demand curve in free trade everybody pays p* and total quantity is C*. But the consumers to the left of the marginal buyer would be willing to pay more than p* for the units of the good they get. The first would be willing to pay $p^{max,C}$ and then each succeeding consumer (or group of consumers) would be willing to pay less as you go down the demand curve. The height of the curve shows the true valuation (or utility) that consumers get from the good. However, the price for all units is p*. The area above this price but below demand captures the excess utility above the costs of consumption. This area is "consumer surplus".

*Consumer surplus: the excess of consumer benefits realized above the costs of consumption.* A real benefit and counted as a *Welfare gain to the economy.*

# Welfare analysis

**Behind the supply curve: producer surplus**

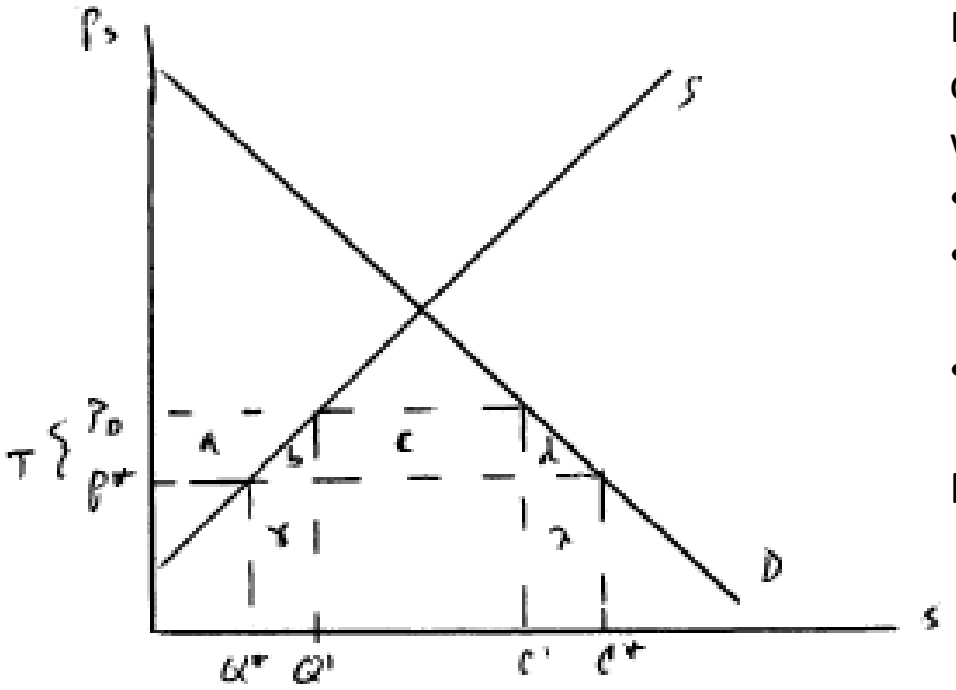



This is the domestic supply curve. Producers in free-trade equilibrium get paid p* per unit of output. Yet some producers were willing to supply the good along the supply curve at lower prices. That is, the first unit would be supplied if the price is $p^{min,S}$ (for "min" supply price). As you move up the supply curve at higher prices, additional units are offered in the market. So sellers receive *more* than is necessary to get them to sell the good. The difference is called producer surplus and is measured by the area above the supply curve up to equilibrium.

*Producer surplus: The excess of producer benefits (measured by payments they receive) over what they would have to receive in order to supply a given amount of the product.* Also a benefit to the economy.

# Welfare analysis

Draw these concepts together to consider the benefits and costs of a tariff.




Let our small economy impose a tariff of $T on imports. Domestic output rises and domestic consumption falls. The impact on welfare:

- Loss in consumer surplus = -(a + b + c + d)
- Gain in producer surplus = +a (transfer from consumers to producers)
- Gain in tariff revenue = + c (a transfer from consumers to government)

Net loss = - b – d. We call this the “deadweight loss” of the tariff.

# More on deadweight losses

Area -b is the "production efficiency loss" from expanding output at higher costs than just buying the good from abroad at $p_W$. That is, to raise output from Q* to $Q^1$ costs (b + γ) in economic resources but only costs γ if the good is imported.

