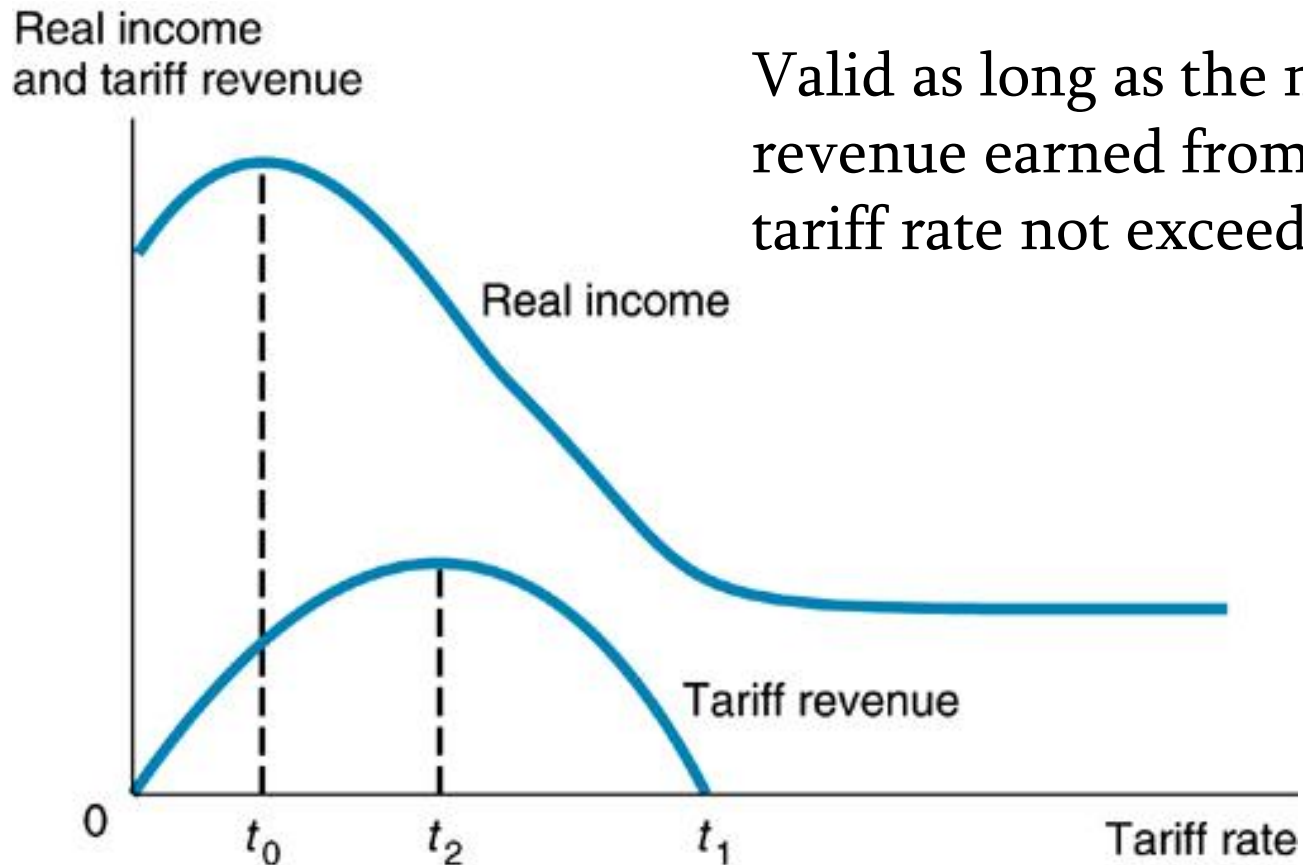


EE451

The Instruments of Trade Policy
Part II

Tariff as a Device for Raising Revenue

- Any tariff that is not so high as to be prohibitive, like t_1 , is a source of revenue.



Political Economy of Protection

- Tariff as a source of government revenue
- National defense argument
 - Potato in EU
- Tariff to improve the balance of trade
 - Other policies would also do.
- Tariff to improve terms of trade
 - The question of optimal tariff
- Tariff to reduce aggregate unemployment
 - Shift in production → hire more resources in importing industry; but loss in labour in exporting industry which would be further reduced if partners do retaliation. Export goods will drop, less jobs → ER affected
 - Specificity principle: Specific policies would do

Political Economy of Protection

- Tariff to increase employment in a particular industry
 - Question of efficiency
- Tariff to benefit a scarce factor of production
 - What if there is no flexibility in resource movement?
- Tariff to correct domestic market failures, such as externalities and monopoly
- Tariff to offset foreign dumping → antidumping duties (AD)
- Tariff to offset foreign subsidy → countervailing duties (CVD)
 - Too large subsidy can distort CA and injure trading partners.
 - Normally applied when injury occurs

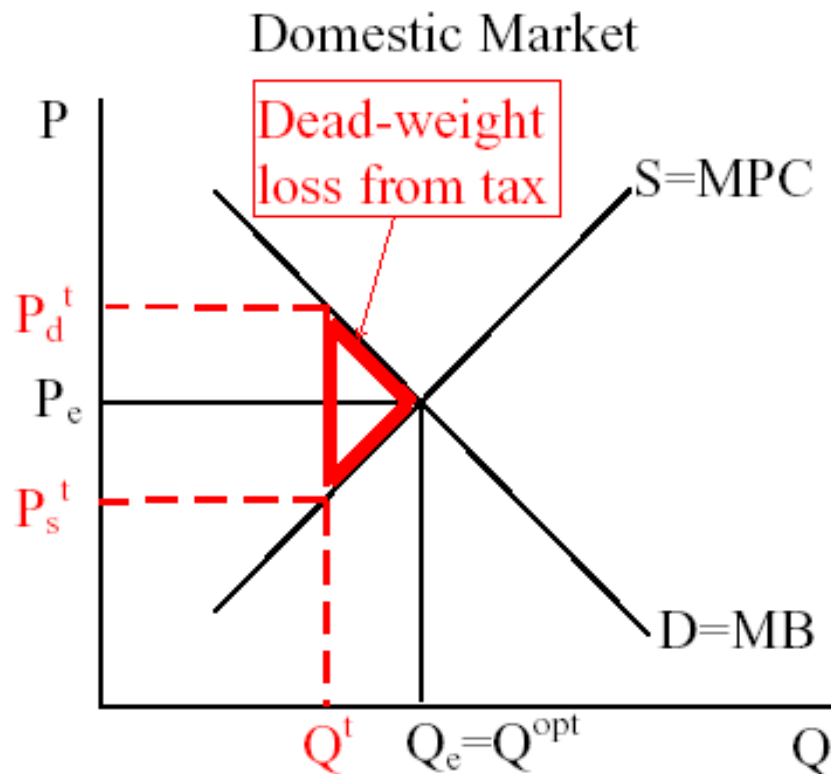
Dumping

- Simply a form of price discrimination → a firm selling the same product in different markets at different prices
- Selling its product at a lower price in the export market than in the home country market.
- Three types:
 - Persistent dumping: price in the importing country is lower than in the home country.
 - Predatory dumping: price is so low that can drive the home producers out of the market. Then price is raised due to monopoly power established.
 - Sporadic dumping: foreign producer with a temporary surplus exports such the excess exported goods. This type would produce temporary adverse effects by adding uncertainty to the home industry.

