

Lecture 19

Political Economy

Inquires into the positive explanations of government behavior concerning trade policy.

Basic Postulate:

- (1) governments are rational economic actors, acting in their self interest (e.g., to get reelected).
- (2) almost every policy change creates gainers and losers

Implication of the Stolper-Samuelson theorem: regardless of whether a change in trade policy leads to a higher or lower level of welfare, it makes some groups better off and some worse off.

Two rather different ways of thinking about unilateral domestic policy formulation.

1. Median voter model: in a democracy, voters vote in their self interest. Policies must capture the median voter to be adopted.

Votes are independent of the size of individual gains and losses.

2. Lobbying models: voters/businesses make contributions to political parties. Political parties have objective functions which are weighted averages of national welfare and contributions.

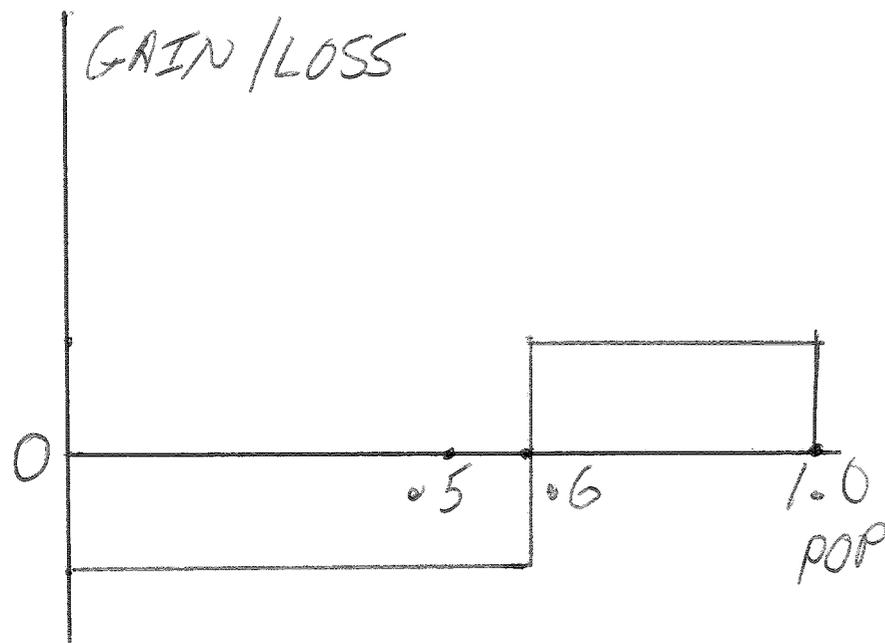
Contributions and political influence are proportional to the size of individual gains and losses.

Many lobbying models explicitly consider free-riding problems.

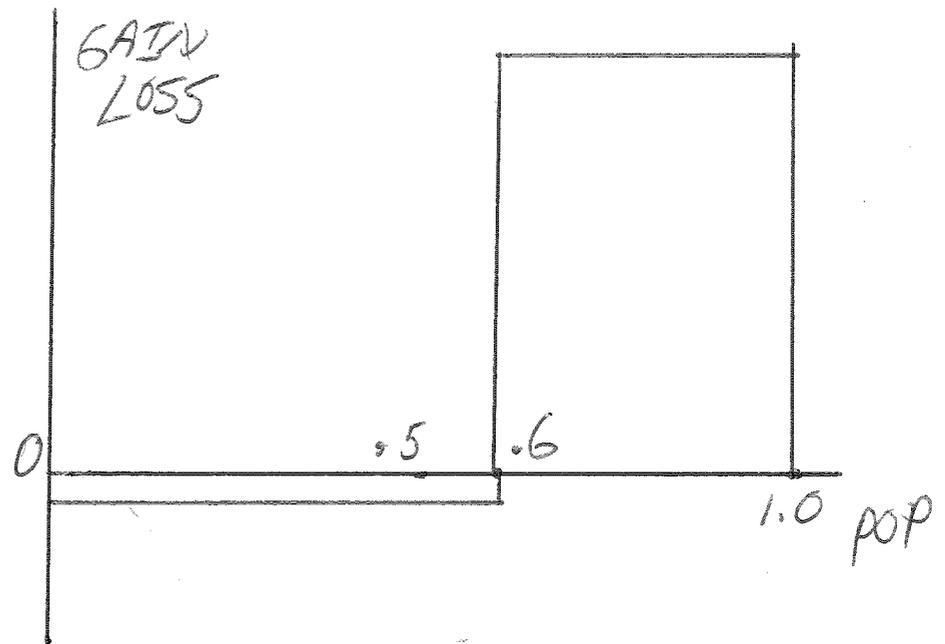
Median-voter decisions may or may not be consistent with overall welfare.

