

Lecture 12

Limits to Public Intervention: Government Failures

Direct democracy – voting.

Issues arise when using voting to reveal preferences.

Condorcet in France in the 18th century discovered that in a set of pair-wise votes, majority votes can disobey the properties of transitivity for a group.

Budget.

Low – low cost budget

Medium – same as the area norm

High – with fancy high cost stuff

Three groups in society:

Moderates, who prefer Medium, to High, to Low (45%)

Fiscal Conservatives, who prefer Low, to Medium, to High (35%)

Effective Schoolers, who prefer High, to Low, to Medium (20%)

	Preferences over Budget Levels			Percent of the vote
	First Choice	Second Choice	Third Choice	
Moderates	Medium	High	Low	45%
Fiscal Conservatives	Low	Medium	High	35%
Effective Schoolers	High	Low	Medium	20%

Table 8.1 : Two rounds of voting, pair-wise voting.

Agenda A: Compare High to Low, then winner takes on Medium

Round 1: High versus Low. High wins 45% moderates, 20% effective schoolers = 65%

Round 2: High versus Medium. Medium wins 45% of moderates, 35% of fiscal conservatives=80%

RESULT: Medium

Agenda B: Compare Medium versus Low, winner takes on High

Round 1: Medium versus Low. Low wins 35% of conservatives, 20% of effective schoolers = 55%

Round 2: Low versus High. High wins 45% moderates, 20% effective schoolers = 65%

RESULT: High

Agenda C: Compare High versus Medium, winner takes on Low

Round 1: High versus Medium, Medium wins 45% of moderates, 35% of fiscal conservatives=80%

Round 2: Medium versus Low. Low wins 35% of conservatives, 20% of schoolers = 55%

RESULT: Low

Can be more uncertain if we allow for strategic voting, or ‘sophisticated voting’ when people realize that voting against one’s own preferences in early rounds can lead to a more desired outcome in the final round.

Arrow in 1951 illustrated that any rule of voting that satisfies a basic set of fairness conditions can lead to an illogical result. A group of two or more people choosing from a set of three or more options.

First: each person has transitive preferences over the options (axiom of unrestricted domain). Recall the principle of transitivity; if A is preferred to B and B is preferred to C, then A is preferred to C as well.

Second: If one alternative is unanimously preferred to a second, then the rule of choice will not select the second (axiom of Pareto choice).

Third: The ranking for any two alternatives should not change if a third alternative is introduced (axiom of independence).

Fourth: The rule should not allow one person dictatorial power over the other members deciding (axiom of nondictatorship).

Any fair voting system that obeys these four properties will fail to ensure a transitive social ordering of policy alternatives.

A policy will be selected, but the framing of the question becomes an important determinant of what the final answer will be.

The power to set the agenda then is a powerful tool.

Figure 8.1 illustrates the concept of agenda control.

Y axis is social spending, x-axis is defense spending.

Policy makers have 'bliss points', B_1 , B_2 , and B_3 .

Around these respective 'bliss points' they have circular indifference curves, where closer in is preferred to farther out.

The status quo is the current spending on both.

“Win Sets” are the areas where a positive vote (2 yes, 1 no) are possible.

- There is a W_{13} where one and three vote yes and two votes no.
- There is a W_{12} where one and two vote yes and three votes no.
- There is a W_{23} where two and three vote yes and one votes no.

If one can set the agenda, then can propose B_1 and it will win, as it is preferred (slightly) by three to the status quo. If two could set the agenda, could propose something in either of the two other ‘win sets’ to build a majority.

As argued in the book, democratic processes do not always give us a true assessment of social values.

Governments following the ‘will of the people’ will not always be doing good.

On the other hand, the selling point may be more that it allows a way to correct really bad mistakes by voting people out.

Democratic processes “...may deny us the full benefits of a truly benevolent and wise government, but they help protect us from the harm of one that is either evil or foolish’. (P 163)

Representative democracy:

Representatives have their own interests, reelection, constituents, prestige...that may distract them from questions of what maximizes social welfare.

