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Econ 854

Week 3: Voting, II: Information and Bargaining

I. The Economics of Imperfect Information
   A. Probability language allows us to **quantify uncertainty**. Even though people rarely put a precise number on each event, they almost always have some probabilities in the back of their minds.
   B. When people are asked difficult questions, they often say "I don't know." But what if they HAD to guess? In real life you must.
   C. Common sophism: "No one can 'know' X."
      1. If this means "No one can know X **with certainty**," then it's obvious but uninteresting.
      2. If this means "No one has any idea at all about X," then it is clearly false.
   D. *Search theory* is the most general theory of economic action under uncertainty.
   E. Basic assumptions of search theory:
      1. More time and effort spent "searching" increase your probability of successful discovery.
      2. Searching ability differs between people.
      3. People can make a reasonable guess about the probabilities of different events and their ability to influence those probabilities.
   F. Main conclusion: People keep searching until E(MB)=E(MC).

II. Political Knowledge and Rational Ignorance
   A. How much do voters know about politics? Search theory suggests that we look at the marginal cost and expected marginal gain of acquiring political knowledge.
   B. Easy part: The marginal cost is whatever time you would have to spend reading the newspaper, watching the news, going to politicians' websites, etc.
   C. Harder part: What are the marginal benefits of political knowledge?
   D. Naive answer: The marginal benefits are better government performance stemming from a more informed electorate.
   E. The naive answer is false because it ignores the logic of collective action. For all practical purposes, the MB of political information is 0.
   F. With positive MC and 0 MB, what is the privately optimal quantity of political information to acquire? None. Hence the concept of **rational ignorance**. When knowledge gives you no practical benefit, and time is money, ignorance (the decision not to acquire knowledge) is rational.
   G. So why do voters know anything at all?

1. "Off-label" benefits - not looking stupid in front of your boss
2. Negative cost - curiosity ("politics is fun"); ubiquity of information

III. Empirical Evidence on Political Knowledge

A. Are voters really "rationally ignorant" with regard to politics? Yes.

B. From Dye and Zeigler: Quiz of adult Americans finds that...

Item	**%**
Know President's term is 4 years	94
Can name governor of home state	89
Can name vice president	78
Know which party has U.S. House majority	69
Know there are two U.S. senators per state	52
Can name their Congress member	46
Aware Bill of Rights is first ten amendments to U.S. Constitution	41
Can name both of their U.S. senators	39
Can name current U.S. secretary of state	34
Know term of U.S. House members is 2 years	30
Can name one of their state senators	28

C. Moving to specific policies, voters look far worse; once you reach foreign policy, the level of ignorance is shocking.

D. Voters are however fairly able to correctly answer questions about affairs, scandals, personalities, pets, and so on.

E. If voters' goal is to pick sensible policies, this seems like a crazy way to allocate mental resources.

F. We will be exploring the practical significance of voter ignorance throughout the course. For now, it is worth pointing out two things:

1. People are rational ignorant about many things besides politics. I am rationally ignorant about car mechanics, the activities of the firms I invest in, and so on. My performance on exams about these subjects would also be "shockingly low."
2. For my car or my portfolio, I can just look at the bottom line. Does my car work? What has my rate of return been? A key question to explore as we go on: Do voters have a similar bottom line to check – and do they check it?

IV. Informed Voting as a Public Good

A. The preceding argument only shows that it is *privately* optimal to know little about politics: If *you* weigh *your* costs and *your* benefits, it doesn't help *you*.

B. Acquiring political information appears to be a public good. Society benefits when the electorate is more informed, since sensible policies are more likely to prevail. But these benefits go to the informed and uninformed alike, leaving no private incentive to gather information.

C. What could be done to raise the level of voter information?

1. The popular but costly way: Subsidize information (public service ads, etc.)
2. The unpopular but cheap way: Franchise restrictions

V. Explaining Variation in Political Knowledge
   A. Some econometrics from Delli Carpini and Keeter.
   B. As usual, the claim that "everyone is knowledgeable about something and has something to contribute" is false. Political knowledge of all sorts is highly correlated: People who know a lot about foreign policy usually know a lot about domestic policy, the Constitution, etc.
   C. The strongest predictor of political knowledge is education - not income.
   D. Interesting factoid: Even though education levels greatly increased over the last 50 years, political knowledge scores remained quite constant.
      1. This suggests that education might merely be a proxy for IQ (though by many measures that's risen too).
      2. Alternately, TV and other forms of entertainment might have counterbalanced rising education levels.
   E. One alternative to voter competency testing, then would simply be to restrict the vote to college graduates. This would drastically raise voters' average information levels.
   F. Probably the second-best predictor of political knowledge, controlling for other variables, is gender. Males out-perform females on tests of political knowledge, even when their education, income, age, and other characteristics are the same.