Area -d is the "consumption efficiency loss" from forcing consumers to cut consumption and pay a higher price. That is, the full loss to consumers is (d + λ) but the cost saving from not importing is λ.

More perspective on these deadweight losses:

These are net welfare losses not compensated by any transfers from anywhere else in the economy. They are *lost GDP* (or resources) that simply disappear as a result of the tariff. So if you add these effects up across sectors and get a figure of, say, 3% of GDP that says GDP is 3% less than it would be without the tariff.

The table on the next page ("Global Insights 6.1") has example figures (except for tariff revenues) for the US from past tariffs.

| ıdustry | Tariff (percent) | Consumer Cost ($million) | Producer Gain ($million) | Consumer Cost per Job ($thousands) | Deadweight Cost ($million) |
|---|---|---|---|---|---|
| ubber footwear | 20.0 | 321.8 | 85.1 | 189.2 | 18.6 |
| Vomen's shoes | 10.0 | 581.7 | 108.3 | 157.2 | 17.0 |
| eramic tiles | 19.1 | 215.0 | 69.6 | 619.8 | 3.1 |
| uggage | 16.3 | 326.4 | 24.8 | 1,444.3 | 40.2 |
| rozen orange juice concentrate | 30.0 | 434.7 | 156.3 | 713.8 | 54.1 |
| lass and glassware | 11.0 | 411.5 | 250.6 | 278.6 | 13.9 |
| hinaware | 11.0 | 157.8 | 27.8 | 377.5 | 3.1 |
| Vomen's purses | 13.5 | 229.0 | 24.8 | 296.3 | 20.1 |
| ostume jewelry | 9.0 | 159.3 | 71.2 | 149.3 | 7.7 |

*ıurce:* Hufbauer and Elliott. Values in the table converted to 2005 dollars using the U.S. GDP deflator. Table constructed by the authors.

# Qualifications and extensions

1. The welfare criterion is $ for $ tradeoff among groups, which is the standard economists' utilitarian approach. It is defensible on 2 grounds:
   - The idea is politically neutral.
   - There *are* net losses to the economy so it is not possible for the gainers to compensate the losers from the tariff, even in principle.

But the tradeoff among groups is a political decision.

And here is a powerful point to understand about the *political economy of trade protection.*

*If the country removes a tariff the losses would be concentrated among the firms and workers in the protected industry and they would have a strong incentive to oppose removing it (or to lobby for a higher tariff).*

*But the gains from the lower price when a tariff is cut are spread out among millions of consumers.*

***This means we should expect a political bias in favor of seeing countries protect domestic industries with tariffs.***

# Qualifications and extensions

2. Another effect of the tariff is on income distribution.
   - a. The losers are consumers and (in the long run) the economy's abundant factors.
   - b. The winners are workers and capital in the protected industry and (in the long run) scarce factors.

*Another insight from the political economy of tariffs:*

This gives us a major reason why tariffs exist and how they vary across industries. In many cases *they are policies to protect scarce factor incomes by limiting imports*. (There are other reasons.)

But this is actually an inefficient means of protecting incomes compared to an explicit income redistribution program with taxes and transfers (e.g., "consumer costs per job" to the actual salaries in the sectors in Global Highlights 6.1).

3. There are further impacts of tariffs not shown in this simple diagram.
   - a. Because resources are drawn away from competitive export sectors, there are welfare losses there in general equilibrium. Note an important fact: protecting imports is likely to draw resources away from the production of exports, meaning higher tariffs on imports can be expected to reduce exports.
   - b. Tariffs on inputs raise costs of producing final goods (we'll briefly consider this issue later).
   - c. Dynamic effects: tariffs distort investment and skills into inefficient sectors, so over time you may get lower growth and lower labor productivity. (There is considerable evidence of this problem in developing countries.)

