PubPol/Econ 541

Class 25

Subsidies and Countervailing Duties

by
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2022

Announcements

- Paper #3
  - Is now due at 11:59 PM Monday Dec 12.
  - I am still available to answer questions by email or to meet with your group by zoom

Announcements

- Quiz #12

	Q9	Q10	Q11	Q12
Mean	6.30	7.04	8.81	7.75
Median	6.5	7.5	9	7.75
Max	10	9.5	10	10
Min	1	0.5	7	4.5
S.D.	2.39	2.43	1.09	1.46

Announcements

- Quiz #13
  - Available from 10:00 AM today.
  - Due by Friday 12/9 midnight,
  - Accepted until Saturday 12/10 midnight with 1 point penalty
  - Covers material from today only (Subsidies and Countervailing Duties)

Announcements

- This is NOT our last class together
- Class this Thursday, Dec 8:
  – No required reading
  – New optional reading now available:
    - Max Boot, “Biden is making the same mistake as Trump on China,” Washington Post, November 30, 2022.
    - See link on syllabus or in Canvas
  – Class will be review and discussion
    - What have you learned from this course?
    - What would you still like to know?

Announcements

- Course evaluations
  - Please do them
  - Due by
    - ?
  - So far (yesterday) I have
    - Only 6

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
  – In practice they are seldom that simple
- Countervailing duties (CVDs) are permitted by the GATT/WTO under specified circumstances

Pause for Discussion

Questions on Jackson Ch. 11

- 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.)
- 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?

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 issues

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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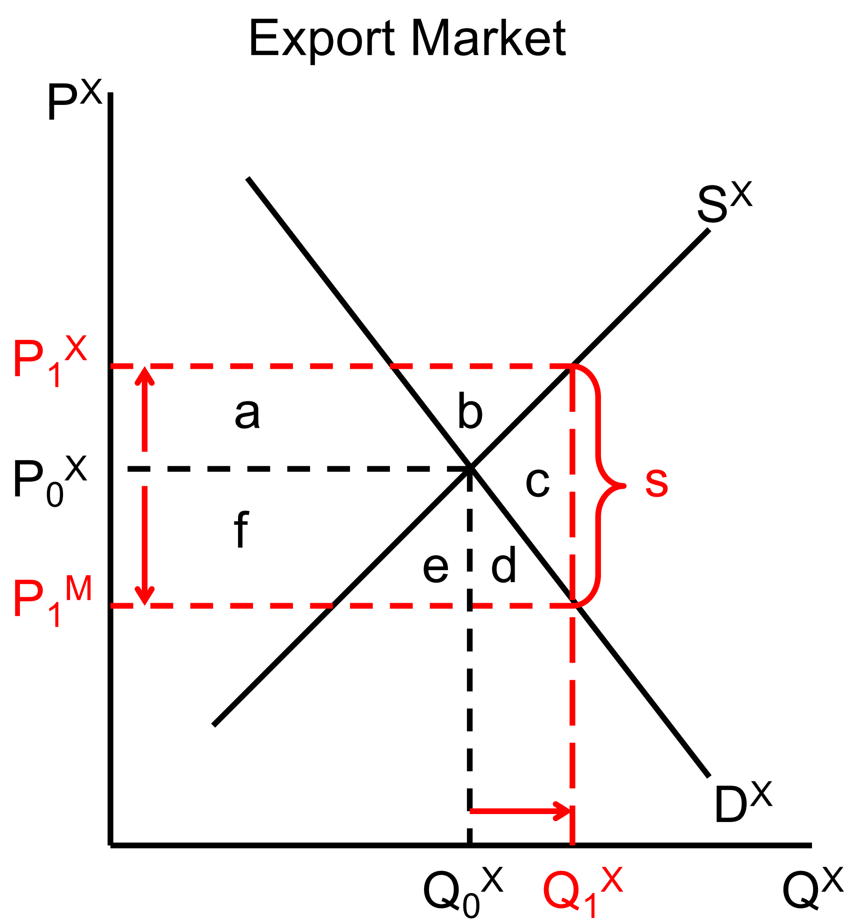
Export Subsidy



- 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 on KOM, Ch 9

- 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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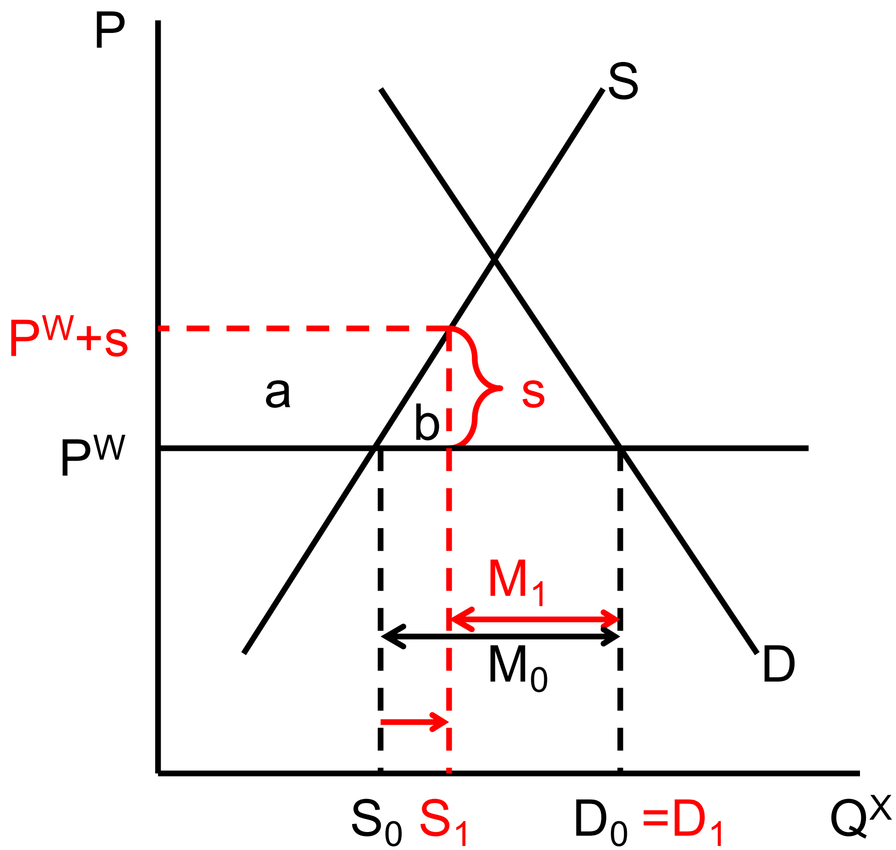
Production Subsidy, Small Country Importer



