

The Median Voter Theorem

ECO1028 - Politics Without Romance

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Introduction & Motivation

Before We Begin: A Diagnostic Question

Quick poll - think about Irish politics:

On a left-right economic scale (1 = far left, 10 = far right):

- Where would you place Fianna Fáil?
- Where would you place Fine Gael?
- Where would you place yourself?

Common complaint: “I can't tell the difference between FF and FG!”

Today's question: Is this convergence a bug or a feature of democracy?

The Central Puzzle: Why Do Parties Converge?

Tyler Cowen (2010): “In Politics, Sometimes the Middle Way Really Is the Best”

“Economists approach political competition with a simple but potent hypothesis called the ‘median voter theorem.’”

“Essentially, the idea is this: Any politician who strays too far from voters at the philosophical center will soon be out of office.”

Core insight: There is a dynamic that pushes politicians to embrace the preferences of the typical or “median” voter, who sits squarely in the middle of public opinion.

The Intuition

From Cowen's article:

"A significant move to either the left or the right would open the door for a rival to take a more moderate stance, win the next election and change the agenda."

"Politicians will respond to this dynamic, whether they are power-seeking demagogues or more benevolent types who use elected office to help the world."

Key implication: Centrist convergence isn't (necessarily) evidence of lack of choice - it's a *prediction* of democratic competition!

What You Need to Know

Four prerequisite pillars for understanding MVT:

1. Single-Peaked Preferences

- Each voter has an ideal point on a policy dimension
- Utility declines as you move away from that ideal

2. Majority Rule

- Decisions made by simple majority vote
- 50% + 1 determines the outcome

3. Two-Party/Candidate Competition

- Two main alternatives compete for votes
- Winner-take-all system

4. Rational Voters & Politicians

- Voters choose preferred alternative
- Politicians maximize probability of winning

Diagnostic Check

Test your understanding:

Question 1: Can you think of political issues where Irish voters have single-peaked preferences? (i.e., everyone has an ideal point and prefers outcomes closer to that ideal)

Question 2: Can you think of issues where preferences are *not* single-peaked? (i.e., people might have multiple preferred options).

Question 3: In PR-STV (Irish electoral system), is it really “winner-take-all”?

- **Insight:** PR-STV violates the “two-party” assumption, but government formation acts as a “**second stage**.”
- To form a coalition ($50\% + 1$), parties must still satisfy the median TD (and arguably the median voter).

Historical Context

Before Downs (1957)

- Political science studied institutions, history, norms
- Economics studied markets
- Separate intellectual worlds
- Little formal theory of voting

Key predecessors:

- **Knut Wicksell (1896):** Unanimity and “just taxation”
- **Duncan Black (1948):** First statement of median voter theorem
- **Kenneth Arrow (1951):** Impossibility theorem (Nobel 1972)

After Downs (1957)

- Economic tools applied to politics
- Formal models of electoral competition
- Testable predictions
- Birth of Public Choice

Anthony Downs (1957)

An Economic Theory of Democracy

Revolutionary insights:

- Parties are like firms competing for votes (analogous to profits)
- Voters are like consumers choosing products
- Political competition has predictable patterns
- **Parties converge to the median voter position**

Why revolutionary?

- Before: Politics was about ideals, public interest, civic duty
- After: Politics is about strategic behaviour and incentives
- Same logic that explains markets can explain democracy

Note: Duncan Black (1948) formalized the theorem first, but Downs popularized it and explored its implications for electoral competition

The Restaurant Illustration: Setup i

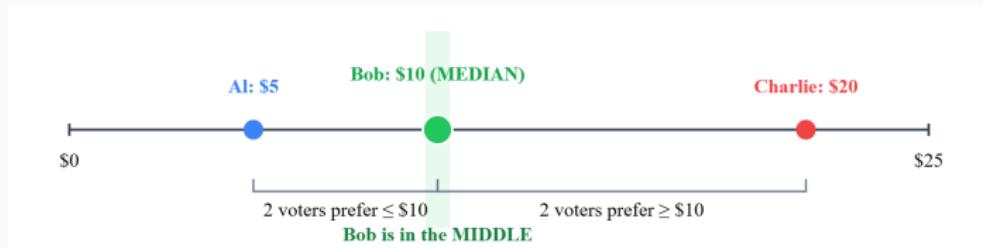
A simple example to build intuition:

Al, Bob, and Charlie need to pick a restaurant for lunch. They'll use majority rule.

Preferences:

- **Al** prefers cheap: \$5.00 lunch
- **Bob** prefers moderate: \$10.00 lunch
- **Charlie** prefers expensive: \$20.00 lunch

The Restaurant Illustration: Setup ii



Assumption: Each person prefers restaurants closer in price to their ideal point.

- If Al must choose between \$10 and \$20, he picks \$10 (closer to \$5)
- If Charlie must choose between \$5 and \$10, he picks \$10 (closer to \$20)

Key observation: Bob is the **median voter**

- 1 person prefers cheaper (\$5)

The Restaurant Illustration: Setup iii

- 1 person prefers more expensive (\$20)
- Bob is in the middle (\$10)

The Restaurant Illustration: Voting Outcomes

What happens under majority rule?

Options	AI	Bob	Charlie	Result
\$20 vs. \$5	\$5	\$5	\$20	\$5 wins (2-1)
\$10 vs. \$20	\$10	\$10	\$20	\$10 wins (2-1)
\$10 vs. \$5	\$5	\$10	\$10	\$10 wins (2-1)

Pattern:

- Bob (median voter) always votes for the winner
- \$10 (median preference) beats any alternative in pairwise vote
- Once we're at \$10, no other option can defeat it

This is the **weak form** of the median voter theorem: the median voter is always in the winning coalition.

Weak Form vs. Strong Form

Weak Form:

- The median voter always casts his or her vote for the policy that is adopted
- The median voter's preference always beats any alternative in a head-to-head vote
- Once median voter's preferred outcome is reached, it cannot be defeated in pairwise majoritarian election

Strong Form:

- The median voter always gets **exactly** their most preferred policy
- Requires additional conditions (credible commitment, perfect information)
- This is what Downs (1957) emphasized in electoral competition

Critical distinction: Weak form is about voting power. Strong form is about policy outcomes.

From Policies to Politicians

Extension to electoral competition:

Same logic applies when we switch from *selecting policies* to *selecting policymakers*.

Setup:

- Two candidates/parties compete for office
- Winner gets to implement policies
- Voters choose candidate closest to their ideal point

Result:

- Candidate closest to median voter **wins the election**
- Why? They're closest to the ideal points of *more than half* the electorate
- Median voter always votes for the winner
- Weak form of MVT holds

Platform Convergence i

The strategic logic:

If candidates can freely choose policy positions...

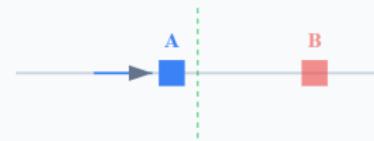
- Each candidate tries to position closer to the median voter than their opponent
- If Candidate A is left of median, Candidate B positions slightly right of median
- Then Candidate A moves right to be closer to median
- Then Candidate B adjusts...

Platform Convergence ii

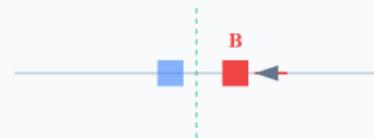
1. Initial Positions



2. A Moves Right



3. B Responds



4. Equilibrium



- This process continues until...

Equilibrium: Both parties adopt identical positions at the median voter's ideal point

- Both parties get 50% of votes
- No matter who wins, median voter gets exactly what they want
- Strong form of MVT holds (assuming winners keep campaign promises)

Sound familiar? “FF and FG are the same!” might be exactly what theory predicts...

Formal Theory & The Proof

Single-Peaked Preferences: Definition

Formal definition:

Single-Peaked Preferences

Preferences are **single-peaked** if:

- Alternatives can be represented as points on a line (one dimension)
- Each voter's utility function has a **maximum at some point on the line** (their "ideal point")
- Utility **slopes downward** on either side of the maximum

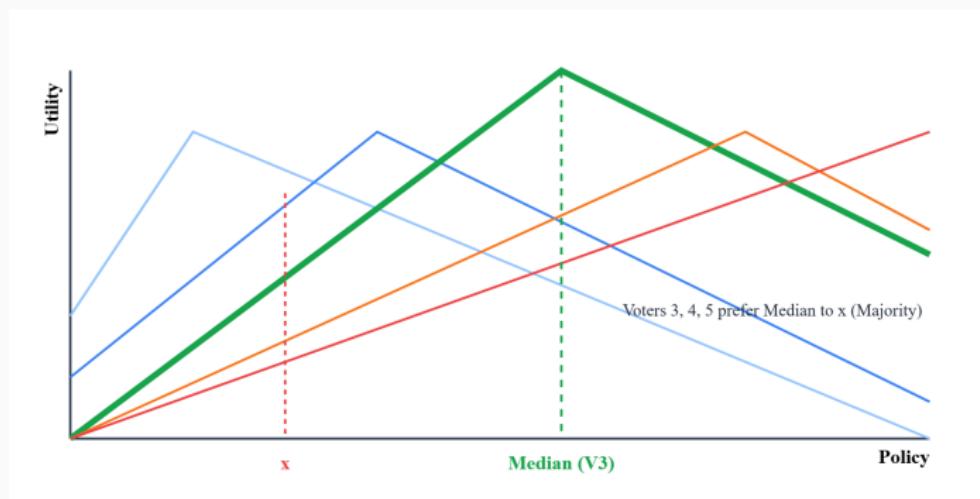
In plain English:

- You have a favorite position (your peak)
- Moving away from your favourite makes you worse off
- Doesn't matter which direction you move - farther is worse

This is the important assumption that makes the median voter theorem work!

