

# International Economics: Lecture 12

## Quotas & Subsidies

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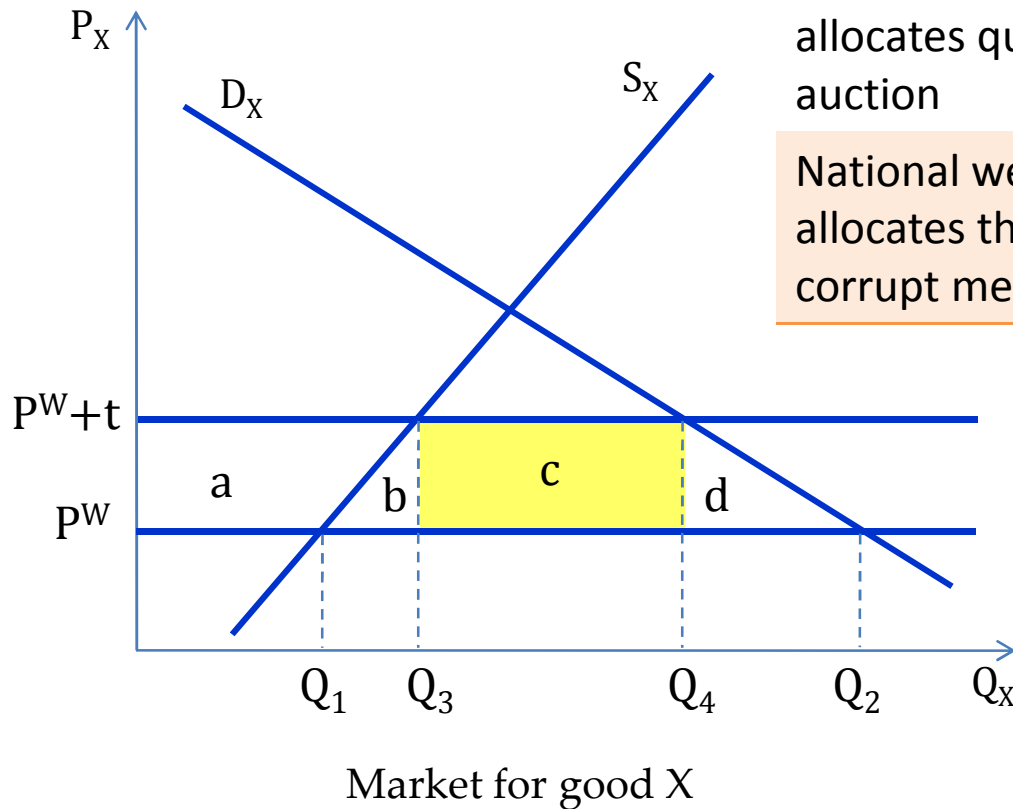
ATC, March 10, 2017

# Import Quotas

- A quantitative restriction on the amount of a good allowed to be imported or exported.
- Tariff rate quota – within quota import faces low (sometimes zero) tariff rate, outside quota import faces high (sometimes more than 100%) tariff rate.

# Import quota in a SMALL country

*partial equilibrium analysis*



Consumer surplus	$-(a+b+c+d)$
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Producer surplus	$+a$
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National welfare, if government allocates quota licenses by fair auction	$-(b+d)$
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National welfare, if government allocates through any form of corrupt mechanism	$-(b+c+d)$
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$c$  – quota rent, economic rent received by quota license holder.

