PubPol/Econ 541

Class 25

Subsidies and Countervailing Duties

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2020

Pause for Discussion

Questions on Jackson

- Why does Jackson view the issue of subsidies as "perplexing"?
- In what ways can a subsidy have international effects – that is, effects on other countries? (Jackson lists three.)

Questions on Jackson

- What is meant by the three colored “baskets” or “boxes” of subsidies?
- What is the importance of “specificity” and “general availability” in the context of subsidies?

Subsidies and Countervailing Duties

- Subsidies are assistance provided by government to firms or industries
- Here they will take the simple form of a fixed payment per unit of output or per unit of export
- Countervailing duties (CVDs) are permitted by the GATT/WTO under specified circumstances

Outline

- “Unjustified” Subsidies
  - Effects of subsidies
    - Export
    - Production by Small Country
    - Production in 2-country world
  - Effects of CVDs
- “Justified” Subsidies
- Subsidies with Imperfect Competition
- Recent subsidy disputes

Categories of Subsidies

- There are several ways of categorizing subsidies
  - Export versus domestic (=production)
  - Direct versus indirect
  - Trade distorting versus not
  - “Justified” versus “unjustified”
- I’ll use the latter term:
  - “Justified” means being used appropriately to correct a distortion
  - “Unjustified” is any other

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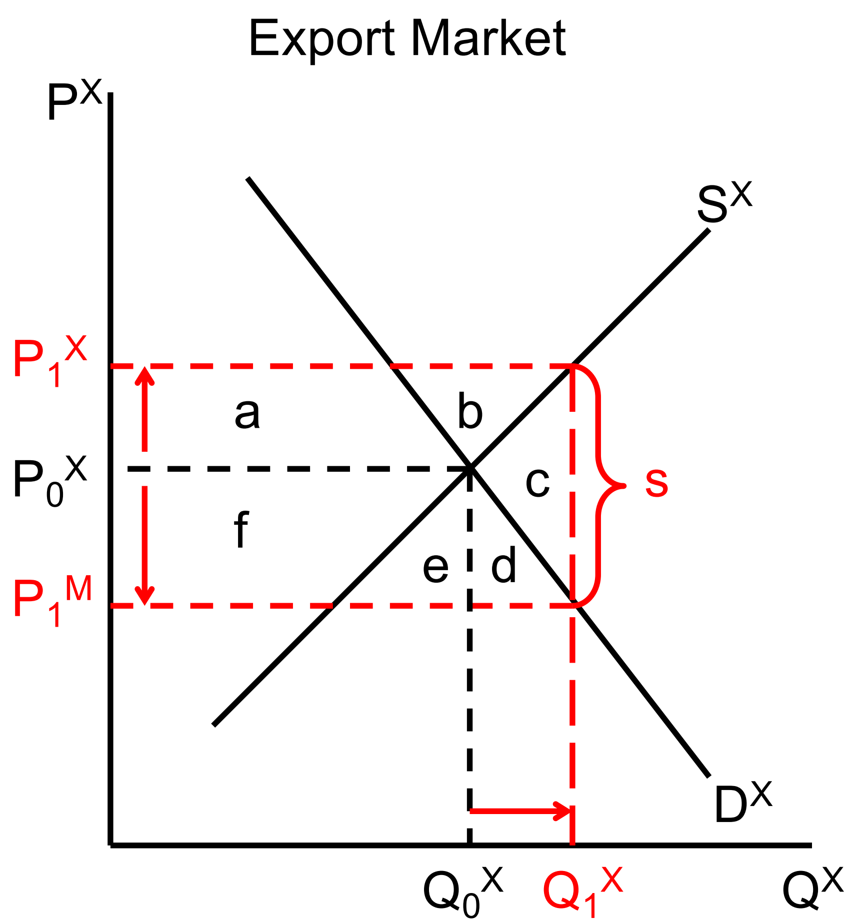
Export Subsidy



- The export subsidy, s per unit of the good exported, gives exporters price P_1^X which is larger than what foreign importers pay, P_1^M, by the amount s.
- Home price (inc. subsidy) rises
- Foreign price falls
- Exports rise

Welfare effects

- Dom. private gains +(a+b)
- Dom. govt loses –(a+b+c+d+e+f)
- Dom. cty loses –(c+d+e+f)
- For. private gains +(d+e+f)
- World loses –c

"Dead Weight Loss" =

Pause for Discussion

Questions

- Can an export subsidy benefit the country that uses it (in perfect competition)? If so, how? If not, why not?
- Why does the text say that an export subsidy has effects that are "exactly the reverse of those of a tariff," given that the export subsidy raises the domestic price above the world price and (if the country is large) pushes down the world price?

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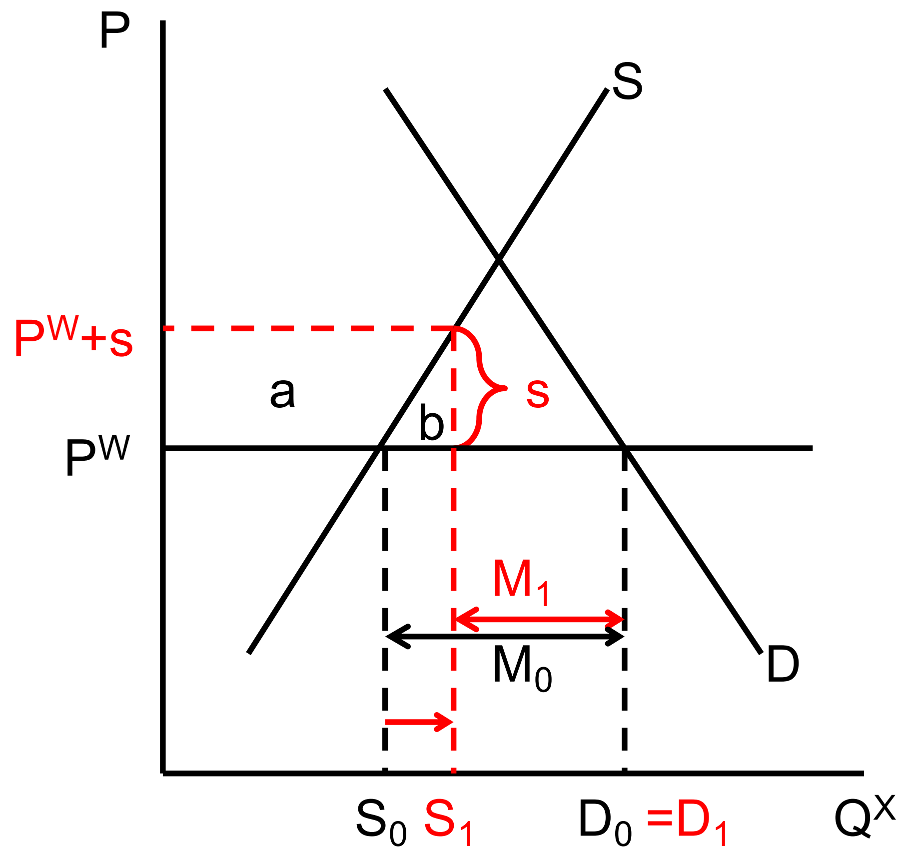
Production Subsidy, Small Country Importer