Visual Examples of Single-Peaked Preferences

Five voters with different ideal points:



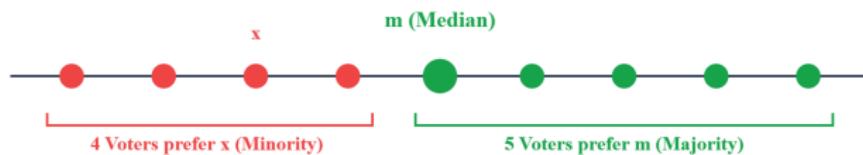
Key features:

- Each voter has exactly one peak (ideal point)
- Utility declines moving left or right from peak
- V3's ideal (m) is the **median** - half prefer less, half prefer more

The Graphical Proof Setup

Why does the median voter win?

Consider any proposal x that provides *less* than the median voter's ideal m :



m plus everyone to its right beats x

Voters 3, 4, and 5 prefer m to any $x < m$ (that's a majority: 3 out of 5)

Examples: When Do We Get Single-Peaked Preferences?

Issues where single-peaked preferences are plausible:

1. Tax rates

- Everyone has an ideal tax rate (0% to 100%)
- Rates higher or lower than your ideal make you worse off

2. Education spending

- Ideal level of spending per student
- Too little: underfunded schools. Too much: wasted resources

3. Left-right ideology (in the US sense)

- Position on liberal-conservative spectrum
- Your ideal point, with costs to deviations either way

4. Location of public facilities

- Where to build a new hospital, library, or park
- Everyone prefers locations closer to them

Examples: When Preferences Are NOT Single-Peaked

Issues where single-peaked preferences fail:

1. School paint color

- You like blue. Moving from blue to green to yellow doesn't get progressively worse
- No natural ordering of alternatives

2. Summer ball headliner

- You want Artist A. If not A, maybe Artist C is second choice
- Artist B (between A and C alphabetically) might be your least favourite

Examples: When Preferences Are NOT Single-Peaked ii

3. Constitutional amendments

- Multiple possible reforms, each qualitatively different
- Can't arrange on a single dimension

4. Multi-attribute choices

- Choosing a candidate based on economic policy *and* social policy *and* foreign policy
- Can't reduce to single dimension

When preferences aren't single-peaked, median voter theorem breaks down!

Why Single-Peakedness Matters

Connection to voting theory:

- **Condorcet winner:** Alternative that beats all others in pairwise votes
- **Problem:** Condorcet winners don't always exist!
- **Arrow's Impossibility Theorem** (1951): No perfect voting system

But with single-peaked preferences:

- Condorcet winner **always exists**
- It's the median voter's ideal point
- We escape Arrow's impossibility result
- Majority rule produces stable, predictable outcomes

Key Insight

Single-peakedness is a *domain restriction* that makes democracy work well. Without it, we might have voting cycles, instability, and no clear "will of the people."

The Formal Proof: Setup and Notation

What we need to prove:

The median voter's ideal point m defeats any alternative x in a pairwise majority vote.

Setup:

- n voters (assume n is odd for simplicity)
- Voters indexed $i = 1, 2, \dots, n$
- Each voter i has ideal point x_i^* on a single dimension
- Order voters by ideal points: $x_1^* \leq x_2^* \leq \dots \leq x_n^*$
- **Median voter:** Voter m where $m = \frac{n+1}{2}$
- All voters have single-peaked preferences

To prove: For any $x \neq x_m^*$, more than half of voters prefer x_m^* to x .

The Proof: Part 1 - Median Beats Any $x < m$

Case 1: Consider any alternative $x < x_m^*$ (to the left of median)

Which voters prefer x_m^* to x ?

- Voter m (the median) prefers x_m^* to x (it's their ideal point)
- All voters with ideal points $> x_m^*$ prefer x_m^* to x
 - Why? Their ideal is to the right of x_m^*
 - x_m^* is closer to their ideal than x is
 - Single-peaked preferences: they prefer outcomes closer to their ideal

How many voters is this?

- Voter m plus all voters $i \geq m$
- That's voters $m, m+1, m+2, \dots, n$
- Total: $n - m + 1 = n - \frac{n+1}{2} + 1 = \frac{n+1}{2}$
- **This is a majority!** ($> n/2$)

The Proof: Part 2 - Median Beats Any $x_i m$

Case 2: Consider any alternative $x_l x_m^*$ (to the right of median)

Which voters prefer x_m^* to x ?

- Voter m (the median) prefers x_m^* to x (it's their ideal point)
- All voters with ideal points $< x_m^*$ prefer x_m^* to x
 - Why? Their ideal is to the left of x_m^*
 - x_m^* is closer to their ideal than x is
 - Single-peaked preferences: they prefer outcomes closer to their ideal

How many voters is this?

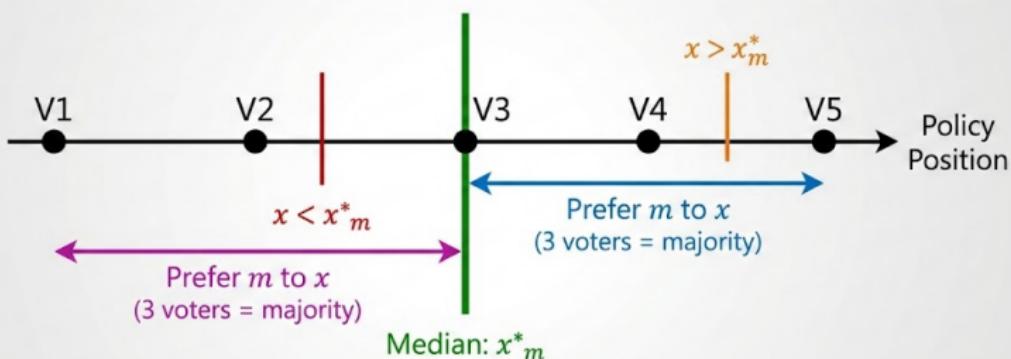
- All voters $i \leq m$
- That's voters $1, 2, \dots, m$
- Total: $m = \frac{n+1}{2}$
- **This is a majority!** ($> n/2$)

Conclusion: x_m^* defeats any alternative in pairwise majority voting. x_m^* is the Condorcet winner. \square

Graphical Illustration of the Proof

Graphical Illustration of the Proof

Visual intuition:



Key insight: Median always has at least half the voters on their side, no matter which direction the alternative deviates!

Arrow's Impossibility Theorem Context i

Kenneth Arrow (1951), Nobel Prize 1972:

No voting system can simultaneously satisfy all of: (1) Unanimity, (2) Non-dictatorship, (3) Independence of irrelevant alternatives, (4) Unrestricted domain

Implication: There is no “perfect” way to aggregate preferences into social choices.

Arrow's Impossibility Theorem Context ii



But the Median Voter Theorem shows:

- If we **restrict the domain** to single-peaked preferences...
- ...we escape Arrow's impossibility result!
- Majority rule produces a stable Condorcet winner
- This is why single-peakedness is so important

Arrow's Impossibility Theorem Context iii

Trade-off: We get stability and predictability, but only for a limited class of preference profiles.

Platform Convergence Under Competition i

The Downsian model of electoral competition:

Two candidates (A and B) simultaneously choose policy positions.
Voters vote for candidate closest to their ideal point.

Best response dynamics:

1. Suppose A positions at median, B positions to the right
2. B gets votes from everyone right of midpoint between A and B
3. A gets votes from everyone left of that midpoint (a majority!)
4. B moves left toward median to win more votes
5. If B moves past median, A moves to be just right of median
6. Continues until...

Platform Convergence Under Competition ii

Nash Equilibrium: Both candidates locate exactly at the median voter's position!

- Neither can improve by deviating
- Both get 50% of votes
- Median voter gets their ideal policy no matter who wins

The Intensity Problem

A fundamental difference from markets:

"Your vote counts the same whether you're passionate about an issue or completely indifferent."

In markets:

- You can express intensity through willingness to pay
- If you want something more, you can pay more for it
- Prices aggregate information about preferences

In voting:

- One person, one vote
- No mechanism to reveal intensity
- Passionate minority and indifferent majority have equal weight

This is both a feature (equality) and a bug (inefficiency) of democratic decision-making!

Comparison: Market Mechanisms vs. Voting

Markets

- “Dollar votes”
- Intensity matters
- Continuous choice
- Decentralized
- Prices aggregate info
- Can buy exactly what you want

Voting

- One person, one vote
- Intensity ignored
- Discrete choice
- Collective decision
- Majority rule
- Get what majority wants

Comparison: Market Mechanisms vs. Voting ii

Normative question:

- Markets are efficient but unequal (rich have more influence)
- Voting is equal but potentially inefficient (intensity ignored)
- Which is more important: efficiency or equality?

Public Choice insight: We use markets for private goods, voting for public goods. Understanding the trade-offs helps us decide which mechanism to use when.

The Strong Form: When Does It Hold? i

Conditions needed for median voter to get exactly their ideal policy:

1. Perfect information

- Politicians know voter preferences
- Voters know politician positions

2. Credible commitment

- Politicians can commit to positions
- Winners implement campaign promises
- No post-election policy switching

The Strong Form: When Does It Hold? ii

3. Pure office motivation

- Politicians only care about winning
- No ideological preferences
- No influence from donors, party activists

4. Two-party competition

- With 3+ parties, equilibrium breaks down
- Need Duverger's Law to hold

Reality check: These conditions are rarely fully satisfied. So strong form is a theoretical benchmark, not always an empirical prediction.

Section Summary: What We've Established

Key theoretical results:

1. **Weak form MVT:** With single-peaked preferences and majority rule, median voter's ideal point is the Condorcet winner
2. **Strong form MVT:** Under electoral competition with specific assumptions, both parties converge to median voter position
3. **Why it matters:** Provides a predictable theory of democratic outcomes
4. **Key assumptions:**
 - Single-peaked preferences (very important!)
 - Single dimension
 - Two-party competition
 - Rational voters and politicians
 - Perfect information
 - No ideology, no money, etc.