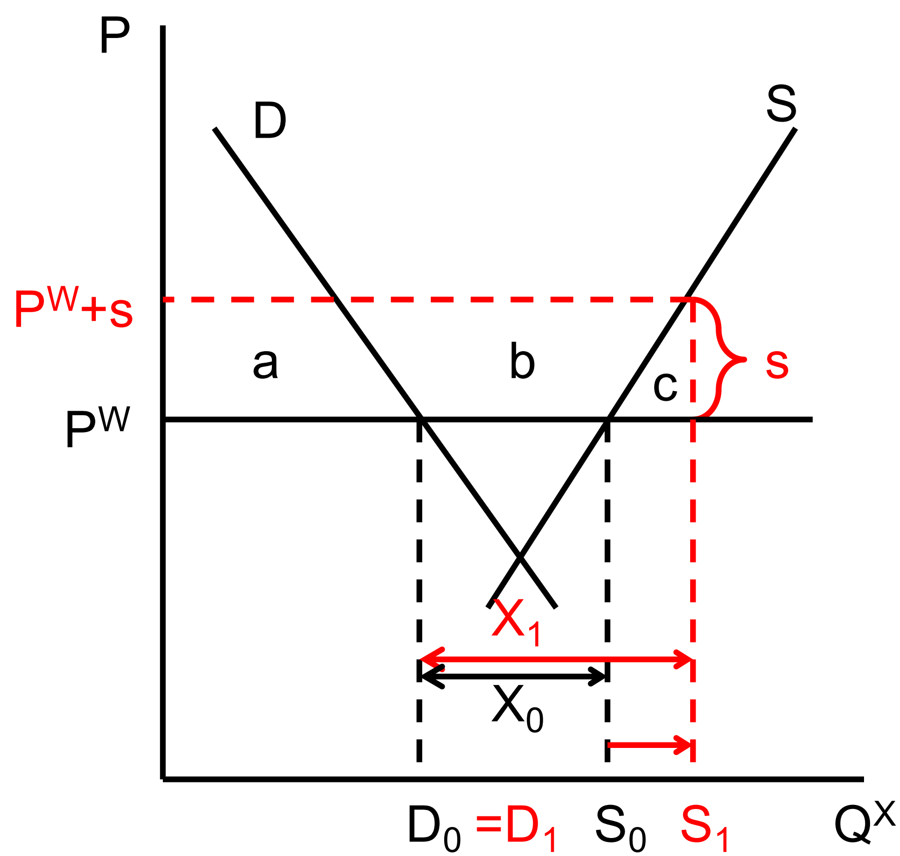
- The production subsidy, s per unit, gives suppliers s in addition to the world price, P^W. Demanders can still buy at P^W.
- Output rises
- Imports fall

Welfare effects

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

"Dead Weight Loss" =

Production Subsidy, Small Country Exporter



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- Output rises
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Welfare effects