# Clicker question

A tariff imposed by a small importing country:

A. Raises domestic price of the protected good.

B. Generates government tax revenue.

C. Increases domestic output of the good.

D. Reduces domestic consumption of the good.

E. All of the above

# Tariff analysis: large-country importer

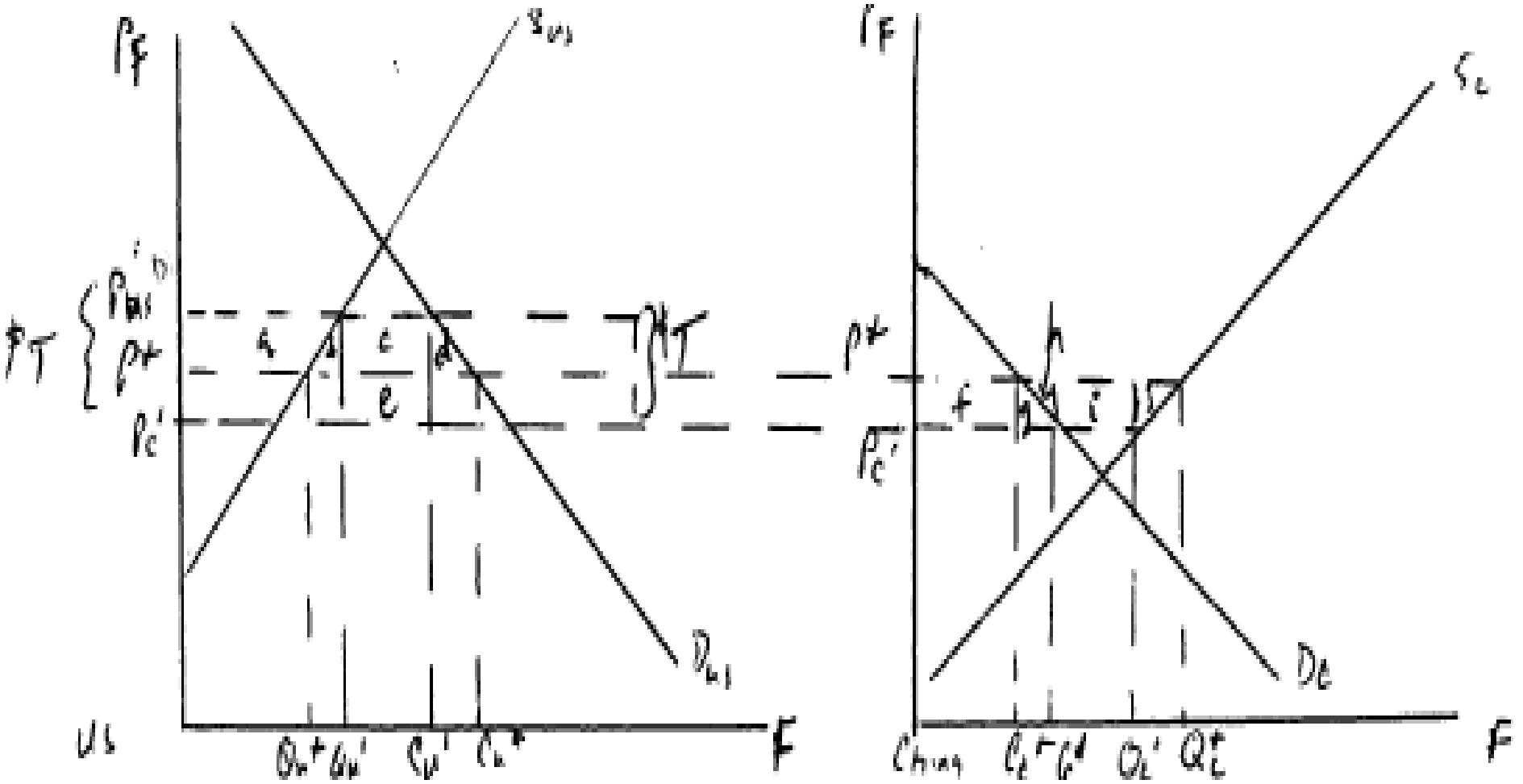
Next let's consider the analysis when two large countries trade with each other. This means their decisions on trade taxes do affect prices in the other country.

Suppose we consider the US and China, with the US importing footwear (F) from China. Here are their partial-equilibrium supply and demand curves. Note again that this approach assumes that US and Chinese footwear are perfect substitutes for each other.

From free trade we see that the US tariff of $T per unit of footwear pushes up the US price as expected. But now because this reduction in demand matters in China, we see that Chinese exporters are forced to cut their price as well.