Next: We'll examine the assumptions critically and test the theory empirically!

Applications of the Median Voter Theorem

Transition: MVT as an Analytical Tool

“Simple models can generate powerful predictions”

What can MVT help us understand?

- Patterns of taxation and redistribution
- Size of government programs
- Education spending decisions
- Healthcare policy choices
- Infrastructure investment

The power of MVT: It converts complicated political questions into simple economic logic about the median voter's preferences.

Application 1: Taxation and Inequality

Setup:

- Society must choose a tax rate t (0 to 100%)
- Tax revenue redistributed equally to all citizens
- Each person i has income y_i

Individual i 's payoff:

$$\text{After-tax income} = (1 - t)y_i + t \cdot \bar{y}$$

where \bar{y} is average income.

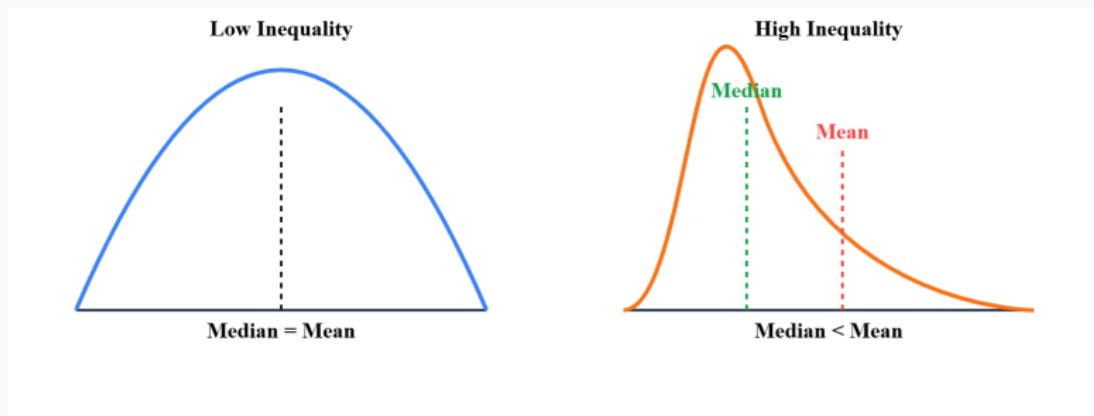
Key insight:

- If $y_i < \bar{y}$: Person i prefers positive tax rate (they're a net recipient)
- If $y_i > \bar{y}$: Person i prefers zero tax rate (they're a net contributor)
- If $y_i = \bar{y}$: Person i is indifferent

Taxation and Inequality: The Median Voter's Choice

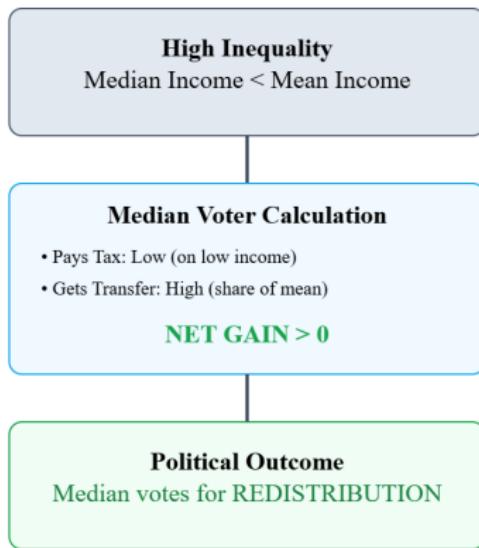
MVT prediction:

The chosen tax rate depends on the median voter's income relative to mean income.



This is the **Meltzer-Richard model** (1981)!

Taxation Example: Numerical Illustration i



Taxation Example: Numerical Illustration ii

Example 1: Equal society

- 5 people with incomes: €40k, €45k, €50k, €55k, €60k
- Median = €50k, Mean = €50k
- Median voter gets no net benefit from redistribution
- MVT prediction: $t = 0$ (assuming redistribution is costly)

Example 2: Unequal society

- 5 people with incomes: €20k, €30k, €40k, €60k, €100k
- Median = €40k, Mean = €50k
- Median voter earns €10k less than mean
- At $t = 50\%$: Median gets $(0.5)(40k) + (0.5)(50k) = 45k$
- That's €5k more than with no redistribution!
- MVT prediction: Positive tax rate, significant redistribution

Taxation Example: Numerical Illustration iii

Key insight: Greater inequality → median earns less relative to mean → median voter demands more redistribution

Application 2: Irish Water Charges (2014-2016) i

Recent Irish example of median voter politics:



MVT interpretation:

- **The Misjudgment:** The government calculated that the median voter was a “Fiscal Responsibility Voter” who would accept charges for better services.
- **The Reality:** The median voter was actually an “Anti-Austerity Voter” (weary from years of cutbacks).
- **Outcome:** The policy was far from the true median, leading to mass non-payment, protests, and eventual policy reversal.

Question for discussion: Did the government respond to median voter preferences? Or did they initially misjudge where the median was?

Application 3: Redistributive Politics i

Meltzer-Richard Model (1981):

Prediction: Size of government increases with inequality.

Logic:

- More inequality → bigger gap between median and mean income
- → Median voter has more to gain from redistribution
- → Higher tax rates and more social spending

Application 3: Redistributive Politics ii

Empirical evidence:

- Mixed support in cross-country data
- Some studies find positive relationship (Persson & Tabellini)
- Others find weak or no relationship
- **Puzzle:** US has high inequality but relatively small welfare state
- Possible explanations: racial divisions, cultural factors, political institutions

Lesson: MVT gives a baseline prediction, but institutions and culture matter too!

Application 4: Social Security Expansion i

Theory: As population ages, median voter age increases.

MVT prediction:

- Older median voter → more demand for pensions and healthcare
- → Expansion of social security programs
- → Higher taxes to fund them

Evidence:

- Most OECD countries: pension spending has grown as populations age
- Median voter age correlated with social security generosity
- Political resistance to pension reforms in aging societies

Application 4: Social Security Expansion ii

Irish context:

- Ireland's population relatively young (median age 38)
- But aging rapidly
- **MVT predicts:** Pressure for pension expansion as median voter ages
- Already seeing debates about pension age, triple lock, etc.

Application 5: Healthcare Policy i

US healthcare debates:

- Pre-existing conditions coverage
- Public option vs. private insurance
- Medicare expansion

MVT logic:

- Median voter's health status and income determine preferences
- Healthier, wealthier voters prefer less government involvement
- Less healthy, lower-income voters prefer more coverage
- Median determines policy

Application 5: Healthcare Policy ii

Irish context:

- Two-tier system: public vs. private
- Debates about Sláintecare reform (universal public system)
- About 45% have private insurance
- Question: Where is the median Irish voter on healthcare reform?
- Probably somewhere between pure public and pure private
- Explains incremental reforms rather than radical change

Application 6: Education Spending i

Local vs. national level differences:

Local education spending (US-style):

- Median voter's key characteristic: Do they have school-age children?
- Parents prefer higher spending
- Non-parents (especially elderly) prefer lower spending
- Result: Spending varies by demographic composition

National education policy:

- Broader considerations: economic growth, equality of opportunity
- Median voter considers future tax base, social mobility
- Different calculus than purely local decision

Application 6: Education Spending ii

Irish context:

- Education highly centralized
- But debates about university fees, teacher pay, school funding formula
- MVT predicts: Policies reflect preferences of families with children (large voting bloc in Ireland)

The Efficiency Question

A very important question:

Does the median voter outcome produce **socially optimal** results?

In other words:

- Markets maximize total surplus (under ideal conditions)
- Does majority voting maximize social welfare?
- When do median voter preferences align with efficiency?

Spoiler: Not always! The median voter can lead to inefficient outcomes.

Let's see why...

Efficiency Example: The Bridge Project i

Setup:

- Bridge project would serve 10 people
- 6 people value bridge at €50 each
- 4 people value bridge at €100 each
- Cost: €60 per person, total cost = €600

Median voter analysis:

- Median value = €50 (6th person when ordered by valuation)
- Median voter's net benefit = $\text{€}50 - \text{€}60 = -\text{€}10$ (loss!)
- **Majority vote:** 6 people oppose, 4 people support
- **Outcome:** Bridge is NOT built

Efficiency Example: The Bridge Project ii

Efficiency analysis:

- Total social value = $(6)(50) + (4)(100) = 700$
- Total cost = €600
- Net social benefit = €700 - €600 = +€100
- Efficient outcome: Bridge SHOULD be built

Conclusion: Median voter leads to inefficient rejection of socially beneficial project!

When Does MVT Produce Efficient Outcomes?

	Symmetric Prefs	Skewed Prefs
Single-Peaked	 MVT Efficient Median = Mean	 MVT Inefficient Bridge Example
Not Single-Peaked	 Unstable Cycling	 Chaos Inefficient + Unstable

General lesson: MVT produces efficiency when median = mean. When preferences are skewed, problems arise.

Lindahl Equilibrium vs. Median Voter Outcome i

What would be the ideal mechanism?

Lindahl Equilibrium (voluntary contributions):

- Everyone pays according to their marginal valuation
- High-value users pay more
- Efficient level of public good provided
- Everyone better off (or at least no worse off)

In the bridge example:

- 6 people pay €50 each = €300
- 4 people pay €100 each = €400
- Total revenue = €700 (covers €600 cost)
- Bridge is built, everyone pays their exact valuation
- **Efficient!**

Lindahl Equilibrium vs. Median Voter Outcome ii

Why don't we use Lindahl pricing?

- Information problem: How do we know true valuations?
- Incentive problem: Everyone has incentive to understate value (free-ride)
- Preference revelation is hard!