VI. Voter Ignorance, Principal-Agent Problems, and Optimal Punishment
   A. The politician-voter relationship is easy to analyze as a principal-agent problem. The voters are principals - they want politicians to do a good job, keep their promises, etc. Politicians are the agents with their own agenda.
   B. Simple model: politician does what voter wants iff: $B_v > B_s - pD$, where B_v are the benefits a politician gets from doing what voters want, B_s are the benefits of shirking, p is the probability of being caught shirking, and D is the punishment for shirking.
   C. Many believe that rational ignorance allows politicians to shamelessly and repeatedly violate voter trust.
   D. But as Becker observed, when information is available but costly, a natural way to align incentives is *random monitoring combined with harsh punishment*. Just set $D \geq \frac{(B_s - B_p)}{p}$.
   E. Ex: If the media catches a politician taking a $1 bribe, voters could decide to never vote for him again, or even give him jail time.
   F. Something to think about: Politicians seem far more likely to ruin their careers with a slip of the tongue, an affair, youthful drug use,

petty bribery, or other indiscretions than by aggressively pursuing foolish policies - or even breaking campaign promises.

G. Main point: Theoretically, even rationally ignorant voters remain able to control politicians. They could just massively punish all observed dishonesty.

H. What about “buck-passing?” Simple: When in doubt, blame the top.

VII. The Principle of Aggregation

A. A basic principle of statistics is the Law of Large Numbers: random errors tend to "cancel each other out" (in percentage terms).

B. In voting theory, this observation is often called "the principle of aggregation."

C. Some aggregation examples

1. Exams
2. Altruism experiments
3. Public opinion on NATO

VIII. Voter Ignorance and the "Miracle of Aggregation"

A. A number of economists and political scientists admit the ignorance of individual voters, but still defend the quality of the **electorate's** decisions using the principle of aggregation.

B. The argument:

1. Individual voters are poorly informed, and thus their votes are highly random.
2. But elections are based on *aggregate* opinions of millions of voters.
3. Thus, even if there is a large component of randomness in individual voting, the principle of aggregation ensures, for all practical purposes, that outcomes still make sense.

C. Suppose that 90% of all voters are uninformed and vote randomly. The remaining 10% are perfectly informed. Who wins? *Whoever has the support of a majority of the well-informed.*

D. This result has been named "the miracle of aggregation." It seems *miraculous* because it implies that a highly uninformed electorate may - at the aggregate level - act "as if" it were perfectly informed.

E. If true, this is an amazing result. But as we shall see, it hinges critically on the assumption that errors are not systematic.

IX. Uncertainty and Platform Convergence

A. Suppose that *politicians* are uncertain about the exact location of the median voter. What then?

B. If politicians care solely about winning, they go wherever they think the median voter is *most likely* to be located.

C. However, if politicians care about both winning and policy, uncertainty gives them some slack. With full certainty, you either compromise your principles or lose. With some uncertainty, in contrast, you can make a trade-off between your probability of winning and your ideological purity.

D. If the two parties have opposing ideologies, then uncertainty provokes each to move somewhat away from the position they believe the median voter is most likely to hold.

E. This allows for a moderate degree of platform divergence, as each party lowers its chance of winning in order to be true to their cause.

X. Divergence Between Median and Mean Preferences on a Single Dimension

A. Politicians cater exclusively to the median voter when:

1. There is one voting dimension,
2. preferences are single-peaked,
3. and politicians have no uncertainty about voter preferences.

B. Question: Is this an efficient outcome?

C. Answer: In general, no. The efficient outcome is for politicians to cater to the **mean** preference.

D. Why? Total surplus is given by $\sum_{i=1}^{N} s_i$. This equals $\bar{s}N$, average surplus multiplied by the number of people. If the number of voters is fixed, then, total surplus reaches its maximum when you maximize <u>average</u> surplus.