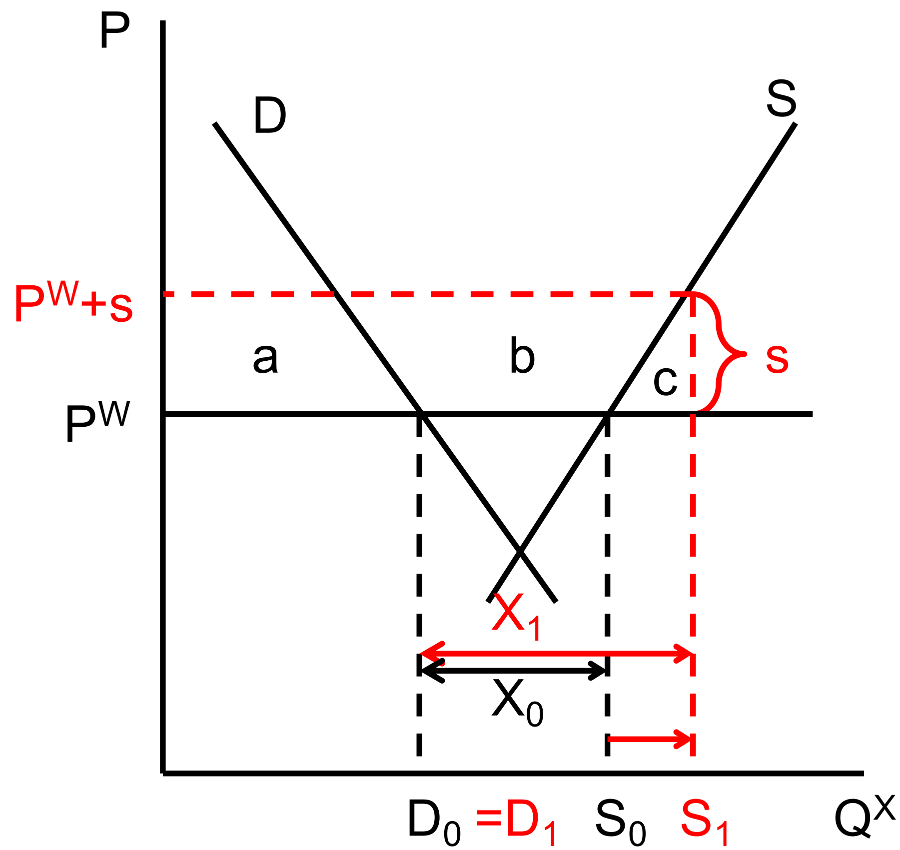
- The production subsidy, s per unit, gives suppliers s in addition to the world price, P^W. Demanders can still buy at P^W.
- Output rises
- Imports fall

Welfare effects

Suppliers gain	+a
Demanders	0
Govt loses	–(a+b)
Cty loses	–b

"Dead Weight Loss" =

Production Subsidy, Small Country Exporter



- The production subsidy, s per unit, gives suppliers s in addition to the world price, P^W. Demanders can still buy at P^W.
- Output rises
- Exports rise