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

"Dead Weight Loss" =

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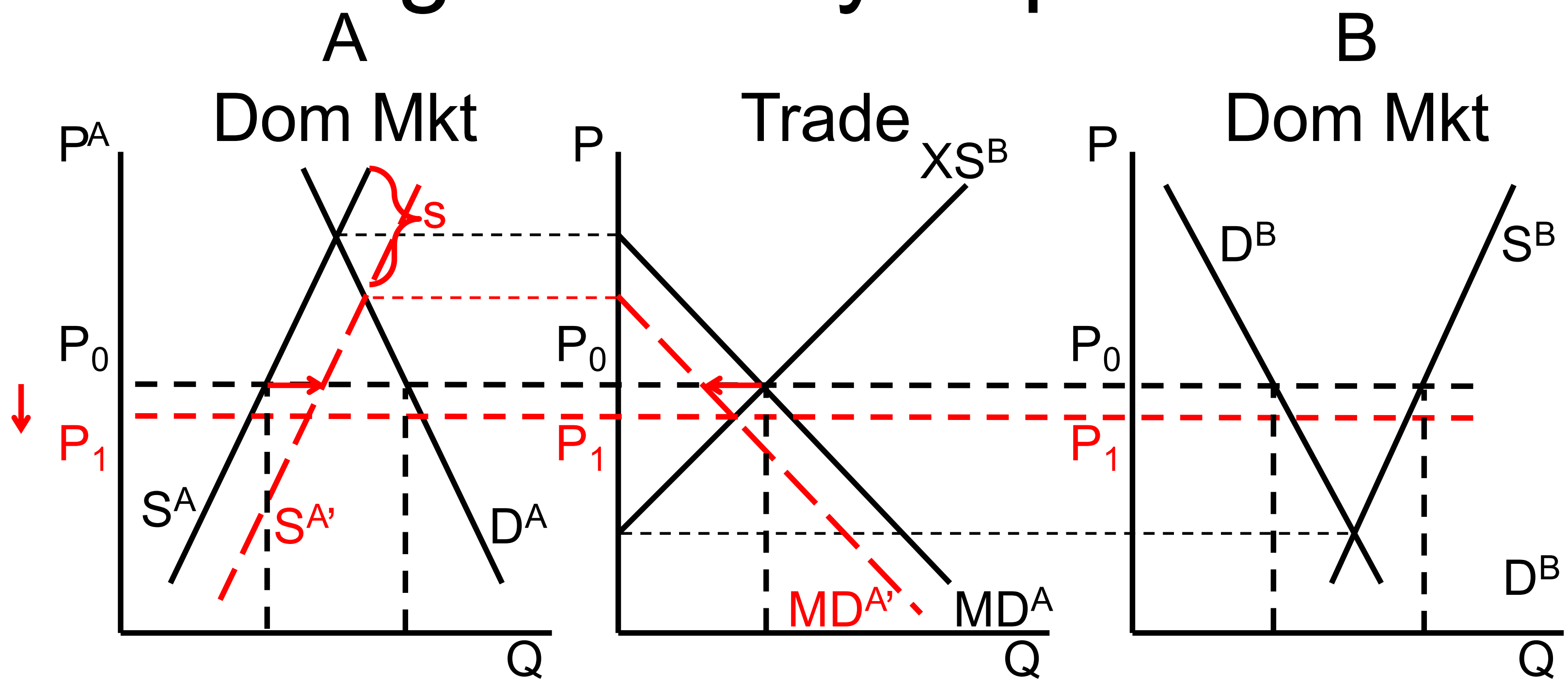
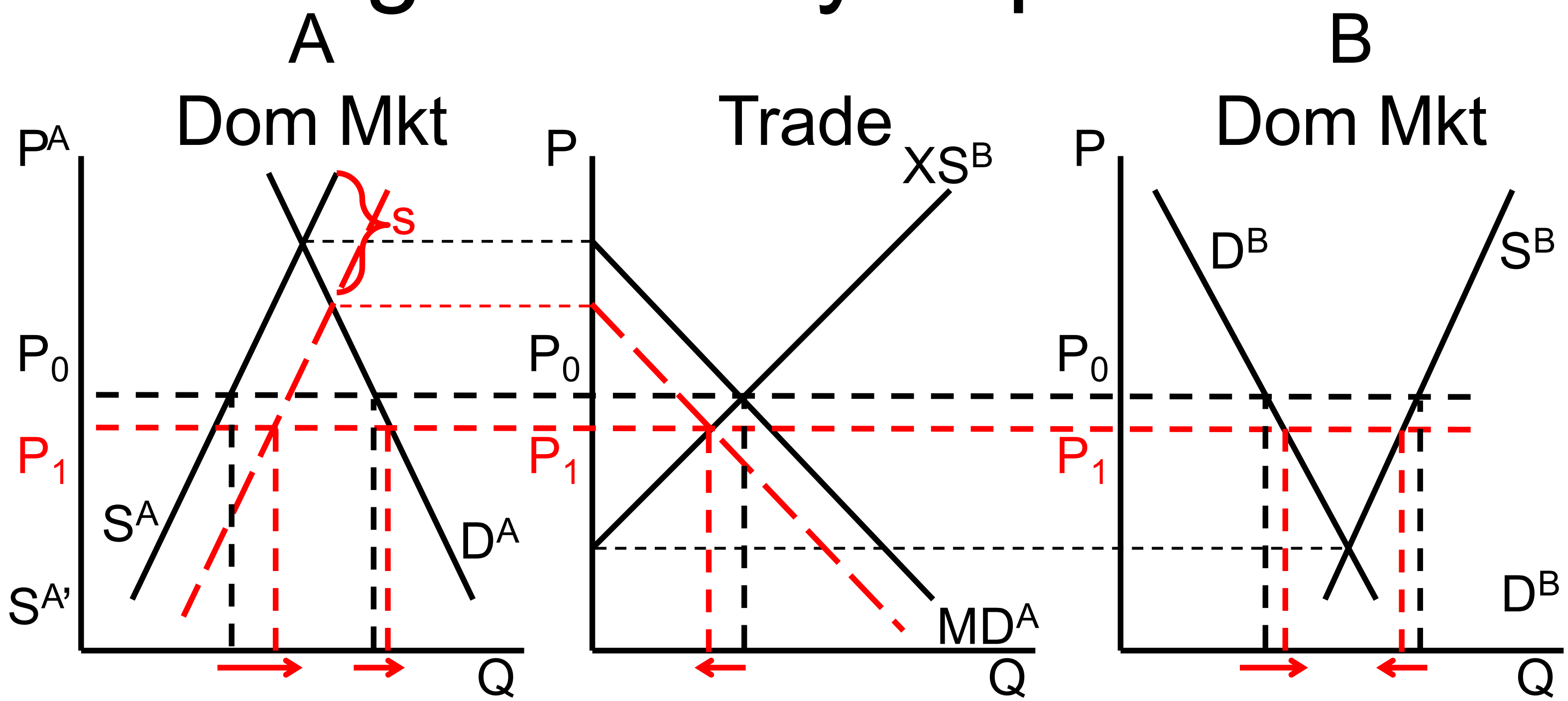
Production Subsidy, Large Country Importer



- 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.