Following the graph are welfare calculations in both countries.

Tariff analysis when both countries are large



# Welfare analysis

US:

- Loss in consumer surplus = -(a + b + c + d)
- Gain in producer surplus = +a
- Gain in tariff revenue = +(c + e).
- Net welfare effects = +e – b – d.

As before, -b and -d are the deadweight losses.

The new element here is the area e, which is the *transfer from Chinese exporters to US tariff revenues*. This is a new gain for the US, associated with its ability to force down the import price with a tariff. We refer to this as a *"terms of trade gain" from the tariff*. (Why?)

Is the US better off or worse off? It depends whether area e is larger than the sum of the deadweight losses: –b - d.

# What is an “optimal tariff”?

We can think of an *optimal tariff* for a large country as the one that maximizes net welfare gains, or maximizes e – b – d.

What determines how big the optimal tariff is?

1. How big the importing country is as a share of world demand for a good. The greater is its share in demand, the higher the optimal tariff.

*Corollary: the optimal tariff for a small country is zero.*

2. The extent to which the exporting country cannot find other export markets to sell the good. If it is difficult to find or expand other markets, the exporter will have to cut its price to the importer by relatively more, meaning a higher optimal tariff for the importer.

Other points:

1. If a large country imports many goods from multiple sources, it would have a menu of optimal tariffs, which vary by product and importer. Trying to figure out and implement that menu would be extremely difficult.

2. As we see next, these tariffs harm the exporting countries, who would be expected to retaliate, which offsets the benefits of the tariff for the importer.

# Welfare analysis: China

China is the exporter facing this tariff. What happens there?

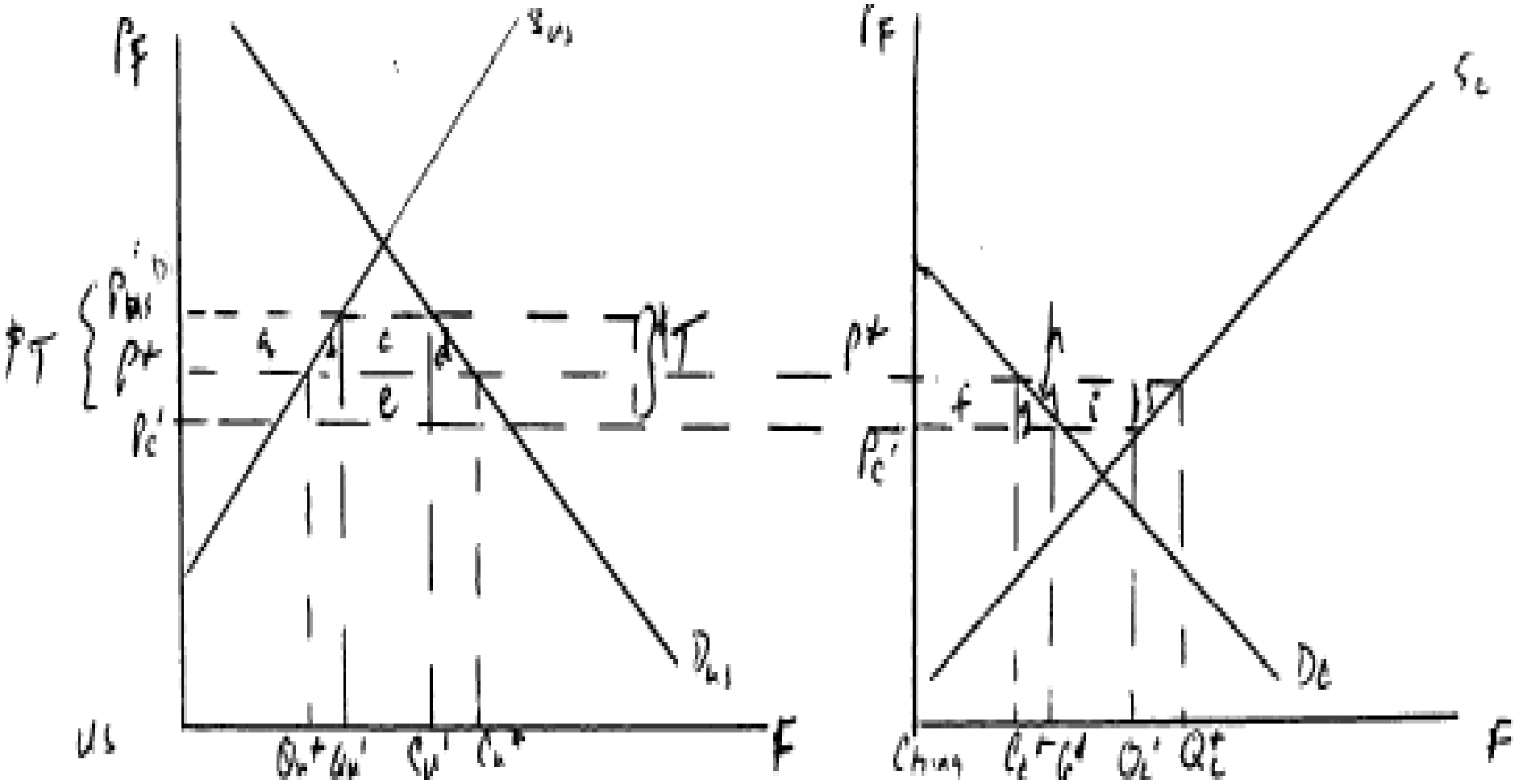
- Output falls, consumption rises.
- Gain in consumer surplus = +f + g
- Loss in producer surplus = -(f + g + h + i + j)
- No tax revenues are generated.
- Net impact is a loss of –h – i – j