Section Summary: Applications & Efficiency

What we've learned:

1. MVT is a powerful analytical tool

- Taxation, redistribution, social programs
- Predicts policy based on median voter characteristics

2. Real-world applications

- Irish water charges
- Aging populations and pensions
- Healthcare and education debates

Section Summary: Applications & Efficiency ii

3. Efficiency concerns

- Median voter outcome \neq always efficient
- Depends on distribution of preferences
- Intensity of preferences ignored

4. Alternative mechanisms

- Lindahl pricing is efficient but impractical
- We're stuck with imperfect mechanisms
- Trade-off: simplicity vs. efficiency

Next: Critical examination of MVT assumptions - how realistic are they?

Critical Examination of Assumptions

Transition: But Is the Model Realistic?

Every model makes simplifying assumptions

George Box (statistician):

"All models are wrong, but some are useful."

The question is: Which assumptions matter most? When do violations of assumptions invalidate the model?

Six key assumptions of MVT:

1. Single-dimensional voting
2. Only two candidates
3. No ideology (pure office motivation)
4. No selective voting (everyone votes)
5. No money in politics
6. Full information

Let's examine each critically...

The Six Critical Assumptions

Assumption	Reality Check	Verdict
1. Single Dimension	Multiple issues (Social, Econ, Green)	✗ Fails
2. Two Candidates	True for US, False for EU/Ireland	⚠ Mixed
3. No Ideology	Politicians have policy goals	✗ Fails
4. Full Turnout	Only ~60% vote; Base matters	✗ Fails
5. No Money	Donors pull to extremes	✗ Fails
6. Full Info	Rational ignorance	✗ Fails

All six are violated to varying degrees. This explains deviations from MVT!

Assumption 1: Single-Dimensional Voting i

The assumption:

- All political issues can be mapped onto a single left-right dimension
- Voters and candidates have positions on this one-dimensional spectrum

Reality:

- Politics involves **bundles** of issues
- Economic policy + social policy + foreign policy + environment + immigration
- These don't always align on a single dimension

Assumption 1: Single-Dimensional Voting ii

Irish example:

- Economic left-right (redistribution, taxes, state vs market)
- Cultural liberal-conservative (abortion, marriage equality, religion)
- EU integration (pro-Europe vs euroskeptic)
- These are at least 3 dimensions, not 1!

Implication: If politics is truly multidimensional, MVT predictions may not hold.

Multidimensional Policy Spaces i

What happens with multiple dimensions?

Chaos theorems (McKelvey 1976, Schofield 1978):

- In multidimensional space, no stable equilibrium
- Any point can be beaten by some other point
- Agenda control becomes central
- Cycling is possible

But:

- Empirically, we don't observe chaos
- Parties do take stable positions
- Some structure must exist

Multidimensional Policy Spaces ii

Possible explanations:

- Issue dimensions are correlated (not truly independent)
- Party labels and ideology provide structure
- Valence issues (competence, honesty) create anchors
- Electoral institutions constrain positions

Assumption 2: Only Two Candidates

The assumption:

- Electoral competition between exactly two parties/candidates
- Winner-take-all system

Why this matters:

- With 2 candidates, convergence to median is Nash equilibrium
- With 3+ candidates, no stable equilibrium exists
- Each candidate has incentive to deviate from median

Duverger's Law provides microfoundation:

- First-past-the-post systems tend toward two parties
- Mechanical effect: Small parties underrepresented
- Strategic effect: Voters don't "waste" votes on third parties
- → Two-party dominance emerges

So assumption 2 may be satisfied in FPTP systems like US/UK, but not in PR systems!

Irish Context: PR-STV System

Ireland's electoral system:

- Proportional Representation with Single Transferable Vote
- Multi-seat constituencies (3-5 seats typically)
- Multiple candidates from same party often run
- Result: Not a two-party system!

Does MVT apply in PR-STV?

- Not directly - more than two viable candidates
- But: Main parties (FF, FG, SF) might still compete for median voter
- Smaller parties (Greens, Labour, PBP) can differentiate
- Coalition formation adds another layer of complexity

Preview:

- Week 4 Irish Context presentations will explore this!
- Do FF and FG converge like MVT predicts?
- Does SF's rise challenge or confirm MVT logic?

Assumption 3: No Ideology i

The assumption:

- Politicians are **purely office-motivated**
- They only care about winning
- No personal policy preferences or ideological commitments

Reality:

- Politicians clearly have **policy preferences**
- Party activists demand ideological purity
- Primary voters punish “flip-flopping” toward center
- Some politicians willing to lose rather than compromise principles

Assumption 3: No Ideology ii

Wittman model (1983):

- Politicians are policy-motivated, not just office-motivated
- They care about implementing their preferred policies
- Result: Parties may not fully converge
- Trade-off between winning and policy satisfaction

Implication: Ideology can prevent full convergence to median, explaining persistent differences between parties.

Assumption 4: No Selective Voting i

The assumption:

- All citizens vote
- Turnout is 100% and exogenous
- Median voter in electorate = median voter among those who turn out

Reality:

- Turnout is typically 50-70% in elections
- Turnout is **endogenous** - it depends on mobilization efforts
- Different demographic groups have different turnout rates

Assumption 4: No Selective Voting ii

Key implication:

- Base mobilization vs. median voter appeal
- Moving toward extreme can energize base and increase their turnout
- Moving toward center can demobilize base
- Trade-off: Appeal to median of electorate vs. mobilize your supporters

Example: Trump 2016 - mobilizing non-college whites who previously didn't vote, rather than moving to center.

Assumption 5: No Money in Politics i

The assumption:

- Candidates compete only through policy positions
- No role for campaign finance
- Voters perfectly informed (no need for advertising)

Reality:

- Money matters enormously in modern campaigns
- Campaign contributions often come from ideological extremes
- Citizens United (2010) in US: unlimited corporate/union spending

Assumption 5: No Money in Politics ii

Strategic implication:

- Taking extreme position on an issue might **maximize fundraising**
- Even if it doesn't maximize votes directly
- Extra money allows more advertising → more votes overall
- Trade-off: Moderate position (wins median) vs. extreme position (wins donors)

Example: US candidates take strong positions on gun control, abortion to appeal to donors, even if median voter is more moderate.

Assumption 6: Full Information

The assumption - three types:

1. **Voter knowledge of issues**

- Voters understand policy proposals and their effects

2. **Politician knowledge of issues**

- Politicians know the true effects of policies

3. **Politician knowledge of voter preferences**

- Politicians know exactly where median voter is

Reality:

- All three are unrealistic!
- Voters are often rationally ignorant (Downs himself recognized this)
- Politicians use polls but still uncertain about preferences
- Policy effects are often unknown ex ante

Implication: Information problems create space for manipulation, demagoguery, and mistaken policies.

Which Assumptions Are Most Problematic? i

Open question for discussion:

Rank these assumption violations by **importance** for explaining real-world deviations from MVT:

1. Multidimensional policy space
2. More than two parties
3. Ideology (politicians care about policy)
4. Selective turnout
5. Money in politics
6. Imperfect information

Which Assumptions Are Most Problematic? ii

My view:

- #1 and #3 probably most important
- Multidimensionality destroys equilibrium
- Ideology prevents full convergence
- The others create deviations but don't destroy core logic

What do you think? Which matters most in Irish context?

Extensions That Relax Assumptions i

Active research areas in political economy:

1. Probabilistic voting models

- Voters don't vote deterministically for closest candidate
- Some randomness in voting behaviour
- Allows for non-convergence even in one dimension

2. Citizen-candidate models

- Candidates are citizens with policy preferences
- Entry is endogenous (people decide whether to run)
- No convergence: Candidates stick to their preferences

3. Multidimensional spatial models

- Explicitly model multiple issue dimensions
- Study conditions for equilibrium existence
- Role of party labels, valence, etc.

These extensions preserve useful insights from MVT while relaxing unrealistic assumptions.

When Is MVT Still Useful Despite Violations?

MVT as a benchmark:

Even when assumptions are violated, MVT can still be useful for:

1. Baseline prediction

- Start with MVT, then adjust for institutional details

2. Understanding deviations

- If parties don't converge, ask: which assumption is violated?

3. Single-issue referendums

- When choice really is one-dimensional, MVT works well

4. Local public goods

- School spending, park locations, etc.
- Often closer to single-dimensional ideal

5. When violations offset

- Ideology might pull candidates apart
- But electoral incentives pull them together
- Net effect: partial convergence

Section Summary: Critical Assumptions

What we've learned:

1. MVT makes strong assumptions

- Single dimension, two parties, no ideology, etc.
- All are violated to some degree in reality

2. Some violations more serious than others

- Multidimensionality destroys equilibrium
- Ideology prevents complete convergence
- Money and selective turnout create deviations

3. Extensions address some concerns

- Probabilistic voting, citizen-candidate models
- Active research continues

4. MVT still useful as benchmark

- Helps us understand when and why reality deviates
- Good starting point for analysis

Next: Empirical evidence - does MVT actually work in practice?

Empirical Evidence Supporting MVT

Transition: Does the Model Match Reality?

The empirical question:

Do we observe median voter behaviour in real elections and policy outcomes?

Two types of evidence:

1. **Supporting evidence** - cases where MVT predictions hold
2. **Challenging evidence** - cases where MVT fails

Good science requires examining both!

We'll look at supporting evidence first, then challenges in the next section.

Evidence 1: Poole & Daniels (1985) i

Question: Is US politics really one-dimensional?

Method: DW-NOMINATE scores

- Analyze every roll call vote in US Congress
- Use scaling techniques to map legislators onto dimensions
- How many dimensions needed to explain voting patterns?