The Simple Analysis of Policy

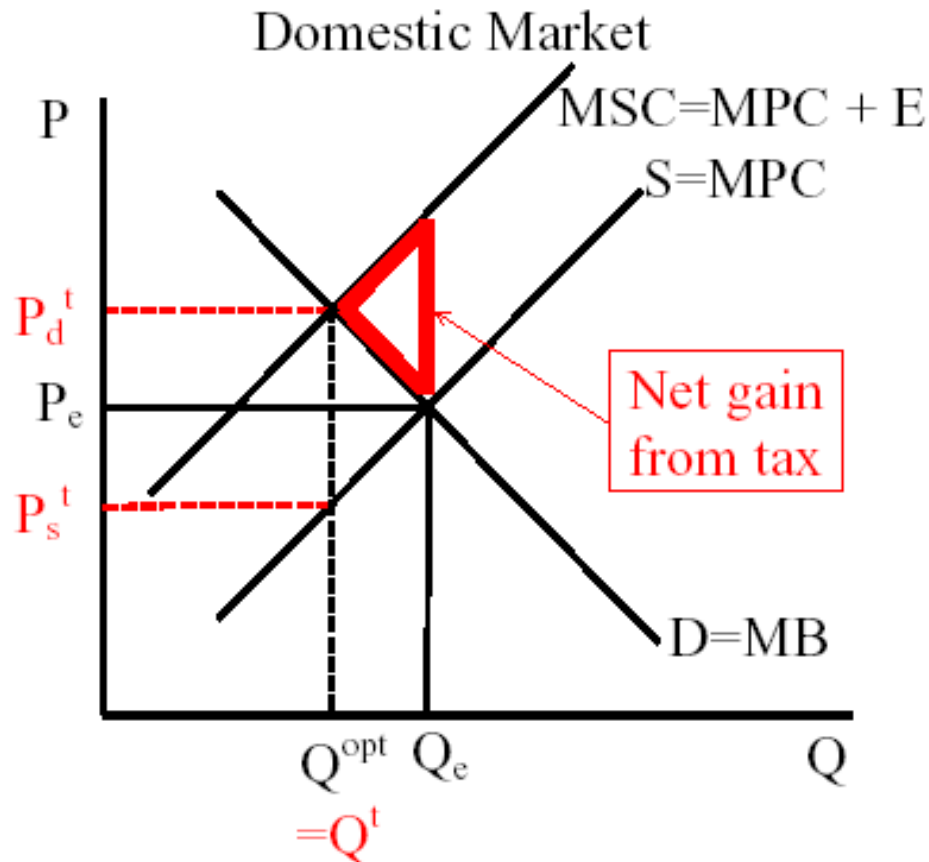
- Situation
 - External social cost arising from production, such as pollution or threat to public safety.
- Policies
 - Tax on production
 - Regulation of quantity produced
- Possible cases to consider
 - No trade, no distortion
 - No trade, with distortion
 - Small open economy, no distortion
 - Large open economy, no distortion
 - Small open economy, with distortion
- Goal
 - Find optimal policies

Case I: No trade, No distortion



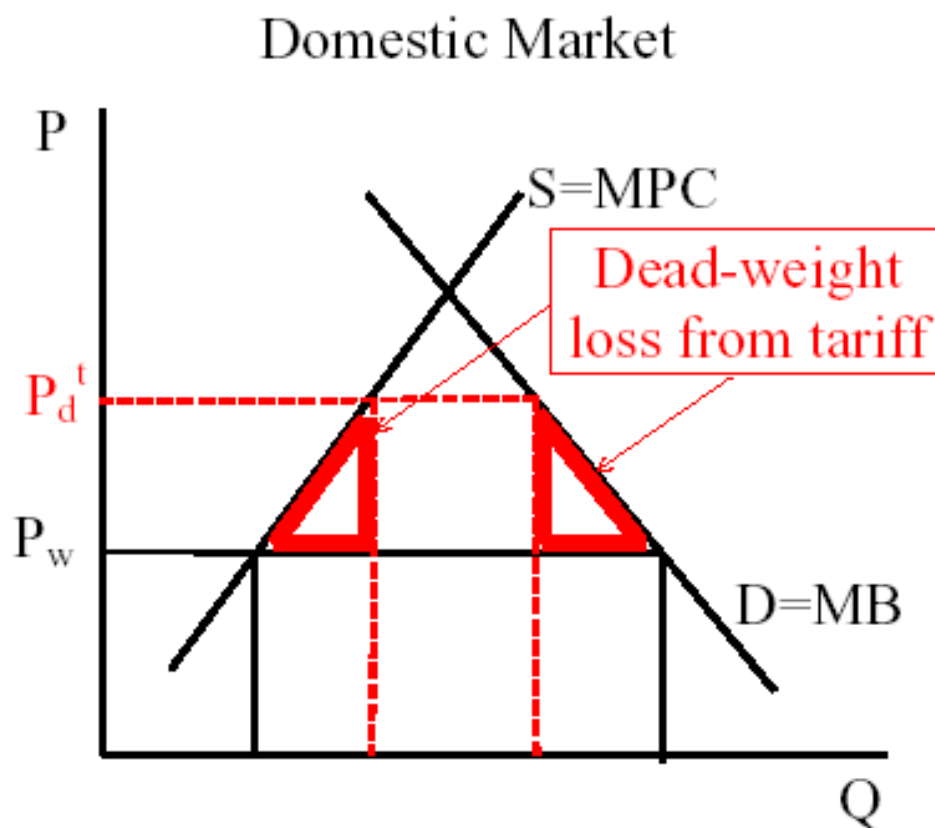
- Market gets it right.
- Tax or regulation causes deadweight loss.

Case II: No trade, With distortion



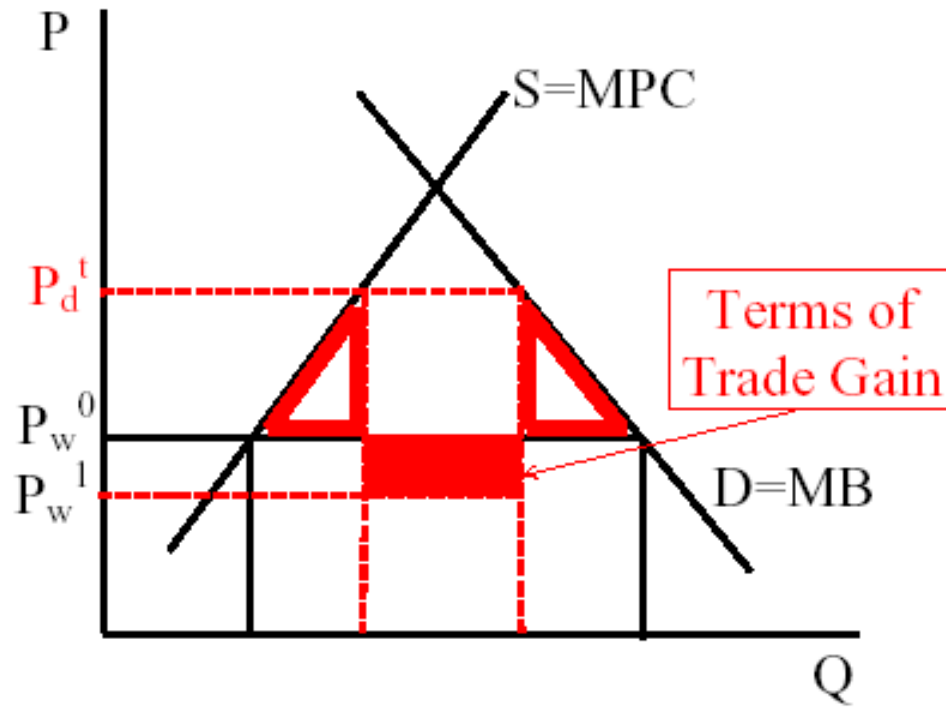
- Market gets it wrong.
- Tax or regulation can offset externalities and get it right. (but problem is producers may not cooperate).