Welfare effects

- Suppliers gain +(a+b)
- Demanders 0
- Govt loses –(a+b+c)
- Cty loses –c

"Dead Weight Loss" = –c

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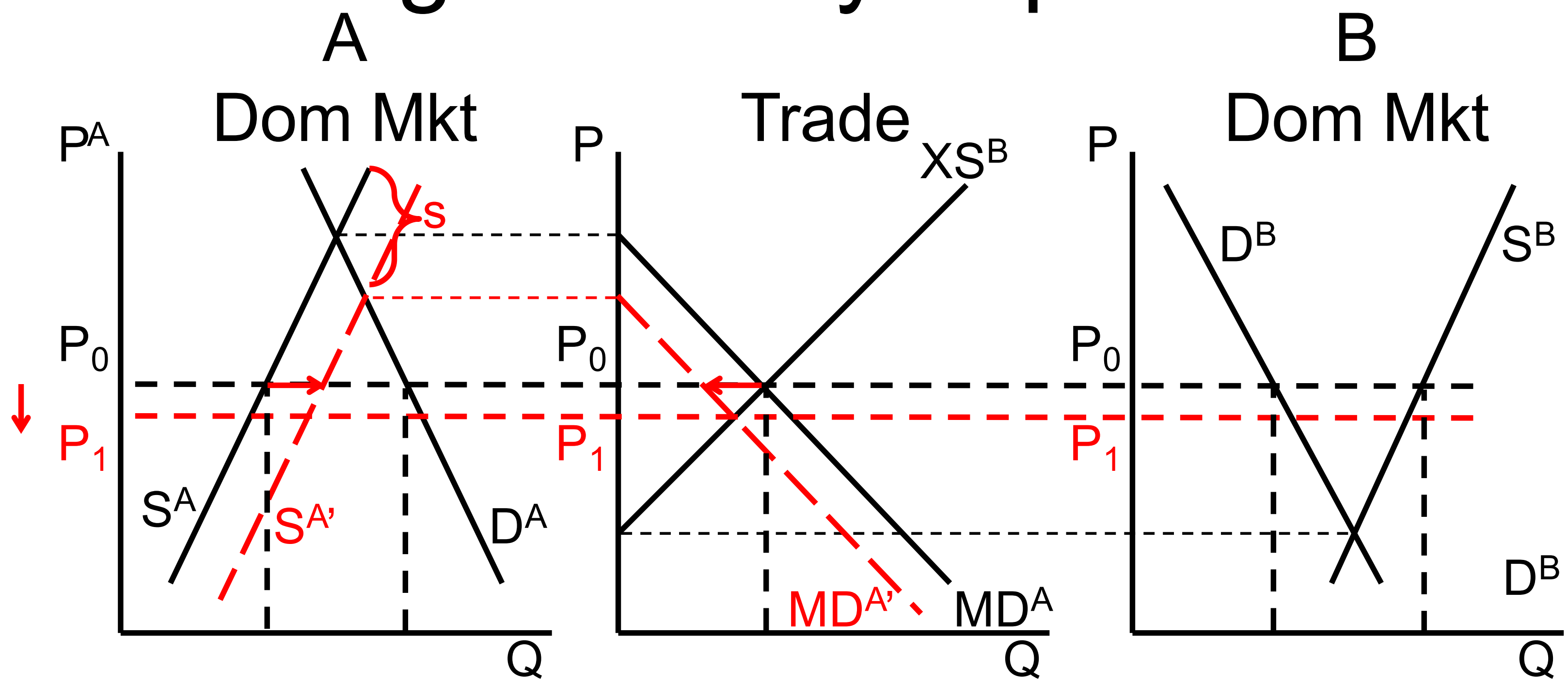
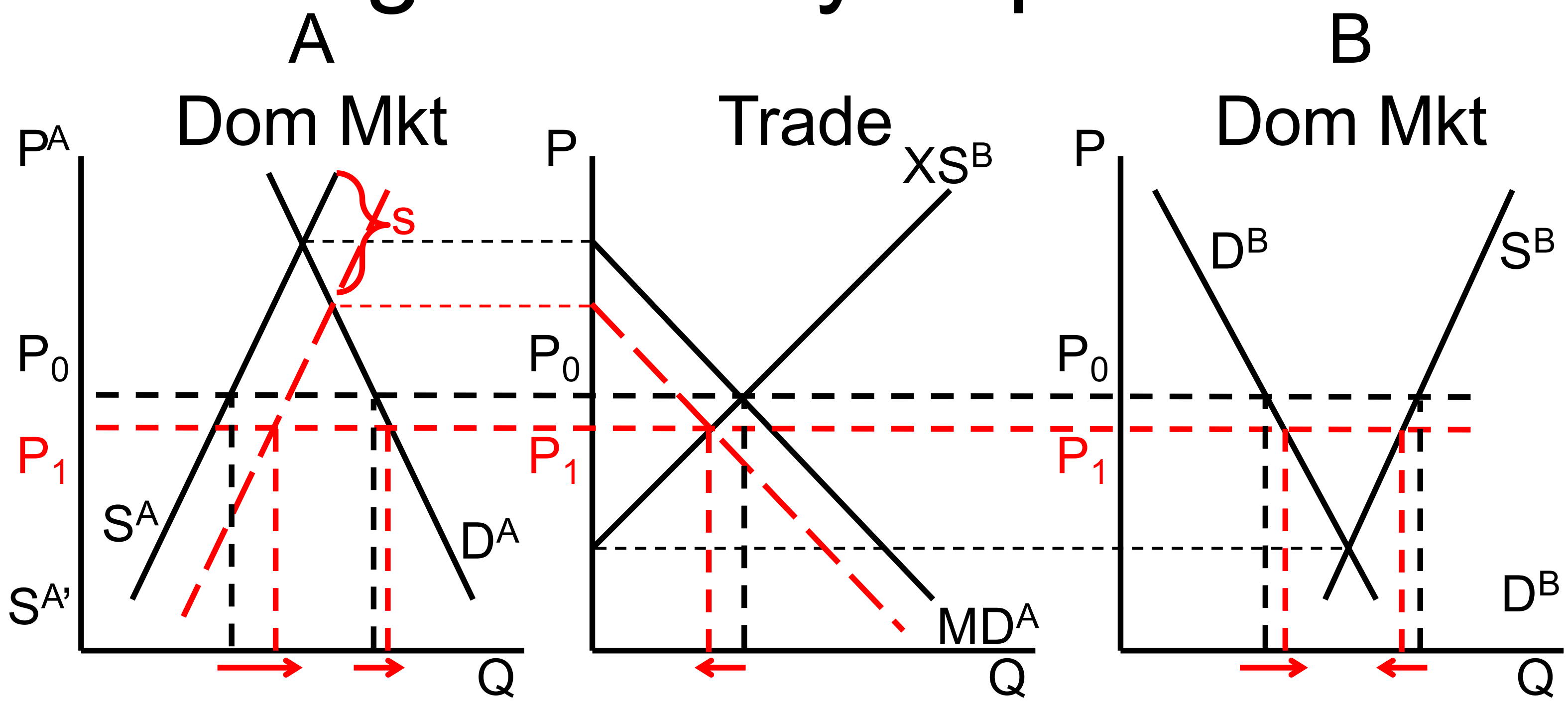
Production Subsidy, Large Country Importer



- The subsidy, s, is here most simply thought of as reducing the cost of suppliers in A and thus shifting its supply curve down by the amount s
- This causes A's import demand curve to shift to the left.
- The world price falls from P_0 to P_1.

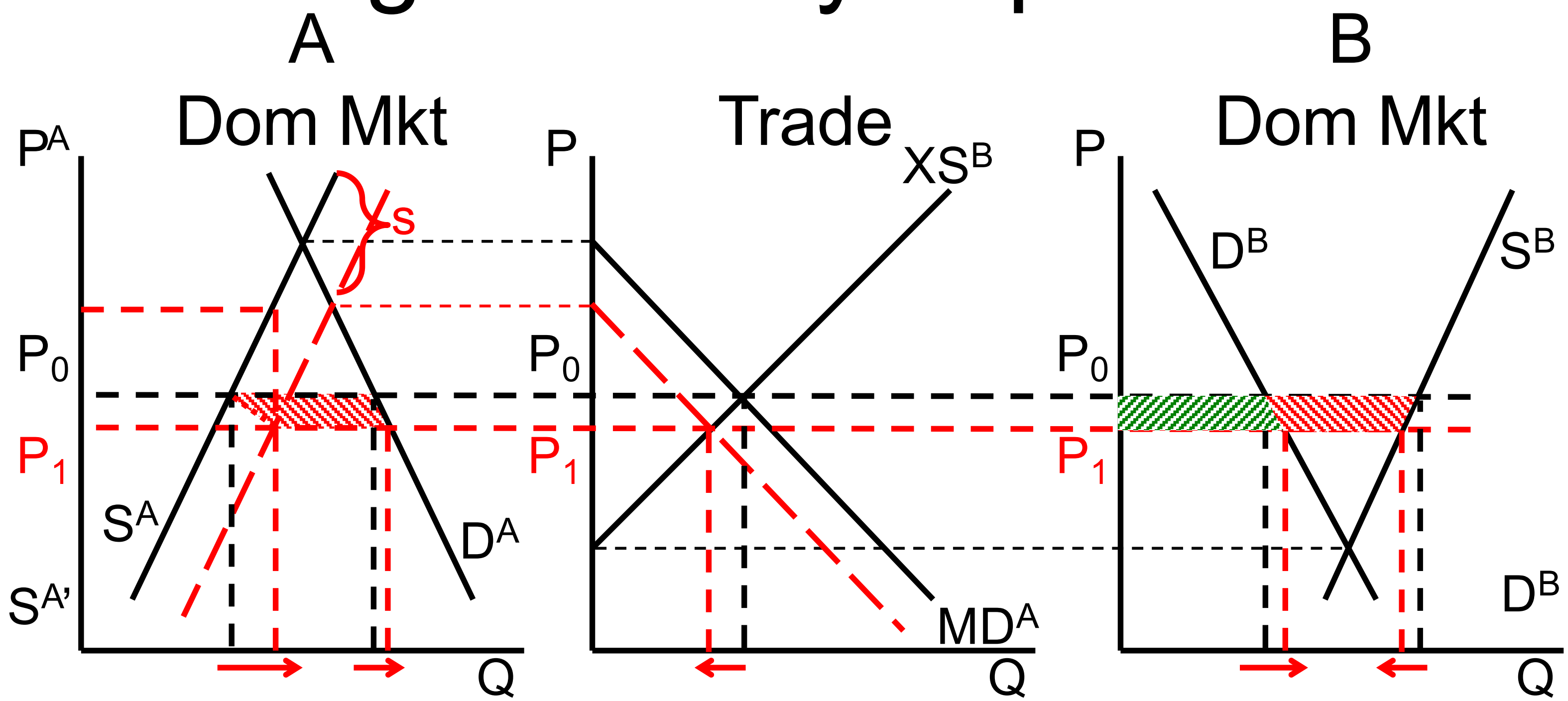
Production Subsidy, Large Country Importer