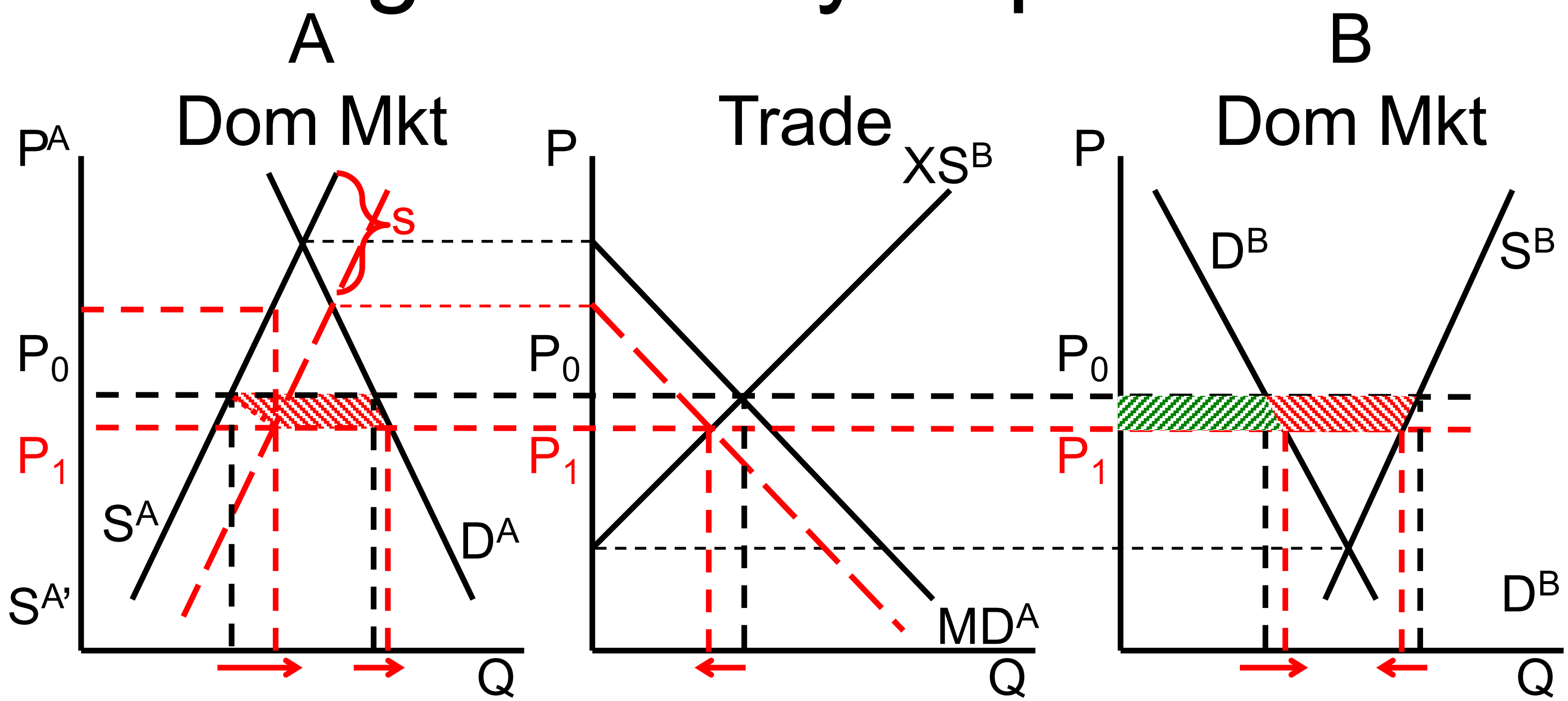
Production Subsidy, Large Country Importer



Results:

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

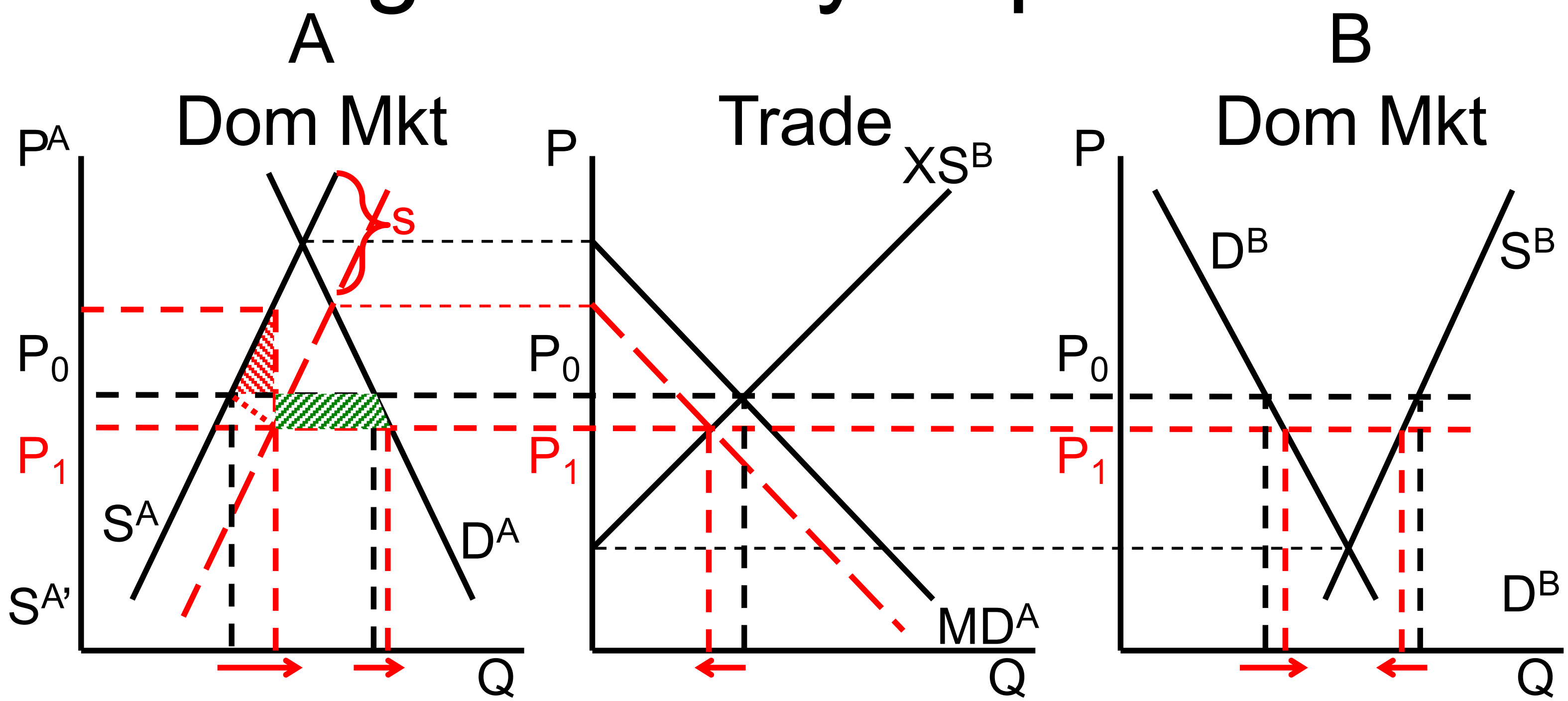
Production Subsidy, Large Country Importer



