



国际经济学

贸易的政策工具

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提纲

1 Motivation

2 The Instruments of Trade Policy

- Types of Protection and analytical tools
- Effect of Tariff
- Import Quotas
- Export Subsidies
- Other Instruments of Trade



1 Motivation

2 The Instruments of Trade Policy



Motivating words



Donald J. Trump ✓

@realDonaldTrump

关注

Tariffs are the greatest! Either a country which has treated the United States unfairly on Trade negotiates a fair deal, or it gets hit with Tariffs. It's as simple as that - and everybody's talking! Remember, we are the "piggy bank" that's being robbed. All will be Great!

上午4:29 - 2018年7月24日

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3万 2万 9万



Kris Koana @KrisKoana · 7月25日

回复 @realDonaldTrump

Mr. President:

鲁晓东

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Kris Koana @KrisKoana · 7月25日

回复 @realDonaldTrump

Mr. President:

If tariffs are the greatest, why do u need to give \$12B of taxpayers' money to farmers who are hurt by the effects of your tariffs?

& other Americans, not just farmers, will feel the effects of the tariffs, & won't get any of that \$12B.

Have u thought this through?

39 40 353



Motivating Example

- “Chicken Tax” originally a retaliation by Lyndon Johnson’s administration to tariffs imposed on U.S. exports of chicken to Europe (early 1960s)
 - Tariff protected European chicken producers but it was defended by arguing that hormone use affected male virility
- U.S. retaliated with a 25% tariff on imports of light commercial trucks (still in place 50 years later!)
- Retaliation was focused on Germany (one of the main political proponents of the original tariff) and Volkswagen in particular



Volkswagen Produced Trucks?





Tariffs Perpetuated

- Volkswagen stopped producing light trucks, but by then the “big three” auto and truck producers were concerned about competition from Japan
- Chrysler, Ford, GM successfully lobbied to keep a 25% tariff
- For a while, Subaru’s response to the tariff was to introduce a “passenger” vehicle (subject to the substantially lower 2.5% tariff)



Meet the Subaru BRAT





Indirect and Unforeseen Costs

- Latest firm to be hit by the tariff is Ford — one of the initial proponents of the tariff!

- Ford produces and sells the Ford Transit as a commercial truck in Europe
- ... but the “truck” looks quite different when it is shipped to the U.S., before being reconverted into a truck





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Different Types of Protection

- The classic instrument of protection is the **tariff**, a tax on imports
 - these can be either specific (a fixed charge per unit) or advalorem (as a fraction of the value of imported goods)
- **Export subsidies** are another form of protection (e.g., European agricultural goods)
- **Import quotas** are quantity restrictions (import side)
- **Voluntary Export Restraints (VERs)** are analogous to import quotas but on the export side
- **Regulations** of various types may act as protection



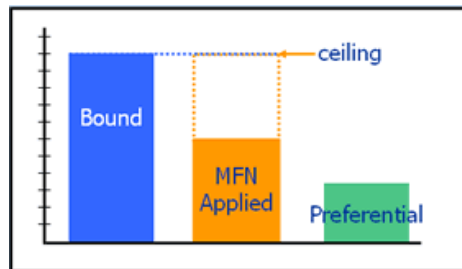
Types of Tariffs

■ Classification on the Basis of Criterion for Imposition

- Specific Tariffs 从量税
- Ad Valorem Tariffs 从价税
- Compound Tariffs 复合税
- Sliding scale tariff 滑准税
- Tariff Quota 关税配额

■ Classification on the Basis of Discrimination

- Most-Favored Nation Tariffs MFN 最惠国关税
- Preferential Tariffs 歧视性关税
- Bound Tariffs 约束税率





Partial Equilibrium Analysis

- We next study the effects of an import tariff in *partial equilibrium*
- By that we mean that we focus on the effects of a tariff on an industry that is “small” relative to the size of the economy
- By “*small*” we mean that:
 - No income effects of trade policy feeding back into demand
 - No effect on wages (or exchange rates) which might feed back into the supply side
 - Do not worry about the trade balance being equal to zero
- Then we can use standard supply and demand analysis