Results:

- A: Supply and demand both rise
- B: Demand rises; supply falls
- Quantity traded – export and import – falls

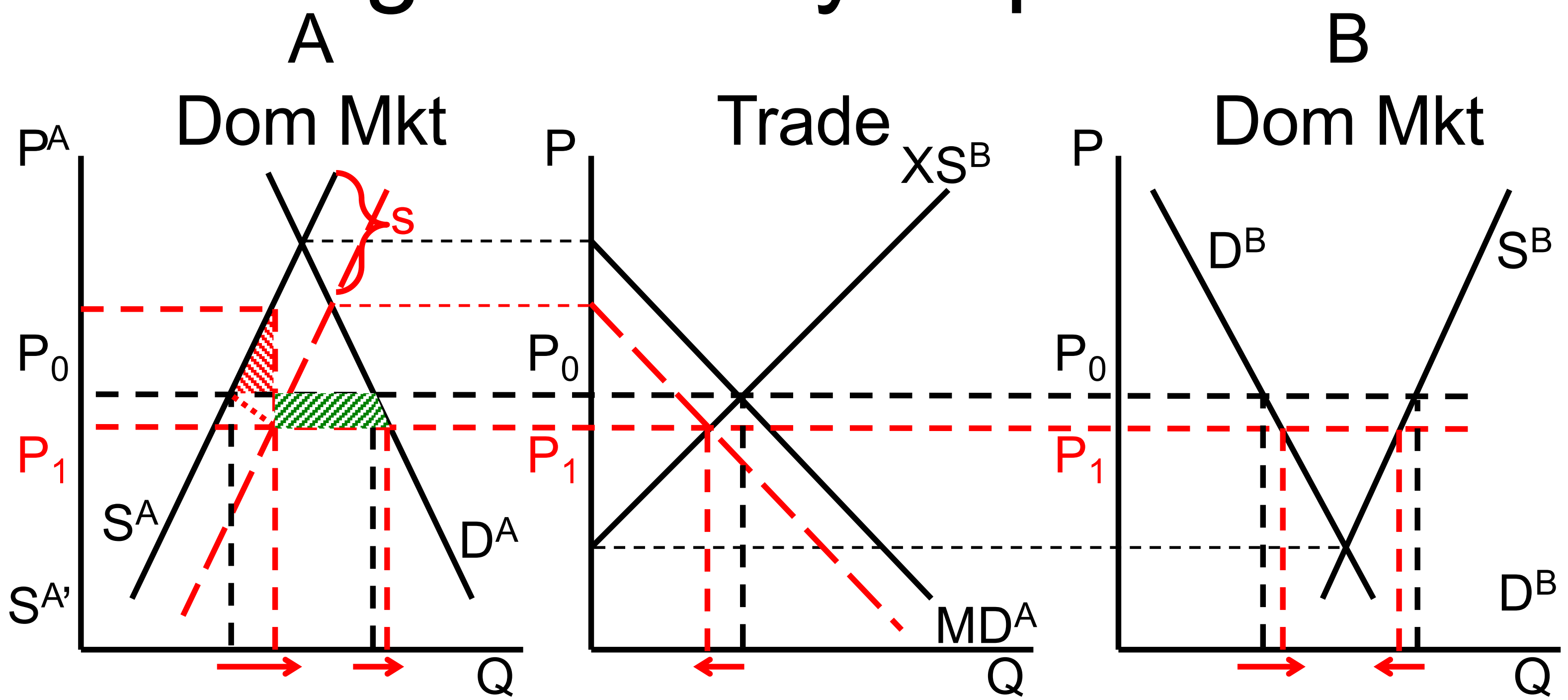
Production Subsidy, Large Country Importer



Welfare of Country B:

- Demanders gain
- Suppliers lose
- So country B loses
- Note that B's loss also appears in A as