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



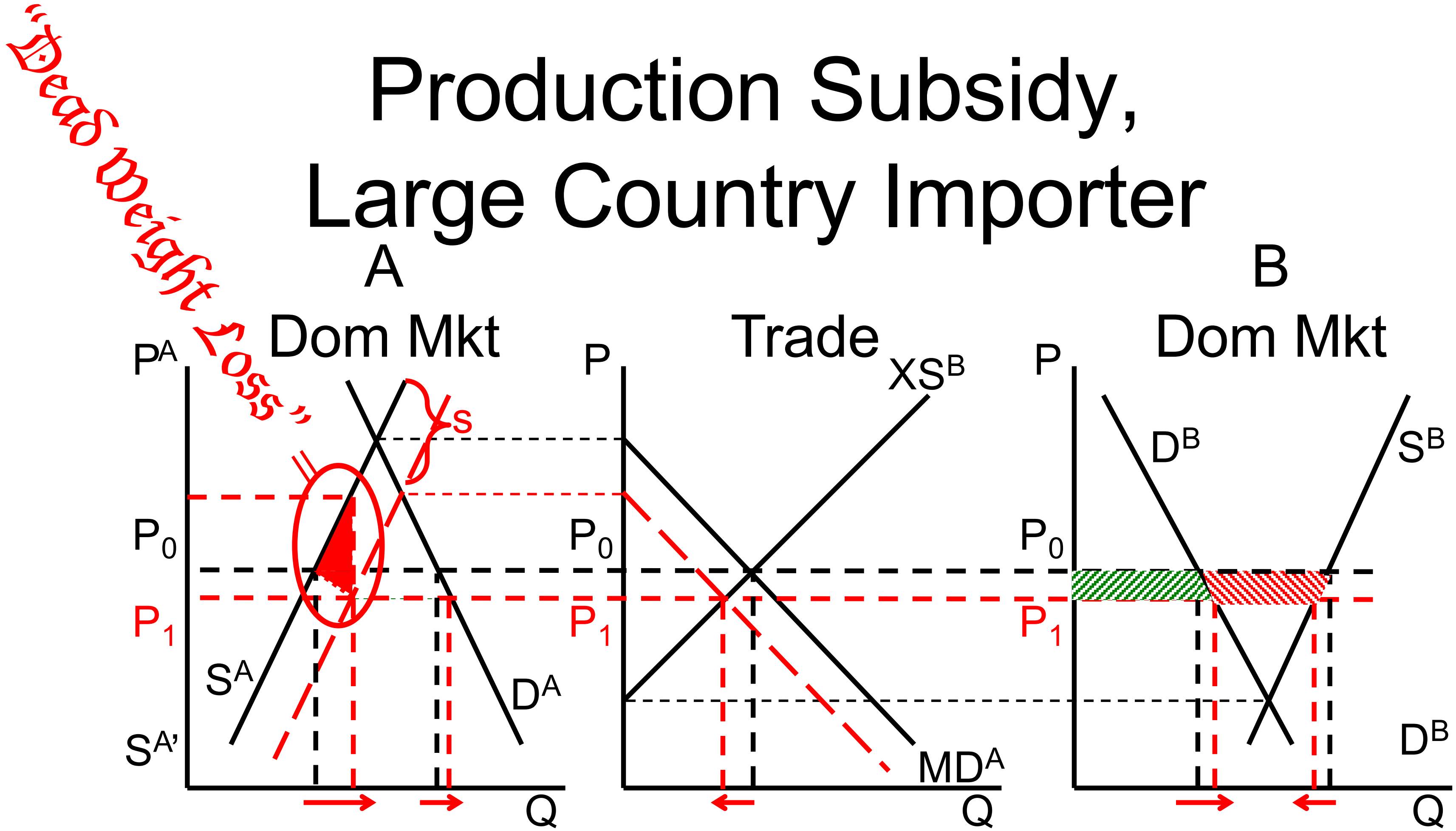
Welfare of Country A:

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

Result:

- Large importer may (but need not) 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 (Not asked before)

- 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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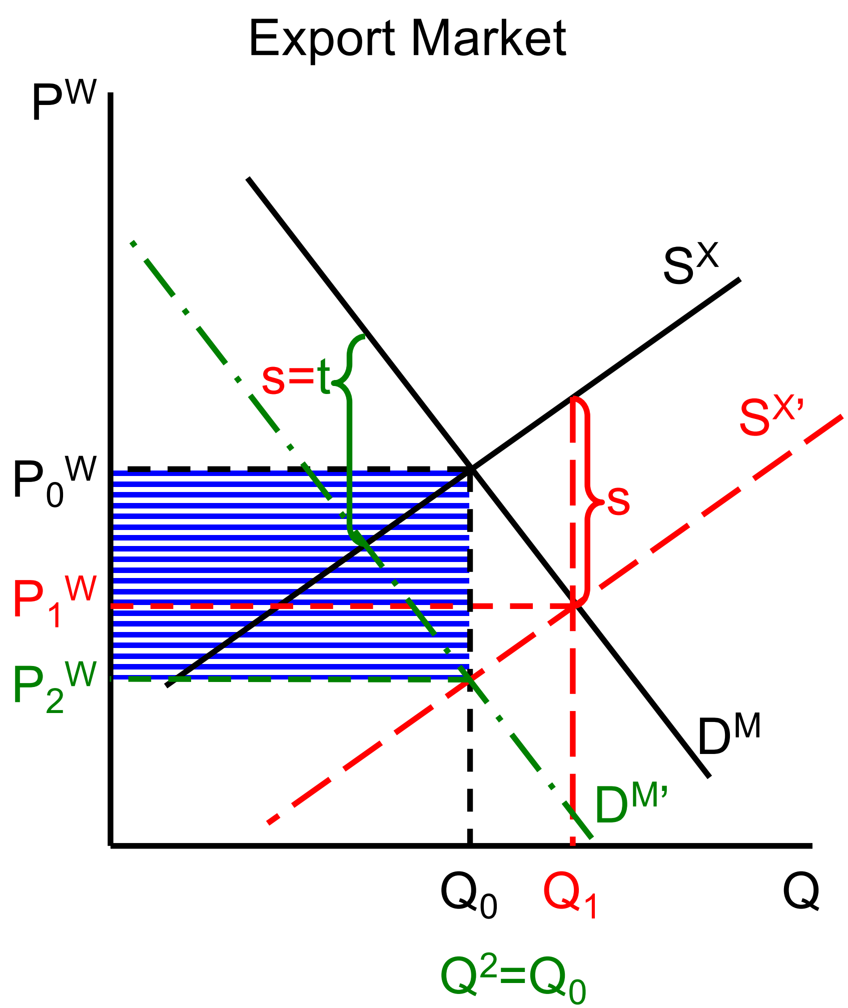
CVD and Export Subsidy