- Campaign contributions. Difficulty of discerning whether donors give to those who make the kinds of decisions they like or whether they influence decisions.
- Monitoring representatives is costly and time consuming. Those who have the time and money to monitor tend to be non – representative in their preferences, as they are often interest groups.
- Party discipline may influence decisions.

Rent Seeking:

Government intervention in markets can create economic rents – returns to the owners of resources over what they could earn in alternative uses. Lobbying for such interventions is called ‘rent seeking’.

Illustrate rent seeking ‘infant industry’ model by use of an import tariff.

A note on agricultural subsidies:

Estimates made in 2000 that trade restrictions by developed countries cost LDC’s more than 100 billion per year. In contrast, 2002 official development assistance was 58 billion.

Developed countries have import restrictions / subsidies directed at the products developing countries make to protect domestic industry.

Also have subsidies in the developed country that lead to reduced competitiveness of developing country products (from Roodman 2005)

	Subsidy per head of cattle	Subsidy per chicken	Subsidy per head of pigs	Subsidy per head of sheep	Net aid transfer per poor person
Australia	\$18.37	\$0.41	\$7.12	\$1.12	\$0.44
Canada	\$92.19	\$0.46	\$17.34	\$0.00	\$0.71
EU-15	\$200.09	\$0.36	\$10.52	\$35.45	\$11.03
Japan	\$160.64	\$0.23	\$5.17	\$0.00	\$2.20
New Zealand	\$2.55	\$0.47	\$0.44	\$0.05	\$0.06
Norway	\$964.98	\$0.85	\$51.50	\$91.07	\$0.75
Switzerland	\$985.87	\$2.63	\$140.35	\$15.74	\$0.46
United States	\$41.34	\$0.43	\$6.16	\$2.22	\$5.26

Standards and regulation as a way of stifling competition.
Sanitary and Phyto-sanitary, intellectual property rights, safety,
labor standards....

‘Regulatory capture’ – regulating agency eventually finds it has moved from monitoring and oversight of an industry to an advocacy / facilitation / protection of the industry role.

- “Revolving door” as people move back and forth between government and industry.
- Expertise may be more valuable in industry than in government.

Return to the price setting measures we talked about some time ago. The price floor and price ceiling.

Work through figures 8.2 and 8.3

The impact on total social welfare depends some on how the policy is implemented.

Problems of geographic representation:

Say there are 100 districts, each with 1000 people.

In 51 of the districts, 501 people support, 499 don't support a proposal. If the representative is voting according to the majority will of the constituents, there will be 51 yes votes.