Finding:

- 80-90% of votes can be explained by a single liberal-conservative dimension
- Second dimension (North-South, racial issues) explains some additional variation
- But first dimension dominates

Evidence 1: Poole & Daniels (1985) ii

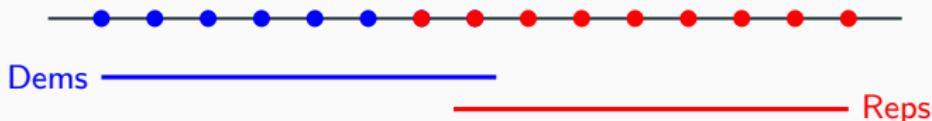
Implication:

- Single-dimensional assumption is **not crazy**
- At least for explaining legislative voting
- Supports basic MVT framework

DW-NOMINATE: Visualizing the Spectrum i

What DW-NOMINATE scores show:

1970s: Overlap



2020s: Polarization



Pattern:

- 1970s: Significant overlap between parties
- 2020s: Complete separation, no overlap
- **Polarization has increased dramatically**

We'll discuss what this means for MVT later!

Evidence 2: Trade Policy - Dutt & Mitra (2002) i

Question: Does median voter's industry predict trade policy?

Theory:

- Workers in import-competing industries prefer **protection** (tariffs)
- Workers in export industries prefer **free trade**
- Median voter's industry determines policy

Data:

- Cross-country panel data
- Industry employment shares
- Trade protection measures (tariffs, non-tariff barriers)

Evidence 2: Trade Policy - Dutt & Mitra (2002) ii

Finding:

- Countries where median worker is in import-competing sector have higher protection
- Countries where median worker is in export sector have lower protection
- Consistent with median voter theorem!

Evidence 3: Education Spending - Corcoran & Evans (2010) i

Question: How does inequality affect local public spending?

MVT prediction:

- Higher inequality → median voter pays lower tax share
- → Median voter demands more public spending
- (They get the benefits but pay less of the cost)

Data:

- US school districts
- Inequality measures (income distribution)
- Education spending per pupil

Finding:

- “Results consistent with median voter model”
- Inequality that reduces median voter's tax share → higher local spending on education
- Growing wealth at top lowers median voter's tax burden → they vote for more services

Inequality and Education Spending: The Mechanism

Numerical example:

Low inequality scenario:

- Median income = \$45k, Mean income = \$50k
- Median voter's tax share = $45/50 = 90\%$ of average

High inequality scenario:

- Median income = \$40k, Mean income = \$70k (top-heavy distribution)
- Median voter's tax share = $40/70 = 57\%$ of average

Result:

- In high inequality scenario, median voter gets schools funded by others
- They pay 57% but get 100% of benefit
- **Incentive to vote for higher spending**

This is exactly what Corcoran & Evans find in the data!

Evidence 4: Female Suffrage - Introduction

Natural experiment: Expansion of voting rights to women

MVT prediction:

- When women get the vote, median voter changes
- If women have different preferences than men on some issues...
- ...we should see policy changes in those areas

Historical context:

- US: Women's suffrage varied by state (1869-1920)
- Provides variation in timing across states
- Can use difference-in-differences methodology

Two major studies:

1. Kose et al (2021): Education outcomes
2. Miller (2008): Public health spending

Evidence 5: Female Suffrage - Kose et al (2021) i

Question: Did female suffrage improve educational outcomes?

Why might it?

"Women's organizations in the early 20th century lobbied for the passage of children's codes to regulate child work, guardianship, and mandatory school attendance."

Data:

- Variation in suffrage adoption across US states
- Educational attainment by cohort and state
- Focus on disadvantaged children (black children, Southern white children)

Finding:

- Full exposure to suffrage (ages 0-15) → +1 year of education for black children
- Also large effects for white children from the South
- Consistent with median voter shifting toward pro-education policies

Evidence 6: Female Suffrage - Miller (2008)

Question: Did suffrage increase public health spending?

Theory:

- Women disproportionately concerned with maternal and child health
- Suffrage shifts median voter preferences
- → Increased spending on public health programs

Finding:

- States that granted women's suffrage saw **significant increases** in public health spending
- Particularly on maternal and child health programs
- Effects consistent with median voter model

Interpretation:

- Politicians respond to changes in the electorate
- When median voter shifts (due to suffrage), policy follows
- This is exactly what MVT predicts!

Evidence 7: Local Public Goods Provision i

Other studies finding MVT support:

Besley & Case (various papers):

- Gubernatorial term limits
- When governor is term-limited, behaviour changes
- Less responsive to median voter (no re-election incentive)
- Evidence that electoral incentives matter

Levitt & Snyder (1997):

- Congressional spending patterns
- Do representatives bring federal spending to their districts?
- Find evidence consistent with serving constituent (median voter) interests

Evidence 7: Local Public Goods Provision ii

Common theme:

- When electoral connection is strong → policies match median voter
- When electoral connection is weak → deviation from median voter
- Supports core MVT logic

Evidence 8: Cross-Country Social Spending

Broad patterns in OECD countries:

Correlation with median voter income:

- Countries where median voter is poorer relative to mean
- → More social spending as % of GDP
- → More progressive taxation

Age structure effects:

- Countries with older median voter
- → More pension spending
- → More healthcare spending

Caveats:

- Correlation doesn't prove causation
- Many other factors differ across countries
- Institutions, culture, history matter
- But patterns are **consistent with MVT**

Section Summary: Evidence FOR MVT

What the evidence shows:

1. US politics largely one-dimensional

- Poole & Daniels: 80-90% of votes explained by liberal-conservative spectrum

2. Policy responds to median voter characteristics

- Trade policy: Median worker's industry
- Education spending: Median voter's tax share
- Social spending: Median income relative to mean

3. Suffrage expansion changed policies

- Women's suffrage → education and health spending up
- Consistent with median voter shifting

4. Strongest support in specific settings

- Single-issue votes
- Local public goods
- When preferences plausibly single-peaked

But: There's also substantial evidence that challenges MVT. Let's examine that next...

Empirical Challenges to MVT

Evidence Against: Overview

Scientific method requires examining contradictory evidence!

If MVT is wrong or incomplete, we should find:

- Identity of policymaker matters (not just constituency)
- Party affiliation predicts votes even with identical constituencies
- Policy doesn't respond to median voter shifts

Three main sources of evidence:

1. Randomized gender quotas in India
2. US Senate: Same state, different parties
3. US House: Close elections with identical constituencies

Spoiler: All three challenge MVT in important ways!

Challenge 1: Indian Village Study - Setup

Chattopadhyay & Duflo (2004):

Context:

- India: 1993 constitutional amendment
- Randomly selected villages required to reserve chief position for women
- 1/3 of village councils (Gram Panchayats) reserved for women

Research design:

- Compare villages with female-reserved positions to control villages
- Random assignment → no pre-treatment differences
- Perfect natural experiment!

MVT prediction:

- Gender of leader shouldn't matter
- Both male and female leaders represent same constituency
- → Same median voter → same policies

Challenge 1: Indian Village Study - Results i

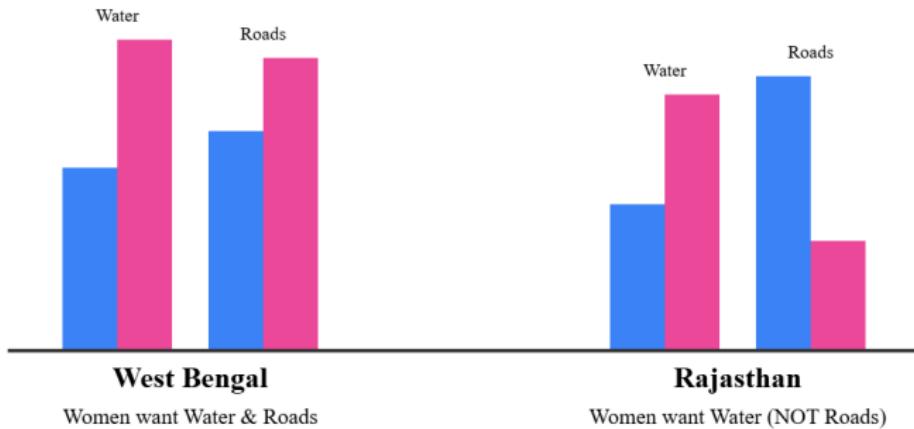
Finding: Leaders invest more in infrastructure directly relevant to their own gender's needs

Challenge 1: Indian Village Study - Results ii

Public Goods Investment by Leader Gender

Male Pradhan

Female Pradhan



Challenge 1: Indian Village Study - Results iii

Implication:

- Identity of leader matters, not just constituency preferences
- Same constituency, different leader → different outcomes
- Contradicts MVT prediction

Challenge 1: Interpretation

Why does this challenge MVT?

Possible explanations:

1. Information asymmetry

- Female leaders better informed about women's needs
- Know which problems are most severe

2. Preference aggregation

- Multiple issues, no clear single dimension
- Leader's identity determines which issues get prioritized

3. Descriptive vs. substantive representation

- Having representatives "like you" matters
- Not just about median voter's policy preference
- Identity politics is real

Key insight: In multidimensional policy space, leader's identity breaks ties and determines agenda. MVT is incomplete.

Challenge 2: US Senate - Setup

Poole & Rosenthal (1996):

Observation:

- Each US state has 2 senators
- Both represent **exactly the same constituency**
- Same median voter!

MVT prediction:

- Both senators should adopt same positions
- Should vote identically in the Senate
- Median voter determines both senators' behaviour

Reality:

- When a state has 1 Democratic senator and 1 Republican senator...
- ...those 2 senators vote **very differently** in the Senate
- Party affiliation trumps constituency

This directly contradicts MVT!

Challenge 2: US Senate - Evidence

Pattern in the data:

- Compare DW-NOMINATE scores of senators from same state
- Democratic senator: Typically -0.4 to -0.6 (liberal)
- Republican senator: Typically +0.4 to +0.6 (conservative)
- **Enormous gap!**

Examples:

- Pennsylvania: Bob Casey (D) vs. Pat Toomey (R) - very different
- Ohio: Sherrod Brown (D) vs. J.D. Vance (R) - opposite ends
- Nevada: Catherine Cortez Masto (D) vs. Jacky Rosen (D) - similar!