E. Special case: Median and mean preference are identical.

F. Intuition: Under democracy, a vote is a vote; there is no incentive to care about the *intensity of preferences*.

G. In contrast, in markets, intensities matter because people express their wants in dollars, not merely a for/against vote.

H. This is a major inefficiency built into democracy: It treats all preferences equally, even when some are vastly more intense.

XI. Log-Rolling, Bargaining, and the Coase Theorem

A. The Coase Theorem holds for all bargaining, including political bargaining (aka "log-rolling").

B. Main unusual feature of political bargaining: You don't need unanimous consent for a bargain!

C. Election rules create the "initial endowments," the status quo from which bargaining starts.

D. The **Mean Voter Theorem**: with zero transactions costs, political bargaining implements the <u>mean</u> voter preference on any number of issues, even if preferences are not single-peaked.

E. *Bargaining on a Single Issue*: The Coase Theorem implies that log-rolling can take care of the divergence between median and mean preferences.

F. Median voter has the power to pick the "initial endowment" from which bargaining begins. But it remains possible for the minority to "bribe" the majority to switch to a different policy.

G. *Bargaining on Multiple Issues*: Even if median and mean preferences are identical for each issue, democracy need not yield the efficient result if there is one election over multiple issues.

H. But log-rolling across issues once again makes it possible to reach the efficient outcome.

I. *Bargaining Around Intransitivity*: Social intransitivity ultimately stems from ignoring preference intensities. There can be only one option that maximizes surplus. But - without bargaining - voting is a poor method for reaching that point, because it only asks about ordinal preferences, not dollar values.

J. Return to the school spending example:
   1. Voter #1's surplus: {high - $1000, low - $400, medium - $0}
   2. Voter #2's surplus: {medium - $500, high - $250, low - $0}
   3. Voter #3's surplus: {low- $300, medium - $250, high - $200}

K. Recall that under majority rule, high beats low, low beats medium, and medium beats high.

L. Summing total surplus for each option: {high - $1450, medium - $750, low - $700}. High spending unambiguously generates more surplus even though pair wise voting is intransitive.

M. Suppose you begin by voting on medium versus high. Medium wins. With bargaining, though, Voter #1 can "bribe" Voters #2 and #3 to increase spending, perhaps by agreeing to a tax on luxury cars to raise extra school revenue.

XII. Pork Barrel Politics

A. Some economists doubt the wonders of log-rolling. In particular, there are recurring criticisms of "pork barrel" spending, where all legislators swap votes to fund inefficient projects in their home districts.
   1. Examples: Military bases, roads, museums, other infrastructure.

B. The usual story is that all legislators have to participate in the scramble for "pork" because if representatives from one district/state hold back, the money just goes to other districts/states.

C. Two alternative versions:
   1. Politicians want to win popularity by loudly "doing something" for their constituents.
   2. Politicians want to secretly pay off special interests without *losing* their popularity with voters.

D. Note: Rational ignorance cuts against the first and for the second.

E. On either of these account, the intuition is that restraining spending is a public good; the federal budget suffers from a "tragedy of the commons."

F. Puzzle: Why bargain to inefficient outcomes when you could bargain to efficient ones?

G. If you are trying to win popularity, wouldn't voters prefer a tax refund to inefficient programs? If so, why not have the omnibus repeal bill, as with base closings?

H. If you're just trying to buy support from special interests, recall that rationally ignorant voters may be able to keep politicians in line with threats of severe punishment.

XIII. Restrictions on Political Competition: Supermajority Rules, Term Limits, Spending Limits

A. So far we've implicitly assumed that politicians compete without restriction, and that whoever gets more votes wins.

B. But major political changes often require supermajority support, and elections have been increasingly regulated over the past few decades.

C. Restriction #1: Supermajority rules. Like other voting rules, these shift the "initial endowments" for political bargaining.

D. Without bargaining, supermajority rules could easily lead to highly inefficient outcomes.

1. Question: When would supermajority rules without bargaining be efficiency enhancing?

E. With bargaining, however, supermajority rules merely shift the distribution of political "wealth," putting a lot of power in the hands of those who want to block change. This doesn't mean change won't happen, only that it may be necessary to "buy off" opponents.

F. Restriction #2: Term limits. Restricting the total number of terms a politician may serve in a given office.

G. Obvious argument against term limits: It limits voter choice, and magnifies the "end-game problem." If a candidate would have won an election, but can't run due to term limits, voters have to settle for their second choice.