- 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 on Jackson Ch. 11

- 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 subsidies?

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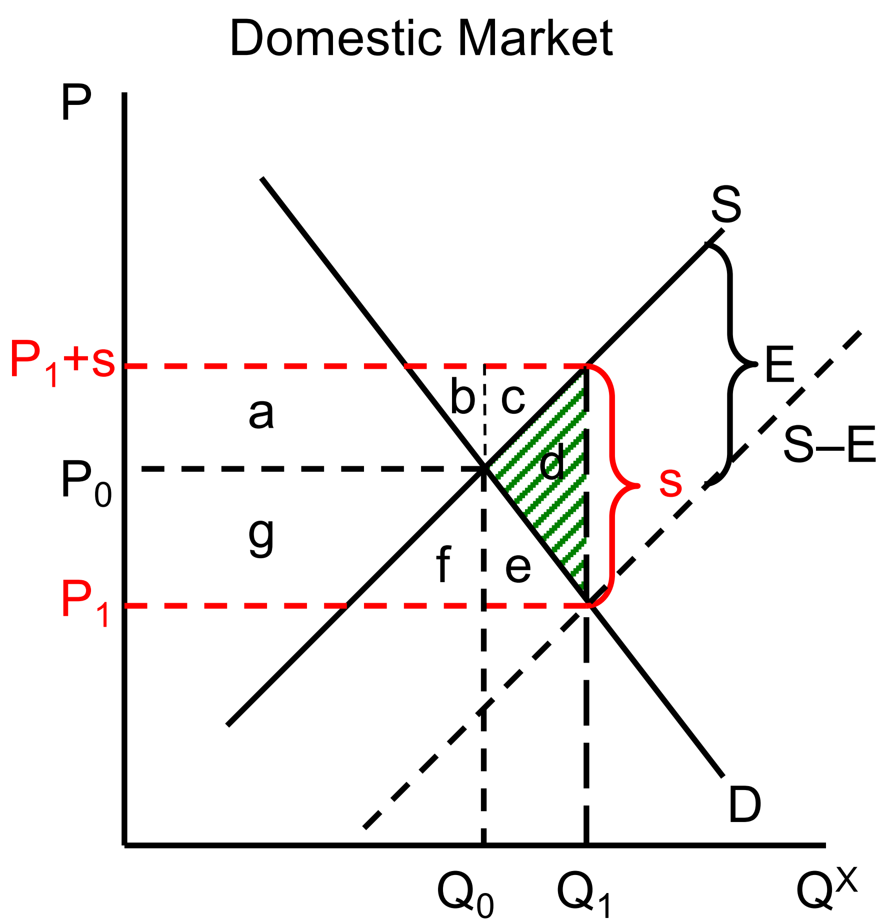
“Justified” Subsidies

- The only example I will consider here is a positive external economy, E, per unit of a good produced (you should try others)
- 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