Areas -h and -j are the deadweight losses imposed on China by the US tariff. Why?

- Consumption is expanded artificially by the lower price in China (those goods would have been worth more if exported at the original free trade price), giving the consumption efficiency loss of -h.
- And output in China falls, saving resources under the supply curve but that lost output was worth more at the free-trade price, giving the production efficiency loss of -j.

Area i is a transfer from China's producers to US taxpayers and is a loss from China's perspective. We call this the *"terms of trade loss"* for the exporting country.

Tariff analysis when both countries are large



# Comments on tariff retaliation

Because the exporting country is made worse off we might expect tariff retaliation.

Suppose China retaliates with a tariff on imports of corn from the US. What would happen? (Not shown.)

- China would get the net gain (like the one above) from a lower US export price and tax revenues would be transferred from US corn producers to China. US would be made worse off in this second round.
- In which case we might expect the US to retaliate with a higher tariff, then China responds, etc.
- In the end (after multiple rounds) we would observe:
- A. The offsetting tariffs eliminate the possibility for either country to generate terms of trade improvements.
- B. Tariff revenues (transfers) move in both directions (also basically offsetting each other);
- C. But trade volumes in both footwear and corn would be much lower than in free trade. (And this would also limit any tariff revenues in both countries.)
- D. In principle we would end up only with increasingly larger DW losses.

Do we see retaliation in the real world?

A. In history, yes (Smoot-Hawley and the Depression)

B. In current policy (antidumping duties)

C. Threats of “trade wars”.

*In large part the WTO exists to remove pressures for such tariff-setting and retaliation possibilities.* More on that later.

# Overview of the US-China trade war

Background of the conflict (just a summary; it's more complicated).

- China's growing export orientation 1990s and 2000s.
- China's relatively aggressive policy approach to inward technology transfer. There are precedents for it but China's market size makes it a unique case.
- Issues of technology transfer, intellectual property, and investment restrictions have been concerns for decades and there have been continuous US-China and EU-China policy dialogues.
- China joined the WTO in 2001. Some practical implications:
  - A. Chinese exports gained certain access to US MFN tariffs. This greatly increased incentives of international firms to build production networks and facilities in China.
  - China formally abandoned its laws mandating technology transfer but continued them implicitly in new ways.
  - China's bilateral trade surplus in merchandise (manufactures) with US and EU grew dramatically.
  - As China's real wages have grown its exports have shifted toward higher-technology goods.
- China has invested massively in education, technology and infrastructure.
- It also has an extensive industrial policy (with selective trade protection, public investments, cheap financing and subsidies for particular industries) though it has reduced these considerably in recent years.
- Publication by Chinese government in 2015 of its planning document "Made in China 2025". It plans for industrial upgrading generally and targets "world leadership" in 10 advanced technologies.