Case III: Small Open Economy, No Distortion



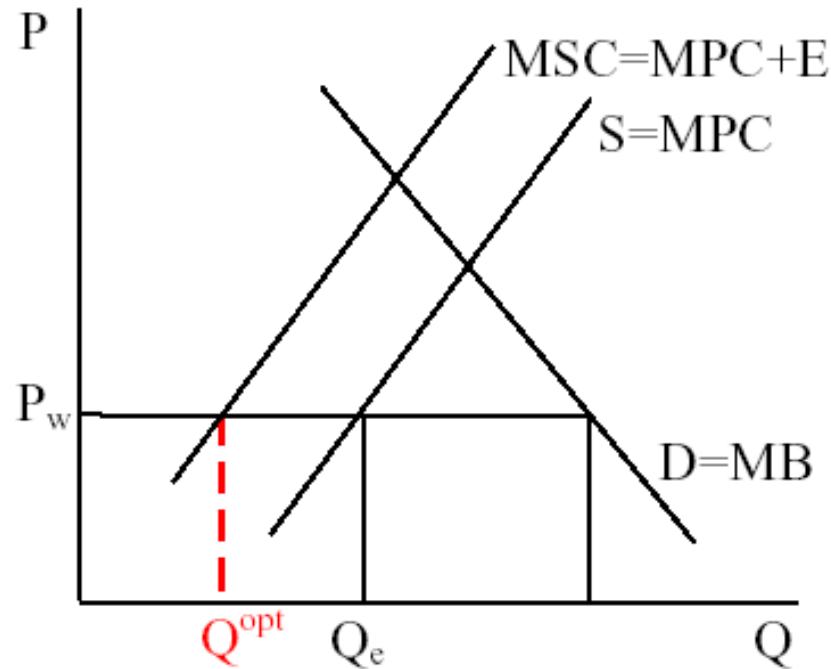
- Free trade gets it right.
- Tariff causes deadweight loss, but note that gains accrue to suppliers.

Case IV: Large Open Economy, No Distortion



- For a large country, a tariff raises the domestic price but lowers the world price from P_w^0 to P_w^1 .
- The higher domestic price causes the two triangles of net welfare loss, as in the small-country case, but the lower world price generates also the red triangle of the TOT gain, which is a portion of tariff revenue not offset by consumer loss..
- Therefore, a large country may gain, but at the world's expense.

Case V: Small Open Economy, with Distortion

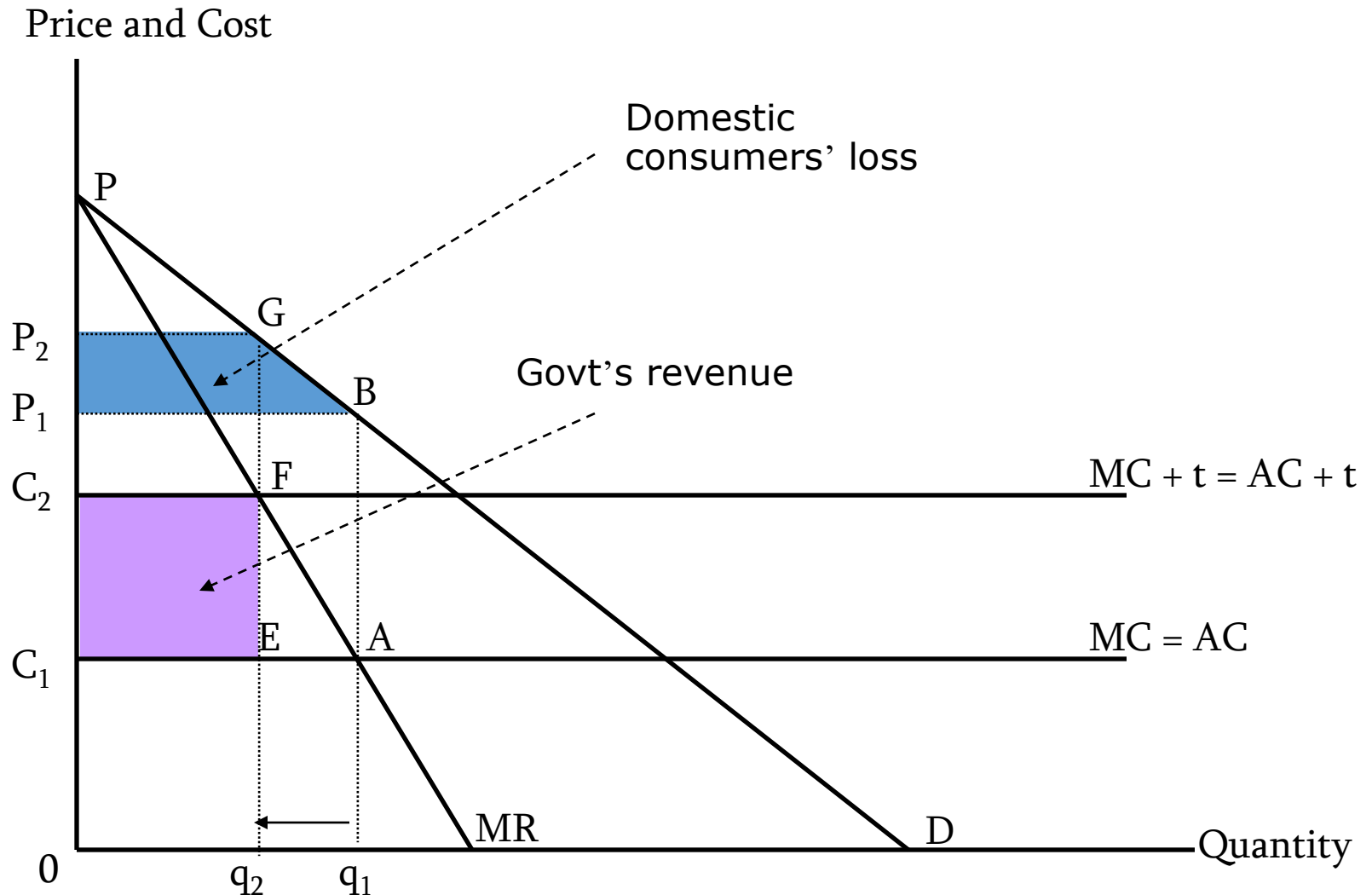


- Optimal policies: Tax = E, or Regulation of $Q = Q_{\text{opt}}$.
- Now suppliers bear the full burden of tax, get less rent from regulation, perceive trade as unfair, and may form a lobbyist to get some sort of protection, such as a tariff equal to the externality tax.