Interpretation:

- **Party matters more than constituency**
- Senators vote with their party, not median voter
- Party discipline, career incentives, ideology all matter

Challenge 3: US House Close Elections - Setup i

Lee, Moretti, Butler (2004) QJE:

Research design: Regression Discontinuity (RD)

- Compare districts where Democrat won 50.1% vs. Republican won 50.1%
- Constituencies are **virtually identical**
- Only difference: party of winner

MVT prediction:

- Median voter is same in both cases
- Democrats and Republicans elected from identical constituencies should vote similarly
- Party shouldn't matter when median voter is the same

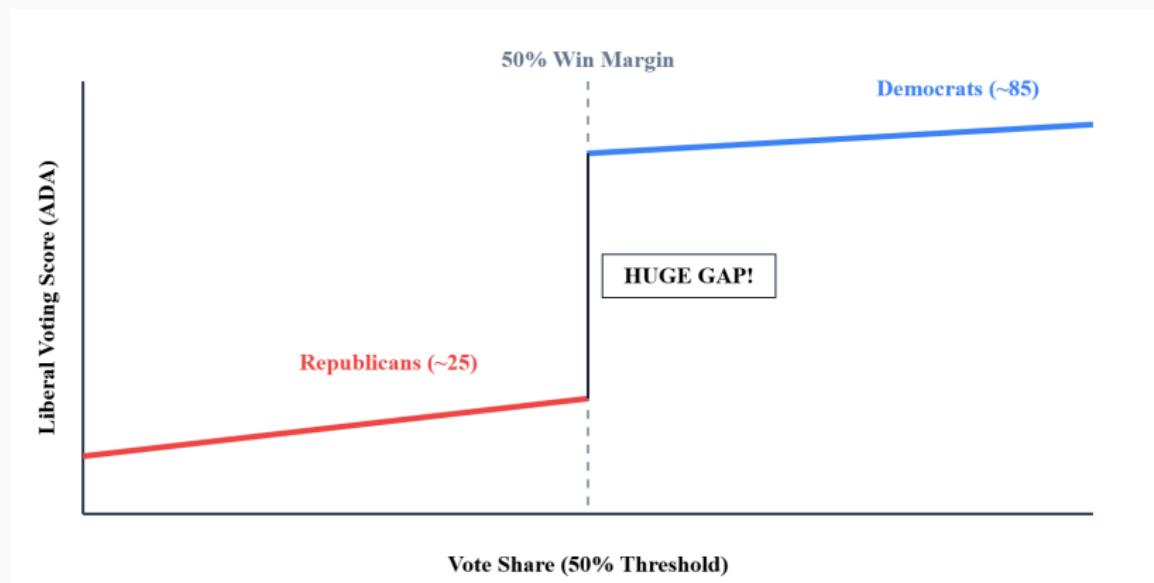
Challenge 3: US House Close Elections - Setup ii

Measurement:

- ADA (Americans for Democratic Action) scores
- 0 = most conservative, 100 = most liberal
- Based on voting record in Congress

Challenge 3: US House Close Elections - Results i

Finding: Huge discontinuity at 50% threshold



Challenge 3: US House Close Elections - Results ii

Interpretation:

- Even with identical constituencies, party matters enormously
- ADA scores differ by 60-80 points
- Party identity > Median voter preferences

Challenge 4: European Parliament Evidence

Beyond the US - similar patterns in Europe:

Setup:

- Members of European Parliament (MEPs) from same country
- Same national constituency
- Different parties (left vs. right, pro-EU vs. euroskeptic)

Finding:

- MEPs vote with their **party group** (EPP, S&D, etc.)
- Not with their national delegation
- Party discipline is strong

Example:

- French EPP MEPs vote with German EPP MEPs
- Not with French Socialist MEPs
- **Party > Country > Median voter**

Party Discipline vs. Constituency Preferences

Why does party matter so much?

Institutional features:

1. Whip systems

- Party leaders enforce voting discipline
- Punishments for deviating (committee assignments, etc.)

2. Career concerns

- Advancement within party depends on loyalty
- Party controls endorsements, funding for re-election

3. Primary elections

- Party activists (not median voter) choose nominees
- Median primary voter \neq median general election voter
- Incentive to appeal to base, not center

4. Ideological selection

- People who become Democrats/Republicans already ideological
- Not randomly assigned to parties

Reconciling the Evidence

When does MVT work? When doesn't it?

MVT Works Better When:

- Single, clear issue
- Local elections
- Weak parties
- Direct democracy (referendums)
- Strong electoral connection

MVT Works Worse When:

- Multiple dimensions
- Strong party discipline
- Primary elections matter
- National elections
- Ideological selection

Bottom line:

- MVT captures important forces (electoral incentives)
- But it's **incomplete** - institutions, parties, and identity matter too
- Use MVT as baseline, then adjust for institutional details

Section Summary: Evidence AGAINST MVT

What we've learned:

1. Identity matters

- Gender of leader affects policy (India study)
- Descriptive representation has substantive effects

2. Party matters

- Same-state senators vote differently by party
- Close elections: party creates huge discontinuity
- European Parliament: party groups > national delegations

3. Institutions matter

- Party discipline shapes behaviour
- Primary elections create different incentives
- Career concerns within party

4. MVT is not useless, but incomplete

- Good in some settings (local, single-issue)
- Limited in others (partisan, multidimensional)
- Need richer models incorporating parties and institutions

Contemporary Challenges to MVT

The Puzzle of Modern Politics

Diane Coyle (2015): "Has the median voter lost her power?"

"Why does the mainstream middle of the political spectrum appear to have been hollowed out, with extreme parties in many countries doing well in opinion polls (if not yet elections), and the greater polarisation of major parties?"

The paradox:

- MVT predicts centrist convergence
- But we observe polarization and extremism
- What happened?

"For many years this seemed a reasonably good account of politics in many democracies, despite being so simplistic... So what has changed recently? Why has the median voter lost her former power?"

US Polarization: The Long View i

Evidence from DW-NOMINATE scores (1880-present): Historical pattern:

- 1880-1900: High polarization
- 1900-1970: Gradual convergence
- 1970-1980: Minimal polarization (peak MVT era!)
- 1980-present: Dramatic increase in polarization

Current state (2020s):

- Almost no overlap between parties in Congress
- Most liberal Republican > most conservative Democrat
- Polarization at highest level since Civil War era

US Polarization: The Long View ii

1970s: Overlap



2020s: Polarization



Key question: Is this asymmetric polarization (Republicans moving right) or symmetric (both moving)?

- Evidence suggests **asymmetric** - Republicans moved more

The Hollowed Center

Two possible explanations:

Explanation 1: Voters polarized

- Distribution of voter preferences has changed
- Fewer moderate voters, more extremes
- Bimodal distribution replaces normal distribution
- Parties follow voters to extremes

Explanation 2: Parties polarized (voters unchanged)

- Voter preferences relatively stable
- But parties moved for other reasons
- Voters sort into parties after parties move
- Parties lead, voters follow

The Hollowed Center ii

Evidence:

- Some voter polarization (especially on cultural issues)
- But **elite polarization came first**
- Mass polarization is partly a response to elite polarization

Possible Explanation 1: Less Rational Voters? i

Have voters become more emotional, less rational?

Evidence for this view:

- Rise of tribal identity politics
- Voters seem to vote against their economic interests
- Anger and resentment drive choices
- “Politics as team sport”

But:

- Were voters ever purely rational?
- Emotion always mattered in politics
- Identity always shaped voting
- Why would irrationality increase now?

Possible Explanation 1: Less Rational Voters? ii

Need structural explanation:

- What changed in the environment?
- What made emotional voting more salient?
- Enter: social media...

Social Media and Information Fragmentation

How social media changed politics:

1. Echo chambers

- Algorithms show you content you already agree with
- Filter bubbles reduce exposure to opposing views
- Reinforces existing beliefs

2. Personalized news feeds

- No more shared information environment
- Different voters see different “facts”
- Hard to find common ground

3. Outrage amplification

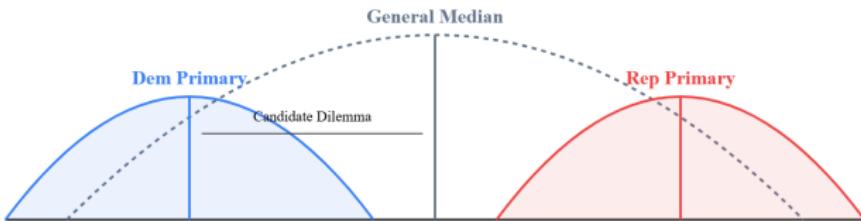
- Extreme content gets more engagement
- Moderate voices drowned out
- Incentive for politicians to be provocative

4. Direct communication

- Politicians bypass media gatekeepers
- Can appeal directly to base
- Less need to court median voter

Result: Harder to maintain centrist coalition when voters inhabit different information universes.

Primary Elections vs. General Electorate



The Problem:

- Primary voters are more ideological than general electorate
- Candidates optimize for primary, not general median
- Electoral incentives pull toward base, not center

Possible Explanation 2: Return of Ideology i

Activists and donors matter more than ever:

Primary electorate \neq General electorate

- Primary voters are more ideological
- More engaged, more extreme
- Median primary voter \neq median general election voter

Donor influence:

- Campaign finance increasingly important
- Donors tend to be more ideological than median voter
- Small donors especially ideological (both left and right)
- Candidates optimize for donors, not just voters

Possible Explanation 2: Return of Ideology ii

Party activists:

- Control nominations, endorsements
- Punish “RINOs” (Republicans In Name Only) and moderate Democrats
- Push candidates away from center

Result: Electoral incentives now pull candidates toward base, not median voter.