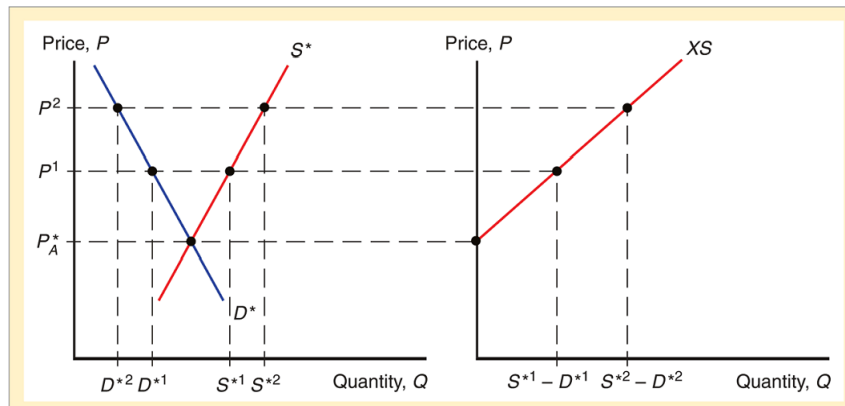


Export Supply Function

- Denote by P the equilibrium price in the industry under study
- Naturally, when P goes up there will be an incentive for
 - domestic producers to expand production
 - domestic consumers to reduce demand
- Overall, we have that exports (when positive) will go up
- Or, more simply, the export supply function is upward sloping



Graphical Derivation of XS 出口供给曲线



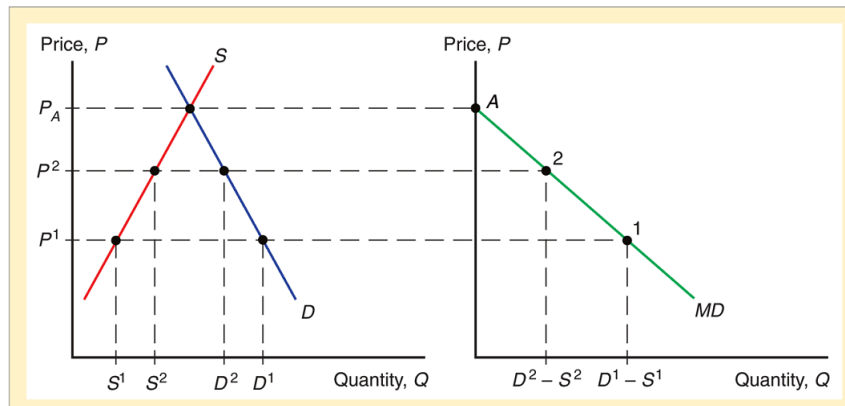


Import Demand Function

- What happens when P is lower than P_A^* ?
- Then the country imports the good
- And the lower is P , the larger is the volume of imports
- Hence, the import demand function is downward sloping



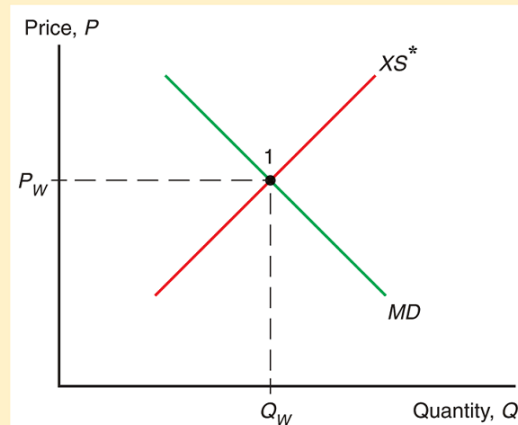
Graphical Derivation of MD





Equilibrium

- the equilibrium will achieve where MD and XS^* intersect.
- Say, domestic import demand equals foreign export supply
- This determines the equilibrium world price P_W
- Q_W is the amount of export/import





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Effect of Tariff-大国情形

- 思考：美国对来自中国进口商品征收关税，关税的实际承担者是谁？
- Now suppose that the Home country levies a specific **tariff** t on imports from Foreign
- Foreign producers will not be able to sell at Home unless the price difference between the domestic and foreign markets is at least as large as the tariff
- At the original price, there is excess demand in the domestic market and excess supply in the foreign market
- The price will tend to rise in the domestic market, while
- it will tend to fall in the foreign market