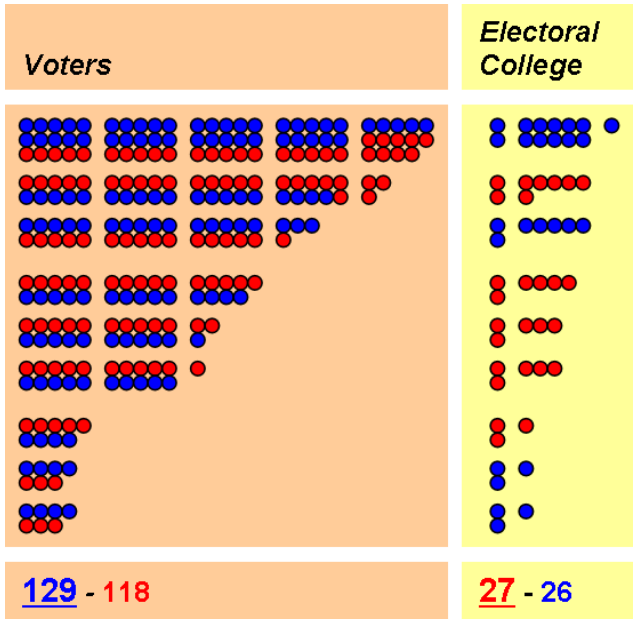
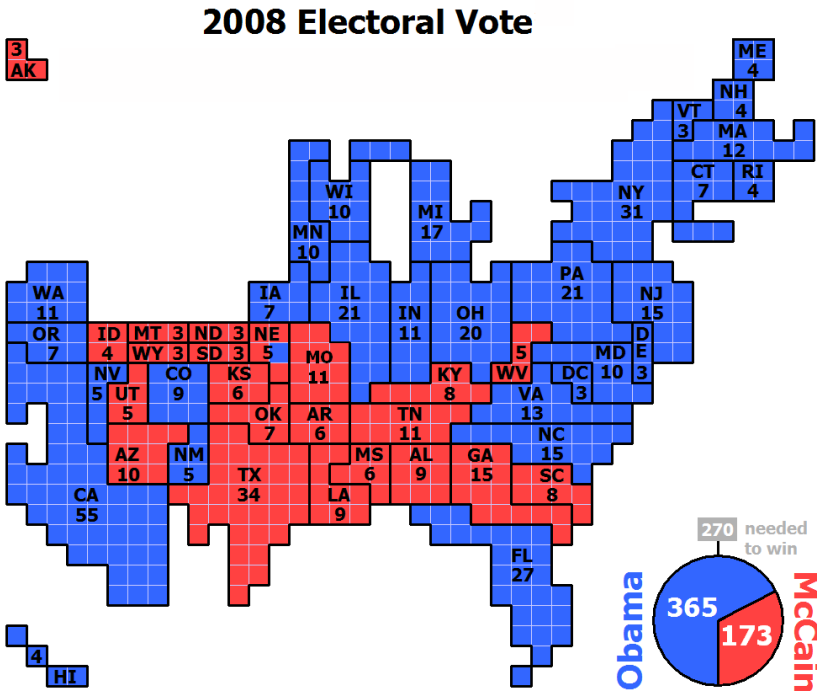
In the other 49 districts, all 1000 people are against. If the representative is voting according to the majority will of the constituents, there will be 49 no votes.

It will pass.

In the population, there are 74,449 against $[49,000 (49*1000) + 25,449 (51*499)]$

In the population, there are 25,551 $(51*501)$ for.

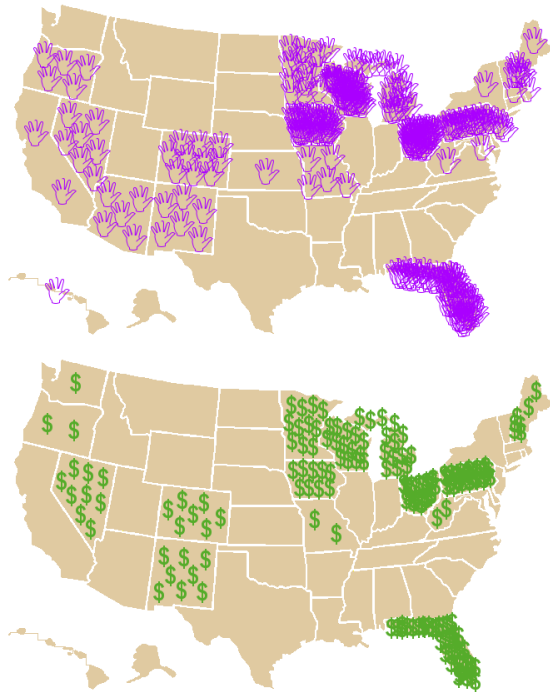
The US electoral college, Obama gets 68%. Of the popular vote he got 53%.



Conceptually, it is possible to win the popular vote yet lose the electoral vote.

	Bush	Gore
Popular Vote	47.87%	<u>48.38%</u>
Electoral Votes	<u>271</u>	266

What impact does this have?



These maps show the amount of attention given to each state by the [Bush](#) and [Kerry](#) campaigns during the final five weeks of the [2004 election](#). At the top, each waving hand represents a visit from a presidential or vice-presidential candidate during the final five weeks. At the bottom, each dollar sign represents one million dollars spent on TV advertising by the campaigns during the same time period.

From Wikipedia entry on the electoral college.