Production Subsidy, Large Country Importer



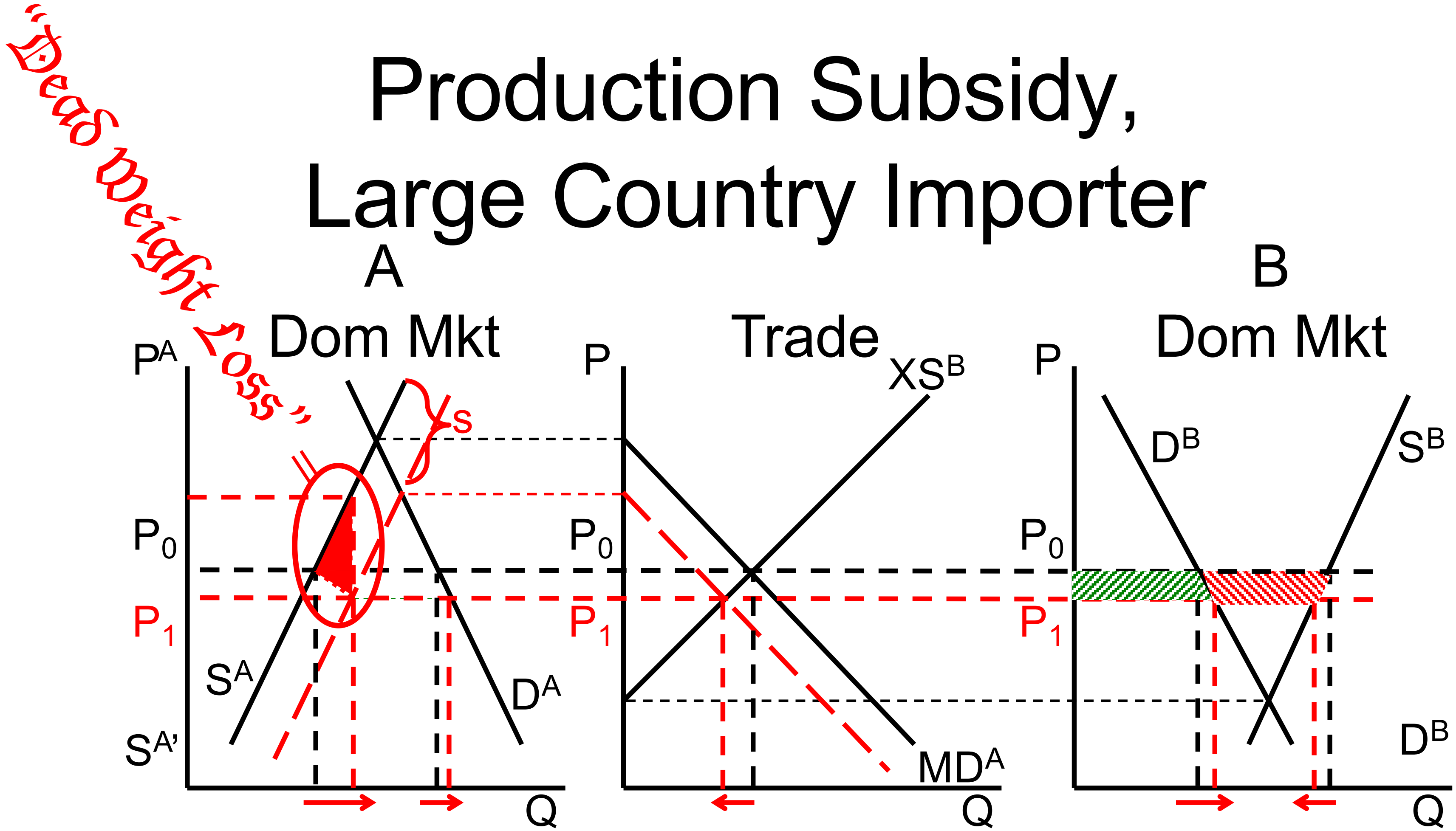
Welfare of Country A:

- Suppliers gain
- Demanders gain
- Government loses
- So country A gains but loses

Result:

- Large importer may gain from subsidy
- Why? Improves terms of trade

Production Subsidy, Large Country Importer



Welfare of Country A:

- Suppliers gain
- Demanders gain
- Government loses
- So country A gains but loses

Deducting the loss for Country B

- World loses

Pause for Discussion

Questions

- We didn't look at a production subsidy for an exporter. (You should be able to do it yourself now.) How would you expect it to differ from the case of an importer?

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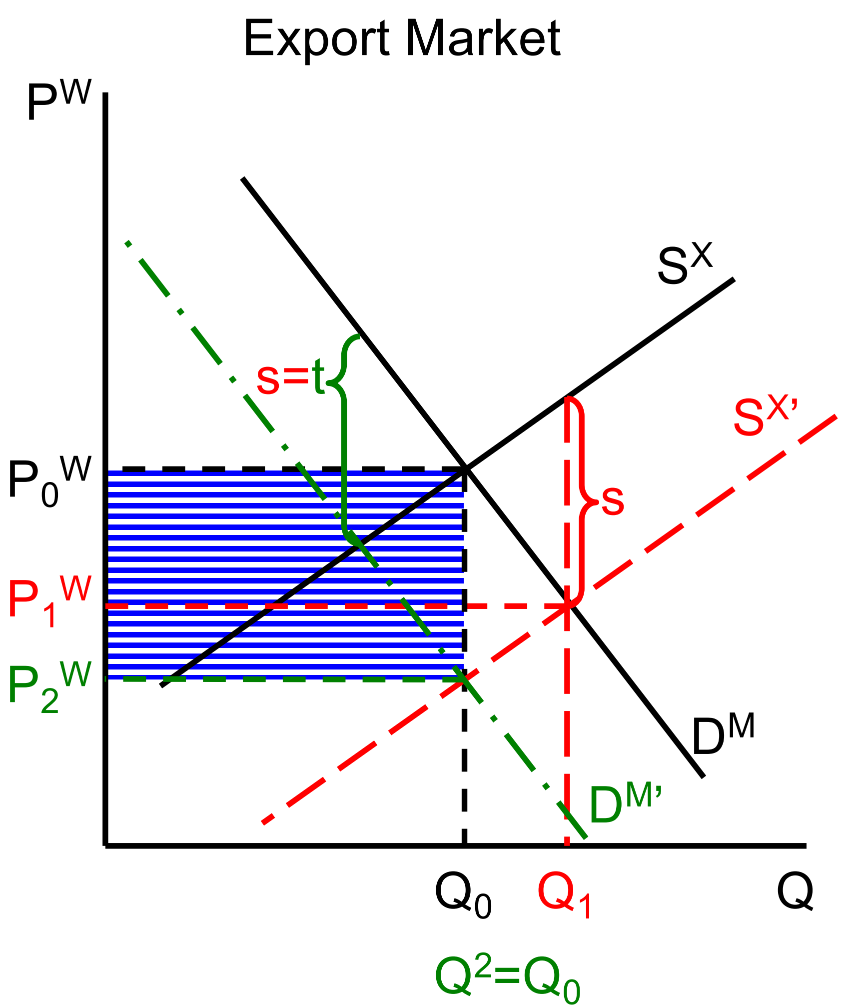
CVD and Export Subsidy



- The export subsidy, s, shifts the export supply curve down by the amount s
- This lowers the world price to P_1^W and increases quantity traded to Q_1
- The CVD is a tariff, t, equal to the subsidy, which shifts the demand curve for imports down by t
- Quantity traded returns to Q_0
- World price is now below its initial level by t=s. But domestic prices in both countries are returned to P_0^W
- Thus the only effect of the combined s&t is a transfer of $s \times Q_0$ from the exporting government to the importing government

Pause for Discussion

Questions

- How are export subsidies handled in the WTO? Why does Jackson suggest that perhaps importing countries should be <u>required</u> to levy countervailing duties against export subsides?