Suppose that the population size is normalized at 1, and 60% will lose from a proposed policy and 40% will gain.

Social welfare change is negative,
median voter votes no.



Social welfare change is positive,
Median voter votes no.



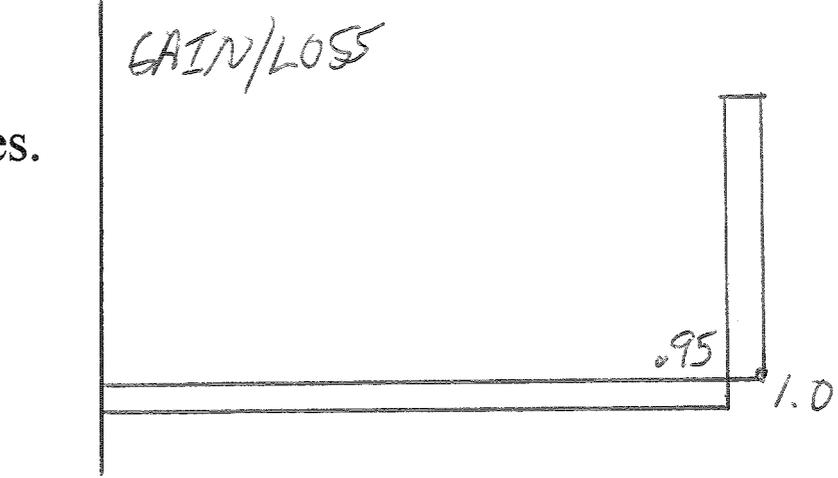
Generalizations allow for the strength of interests to be considered, free riding.

However, this certainly does not mean that the outcome is optimal. If real resources are used in voting/lobbying, then there is a deadweight loss no matter what the outcome.

Lobbying has a couple of undesirable features.

Participation Costs

Individual	A	B	C	D	E
Gain from policy	10	-3	-3	-3	-3
Cost of voting	-4	-4	-4	-4	-4
Vote???	Y	N	N	N	N
<hr/> NET	6	-3	-3	-3	-3



TOTAL = -2

Person A is the only one who vote, and the policy passes. This suggests that when the benefits (costs) of a policy are concentrated whereas the losses (gains) are diffuse, the few may get their way in spite of a social welfare loss.

Now suppose that the government is willing to adopt the position of whichever group gives the most campaign contributions (votes for sale).

Free Riding

Individual	A	B	C	D	E	
Gain from policy	10	-3	-3	-3	-3	TOTAL = -2
Maximum willingness to contribute	-10	-3	-3	-3	-3	

Suppose that there is no coordination mechanism among the potential losers. Person A offers a campaign contribution of 4. No loser has an interest in matching this offer. In the absence of an ability to collude, there are no opposing contributions and the bad policy is adopted.

Logrolling is another common phenomenon in democratic politics. Votes are traded among politicians. Suppose that there are two issues under discussion. Only person A gains from issue 1, only person B from issue two. Voting one by one means both issues are defeated. But if A and B can trade votes, both issues can pass.