# Overview

What was the approach under Obama to address these issues?

1. Negotiate a major Asia-Pacific trade agreement called the Trans-Pacific Partnership (TPP) that: (i) excluded China; (ii) put in language on subsidies and state-owned enterprises that were aimed at changing China's behavior; and (iii) held the door open for China to join if it met these terms. The "carrot".

2. Partner with EU and Japan on a joint approach to pressure China's government to change its policies, with the threat of higher tariffs and limits on Chinese investments in US/EU/J high-tech enterprises. The "stick".

Why the unilateral action by President Trump?

1. He pulled US out of TPP.

2. He emphasized punishing China in his campaign, choosing as his trade advisor the developer of the movie "Death by China". https://www.youtube.com/watch?v=W0VjwU8cWEw

3. The Trump administration sees bilateral US deficits in trade as evidence of unfair foreign trade practices. (US deficit with China in 2017 was $375 billion; US exports $130 b and US imports $506 b.)

4. It isn't easy to cooperate with the EU and Japan when you plan to put tariffs on their goods also (so far, steel and aluminum; automobile tariffs are likely).

5. The administration believes that it can extract strong policy changes using tariffs as a threat or cost.

# Overview

Major steps in the trade war to date:

1. January 2018: anti-dumping tariffs on solar panels and washing machines, mostly from China.

2. March 2018: 25% tariffs on steel and 10% tariffs on aluminum imports against all sources on grounds of national security (Section 232). (There were some exceptions until May; some were hit with quotas). China doesn't export much steel and aluminum to US. Canada, Mexico, EU, and China ($3 billion in pork and related US exports) retaliated in June or July. President Trump announces "trade wars are fun and easy to win".

3. Summer 2017 to March 2018: investigation into Chinese unfair trade practices (Section 301) regarding theft of technology and intellectual property. Damages to US business "estimated" at $30 billion per year. US files a WTO complaint on some issues.

4. July 2018: US implemented 25% tariffs on $50 billion imports from China of goods with "industrially significant technology" and announced it would greatly limit Chinese investment in US. China retaliates with 25% tariffs on similar amount of US exports. Economists point out that the US tariffs will largely hit goods produced in Chinese factories owned by US and EU multinational firms. (60% of Chinese exports to US are produced in factories owned by non-Chinese companies. So far they have passed on most of the tariff costs to higher consumer prices.)

5. Sept 2018: US implements 10% tariffs on $200 billion (will rise to 25% on Jan 1 2019). Economists point out that these tariffs will largely hit consumer goods, disproportionately hurting low-income consumers. In essence, most of the tariff revenues to US are paid by US consumers, not Chinese exporters.

Same month: China retaliates with 10% (higher) tariffs on $60 billion of US goods. US farmers see large drops in soybean and pork prices as their markets in China diminish.

6. The President continues to threaten tariffs on the rest of Chinese exports.

Throughout all of this there have been bilateral talks, threats, promises, etc. Nothing has come of that.

# Overview

What will happen? How long can this go on? These are hard questions to answer. Some observations:

1. It's not really true that the US holds the "upper hand" because it imports more from China than vice versa. There are plenty of non-tariff barriers and restrictions on services that the Chinese can use in extended retaliation. Also US tariffs hit US consumers and do relatively little damage to Chinese exporters (Chinese value added in exports to US is around 40%; much of the rest is US value added).

2. The politics are asymmetric. Trump has to survive mid-term elections and 2020 presidential election. Surveys point to increasing dissatisfaction with the tariffs among US voters. But Xi Jinping in China faces very little such opposition.

3. Although we don't really know what "success" would mean to the Trump administration, so far there is no indication that China will back down on its industrial policy.

4. So my guess is at some point there will be some kind of face-saving agreement. China will cut some tariffs, expand government purchases of some US goods, and open up its investment market somewhat more. US will return its tariffs to MFN levels over some time period.

5. Will all of this have been worth it?

# Analysis of an export subsidy

Sometimes countries think that artificially expanding exports would be a beneficial policy. How true is that?