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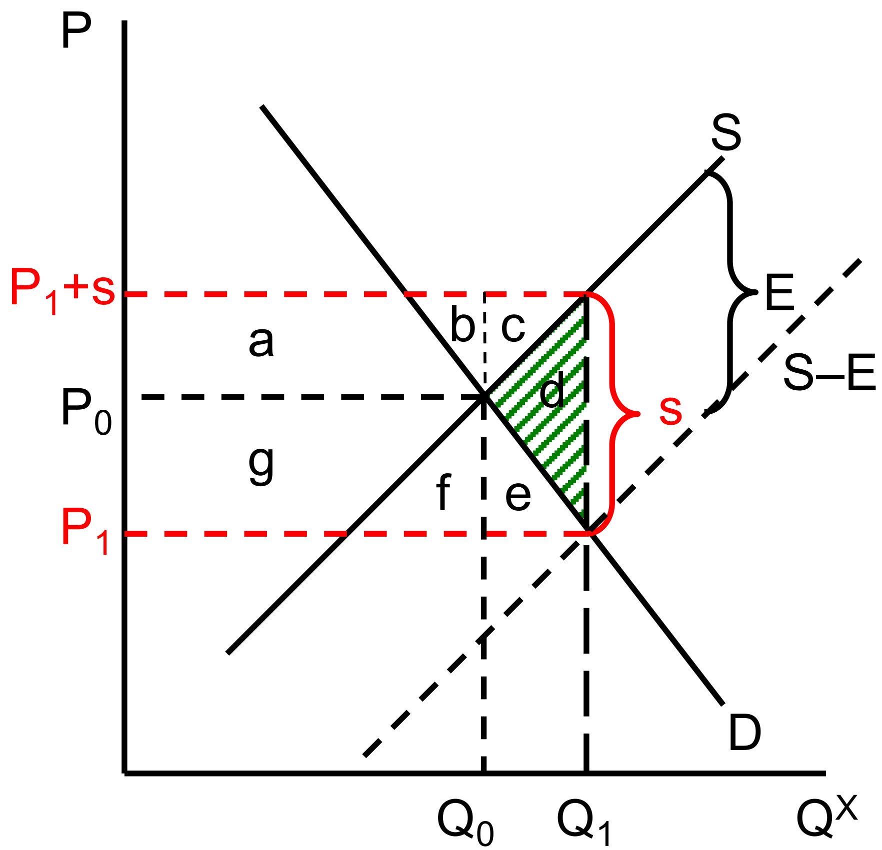
"Justified" Subsidies

- The only example I will consider is a positive external economy, E, per unit of a good produced
- It is well understood that in a closed economy the optimal policy is a production subsidy s=E
- The question here will be how this affects an open economy and its trading partners

External Economy in Autarky

Domestic Market

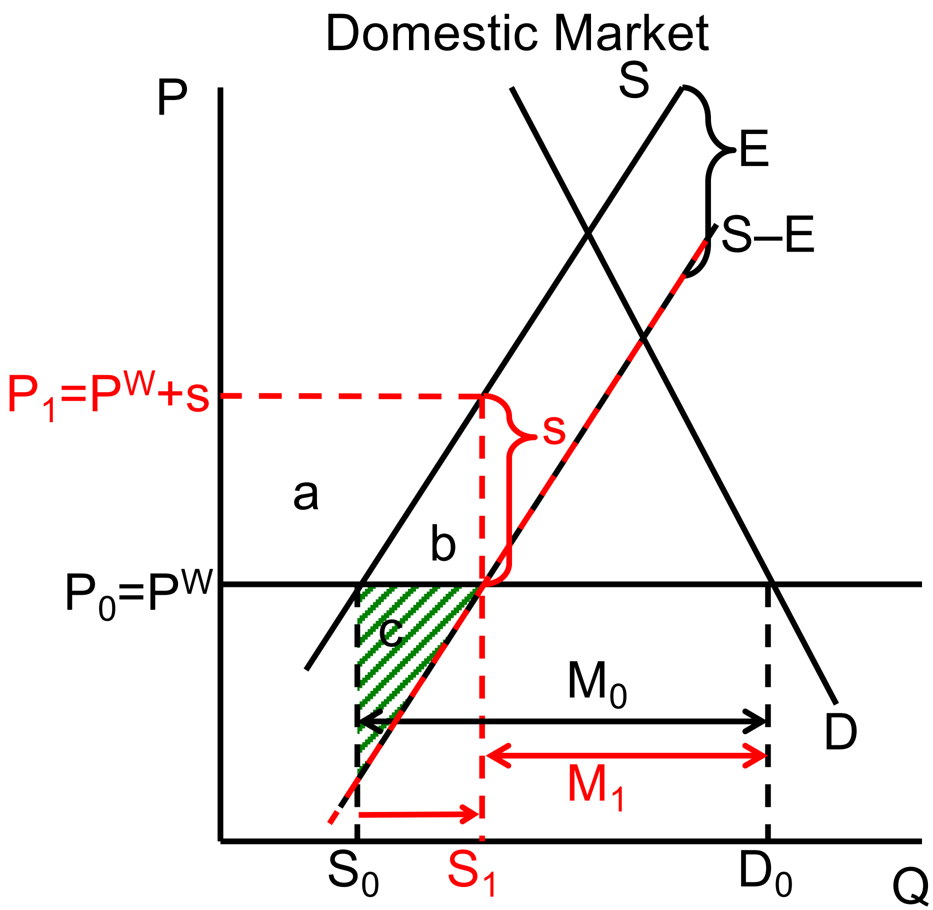


- The externality means that the social cost of this good is less than the private cost by E per unit, so the marginal social cost is shown by S–E
- Therefore the optimal output is Q_1
- A subsidy, s=E, shifts the supply curve down to coincide with S–E and raises output to the optimum

Welfare

- Demanders +(e+f+g)
- Suppliers +(a+b+c)
- Gov't –(a+b+c+d+e+f+g)
- Externality +(c+d+e)
- Country +(c+e) = +d