Case 1 Logrolling leads to efficient outcome

Gain or loss to individual:	A	B	C	Net
Issue 1	+20	-5	-5	+10
Issue 2	-5	+20	-5	+10
Combined 1 & 2	+15	+15	-10	+20

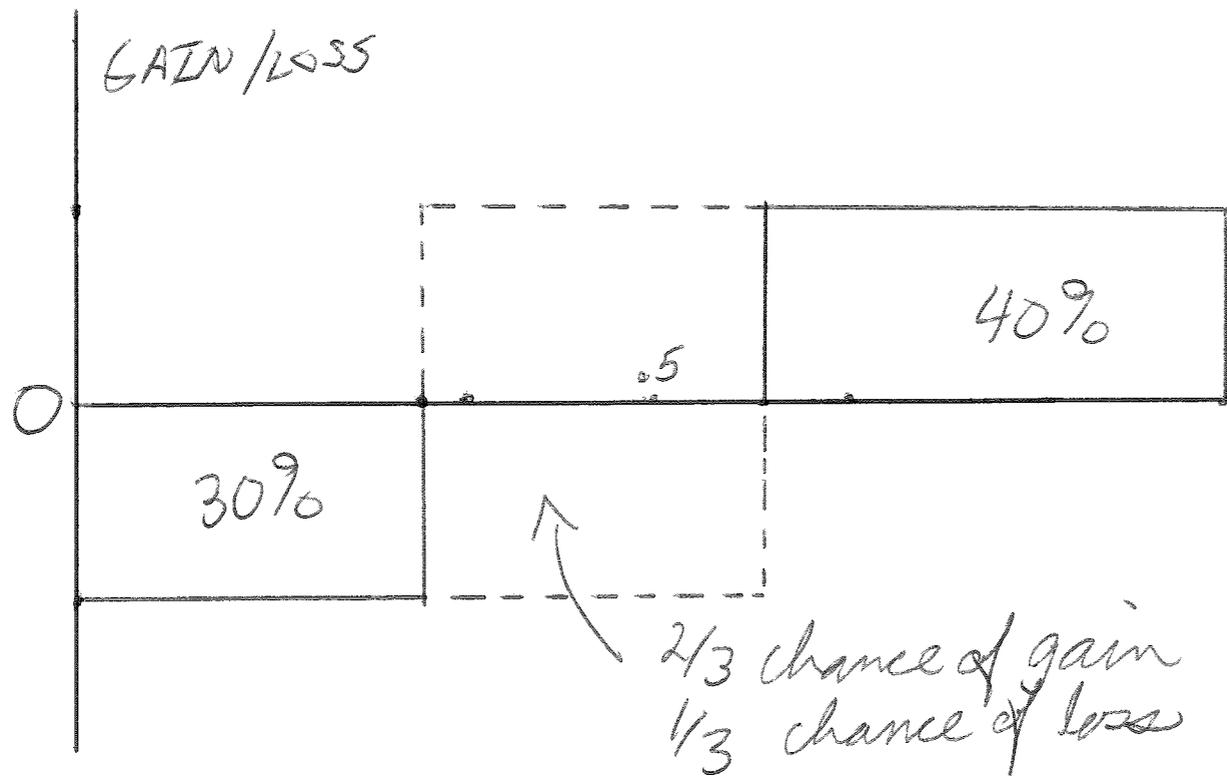
Case 2 Logrolling leads to inefficient outcome

Gain or loss to individual:	A	B	C	Net
Issue 1	+20	-15	-15	-10
Issue 2	-15	+20	-15	-10
Combined 1 & 2	+5	+5	-30	-20

Uncertainty: Status Quo Bias

It is reasonable that some groups know for sure of they are going to gain or lose from trade liberalization.