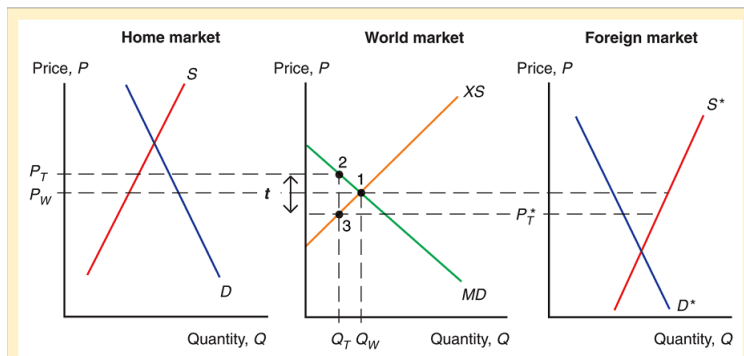
总结

引进关税就好比在两国的价格之间插上了一个楔子



Graphical Analysis

- The difference in prices will settle at $P_T - P_T^* = t$, but the domestic price goes up by less than t (always?)



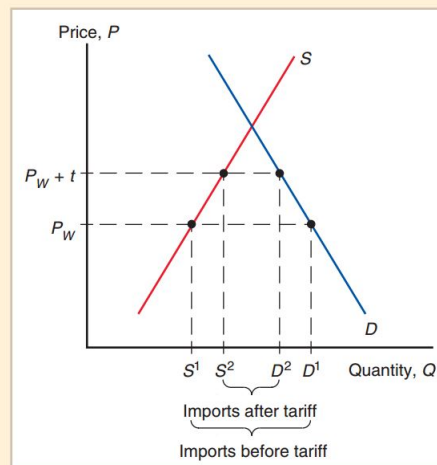


Effect of Tariff-小国情形

Figure 9-5

A Tariff in a Small Country

When a country is small, a tariff it imposes cannot lower the foreign price of the good it imports. As a result, the price of the import rises from P_W to $P_W + t$ and the quantity of imports demanded falls from $D^1 - S^1$ to $D^2 - S^2$.





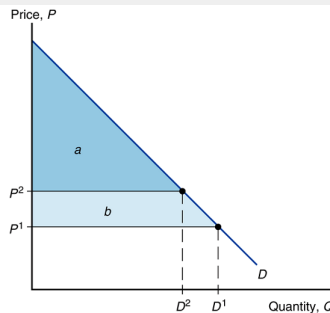
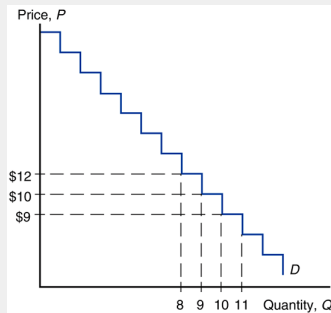
Costs and Benefits of Tariffs——评判标准

- An import tariff raises the domestic price so we expect that the tariff will *hurt consumers, but benefit producers*
- In addition, the government obtains some tariff revenue, which may be rebated back to consumers (directly or more realistically indirectly)
- What is the net effect?
- We can study this by appealing to the concepts of consumer surplus and producer surplus



Consumer Surplus

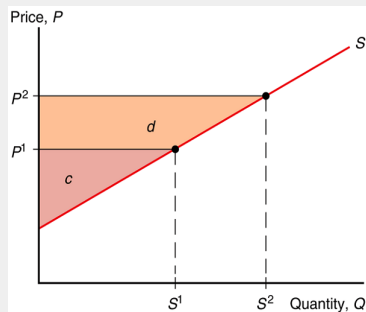
Consumer surplus measures the sum of the differences in the prices actually paid by consumers from the maximum prices they would be willing to pay for each unit consumed





Producer Surplus

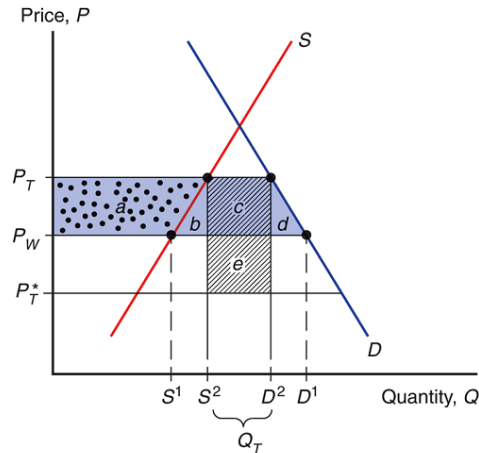
Producer surplus measures the amount that producers gain from sales by computing the difference between the price received and the minimum price at which they would be willing to sell