# Import quota vs. equivalent import tariff

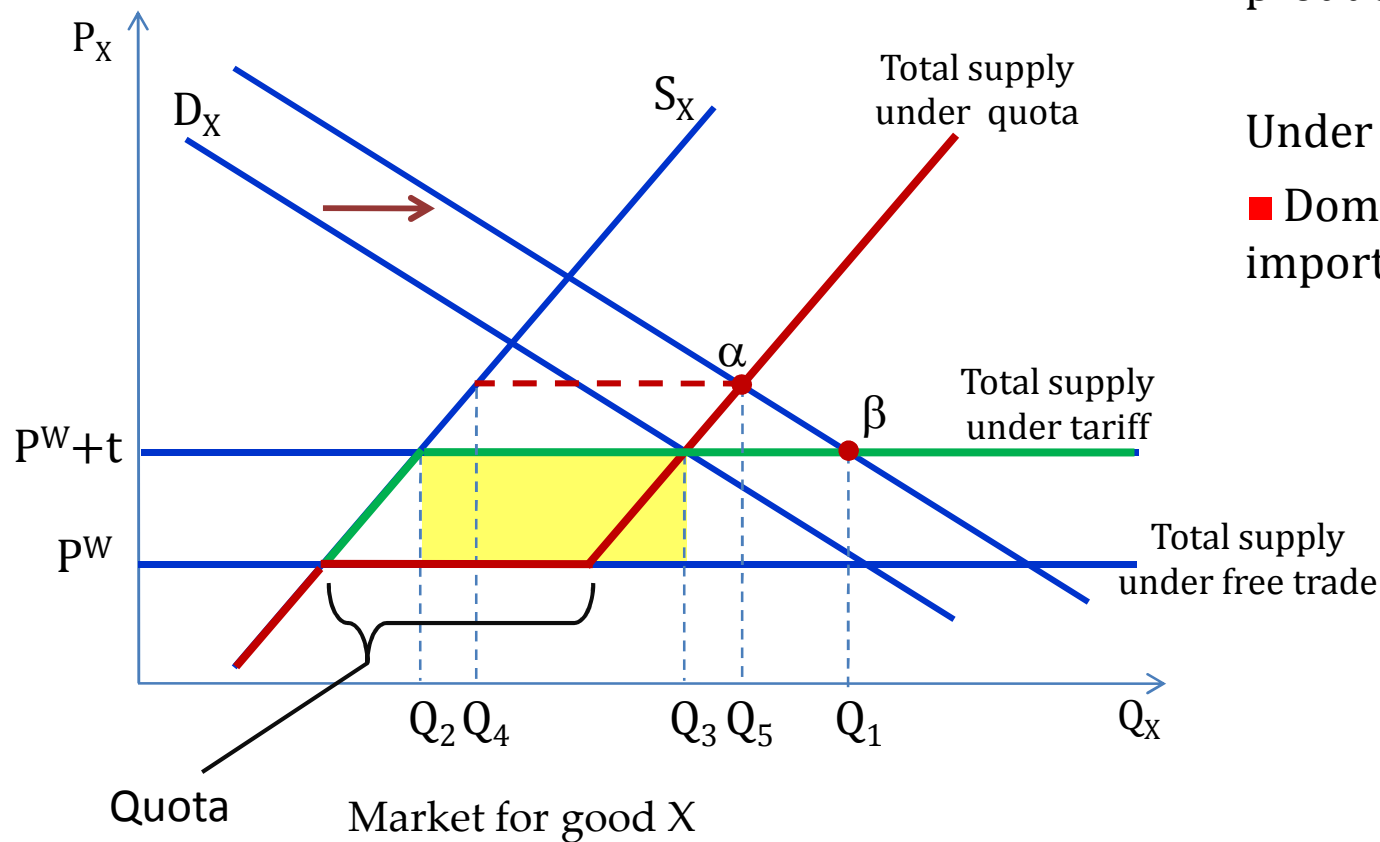
*partial equilibrium analysis in a small country*

Under import quota:

■ Domestic price & production are higher.

Under import tariff:

■ Domestic consumption & imports are higher.