Possible Explanation 3: Multidimensional Preferences

Politics is no longer just left-right:

Multiple cleavages:

- Economic redistribution (traditional left-right)
- Cultural values (liberal-conservative)
- Immigration (open-closed)
- EU/Globalization (integrate-protect)
- Climate change (action-skepticism)

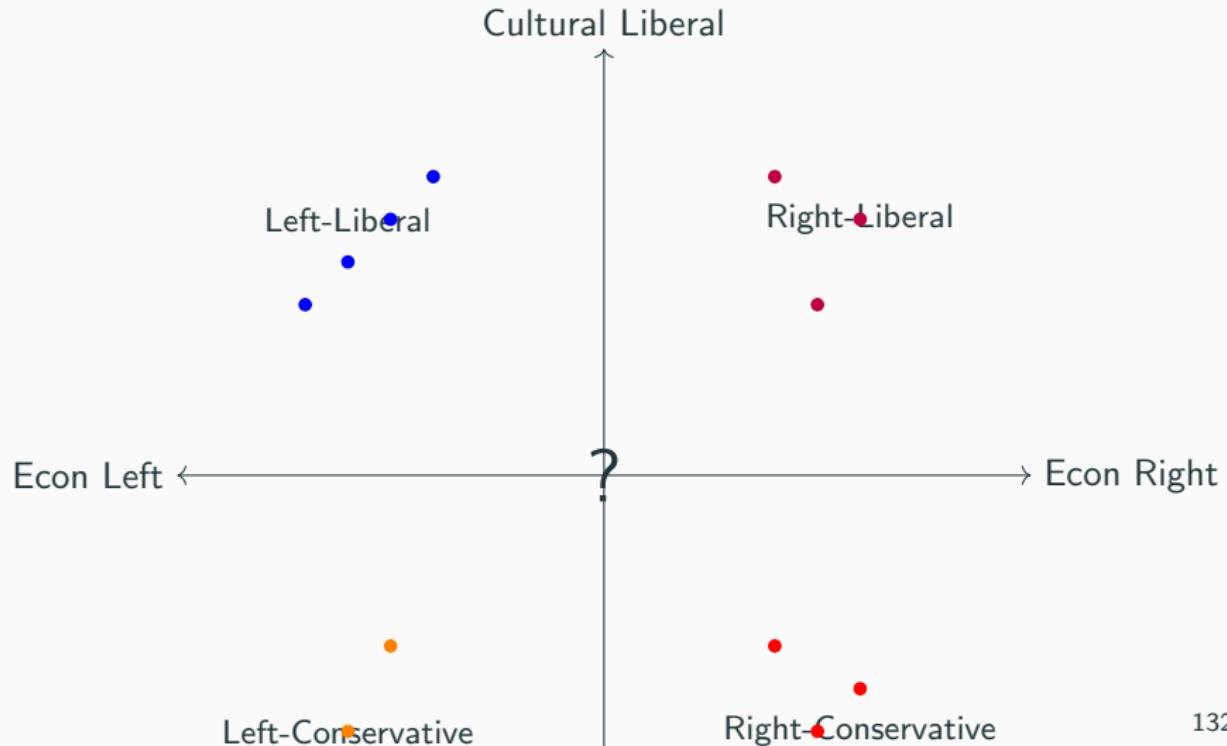
Problem for MVT:

- In 5-dimensional space, **no stable median**
- No clear “center” to converge to
- Different voters prioritize different dimensions
- Coalition-building becomes complex

“If voters are choosing over several criteria... then there might be no stable voting outcome.” - Diane Coyle

Issue Dimensions in Modern Politics

Example: Mapping voters in 2D space



Case Study: Brexit i

Brexit didn't fit traditional left-right dimension:

Cross-cutting cleavages:

- Traditional Labour voters (working class) voted Leave
- Wealthy, educated Conservatives voted Remain
- Cut across party lines

Predictors of Leave vote:

- Age (older → Leave)
- Education (less educated → Leave)
- Urban vs. rural (rural → Leave)
- Immigration attitudes
- NOT traditional left-right economic position

Case Study: Brexit ii

Implication:

- New dimension of politics (open vs. closed)
- Realigns voters across traditional parties
- No clear median on this dimension initially

Case Study: US Elections 2016/2024 i

Trump's strategy: 2-dimensional positioning

Economic dimension:

- Relatively moderate (protect Social Security, Medicare)
- Not traditional Republican position (usually favour cuts)
- Appeals to working-class voters

Cultural/Identity dimension:

- Extreme: immigration restrictionism, nationalism
- “Build the wall,” “Muslim ban,” etc.
- Very far from median on this dimension

Result:

- Won white working-class voters (economic moderates, cultural conservatives)
- Lost college-educated suburbanites (economic conservatives, cultural moderates)
- Realignment along cultural rather than economic lines
- Not traditional MVT convergence!

Populism and Anti-Establishment Politics

New dimension: Elite vs. People

Populist framing:

- “Corrupt elites” vs. “ordinary people”
- Not about policy positions per se
- About identity and belonging
- “Who is politics for?”

Examples globally:

- Trump (US), Le Pen (France), Five Star (Italy)
- Podemos (Spain), AfD (Germany)
- Cut across traditional left-right spectrum

MVT assumption violation:

- MVT assumes policy space
- But populism is about **identity space**
- “Are you with the people or the elite?”
- This doesn’t map onto left-right dimension

Section Summary: Contemporary Challenges

Why has the median voter “lost power”?

1. Social media and information fragmentation

- Echo chambers, filter bubbles
- No shared information environment
- Harder to build centrist coalitions

2. Primary elections and activist influence

- Median primary voter \neq median general voter
- Donors and activists pull parties to extremes

3. Multidimensional politics

- No longer just left-right
- Cultural, identity, globalization dimensions
- No clear median in multidimensional space

4. Populism and anti-establishment

- Elite vs. people framing
- Identity politics rather than policy

Bottom line: MVT still captures important forces, but contemporary politics increasingly violates its assumptions!

Political Selection: Who Becomes a Politician?

Transition: Selection Into Politics

MVT assumes politicians want to win, but...

Who chooses to become a politician in the first place?

Why this matters:

- If only ideologues run, MVT predictions may fail
- If competent people avoid politics, quality of governance suffers
- Selection affects how democracy works

Economic theory predictions:

- Adverse selection: Lower opportunity cost → more likely to run
- Less competent people have lower private sector earnings
- → Politics attracts the less competent?

But is this true? Let's look at evidence from Sweden...

Research question:

“Can a democracy attract competent leaders, while attaining broad representation?”

Data:

- Universe of municipal politicians in Sweden
- Link to military conscription records (IQ, leadership tests)
- Link to tax records (income, family background)
- Compare politicians to general population

Why Sweden?

- Extraordinary data quality
- Universal male conscription → IQ and leadership scores for everyone
- Administrative data on income and background
- Large number of municipal politicians (diverse sample)

Summary of results:

1. Politicians are smarter and better leaders than average

- Significantly higher IQ scores
- Higher leadership ability scores
- Contradicts adverse selection prediction!

2. Representation by social background is remarkably even

- Politicians come from all parts of income distribution
- No elite capture

3. Weak trade-off between competence and representation

- High competence AND broad representation
- Not choosing between elite competence vs. mass representation

4. Material and intrinsic motives both matter

- Higher salaries attract more competent candidates
- But ideology and public service also drive entry
- Party screening is important

Finding 1: Politicians Are More Competent

IQ and Leadership Scores:

- Cognitive ability (IQ): Politicians score significantly higher than general population
- Leadership ability: Even larger difference
- Pattern holds across all parties
- Stronger at higher levels of government

Why is this surprising?

- Economic theory: Lower opportunity cost → more likely to enter politics
- High-ability people earn more in private sector
- Should see negative selection on ability
- But we see positive selection!

Finding 1: Politicians Are More Competent ii

Implications:

- Politics attracts talent
- Democratic institutions can select competent leaders
- Screening mechanisms (parties, voters) work

Finding 2: Broad Social Representation

Income and family background:

- Politicians come from all parts of earnings distribution
- No overrepresentation of economic elite
- Remarkably even across social classes

Why is this notable?

- Common criticism: Politics is for the rich
- Elite capture of political institutions
- Sweden shows it's possible to have broad representation

Mechanisms in Sweden:

- PR system (easier for working-class candidates to get elected)
- Strong party organizations (provide support and resources)
- Public financing of elections (reduces money barrier)
- Union representation in left parties

Finding 3: Competence and Representation - Weak Trade-Off

The surprising result:

Countries often face a perceived trade-off:

- Elite politicians: High competence, low representation
- Mass politicians: Low competence, high representation

Sweden defies this:

- High competence AND broad representation
- Selection on competence doesn't exclude working-class candidates
- Smart people exist at all income levels
- Parties recruit from broad base

Implication:

- Institutions matter for who enters politics
- Well-designed systems can get both competence and representation
- Not inevitable that we choose one or the other

Finding 4: Why Do People Become Politicians?

Material vs. intrinsic motivation:

Material motives (salaries):

- Higher salaries → more competent candidates enter
- Effect is significant and robust
- Money matters for attracting talent

Intrinsic motives (ideology, public service):

- People care about policy outcomes
- Civic duty and public service motivation
- Party affiliation reflects values, not just career

Party screening:

- Parties act as gatekeepers
- Select candidates based on competence and fit
- Provide training and support
- This matters for quality of political class

Selection vs. Treatment Effects

Important distinction:

Selection: Do certain types of people become politicians?

- Dal Bó et al: Smart, capable people enter politics
- Self-selection based on ability

Treatment: Does being a politician change you?