Decomposition of the Effect

- The price increase reduces consumer surplus by an amount $a + b + c + d$
- But producer surplus increases by a
- On top of that, $c + e$ is collected in tariff revenue





Net Effect

- Notice that the net effect is in general ambiguous: it is given by $e - (b + d)$
- The triangles b and d represent an efficiency loss
 - tariff distorts production and consumption decisions (too much production, too little consumption)
- The rectangle e represents a terms of trade gain
 - for a large enough country, the tariff will reduce the (untaxed) export price cashed by foreigners
- What happens when the country is small?



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结论

大国征收关税有可能获益，但是效果征收关税必受损



Effective Rate of Protection 有效保护率

- Do you think tariffs would be a good measures of the effective rate of protection, 或者说, 关税越高, 表示保护程度越高
 - Absolutely No (because they tax gross value, not value added)
- Example: suppose that a car sells on the world market for \$8000, and the parts that made it are worth \$6000
- The value added of the car production is \$2000
- Suppose that a country puts a 25% tariff on imported cars and domestic price goes up to \$10,000
- 那么对于汽车产业的保护率是否就是 25% 呢?
- Cost of assembly can be 100% higher than before!



定义 (有效保护率)

The effective rate of protection for a sector is formally defined as:

$$ERP = \frac{V_T - V_W}{V_W}$$

where V_W is value added in the sector at world prices and V_T is value added in the presence of trade policies.

如果要保护国内的汽车零部件生产，将会对汽车组装业造成怎样的影响

- imposes a 10 percent tariff on imported parts
- raising the cost of parts of domestic assemblers from \$6,000 to \$6,600
- no change in the tariff on assembled automobiles



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Import Quotas

- Remember that an import tariff tends to reduce the volume of imports into the domestic market
- A *more straightforward* way to achieve the same goal is by directly restricting the volume of imports: an *import quota*
- This quota is usually enforced by issuing licenses to domestic importing firms or to foreign exporting countries' governments
- If the quota is binding, the domestic price will rise because of the associated excess demand

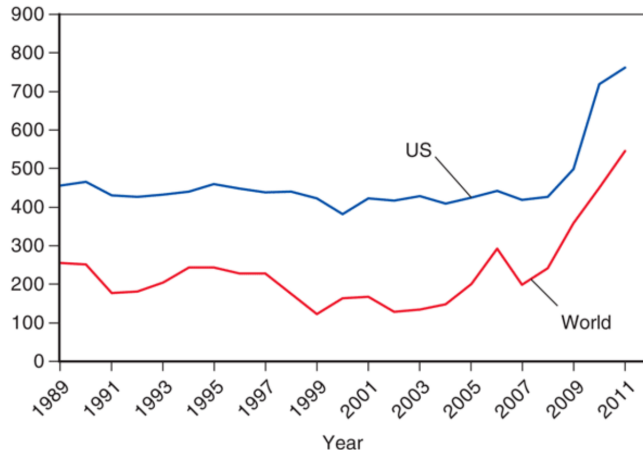


Welfare Effects of Import Quotas

- The analysis is essentially identical to that of import tariffs
 - For each tariff there is a quota that implements the same change in import volumes and prices
- But notice that the government is not collecting any tariff revenues in the quota case
- Is a quota always worse?
- Only when all quota rents are *collected by domestic agents* will the two instruments be equally effective
 - Example: U.S. Sugar quota rents go to foreign gov' s
 - Sugar quotas save jobs, but they cost \$826,000 per job



US Sugar quota



Source: U.S. Department of

Agriculture



US Sugar quota

- textbook: *If the sugar restrictions were lifted, the drop in the refined sugar price would induce a substantial expansion in the sugar-using food industry*
- Maybe they should keep the quota...