What is an *export subsidy*? The government of the exporting country actually pays foreign importers a subsidy (some dollar amount per unit or percentage of value of exports) to buy the country's export good.

The major example is the EU's long-standing policy of subsidizing exports of agricultural goods in order to ship abroad the surpluses created by the Common Agricultural Policy (CAP). They do much less of this now because of agreements reached at the WTO to discourage export subsidies.

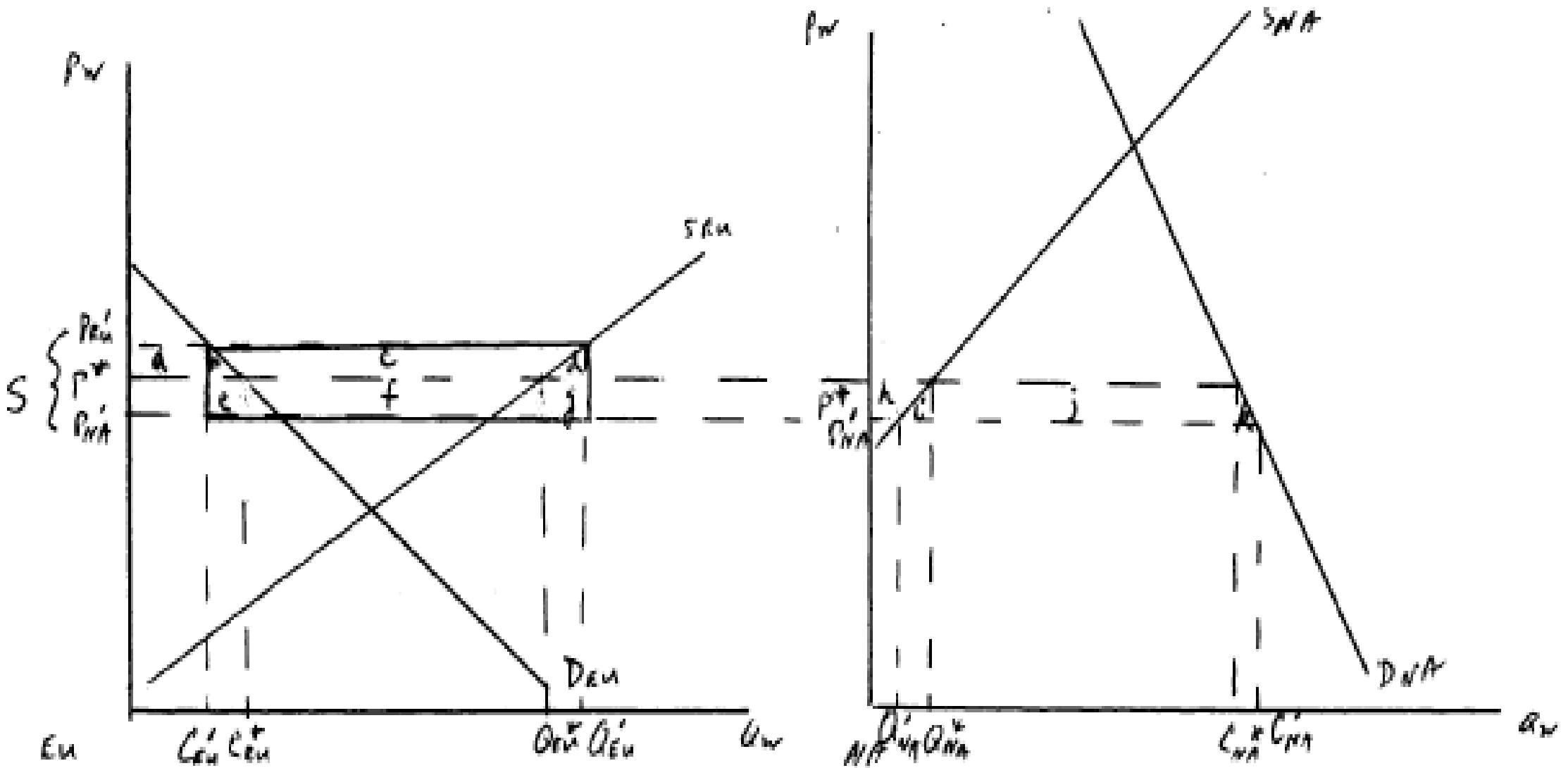
To analyze this possibility, consider a situation where the EU exports wheat to North Africa (NA). The EU pays to NA importers a specific subsidy of S euros per unit the EU exports there.