1. "We already have term limits. They're called elections."

H. Arguments for? The main one is probably "incumbency advantage." An inferior incumbent is somehow able to beat a superior challenger.

I. A more specific complaint is that incumbents are more strongly under the influence of special interests. But why don't voters just take this drawback into account?

J. Empirical studies of term limits have quite mixed results. Some find evidence of intensified end-game problems, others of better performance.

1. One GMU dissertation found that term limits make government grow. Note that there are at least two ways to interpret this result.

K. Restriction #3: Spending limits. Restricting the amount candidates and their supporters are allowed to spend on campaigns.

L. Obvious argument against spending limits: Advertising is just information. How are voters supposed to decide without it?

1. Also: If you believe in incumbency advantage, the well-funded challenger may be the only counter-balance.

M. Empirical studies of spending limits rarely find them to be beneficial. This is complicated by choice of metric: Why should we think that "closer" elections are better to begin with?

N. While restrictions supposedly aim at "making democracy work better," they often seem to assume irrational voters. (More on this later).

O. Leaving aside the effect on politicians, what about **policy**? The effects of supermajority rules are fairly clear. But would term and/or spending limits change what government does? In what direction? Wouldn't someone else just offer the same platform?

Table 4.1 Regression Analyses of Knowledge Domains

Variable	Rules of the Game	Substance	People and Parties	Gender	Party	People
(scale)	(0–22)	(0–18)	(0–11)	(0–4)	(0–5)	(0–6)
Follow politics	0.44	0.53	0.27	0.01	0.14	0.13
	.11*	.15***	.08*	.01	.07	.07
Education	0.86	0.72	0.63	0.14	0.33	0.30
	.29****	.28****	28****	.20****	26****	.23****
Internal efficacy	0.40	0.27	−0.04	0.09	−0.02	−0 01
	.13***	.10**	−.02	11*	−.02	− 01
Discuss politics	0.37	0.41	0.24	−0.00	0.13	0.11
	.11**	.14***	.09*	−.00	.09*	08
Income	0 24	0.20	0.13	0.04	0.06	0.07
	.07*	.07*	05	06	.04	05
Other source: newsmagazines	0.69	0.63	0.38	0.04	0 08	0.30
	.08*	.08*	.06	.02	.02	.08*
Read news in newspaper	−0 00	−0.01	0.05	−0.01	0 01	0 04
	− 00	−.02	.14****	−.02	.05	.19****
Sex (female)	−1.22	−1.76	−0.76	−0.04	−0.29	−0.47
	−.16****	−.27****	−.13****	−.02	−.09**	− 14****

Table 4.1 Regression Analyses of Knowledge Domains (*continued*)

Variable	Rules of the Game	Substance	People and Parties	Gender	Party	People
(scale)	(0–22)	(0–18)	(0–11)	(0–4)	(0–5)	(0–6)
Other source: radio	0.89	0.23	0.79	0.11	0.30	0.50
	.09**	.03	.11***	.05	.07*	.12***
Party ID strength	−0.37	−0.09	−0.25	−0.04	0.20	0.04
	−.10**	−.03	−.09**	−.04	.12***	.03
Region (South)	−0.23	−0.01	−0.35	−0.02	−0.04	−0.31
	−.03	−.02	−.06	−.01	−.01	−.09**
Watch TV news	−0.01	−0.01	−0.00	−0.01	−0.00	−0.00
	−.02	−.02	−.01	−.05	−.00	−.01
Race (black)	−2.28	−2.10	−1.48	−0.08	−0.89	−0.59
	−.18****	−.19****	−.15****	−.03	−.16****	−.11**
Trust	−0.06	−0.29	−0.27	−0.02	−0.11	−0.16
	−.01	−.04	−.05	−.01	−.03	−.05
Age	0.02	0.02	0.07	0.00	0.04	0.02
	.07	.12***	.39****	.05	.45****	.24****
Civics instruction	0.23	0.01	−0.01	0.01	−0.05	0.05
	.05	.00	−.00	.01	−.02	.02
r^2	.42	.48	.50	.08	.41	.38
Standard error of the regression	2.89	2.33	2.04	.88	1.27	1.30

Source: 1989 Survey of Political Knowledge
Note: Top entry in each cell is the unstandardized regression coefficient (*b*). Bottom entry is the standardized coefficient (beta).
*p <.05. **p <.01. ***p <.001. ****p <.0001.