$\alpha$  – equilibrium under quota

$\beta$  – equilibrium under tariff

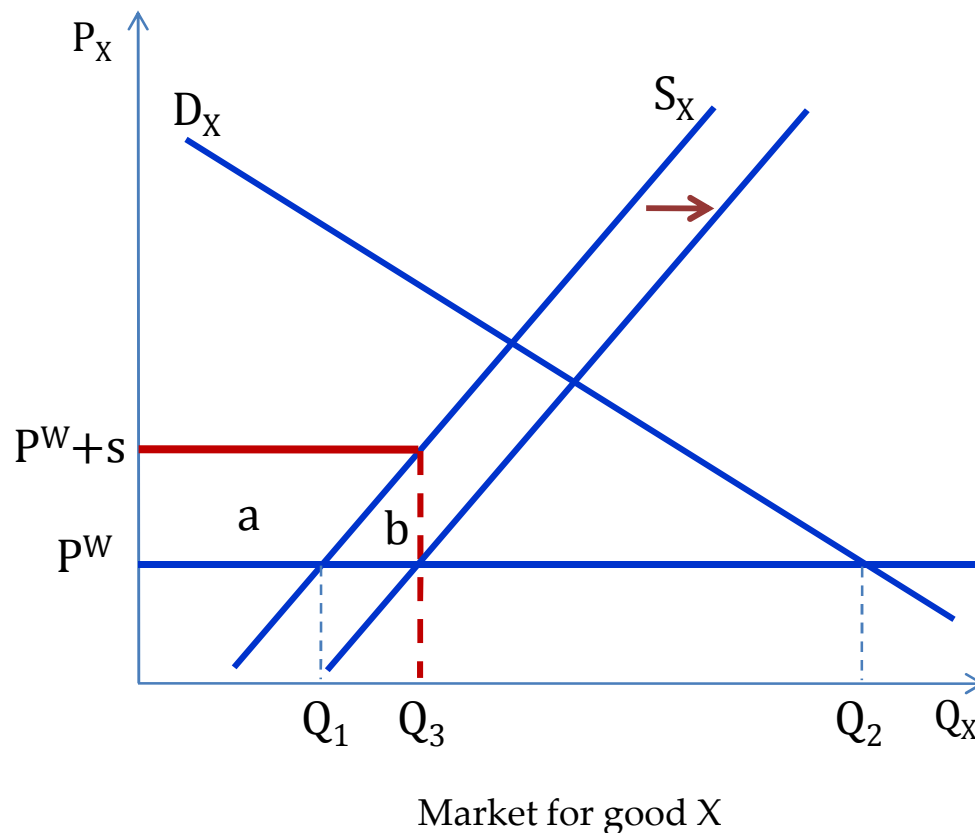
# Subsidies

## *partial equilibrium analysis*

- **Production subsidy:**  
A payment made by a government to firms based on output, regardless exported or not.
  
- **Export subsidy:**  
A payment made only for exported quantity.

# Production subsidy

*partial equilibrium analysis*



- Producer surplus:  $+a$
- Consumer surplus:  $0$
- Government revenue (subsidy cost):  $-(a+b)$
- National welfare:  $-b$

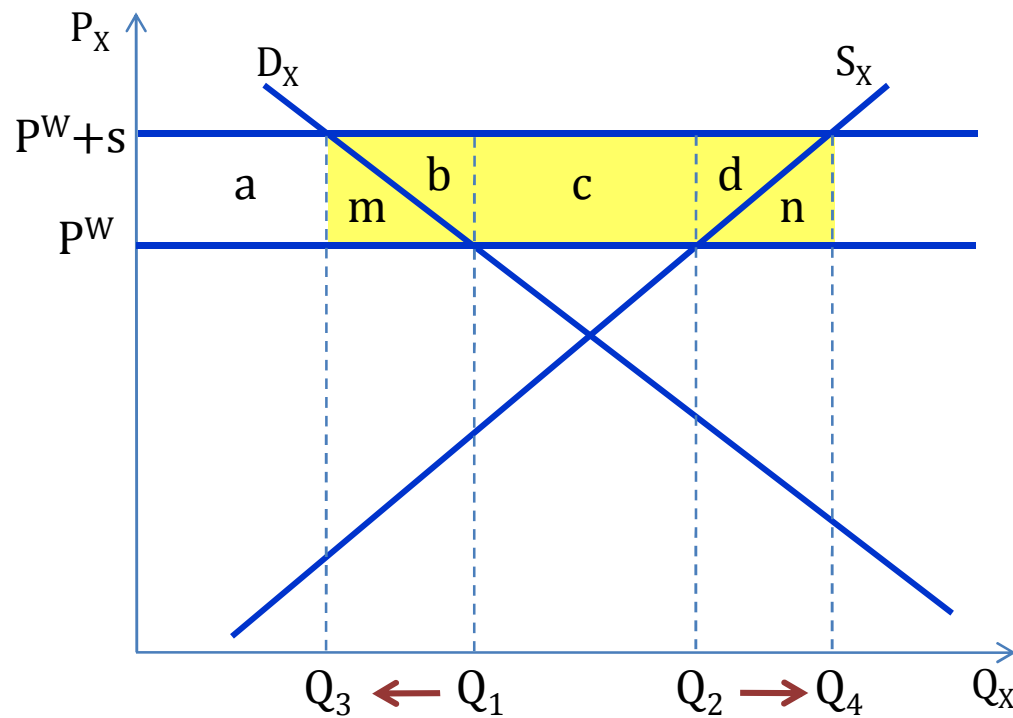
Imports quantity

- under free trade:  $Q_2 - Q_1$
- after subsidy:  $Q_2 - Q_3$

The taxpayers fund the subsidy, which means someone must pay higher taxes.