First consider the price relationship: because the EU pays NA to buy its wheat the NA price will be lower than the EU price:

$p_{EU}' - S = p_{NA}'$ where S is the per-unit subsidy in dollars (or euros).

For example, if the EU price is 1000 euros per metric ton exported and the subsidy is 100 euros per metric ton, the NA price would have to be 900 euros. The EU pays NA importers a check of 100 euros per ton.

Analysis of an export subsidy



# Export subsidy

In the diagram, the initial price is p* without the subsidy and the EU exports to NA.

The subsidy causes a rise in the EU price and a fall in the NA price. In effect, the EU chooses to reduce its export price in order to export a higher quantity. (NOTE: this means the EU is deciding to *worsen* its terms of trade.)

Outcomes in the EU:

Higher price implies reduced consumption and a loss in consumer surplus, which is –(a + b).

Higher price implies higher domestic wheat production and a gain in producer surplus, which is +(a + b + c).

The higher output and lower consumption imply a higher volume of exports, as shown.

There are no tax revenues generated, instead there is a *fiscal cost* of the subsidy, which is the subsidy S times the volume of exports, or a welfare loss of –(b + e + f + g + d + c). (Note this is the outlined box.) One important note: this subsidy has to be paid on the entire volume of exports, not just the additional exports the subsidy creates.

Net welfare loss = -b –d – (e + f + g). The areas b and d are the deadweight efficiency losses of the subsidy (b on the demand side and d on the output side), while area (e + f + g) represents an income transfer from the EU to NA. This transfer exists because the EU has paid NA to accept its wheat at a lower price than in free trade. In essence, the EU is writing a check from its treasury to NA.

# Export subsidy

Outcomes in NA:

There is a lower price in NA, which implies expanded consumption and a gain in consumer surplus, which is +(h + i + j + k).

The lower price implies reduced wheat production and a loss in producer surplus, which is – h.

No tax revenues are generated or fiscal costs paid.

So the net welfare effect = +(i + j + k). NA actually gains welfare from the EU's subsidy.

# Export subsidy: comments

EU consumers/taxpayers suffer a “double whammy” in that they both pay the subsidy fiscal cost and also must pay a higher price for wheat (and wheat products, like baguettes).

The EU is worse off, despite the higher level of exports. Never make the mistake of believing that using public resources to subsidize a higher volume of trade is likely to raise welfare; it’s just the opposite. Put differently, more trade is not beneficial if it exists because of a distortion like this.

Why would the EU consciously make itself worse off with the subsidy? Because the EU farming lobby (like those in the US, Japan, Korea, and other places) is very powerful. This is another example of what we call “political economy” of trade policy. Note an implication: if land is a sector-specific fixed asset then these subsidies help keep up the price of agricultural land in the EU.

What would we expect NA to do in response? The EU subsidy is a good thing for them in terms of having access to cheaper food, so we might expect them to write a big thank-you note.

But if NA farmers are also a powerful political lobby they would ask their governments to oppose the subsidy. The policy that such governments might impose as a result would be a *countervailing tariff*, which would mean a tariff that offsets the EU subsidy.

Then we would find ourselves in a situation where the EU subsidizes higher exports, but the NA puts a tariff on those imports, which would essentially push the price and quantities back toward the original equilibrium. Bizarrely, however, NA would gain from the subsidy paid and also would gain the import tariff revenue. In this sense, the CV tariff can actually be efficient, because it both helps restore the original equilibrium and penalizes the export subsidizer.

Countervailing tariffs are another big issue in global trade policy.

# Clicker question

If a large country decides to subsidize an export good we can conclude that

A. The foreign price of the good will fall and the domestic price in the subsidizing country will also fall.

B. The foreign country will be worse off and the domestic country will be better off.

C. The fiscal cost of the subsidy in the exporting country will be greater than the producer surplus gains.

D. Consumers in both countries are better off.