Suppose that 60% are going to gain for sure, and only 40% are going to lose for sure. But there is some uncertainty among individuals, e.g., in non-traded goods sectors. Only 40% know for sure if they will gain, 20% know for sure that they will lose, and 30% are uncertain, with 2/3-1/3 odds in favor of winning. If the 20% are risk averse, they will tend to vote "no" on the proposed policy change.



Uncertainty: the conservative social welfare function

One concept that works well in actually explaining the pattern of protection in the US is the "conservative social welfare function", essentially a "social safety net" policy. This holds that governments act to help out groups that are unexpected adversely affected by changes. This view suggests that protection goes to industries that experience sharp increases in import penetration. This theory works well in explaining US protection.

Form of Protection

Consumers Subsidies > Tariffs > Quotas

Protection seekers Quotas > Subsidies = Tariffs

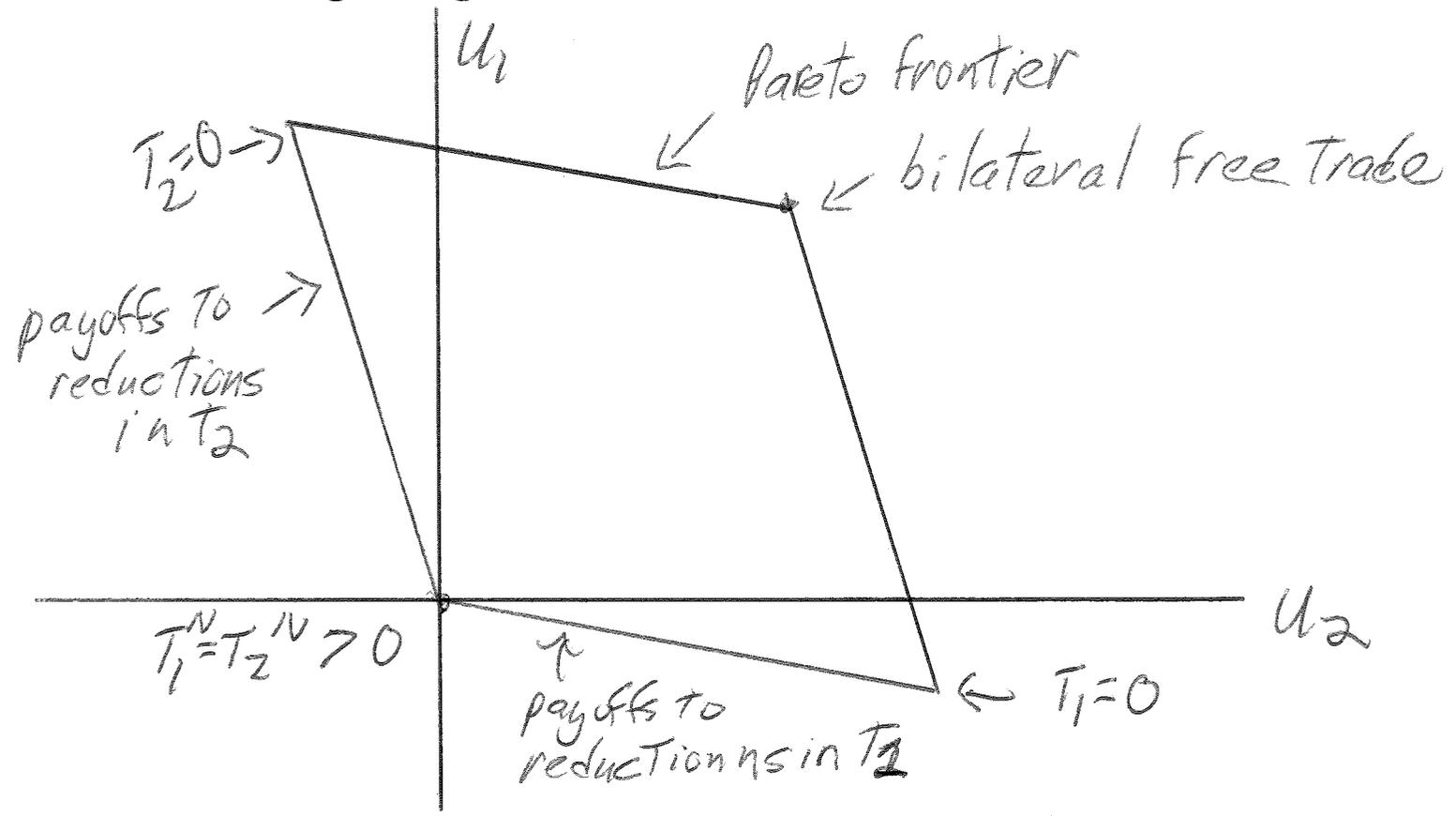
Revenue seekers Tariffs > Quotas > Subsidies