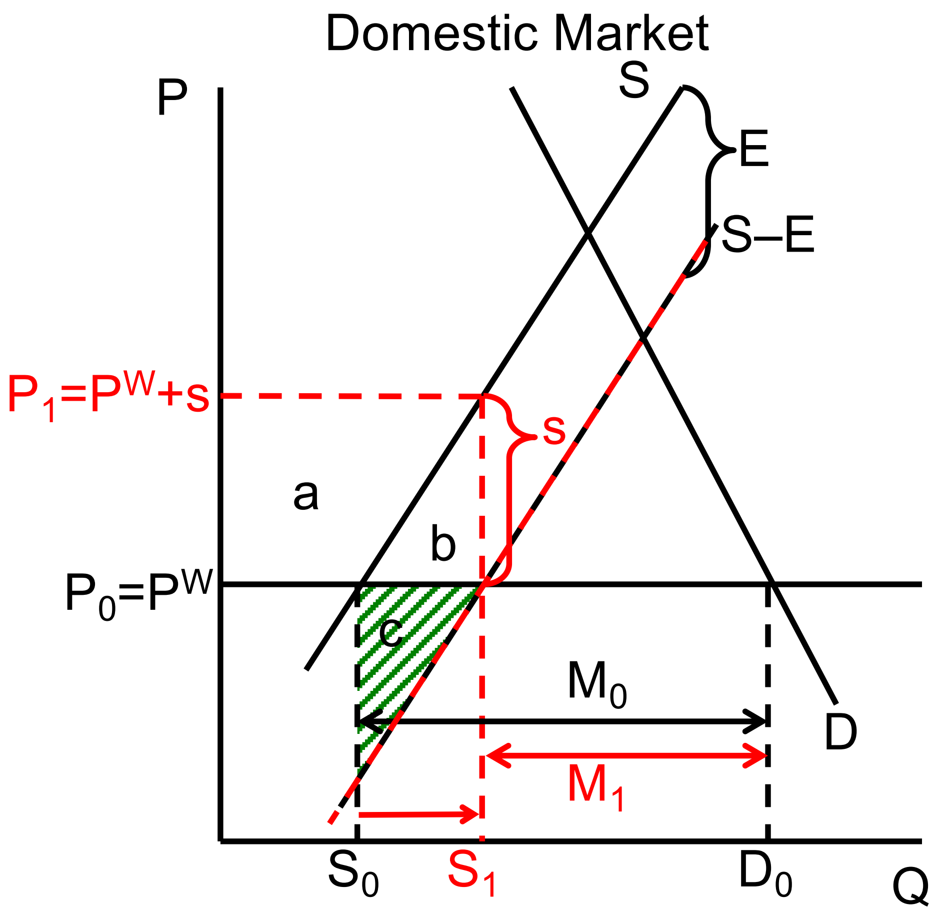


- The externality means that the social cost of this good is less than the private cost by E per unit, so the marginal social cost is shown by S–E
- Therefore the optimal output is Q_1
- A subsidy, s=E, shifts the supply curve down to coincide with S–E and raises output to the optimum

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

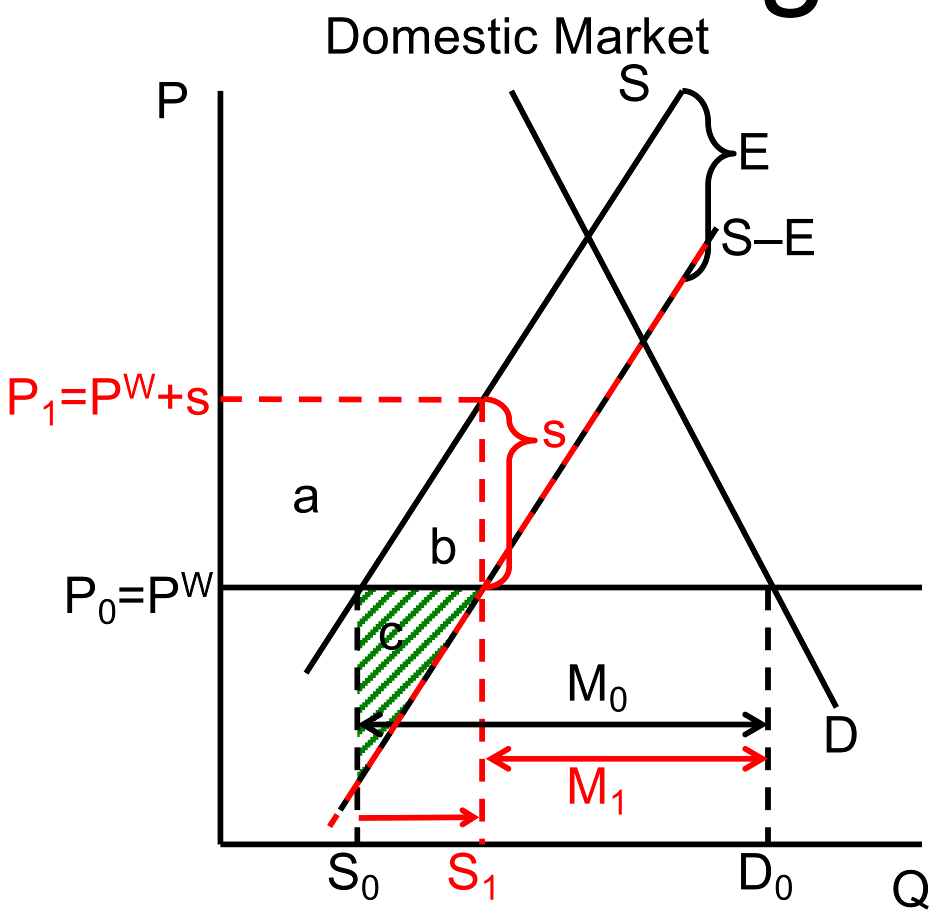


- Subsidy s = E shifts supply down by s to match S-E
- Supply rises
- Demanders still face P^W so demand does not change
- Imports fall

Welfare

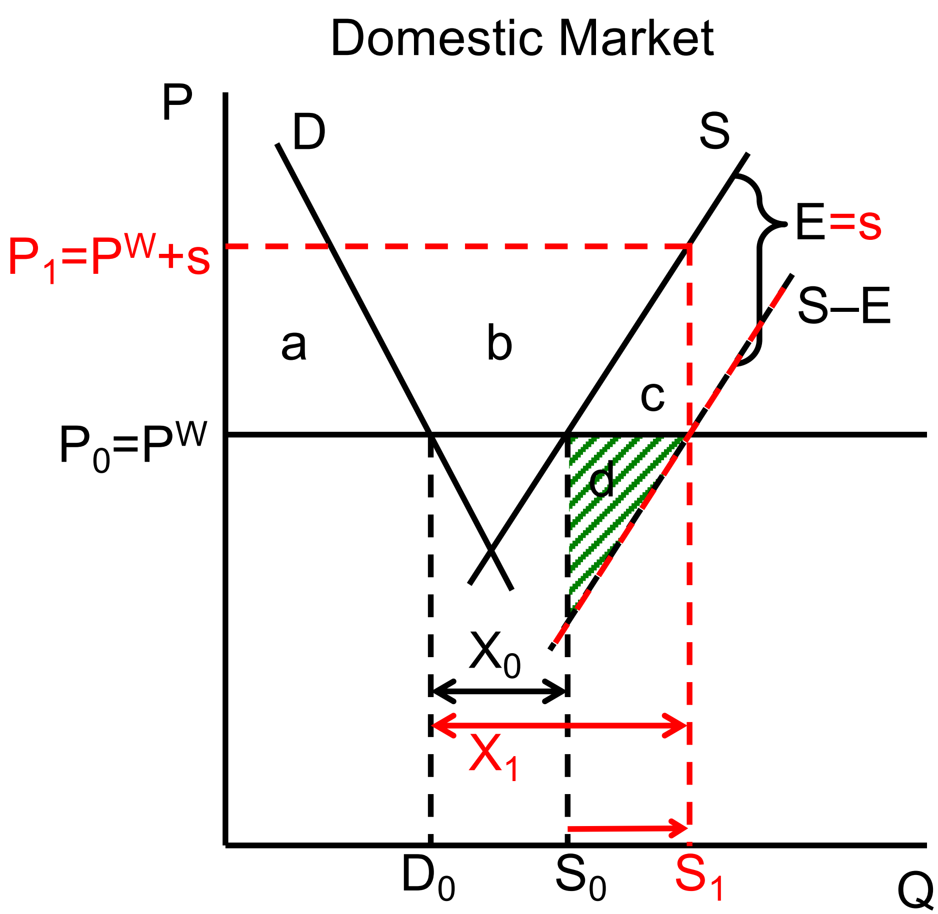
- Demanders 0
- Suppliers +a
- Gov't –(a+b)
- Externality +(b+c)
- Country +c