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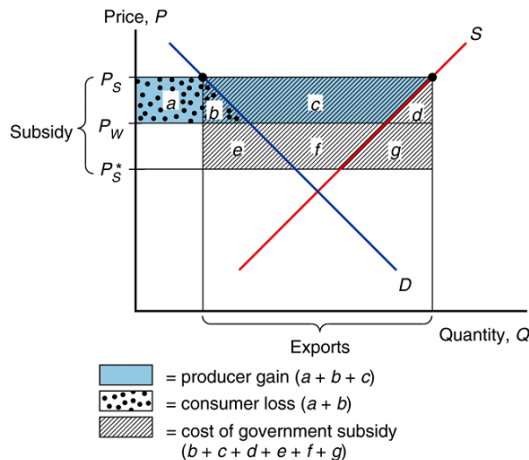
Export Subsidies

- **Export subsidies** were used very widely (now somewhat less so) by the EU under its CAP(Common Agricultural Policy)
- An export subsidy raises the price of a good in the exporting country, while lowering it in foreign countries
- 出口补贴只有在商品出口时才会获得补贴，为什么会提高国内的价格呢？
- Consumers are worse off, producers are better off, and government revenue is negative
- The welfare effects are unambiguously negative overall
- If there is a export subsidies, which market would the producer prefer? Home or Foreign?



Export Subsidies: Welfare Analysis

- Consumer surplus goes down by $a + b$
- Producer surplus goes up by $a + b + c$
- The required government expenditure is $b + c + d + e + f + g$
- So net loss is $b + d + e + f + g$
 - of these, b and d are efficiency losses
 - $e + f + g$ is the terms-of-trade loss





European Subsidies

- The European Union' s Common Agricultural Policy sets high prices for agricultural products and subsidizes exports to dispose of excess production
 - In fact, without these subsidies, Europe would be a net importer of most of these agricultural goods
- The direct cost of this policy for European taxpayers was almost \$76 billion in 2009
 - There are proposals to make these subsidies independent of production (preferred policy)



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Export Taxes

- Using an analogous analysis, one can show that export taxes may be welfare-enhancing
- Oil-producing countries sometimes use export taxes
- Or China more recently in the case of rare earth metals (tungsten)¹⁵
- 2015 年 4 月 23 日，财政部发布消息称经国务院批准取消稀土、钨、钼、钢铁颗粒粉末等产品的出口关税，自 2015 年 5 月 1 日起实施。
- 自 2015 年 1 月 1 日开始，中国稀土出口配额制正式取消



Voluntary Export Restraints

- A **voluntary export restraint** is analogous to an import quota, except that the quota is imposed by the exporting country
- These restraints are however usually requested by the importing country
- Example: limitation on Japanese exports of autos in 1981
- The profits or rents from this policy are earned by foreign governments or foreign producers
- Sometimes VERs are multilateral in nature (ex: MFA)
 - The Multi Fibre Arrangement (MFA) governed the world trade in textiles and garments from 1974 through 2004, imposing quotas on the amount developing countries could export to developed countries. It expired on 1 January 2005.



Local Content Requirements 当地成分要求

- A local content requirement is a regulation that requires that some specified fraction of a final good be produced domestically
- TRIMS (与贸易有关的投资措施协议 (Trade Related Investment Measures)) 协议的一部分
- Provides protection for domestic producers of inputs (similar to import quota) 对国内投入品制造商提供了一定的保护
- From the viewpoint of firms that must buy domestic inputs, it is a bit more flexible than an import quota (can expand domestic input purchases)
- Local content requirement provides neither government revenue (as a tariff would) nor quota rents



Other Trade Policy Instruments

- Export credit subsidies
 - A subsidized loan to exporters (Ex: US Export-Import Bank; 中国进出口银行)
- National procurement 政府采购
 - Government agencies are sometimes obligated to purchase from domestic suppliers (even when they charge higher prices than foreigners)
 - 以上行为受 WTO 《政府采购协议》(GPA) 约束
- Bureaucratic regulations 行政性法规
 - Safety, health, quality or customs regulations (can act as a form of protection and trade restriction (Ex: Poitiers 1982))



summary

TABLE 9-1 Effects of Alternative Trade Policies

	Tariff	Export Subsidy	Import Quota	Voluntary Export Restraint
Producer surplus	Increases	Increases	Increases	Increases
Consumer surplus	Falls	Falls	Falls	Falls
Government revenue	Increases	Falls (government spending rises)	No change (rents to license holders)	No change (rents to foreigners)
Overall national welfare	Ambiguous (falls for small country)	Falls	Ambiguous (falls for small country)	Falls