External Economy & Subsidy in Small Importer

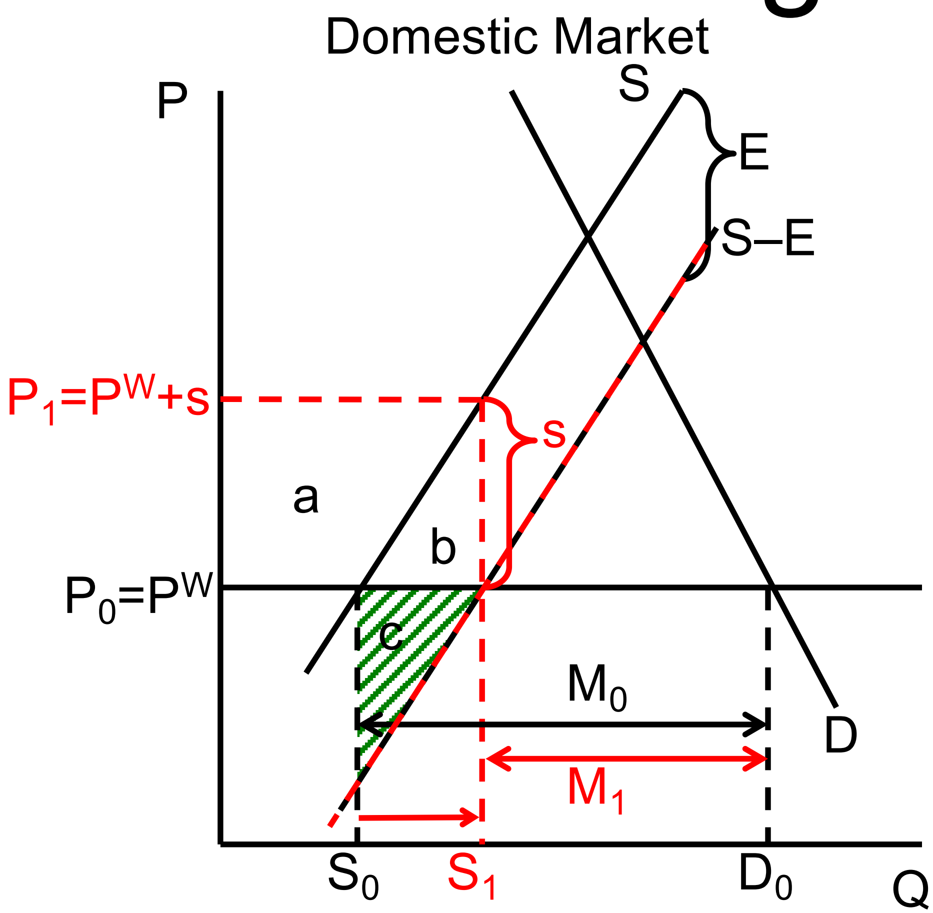


- Subsidy s = E shifts supply down by s to match S-E
- Supply rises
- Demanders still face P^W so demand does not change
- Imports fall

Welfare

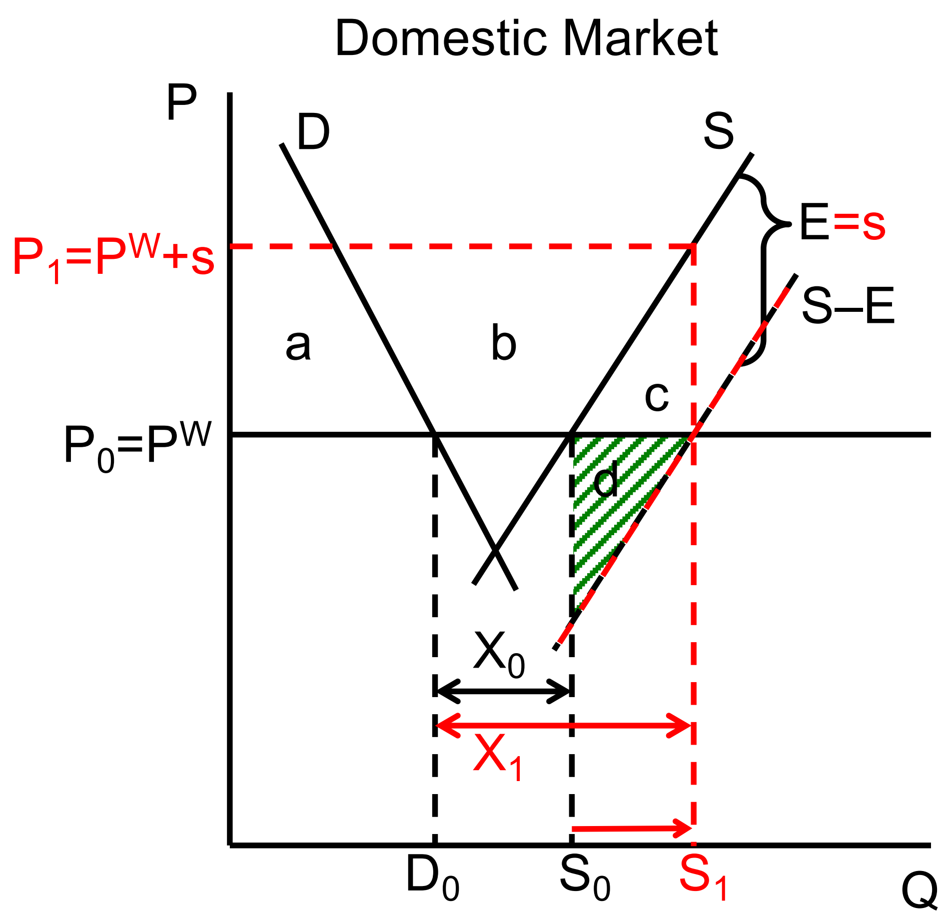
- Demanders 0
- Suppliers +a
- Gov't –(a+b)
- Externality +(b+c)
- Country +c

External Economy & Subsidy in Large Importer



- The same figure shows what will happen for a <u>given</u> world price for a large country
- The decline in imports means that world demand shifts down, reducing world price (not shown)
- This (also not shown) causes additional gain for the importer and loss to the rest of world