# Export subsidy in a small country

*partial equilibrium analysis*



Market for good X

Consumer surplus	$-(a+m)$
Producer surplus	$+(a+m+b+c+d)$
Government revenue (subsidy cost)	$-(m+b+c+d+n)$
National welfare	$-(m+n)$

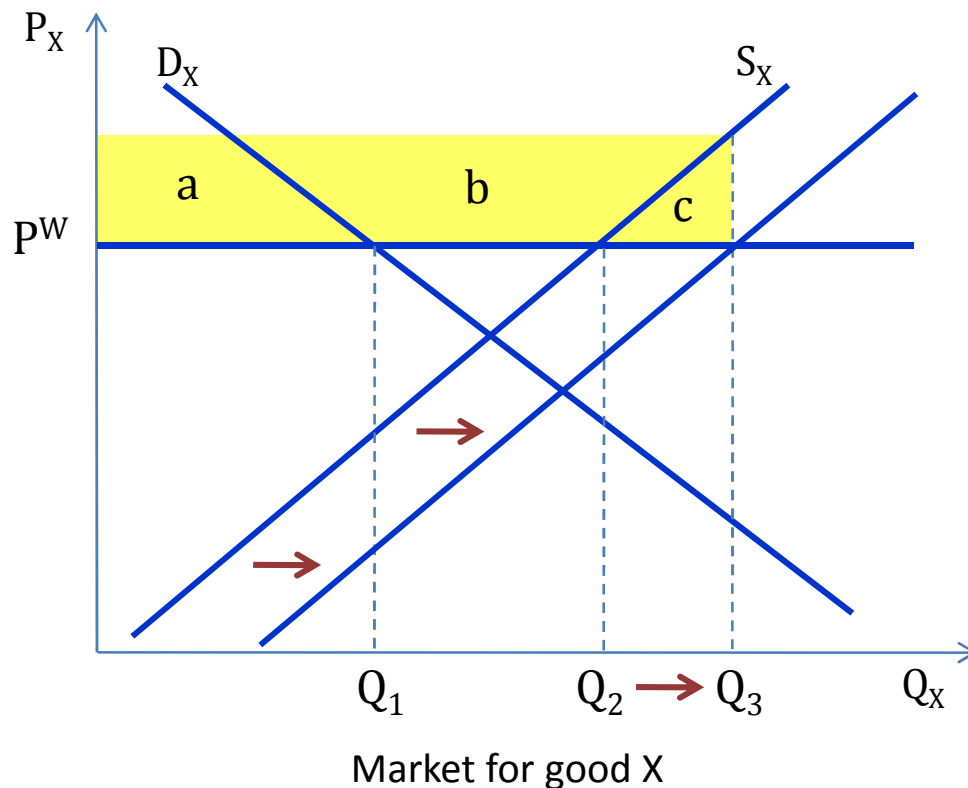
Exports quantity

- under free trade:  $Q_2 - Q_1$ - after subsidy:  $Q_4 - Q_3$ 

The country is small, and the domestic price increases by the full amount of the subsidy.

# Production subsidy in an exporting industry in a small country

*partial equilibrium analysis*



Consumer surplus	0
Producer surplus	$+(a+b)$
Government revenue (subsidy cost)	$-(a+b+c)$
National welfare	$-c$

Exports quantity

- under free trade:  $Q_2 - Q_1$

- after subsidy:  $Q_3 - Q_1$

- Domestic price & consumption don't change.
- Producers have no specific preference for export.

The country subsidizes not the export, but the production of the good.



Thank you and good luck,

but remember

Upon the education of the  
people of this country the  
fate of this country depends.

*Benjamin Disraeli,*  
'Hansard' 15 June 1874, col. 1618