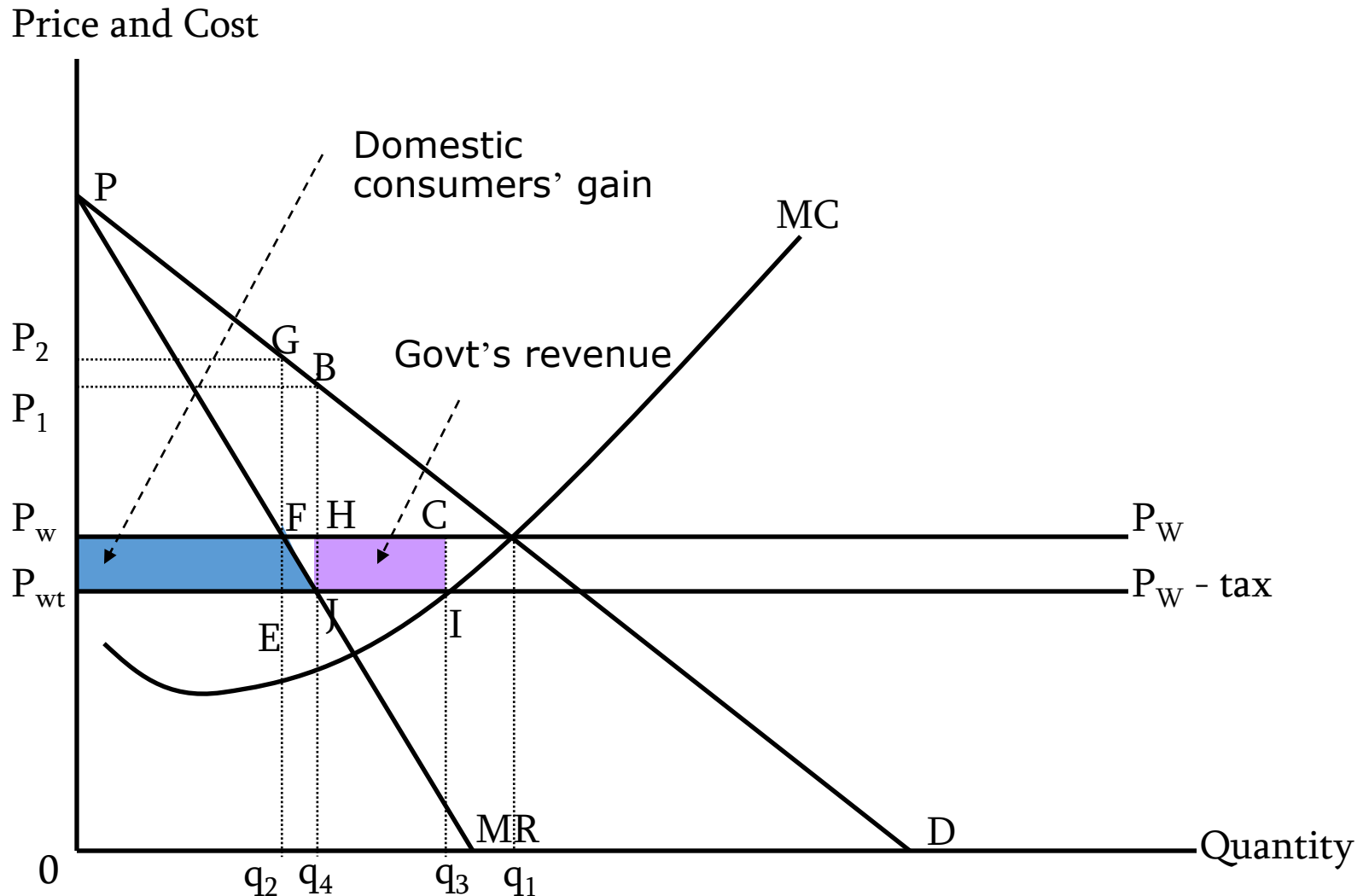
Other Issues

- To what extent is it helpful for domestic policies to be coordinated?
- Will governments act for the best? Possible conflicts between the best for 'a country' and the best for the world exist. Are the incentives confronting governments such that it is in their interest to select policies that will be optimal for the world? Or do they need to be restrained from using policies that will hurt each other?
- From terms of trade effect, to what extent do these price changes matter for policy choice? And how can these affect the work of international institutions?
- Further technical barriers, such as standards, measures mainly directing to trade in services, intellectual property, environment, and labours.

Tariff to Extract Foreign Monopoly Profit



Export Tax to Extract Profit from a Domestic Monopoly



Cons

- Tariffs, the distribution of incomes and rent-seeking activities
- The infant industry argument
- Growth, protection and welfare
- Income distribution and domestic saving

Import Quota

- Every quota has an equivalent tariff that produces the same market result.
- However, the welfare implications are not the same.
- No government revenue generated.
- The difference between the international price and domestic price of the import good is an economic quota RENT, which may accrue to
 - The domestic importer/retailer,
 - Or the foreign supplier/ foreign government,
 - Or the home government,
 - Or may be distributed among the three.

Import Quota

- All in all, import quota is worse than tariff
 - DWL + administrative costs.

Subsidy to an import-competing industry

- with an equivalent subsidy, producers are equally as well off as when the tariff was in place.
- However, the welfare effect is different.
 - No loss of consumer surplus.
 - Producers receive subsidy transfer.
 - But the burden of the policy falls on the taxpayers.

Trade Policies Imposed on Exports

- Export Taxes
 - Levied only on home-produced goods that are destined for export and not for domestic consumption
- Export Subsidies
 - Negative export taxes
- All in all, they
 - Interfere market mechanism
 - Distort the pattern of trade from that of CA.
 - Reduce world welfare.

Export Taxes

Export Quota

Export Subsidies

- A payment by the government to a firm or individual that ships a good abroad.
- When the government offers an export subsidy, shippers will export the good up to the point where the domestic price exceeds the foreign price by the amount of the subsidy
- It can be either specific or ad valorem
- An export subsidy raises prices in the exporting country while lowering them in the importing country.
- In addition, and in contrast to a tariff, the export subsidy worsens the terms of trade.
- An export subsidy unambiguously leads to costs that exceed its benefits.