Rent Seeking and Directly Unproductive Activities

1. Rents generated by trade policies are dissipated because they provoke the wasteful use of time and effort in lobbying and in other effects to attract support.
2. Announcement that "trade policies will be considered" causes business people and workers to stop working (resulting in real lost output) and rush to Washington to lobby.
3. In the presence of rent seeking and DUPs, the best policy is to try to credibly maintain a commitment to free markets (examples, India, New Zealand).

Multiple issue, linking: Trade liberalization as multi-issue bargaining and the mutual exchange of market access.

Let there be two countries 1 and 2 and two tariff rates on their import goods. Suppose that each country initially has its Nash tariff in place, and normalize initial utilities to zero. The payoff loci between the status quo and free trade mean that neither country will reduce its tariff when bargaining on that tariff alone. But the grand utility possibility frontier is as shown, and that may support free trade as a bargaining outcome.



Mayer (AER 1984) median voter model, Feenstra's presentation, pp. 301-304.

Two-sector small economy, c denotes consumption: good c_0 is numeraire, good c is imported, superscript h denotes consumer h , I denotes income.

$$(1) \quad U^h = c_0^h + U(c^h) \quad \Rightarrow \quad c^h = d(p) \quad c_0^h = I^h - pd(p)$$

y denotes production:

$$(2) \quad f(y_0, y) = 0, \quad dy_0 + \frac{f_1}{f_0} dy = dy_0 + pd_y = 0, \quad y_0 = y_0(p), \quad y = y(p)$$

Indirect utility V

$$(3) \quad V(p, I^h) = I^h - pd(p) + U[d(p)]$$

Specific tariff t with tariff revenue T , $p = p^* + t$, m denotes imports:

Economy's endowments are L and K . Individual h owns $L = 1$ and K^h units of capital

$$(4) \quad m(p) = d(p)L - y(p) \quad T = tm(p)$$

(5)

$$I^h = \frac{1}{L}(wL + rK^hL + T) = \frac{1}{L}(wL + \rho^h rK + T), \quad \rho^h = K^h/(K/L)$$

Replace factor income with production revenue

$$I^h = \frac{1}{L}(wL + rK + (\rho^h - 1)rK + T)$$

(6)

$$= \frac{1}{L}((\rho^h - 1)rK + y_0(p) + py(p) + T)$$

$$(7) \quad \frac{dV^h}{dt} = -d(p) + \frac{dI^h}{dt} \quad \text{since} \quad (-p + U')d'(p)\frac{dp}{dt} = 0 \quad (\text{FOC})$$

(8)

$$\frac{dV^h}{dt} = (\rho^h - 1)\frac{dr}{dp}\frac{K}{L} + \left[\frac{y(p)}{L} - d(p) \right] + \frac{1}{L}\frac{dT}{dt} \quad dp = dt \text{ (fixed } p^*)$$

since $dy_0 + p dy = 0$ (producer FOC, implicit function theorem)

$$(9) \quad \frac{dV^h}{dt} = (\rho^h - 1)\frac{dr}{dp}\frac{K}{L} + \frac{t}{L}m'(p),$$

$$\text{since } \frac{dT}{dt} = m(p) + tm'(p) \quad \text{and} \quad \left[\frac{y(p)}{L} - d(p) \right] = -m(p)\frac{1}{L}$$