Voting and public goods.

Finding everyone's valuation is difficult if not impossible.

Even if you knew, practical issues arise about charging different people different rates.

Usually, we end up charging a uniform rate.

Median voter theorem. A project will pass if the median voter's valuation is greater than the cost to that voter.

Project is a traffic light. Total cost of light installation is \$300. There are 3 voters here who get benefits and pay the costs. Assume they split the costs evenly, so each one pays \$100 per light installed.

Three corners are being voted on, and the following represents the voters WTP.

	Fred	Barney	Wilma
Corner A	50	100	150
Corner B	50	75	250
Corner C	50	100	110

Corner A has a total WTP of 300

Corner B has a total WTP of 375

Corner C has a total WTP of 260

Which ones will pass if we vote and people vote yes if their WTP-cost is greater than or equal to zero?

Yes – no voting ignores intensity of preferences.

If the valuation of the median voter is greater than the cost to that voter, it will pass a vote with a majority.

How do we figure out WTP for public goods?

Some Methods.

1) Hedonic Methods.

Information on public good demand is embedded in price and consumption levels for private goods.

Consider the case of environmental quality. It is a implicit characteristics of a good you can buy in the private market.

We can disaggregate the observed selling price into its component parts.

We need to have some measure of the public good in question along with observed selling prices and observed characteristics of the commodity sold.

Price is a function of characteristics.

House purchaser maximizes utility subject to a budget constraint by selecting a house with a given set of characteristics and price.

Examples:

Houses next to parks.

Houses next to sewage treatment plants.

Lakefront footage requirement on northern lakes in Wisconsin.

The county extension agent came to us with a question. Counties in northern WI were considering raising the minimum frontage requirement from 100 feet to 200 feet. There was debate about whether this was a good thing or a bad thing.

Externalities from zoning:

- 1) Positive externality. You look across the lake and see fewer houses. If part of your enjoyment of your lakefront house is some kind of wilderness view, this helps you. “Amenity effect”
- 2) Negative externality. You can’t develop your property in the way you could before the law changed. The value of your property in development has been reduced. “Development effect”

What is the net impact?

892 transactions for undeveloped properties between January 1986 and December 1995.

- The amenity effect is significant and positive.
- The development effect is not significant (but is negative).
- The 200 foot rule increases property values by \$15.82 per foot (12.3%).
- Also, an increase in the percent of lakefront that is held as public lands significantly increases the value of a property.

2) Travel Cost methods.

If there is a site specific public good, you can look at the implicit cost of travel to the site as an implicit price of access to the site.

The individual's utility depends on the total time spent at the site, the quality of the site, the individual's opportunity cost of time, and other "stuff". The individual maximizes utility subject to monetary and time constraints.

Lake Michigan Anglers.

97 anglers followed from May to September 1996 and 1997. We called every two weeks and recorded trip information. At the end of the study, we collected background demographic information including their income levels.

Mostly Milwaukee-Racine area anglers.

Estimated seasonal value of fishing: \$500 to \$700 dollars.

Current catch rates are on the order of $\frac{1}{2}$ to 2 fish per hour (depending on the day / season / year).

What is the expected benefit of increasing this rate by 1 fish per hour?

Findings suggest somewhere in the \$1000-\$2000 range.

Most of the fish these people are fishing for are raised in hatcheries.

What is the amount that should be spent on providing the public good of swimming “easter eggs” so that a higher rate per hour catch is possible?

3) Private expenditures on a substitute in the absence of a public good.

Not as common in the literature, but interesting results can be obtained.

The question here is how much do people pay privately in the absence of public good expenditure?

We each hire private security firms in the absence of public security.

We buy bottled water in the absence of a clean municipal water supply – or – how much do we spend per year boiling municipal water since it is not safe to drink unboiled.

We buy kerosene to fuel our lamps since there is no electricity.

Can you provide a public good that substitutes for what people are already paying for at a lower price than they are currently paying?

4) Contingent Valuation.

Used to estimate values for environmental amenities and other non-market goods and services.