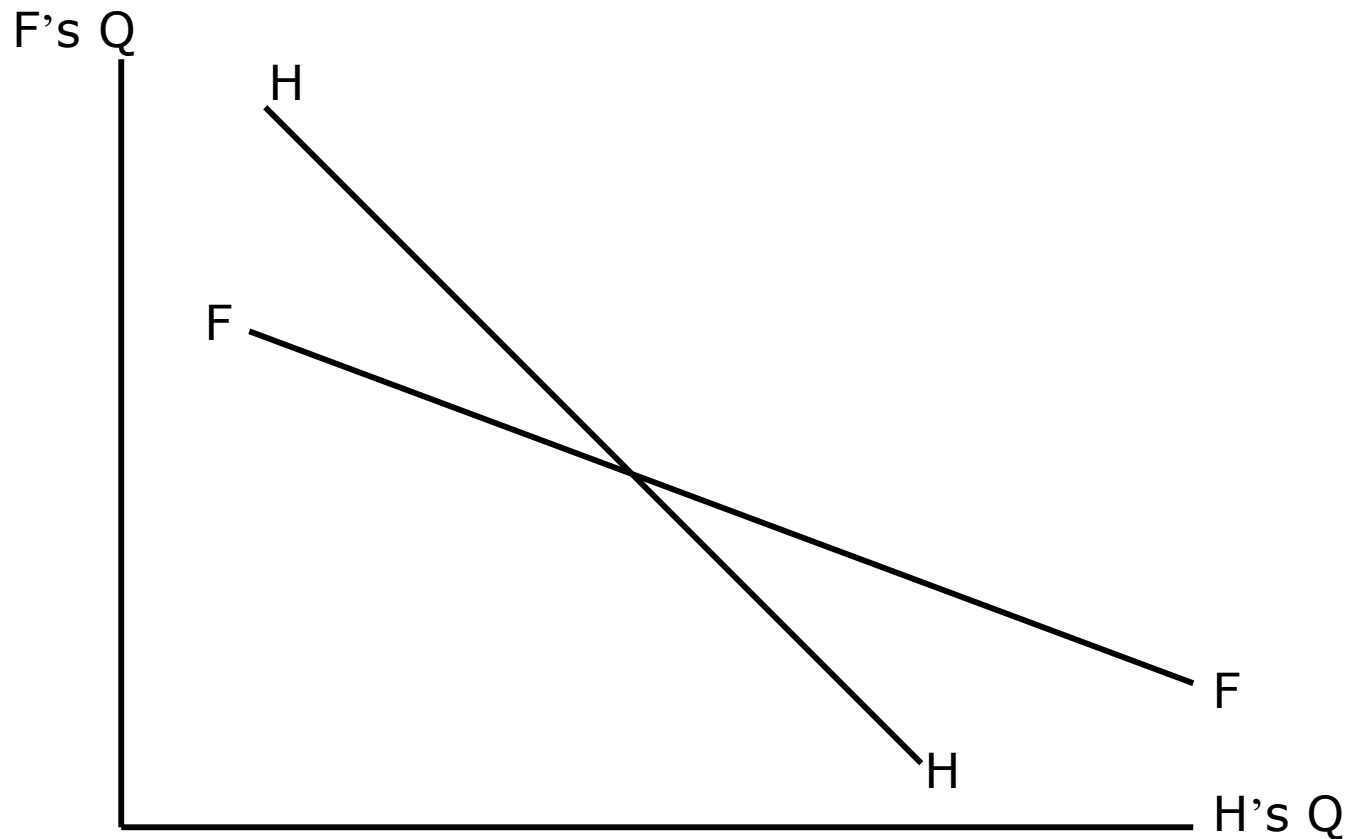
Further Considerations

- International trade policies and national strategies toward industrial development
- Tariff to promote export through R& D
- Export subsidy in duopoly
 - Reaction function
 - Game theory → a determination of dominant strategy
- Strategic trade policy

Economies of Scale in a Duopoly Framework

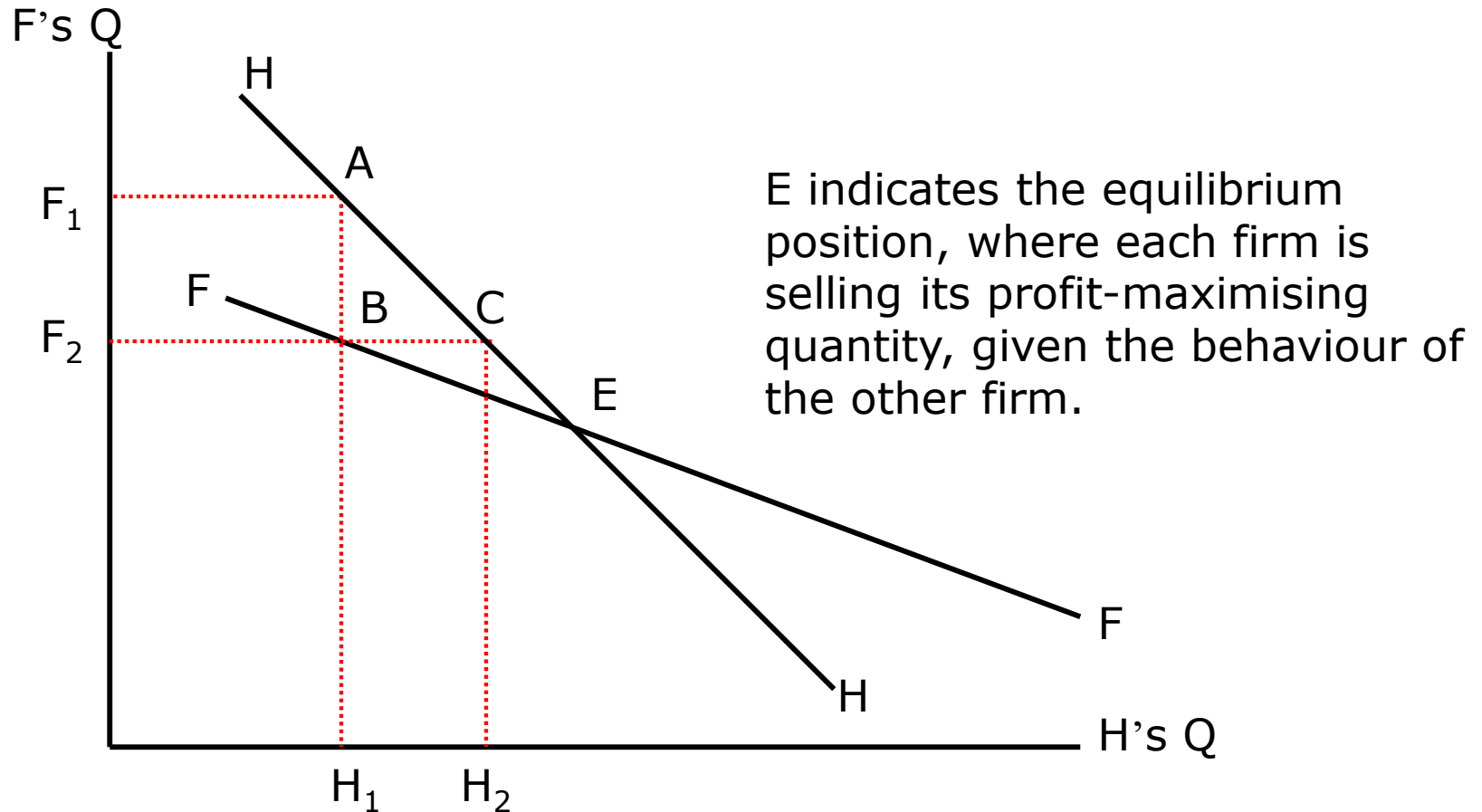
- Given
 - Economies of scale are associated with production
 - Two profit-maximising firms sell the same output in the third market.
 - They recognise interdependence – each of which take the actions of the other firm into account when making its own price and output decisions.
 - That is, $TR_H = f(Q_H, Q_F)$