External Economy & Subsidy in Small Exporter

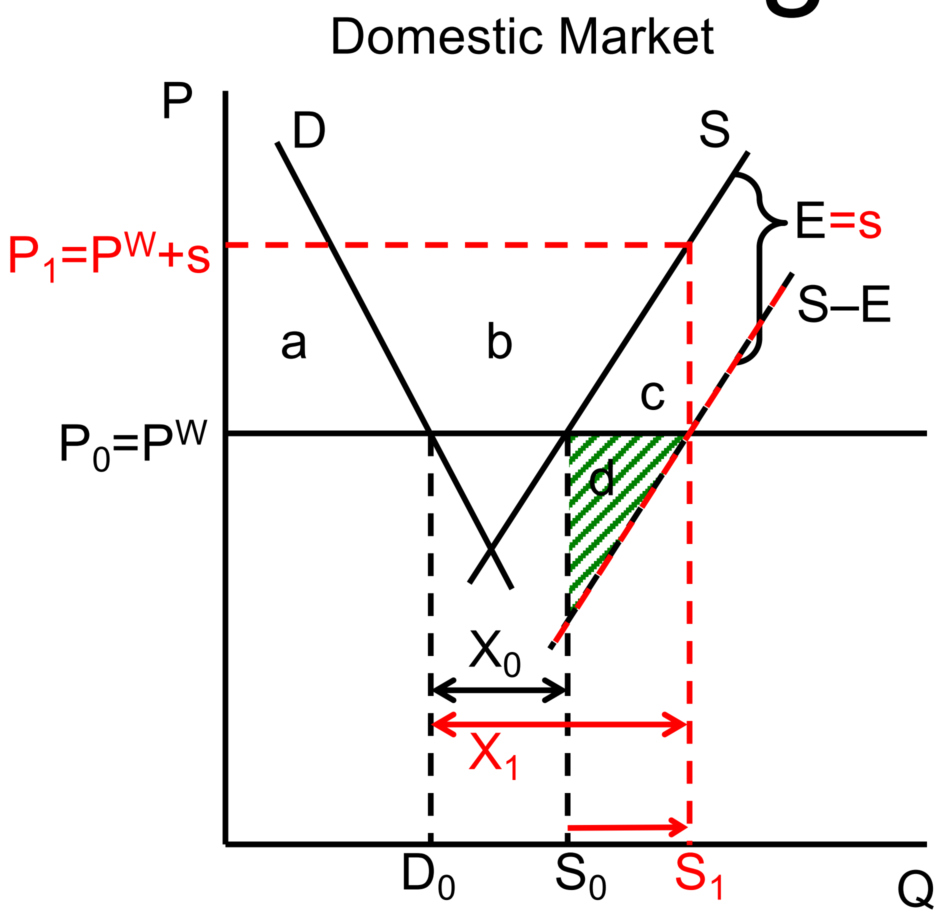


- The analysis is essentially the same for an exporter, except that now exports rise

Welfare

- Demanders 0
- Suppliers +(a+b)
- Gov't –(a+b+c)
- Externality +(c+d)
- Country +d

External Economy & Subsidy in Large Exporter



- Again, the same figure shows what will happen for a given world price for a large country
- The rise in exports now means that world supply shifts out, again reducing world price
- But this causes offsetting loss for the exporter and gain for the rest of world

Pause for Discussion

Questions

- Do justified subsidies (based on the analysis here) always hurt or always help the rest of world?

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Imperfect Competition

- Strategic Trade Policy: Boeing-Airbus Game

  P=produce, N=not produce

  No subsidy,

Equil. If Boeing moves first, since now Airbus will not enter

Boeing choice: depends on Airbus

Payoff Matrix

		Airbus P	Airbus N
Boeing	P	−5 −5	0 100
	N	100 0	0 0

Imperfect Competition

- Strategic Trade Policy: Boeing-Airbus Game

  P=produce, N=not produce

  No subsidy

Now Airbus choice does <u>not</u> depend on Boeing

		Airbus P	Airbus N
Boeing	P	Boeing: −5, Airbus: −5	Boeing: 100, Airbus: 0
	N	Boeing: 0, Airbus: 100	Boeing: 0, Airbus: 0

Imperfect Competition

- Strategic Trade Policy: Boeing-Airbus Game

  P=produce, N=not produce

  No subsidy, Airbus Subsidy = +10

Equil. With no subsidy if Boeing moves first

Equil. with subsidy and exit

		Airbus P	Airbus N
Boeing	P	Boeing: −5; Airbus: −5 (+5)	Boeing: 100; Airbus: 0
Boeing	N	Boeing: 0; Airbus: 100 (110)	Boeing: 0; Airbus: 0

Imperfect Competition

- Boeing-Airbus Game results
  - If Boeing moves first, without subsidy Airbus will not enter
    - Boeing and US gain +100
    - Airbus and EU gain 0
  - If EU pays subsidy, Airbus will enter and Boeing will exit
    - Airbus gains 110, EU gains 100 (=100-10)
    - Boeing and US gain 0
  - Thus EU gains and US loses from EU subsidy

Imperfect Competition

But note caveats: These arguments are <u>not</u> likely to be usable:

- Empirical difficulties: Hard to know where to intervene
- Entry: Benefits will be dissipated by new firms
- General equilibrium: Help in some sectors hurts others
- Retaliation: Other countries may react
- Political economy: Industries lobby for help

Pause for Discussion

Questions

- In the Boeing-Airbus example, Airbus benefits from the subsidy. Is that all that is needed for the example to be a valid basis for a subsidy?
- The textbook warns that correctly using the Brander-Spencer analysis as the basis for an export subsidy relies on getting the numbers right. Where would a government go to learn these numbers? Is that a problem?

Questions on Wall, "WTO Rules Washington State Support to Boeing Not a Prohibited Subsidy

- What part of the WTO dispute settlement process issued this decision?
- Did this end any chance that the EU will be able to retaliate against the US for subsidies to Boeing?
- This says that "At stake are potentially billions of dollars in tariffs." Why?
- If a country loses one of these cases, how can it avoid or delay the penalty?

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Recent subsidy disputes

- Canada-US on lumber
  - For "below-market access to logs from government-owned land"
- Australia, Brazil and Guatemala against India on sugar
  - Keeps sugar cheap for tea drinkers and protects sugar farmers
- EU on Egypt for China subsidies
  - Glass fiber fabrics

Pause for Discussion

Questions on Mauldin, "**U**.S. Trade Fight With Canada"

- In what way does the US claim that Canada subsidizes lumber?
- What has the Trump administration done so far?
- If the US and Canada reach a deal, what it is likely to involve?
- Is this the first time that the US and Canada have disputed over imports of wood?

Questions on Smyth & Kazmin, "India faces WTO investigation"

- What actions did India take that the other countries say are illegal?
- Whom has India been trying to please?
- Why will India "wait this one out till then"?

Questions on Stearns, “EU Challenges China’s Trade Expansion”

- Why is this a “landmark tariff”?
- What product is subject to the tariff, from where into where, and what is the size and duration of the tariff?
- Might more such tariffs be used in the future?