External Economy & Subsidy in Large Importer



- The same figure shows what will happen for a given 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

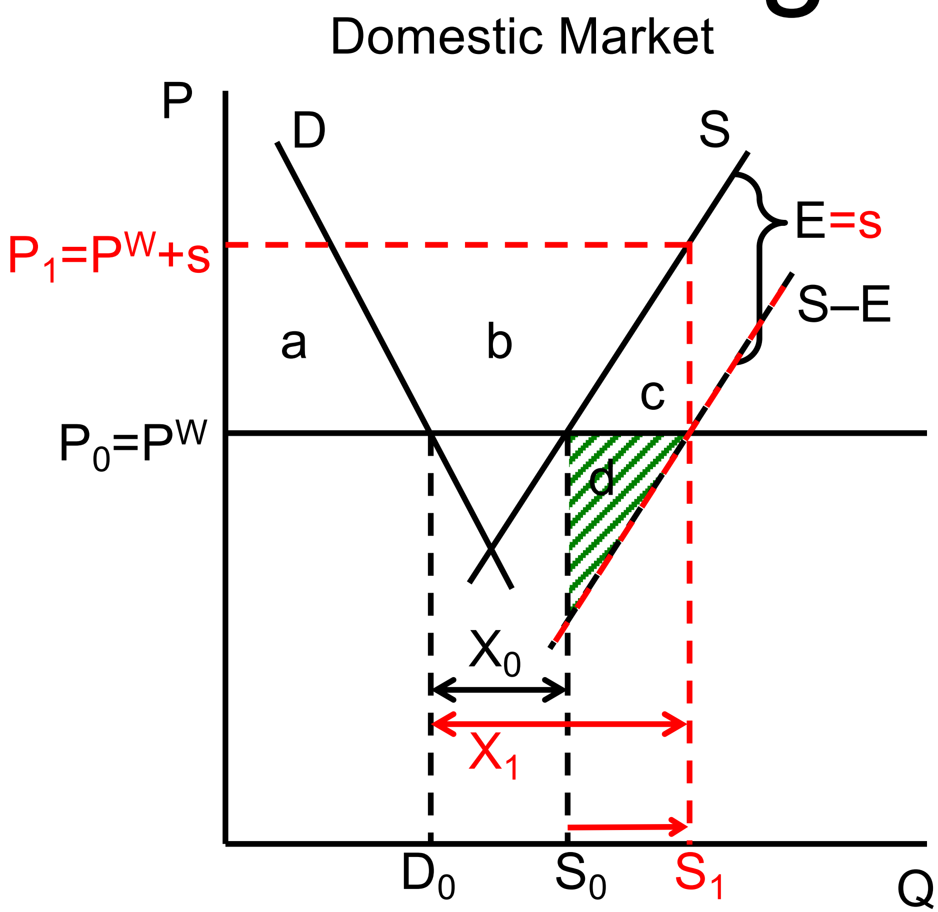


- The analysis is essentially the same for an exporter, except that now exports rise

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 (Not asked before)

- 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	100, 0
	N	0, 100	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	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, Airbus Subsidy = +10

Equil. With no subsidy if Boeing moves first

Equil. with subsidy and exit

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

Imperfect Competition

- Boeing-Airbus Game results
  - If Boeing moves first, without subsidy Airbus will <u>not enter</u>
    - Boeing and US gain +100
    - Airbus and EU gain 0
  - If EU pays subsidy, Airbus <u>will</u> 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 on KOM

- 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 Hollinger, "Airbus and Boeing subsidy battle far from over"

- What did Airbus and Boeing object to with regard to the other company?
- Does this agreement end those actions that each objected to? If not, what does it do?
- How had the WTO dealt with this dispute?
- What are Airbus and Boeing probably more worried about than each other?

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Recent subsidy issues

- EU puts tariff on “glass fiber fabrics” from Egypt, based on China’s subsidy
- EU and China reach agreement on investment, but without addressing subsidies

Pause for Discussion

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?

Questions on Hufbauer, "…accord fails to resolve subsidy disputes"

- What is the CAI, when was it agreed, and is it now in effect?
- What does this article say that the CAI has high standards for and is positive?
- Does the CAI improve upon the handling of subsidies compared to the WTO?
- What actions and policies does this identify that should be prohibited subsidies but are not?
- Why is it "not surprising" that China was not willing to do more to cut subsidies?

Recent subsidy issues

- US "Inflation Reduction Act" is (in spite of its name) important legislation to promote certain "green" activities and products
  - It includes subsidies for producing electric cars and other products
  - Production must use mostly US inputs, so this discriminates against non-US firms producing in US
  - See the WP article that I posted as optional for this Friday's class