Home and Foreign Sales in a Third Country Market

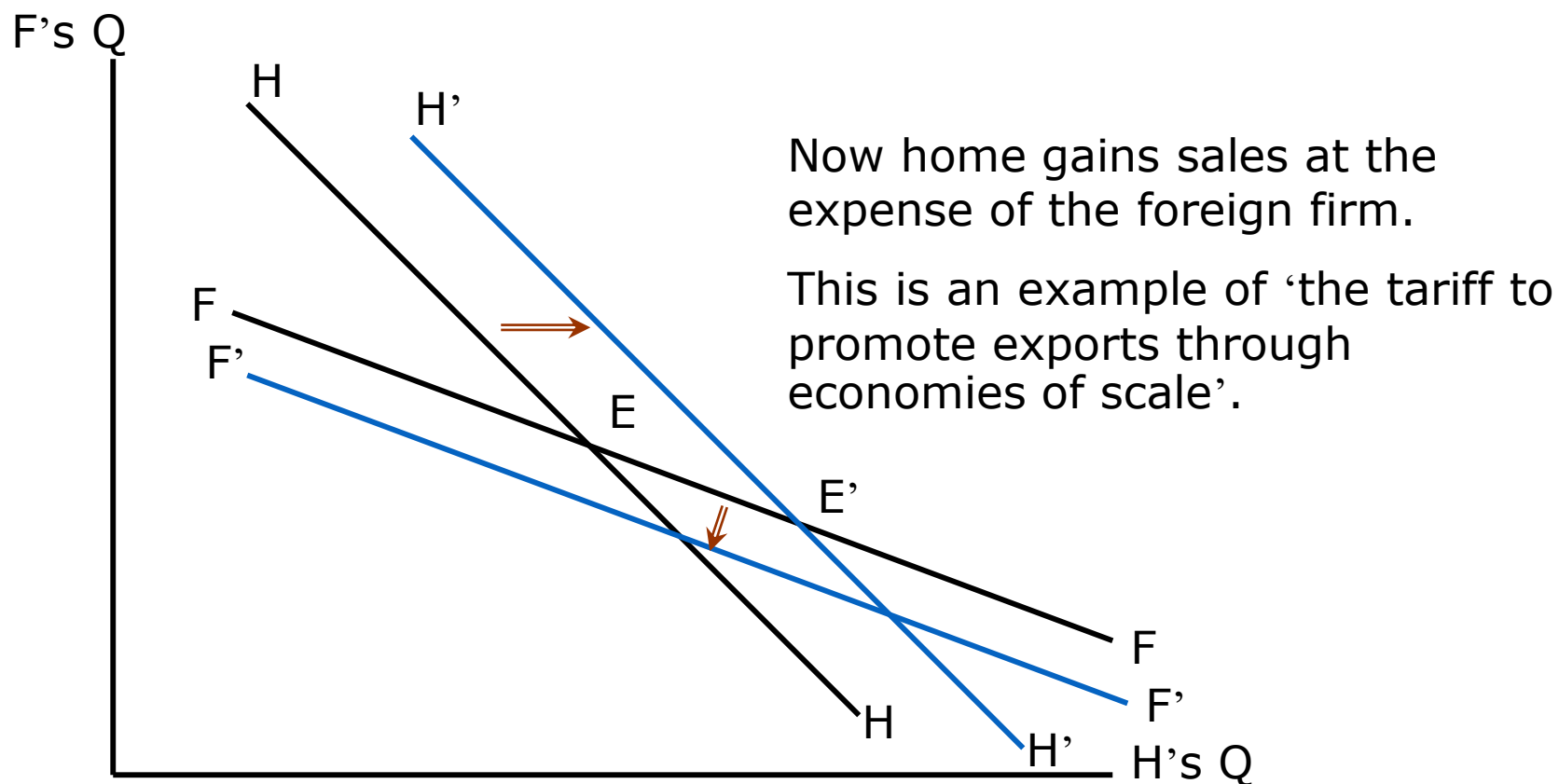


- Firms maximise profit along the reaction function.
- If F increases Q , the demand for H firm's product will fall, so will the price and profit opportunities for the home. That's why the reaction function is downward-sloping.

Home and Foreign Sales in a Third Country Market

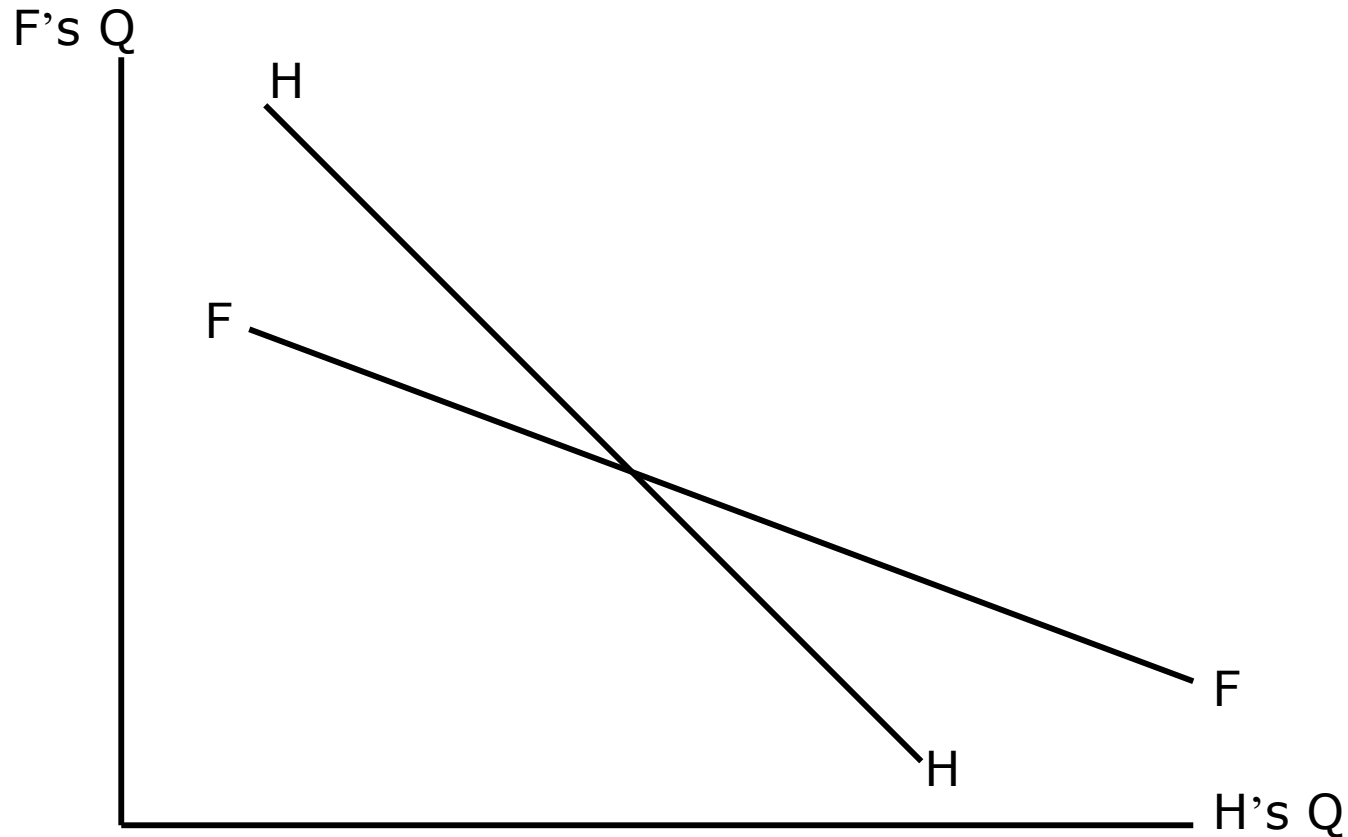


Home and Foreign Sales in a Third Country Market



- Suppose that Home country imposes a tariff or import quota on import of the goods of foreign firm. → Domestic output can rise. As EOS takes effect, MC falls. HH shifts to the right.
- Similarly, MC in foreign increases, causing FF to shift down.