Surveys are designed to elicit monetary values for non-market goods contingent upon creation of a market or other means of payment.

The transactions are hypothetical.

What are you willing to pay for a specified change (or to prevent a specified change from happening)? The response is a direct measure of the individual's valuation of the non-market good or service.

Willingness to pay for wind power.

Madison Gas and Electric was considering implementing a wind power program. They were going to build some windmills. If you signed up, you would voluntarily pay more to help meet the costs of the windmill, and decrease the use of coal to generate electricity.

We took this opportunity to compare actual willingness to pay with hypothetical willingness to pay.

We told one sub-sample they could sign up for \$24 per year, another at \$48 per year, ... up to \$288 per year. They said yes or no. The hypothetical group had the same intervals, but it was

phrased “if we were to offer this, and it would cost you __, would you agree to pay, yes or no”

How many actually signed up? 24%.

How many said they would hypothetically? 43%

How much did people sign up to purchase on average? \$59.

How much did they agree in the hypothetical case to purchase on average? \$101.

We asked a follow up question about how certain they were about their answer in the hypothetical case. For those who were more certain, the actual and hypothetical converged.

Some contrasts between private and public incentive structures:

FURTHER ISSUES TO BE AWARE OF IN POLITICAL PROCESS OF DECISION MAKING

Planning horizon in public sector is tied to election cycle (for elected officials).

Plays out through the media. Importance of media attention for policy makers as means of communicating to voters their importance. Importance of media to campaigns in terms of advertising.

Role of policy 'windows'. Reactive to event, leads to policy outcomes that respond to the event rather than perhaps underlying issues as a whole.

View of sunk costs may differ, public and private.

Private (or at least market forces) make sunk cost not relevant – do the marginal revenues outweigh the marginal costs of going forward.

Public may have less discipline than private in that it may consider sunk costs as backing down is admitting a mistake that can be used against politicians in a political context.

Public decisions and political exposure may lead to a throwing good money after bad approach.

Importance of precedents in public decision making. If you bail out one, you have to bail out others. If you allow a provision for

one state's residents, you may have to allow it for others. Firms don't have to be as consistent.

In the political arena, perception framing by stressing risk, uncertainty, and worst case scenarios (balanced against the other side minimizing risk, uncertainty, and best case scenarios). In a contested policy debate, there are incentives to move to the extreme rather than consensus.

Summary on page 178 of why socially optimal outcomes may diverge from politically selected outcomes.

Nature of the interests among the voting population	Concentrated interests have a strong incentive to monitor and lobby
	Diffuse interests have weak incentives to monitor and lobby
	Organized diffuse interests that overcome collective action problems monitor and lobby
	Diffuse interests may be mobilized around sudden media attention to the topic and creation of a 'policy window'.
Incentives of elected representatives generally	Focused on how actions will influence elections, underemphasize long run cost, overemphasize short run benefits
	Emphasis on risk or cost of opponents proposals to take advantage of risk aversion
Incentives of elected representatives with regard to their constituency	Seek benefits of a policy for the district even if it is to the detriment of society
	Seek to capture the contracts for factor suppliers from the district even if they are not the lowest cost or best suppliers.

Government creates organizations to supply goods and services that the private market cannot or we think should not supply (national defense, legal institutions, monetary policy, EPA,...)

Some differences between the incentive structures in a private firm and a public organization.

Firm, maximize profit as revenue minus cost. Incentive to minimize cost to maximize return.

Public organization - write a project budget, get awarded a given amount with budget lines for different activities, and scramble to spend out by the end of the fiscal year. The amount you get next year is often a function of how much you got this year, so not much incentive to underspend. Also, can't use distribution of unspent money as an incentive structure (without getting in trouble at least we hope).

Pay scale in private sector at least in theory based on the value of the marginal product.