If the tariff is determined by majority vote, then the tariff prevailing will be that which maximizes the utility of the median voter. Let ρ^m be the capital/labor endowment ratio of the median voter.

$$(10) \quad t^m = (1 - \rho^m) \frac{dr}{dp} \frac{K}{m'(p)}, \quad m'(p) < 0$$

where $dr/dp < 0$ if the import is *labor intensive* (country is capital abundant).

If there is any *inequality*, then $\rho^m < 1$, and there will be a positive import tariff on a labor-intensive good in a capital abundant country. Higher inequality will lead to a larger tariff on labor-intensive good for capital-abundant country.

Grossman and Helpman (1994 AER)

$N + 1$ sector small economy. Good 0 is numeraire, produced with labor only. Other N goods produced with labor and sector-specific capital.

Quasi-linear utility as in Mayer,

$$(1) \quad U^h = c_0^h + \sum_{i=1}^N u_i(c_i^h) \quad \Rightarrow \quad c_i^h = d(p_i) \quad c_0^h = I^h - \sum_{i=1}^N p_i d(p_i)$$

Indirect utility V

$$(2) \quad V(p, I^h) = I^h - p' d(p) + \sum_{i=1}^N u_i[d_i(p_i)] = I^h + S(p)$$

Return to specific factor K in sector i is:

$$(3) \quad \pi_i(p_i) = \max \text{ wrt } L_i [p_i f_i(L_i, K_i) - L_i] \quad \pi_i'(p) = y(p)$$

Specific factor in sector i is owned by H_i members of the population, so

$H = \sum_{i=1}^N H_i$ is the total number of persons owning some capital and $(L - H)$

own no capital.

Owners of specific capital in industry i have welfare

$$(4) \quad W_i(p) = \pi_i(p_i) + H_i[1 + S(p)] + (H_i/L)T(p)$$

Persons who own no specific factor have welfare

$$(5) \quad W_0(p) = (L - H)[1 + S(p)] + [(L - H)/L]T(p)$$

A subset O of the industries are organized, can overcome free riding, and can make political contributions $R_i(p)$ (choosing tariffs is equivalent to choosing domestic prices). Government's utility function is:

$$(6) \quad G(p) = \sum_{j \in J_0} R_j(p) + \alpha W(p)$$

Appealing to an article by Bernheim and Whinston, they get that contributions in a Nash equilibrium are:

$$(7) \quad R_i(p) = \max [0, W_j(p) - B_j]$$

$$(8) \quad G(p) = \sum_{j \in J_0} [(1 + \alpha)W_j(p) - B_j] + \sum_{j \notin J_0} \alpha W_j(p)$$

Let $\lambda_0 = \sum_{j \in J_0} (H_j/L)$ denote the fraction of the population owning a specific

factor in an *organized* industry, the share of the population willing to make campaign contributions. Let δ_j be an indicator variable, equal to 1 if industry j is organized, zero otherwise.

Grossman and Helpman show equilibrium tariffs or export subsidies are given by:

$$(9) \quad \frac{t_j}{p_j} = - \left[\frac{\delta_j - \lambda_o}{\alpha + \lambda_o} \right] \frac{y_j}{m_j} \left[\frac{\partial m_j}{\partial p_j} \frac{p_j}{m_j} \right]^{-1}$$

Since the import demand elasticity is negative, positive tariffs go to organized industries. Free trade will be the political outcome if all industries if either everyone or no one belongs to a lobby.

If all industries are organized but not all members of the population own specific factors, then all import industries will have tariffs; that is, the specific factor owners “gang up” on workers - recall that there is no specific factor in the numeraire sector, meaning that this sector is labor intensive and has no lobby representing it.