Home and Foreign Sales in a Third Country Market

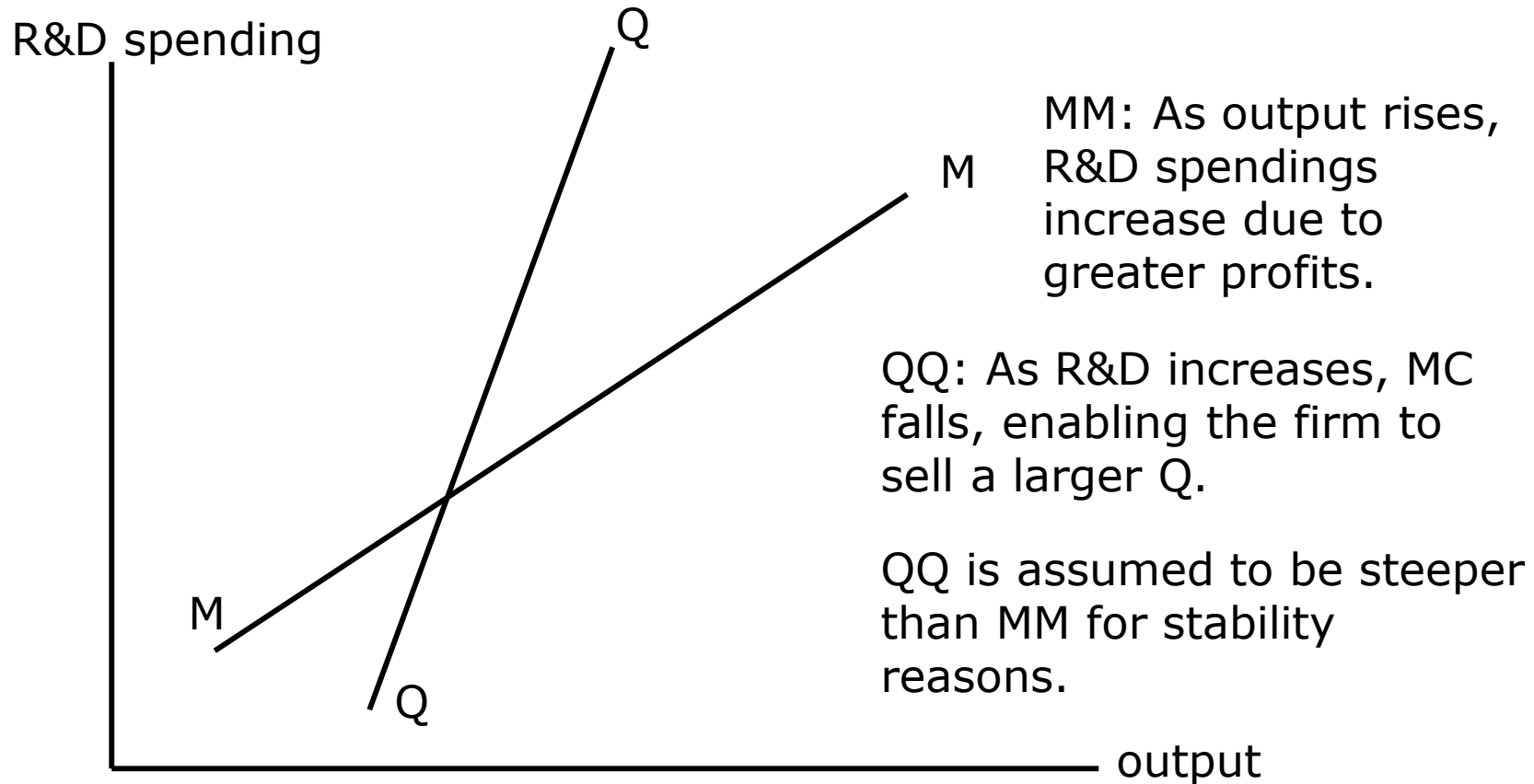


- This idea recommends domestic producers initially been protected can emerge as a leading exporter of the product.