Pay scale in the public sector a function of something like a GS table with time served as a way of moving up:

GS-1	\$ 20,324	-	\$ 30,097
GS-2	\$ 22,851	-	\$ 34,046
GS-3	\$ 24,933	-	\$ 38,372
GS-4	\$ 27,990	-	\$ 43,074
GS-5	\$ 31,315	-	\$ 48,190
GS-6	\$ 34,907	-	\$ 53,719
GS-7	\$ 38,790	-	\$ 59,704
GS-8	\$ 42,960	-	\$ 66,111
GS-9	\$ 47,448	-	\$ 73,019
GS-10	\$ 52,252	-	\$ 80,421
GS-11	\$ 57,408	-	\$ 88,349
GS-12	\$ 68,809	-	\$ 105,897
GS-13	\$ 81,823	-	\$ 125,926
GS-14	\$ 96,690	-	\$ 148,806
GS-15	\$ 113,735	-	\$ 155,500

This does not reflect the value of the marginal product! The range is generally for geographic cost of living differences.

Difficulty in assigning a precise economic value to the output of public agencies. What is the marginal value of another ship for the Navy?

From the Washington Post:

FDA pressured to combat rising 'food fraud'

By [Lyndsey Layton](#)

Washington Post Staff Writer

Tuesday, March 30, 2010

“The expensive "sheep's milk" cheese in a Manhattan market was really made from cow's milk. And a jar of "Sturgeon caviar" was, in fact, Mississippi paddlefish.... “Food fraud” has been documented in fruit juice, olive oil, spices, vinegar, wine, spirits and maple syrup, and appears to pose a significant problem in the seafood industry. Victims range from the shopper at the local supermarket to multimillion companies, including E&J Gallo and Heinz USA. Such deception has been happening since Roman times, but it is getting new attention as more products are imported and a tight economy heightens competition. And the U.S. food industry says federal regulators are not doing enough to combat it. ...”

<http://www.washingtonpost.com/wp-dyn/content/article/2010/03/29/AR2010032903824.html?hpid=topnews>

Another issue is the incentive to innovate. In the private sector, there is a profit motive to shift up the production function. In the public sector, there is not the same pressure.

Private sector has less protection of employees – easier to hire and fire.

Public sector, due to the change in parties in charge, has to have policies in place to protect civil servants.

Private sector can change in response to changing factor prices.

Public sector, lines are in the budget, and moving funds across lines is a difficult process.

Decentralization can lead to there being multiple levels of governance some in a hierarchy, some not, and also separation of powers at a given level of governance.

Binghamton has the “Broome County Regional” and Ithaca has “Tompkins County Regional” airport. Currently, Broome County gets \$30,000 per day from running their own airport, while Tompkins County gets \$50,000 per day (these are net of all possible considerations). Under state guidance, a new regional airport will be constructed if each municipality agrees to close their own airport. If they do agree to close their airport, they will evenly split the profit generate of the jointly managed “Southern-Tier Regional Airport”, which is estimated to be \$120,000 per day. If Broome County closes its airport, but Tompkins County does not, it is estimated that Broome County will earn \$0 per day, while Tompkins will earn \$75,000 per day. If Tompkins county closes its airport, but Broome county does not, Broome county is estimated to earn \$70,000 per day, and Tompkins county earns \$0 per day. In normal form, this can be written as follows.

	Broome County	
	Close (BC)	Don't Close (BC)
Tompkins County	Close (TC) \$60, \$60	Don't Close (TC) \$0, \$70
	Don't Close (TC) \$75, \$0	Close (TC) \$50, \$30

Payoffs are in thousands of dollars.

One other sense of Government Failure to note – a failed government.

“America is now threatened less by conquering states than we are by failing ones” (2002 National Security Strategy)

The 2006 strategy is to:

- 1) Promote transformational development in “...reasonably stable developing countries...with an emphasis on those with significant need for concessional assistance and with adequate (or better) commitment to ruling justly, promoting economic freedom, and investing in people.”
- 2) Strengthen fragile states.
- 3) Support strategic states.
- 4) Provide humanitarian relief.
- 5) Address global issues and other special, self-standing concerns.

How to do policy analysis and advice in the context of a fragile state is an issue to consider in the global sense.