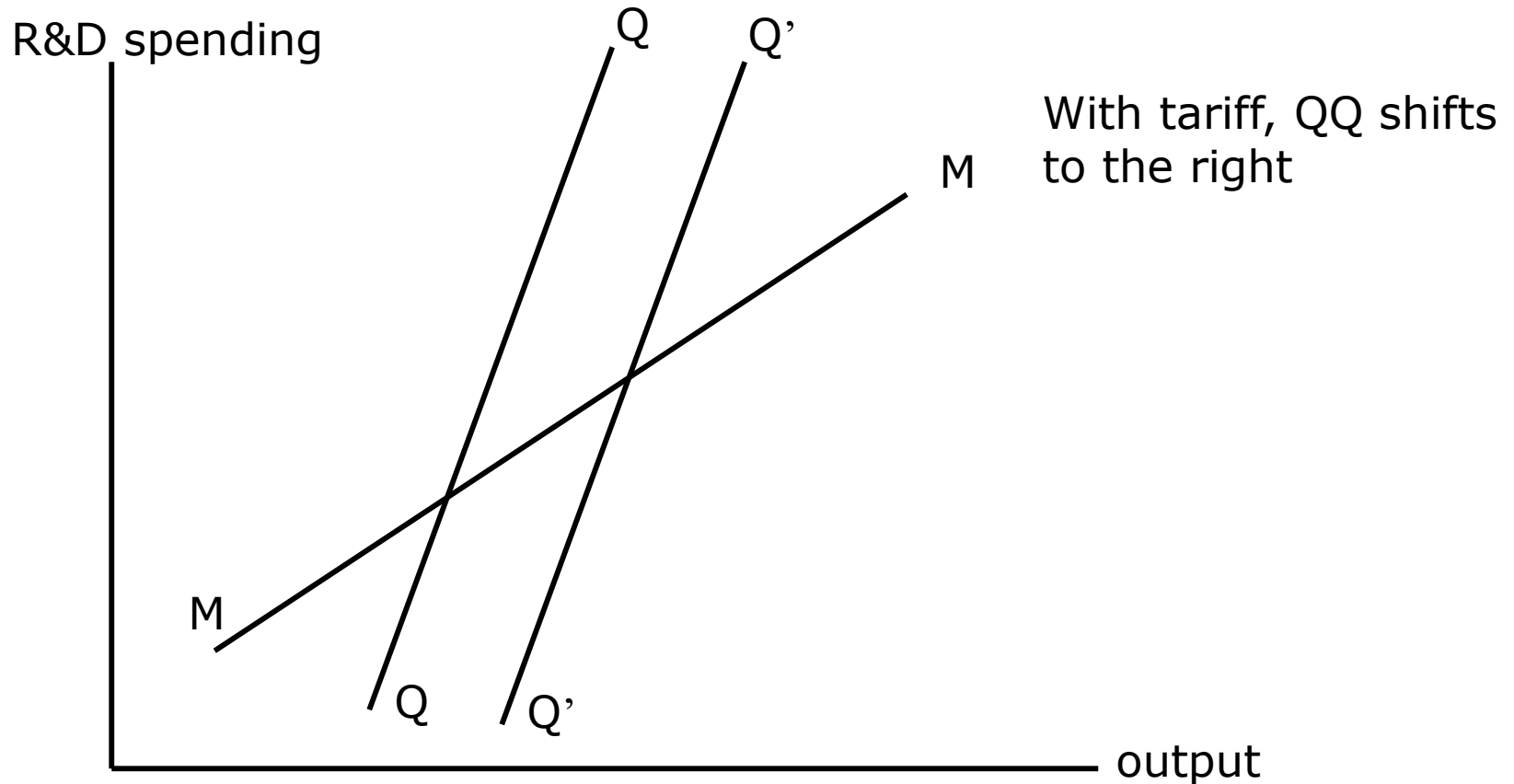
Home Sales and R&D

- Given
 - A duopoly market
 - Constant marginal cost
 - For a given level of output, MC negatively depends on investment in R&D. (greater R&D pulls MC down).

Home Sales and R&D

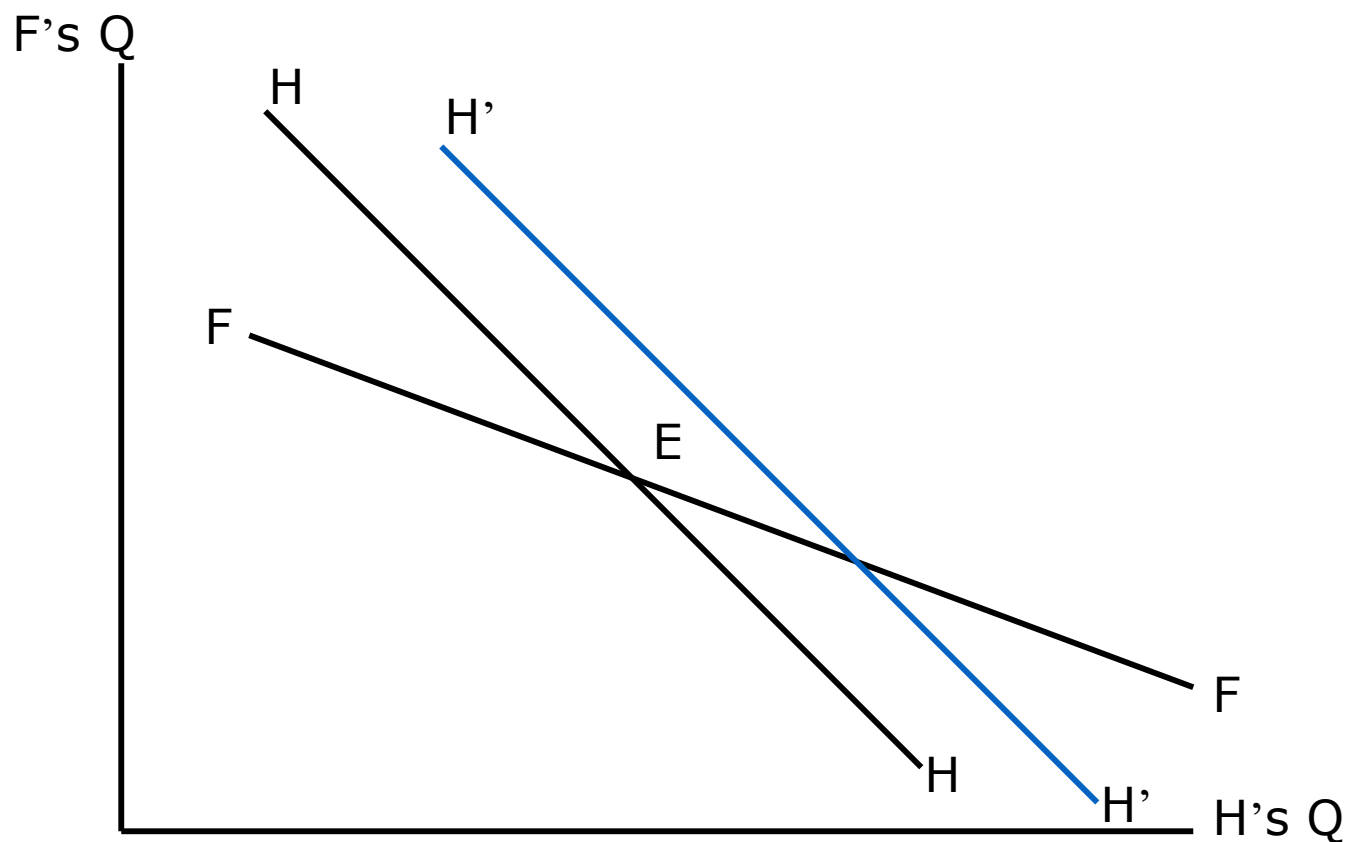


Home Sales and R&D



- The consequences of protection are similar to those in the EOS model.

Export Subsidy in Duopoly



- Export subsidy given to home producers would enhance home's sales.
- The success depend on when the policy is announced, and whether (& how) the foreign would react.

Game & Payoff Matrix

Free trade		F	
		Produce	Not produce
H	Produce	$(-20, -20)$	$(200, 0)$
	Not produce	$(0, 200)$	$(0, 0)$

No certain outcome to this game

Game & Payoff Matrix

Free trade		F	
		Produce	Not produce
H	Produce	$(-20, -20)$	$(200, 0)$
	Not produce	$(0, 200)$	$(0, 0)$

Subsidy of 50 given to Home.		F	
		Produce	Not produce
H	Produce	$(30, -20)$	$(250, 0)$
	Not produce	$(0, 200)$	$(0, 0)$

Strategic Government Intervention

- All above frameworks can also be applied to government's decision regarding to the rate of tariff.
- Duopoly/ game framework allows us to take into account the possibility of retaliation.
- Don't forget that the game can be played
 - Cooperatively
 - Non-cooperatively
- Total welfare may be raised if negotiations are successful.

Lessons for Policy

- From the theory, two results:
 - In absence of 'distortions'
 - Markets work well
 - Intervention hurts
 - In presence of distortions
 - Intervention is needed
 - Theory suggest how to do it.
- Implications for international trade in practice:
 - Free trade is best
 - Distortions should be corrected with domestic policies.
 - Domestic policies need to be calibrated
 - Not too much
 - Not too little