- Do politicians become more centrist after election?
- Or do they stick to their pre-election positions?
- Less evidence on this question

Relevance for MVT:

- If politicians are ideologically committed (selection)
 - → Less likely to converge to median voter
- If politicians are flexible (treatment)
 - → More likely to respond to electoral incentives

Career Politicians vs. Outsiders

Recent trend: Rise of political outsiders

Examples:

- Trump (business background, no political experience)
- Zelenskyy (comedian/actor → President of Ukraine)
- Five Star Movement in Italy (anti-establishment)

Question: Does lack of political experience correlate with extremism?

- Career politicians socialized into norms
- Understand need for compromise
- Outsiders less constrained by party
- May take more extreme positions

Evidence: Mixed

- Some outsiders are moderate pragmatists
- Others are ideological extremists
- Depends on why they entered politics

Does Competence Correlate with Centrism?

Open question:

- Dal Bó et al: Politicians are more competent than average
- **But:** Are more competent politicians also more moderate?

Possible mechanisms:

- Smart people understand trade-offs and complexity
- → More likely to be moderate?
- Or: Smart people better at justifying extreme positions
- → No relationship?

Limited evidence:

- Some studies find educated elites are more extreme
- Others find competence correlates with pragmatism
- **Needs more research**

Section Summary: Political Selection

What we've learned:

- 1. Politicians are more competent than average (Dal Bó et al)**
 - Higher IQ and leadership ability
 - Contradicts adverse selection prediction
- 2. Broad social representation is possible**
 - Sweden achieves both competence and representation
 - Institutions matter
- 3. Material and intrinsic motives both matter**
 - Salaries attract talent
 - But ideology and public service also drive entry
- 4. Selection affects MVT predictions**
 - If politicians are ideologically committed → less convergence
 - If they're office-motivated → more convergence
 - Understanding selection helps explain deviations from MVT

Normative Analysis: Should We Want Median Voter Outcomes?

Positive vs. Normative Analysis

Two distinct questions:

Positive (Descriptive)

- Does MVT describe reality?
- What do we observe?
- When does it work?
- Scientific question

Normative (Prescriptive)

- *Should* we want median voter outcomes?
- Is it desirable?
- Is it just?
- Philosophical question

Why ask normative questions?

- Understanding MVT helps us design institutions
- Should we strengthen or weaken median voter's power?
- What are alternatives?
- Trade-offs between different values

When Is Median Voter Outcome Desirable?

MVT looks good when:

1. Preferences are symmetric

- Median = Mean
- Median voter represents “average” citizen
- Maximizing median welfare = maximizing average welfare

2. Utilitarian welfare maximization

- If we want to maximize total utility
- And median = mean
- Then MVT outcome is efficient

3. Single-peaked preferences

- Condorcet winner exists
- Stable, predictable outcomes
- Democratic legitimacy

But: What if we care about rights, not just utility? What about minorities?

Majority Tyranny Concerns

Classic warnings from political philosophy:

John Stuart Mill:

"The tyranny of the majority is now generally included among the evils against which society requires to be on its guard."

Alexis de Tocqueville:

"...a majority of the citizens are capable of oppressing the remaining minority."

The problem:

- 51% can impose on 49%
- Intensity of preferences ignored
- Minorities can be systematically disadvantaged
- What if median voter wants to violate minority rights?

The Intensity Problem Returns

Recall from earlier: One person, one vote ignores intensity

Example:

- 60% mildly prefer policy A
- 40% passionately oppose policy A
- Majority rule → policy A wins
- But total utility might be higher with policy B!

When is this most problematic?

- Minority rights issues
- Religious or cultural practices
- Fundamental freedoms
- Identity and dignity

Solution: Constitutional protections, rights that can't be voted away, supermajority requirements for certain decisions.

Minority Representation i

Two types of representation:

Descriptive representation:

- Legislature “looks like” the population
- Diverse by race, gender, class, etc.
- Symbolic importance

Substantive representation:

- Policies address minority group interests
- Not just about who is elected
- About what policies are enacted

MVT and minority representation:

- Pure MVT: Majority always wins, minorities lose
- Solutions:
 - Reserved seats (like India study)
 - Proportional representation
 - Coalition governments
 - Consociational democracy

Alternative Voting Systems

How different electoral systems relate to MVT:

System	MVT Relevance	Minority Rep.
FPTP (US/UK)	High Two-party, convergence	Low Winner-take-all
PR (Netherlands)	Low Many parties, coalitions	High Proportional seats
PR-STV (Ireland)	Medium Multi-seat, transfers	Medium Better than FPTP
Ranked Choice	Medium Instant runoff	Medium Reduces spoilers

Trade-off:

- FPTP → Strong MVT forces, weak minority representation
- PR → Weak MVT forces, strong minority representation
- No perfect system!

Irish PR-STV: A Compromise? i

How does Ireland's system balance these concerns?

Features:

- Proportional representation (better for minorities than FPTP)
- Multi-seat constituencies (3-5 seats)
- Single Transferable Vote (preference ranking)
- Local accountability (constituency service)

Effects:

- More parties than FPTP (FF, FG, SF, Lab, Greens, others)
- Coalition governments are norm
- Independents can win seats
- **But:** Still majoritarian in practice (government formation)

MVT implications:

- Less pure MVT convergence than FPTP
- But coalition formation reintroduces median voter logic
- Need to appeal to median to form government

Trade-Offs in Democratic Design

No perfect electoral system (Arrow's theorem again!)

Representation	Governability
-----------------------	----------------------

- Minority voices heard
- Proportional outcomes
- Diverse legislature

Extremism vs. Coalition

Compromise

- Niche parties vs. broad coalitions
- Ideological purity vs. pragmatism

Governability

- Clear accountability
- Decisive action
- Stable government

Median Voter Power

- Centrist policies
- But risk of tyranny of majority

Different societies make different choices based on their values and history.

Future of Majoritarian Democracy i

Is the median voter model still relevant?

Challenges:

- Multidimensional politics
- Polarization
- Social media fragmentation
- Rise of populism

But:

- Electoral incentives still exist
- Median voter logic applies in some contexts
- Useful benchmark even when violated

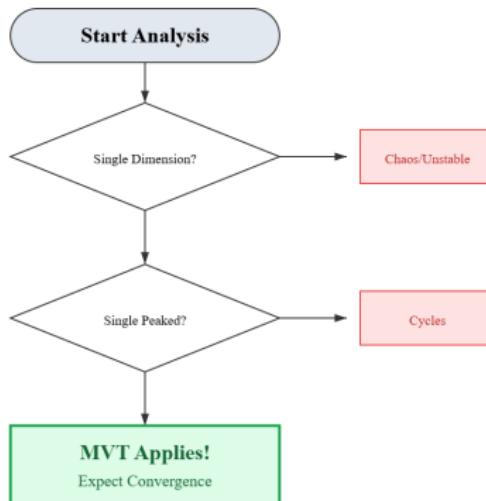
Adaptation:

- More sophisticated models (multidimensional, probabilistic)
- Incorporate parties, institutions, social media
- Behavioral insights
- MVT is a building block, not the complete theory

Conclusion

Applying MVT: A Decision Framework

When analyzing a political situation, ask:



Use this framework to assess whether MVT predictions will hold!

Summary: When Does MVT Work Well?

MVT predictions are strongest when:

1. Single-dimensional issues

- Tax rates, spending levels
- Can order alternatives on a line

2. Two-party/candidate competition

- FPTP systems
- Clear left-right competition

3. Single-peaked preferences

- Everyone has ideal point
- Preferences decline moving away

4. Strong electoral connection

- Re-election matters
- Weak party discipline
- Responsive politicians

5. Local public goods decisions

- School spending, park locations
- Simpler, more direct accountability

Summary: When Does MVT Fail?

MVT struggles when:

1. Multiple dimensions

- Economic + cultural + identity + globalization
- No stable equilibrium

2. Strong party discipline

- Party whips enforce voting
- Career concerns within party
- Party > constituency

3. Primary electorates matter

- Median primary voter \neq median general voter
- Base mobilization vs. center appeal

4. Money in politics

- Donors pull candidates to extremes
- Fundraising incentives

5. Ideological politicians

- Policy-motivated, not just office-motivated
- Willing to lose rather than compromise

Open Research Questions

What we still need to understand better:

1. How many dimensions in modern politics?

- Can we reduce to 2-3 dimensions?
- Or truly 5+ dimensional?

2. Can we measure the median voter?

- In multidimensional space
- With imperfect information

3. Effect of polarization on governance

- Does polarization harm policy quality?
- Or is it just redistribution of power?

4. Role of social media

- Does it fundamentally change electoral incentives?
- Or just amplify existing trends?

5. Institutional design

- What electoral systems best balance representation and governability?
- How to protect minorities while respecting majority rule?

Final Takeaway

George Box (1976):

"All models are wrong, but some are useful."

The Median Voter Theorem is useful because:

- Provides a clear baseline prediction
- Helps us understand when reality deviates (and why)
- Clarifies the forces pushing toward convergence
- Shows what's required for democratic stability

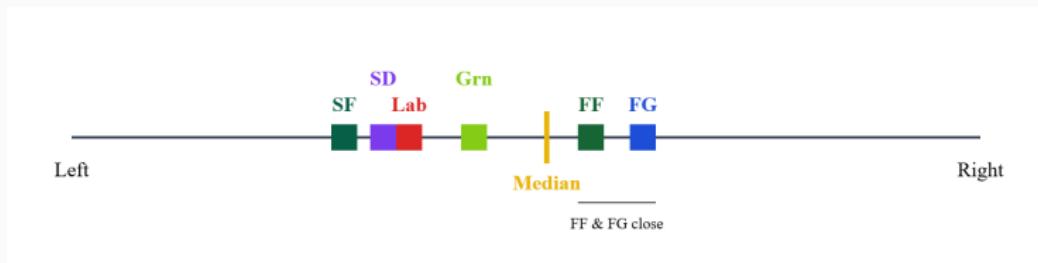
But it's wrong in important ways:

- Parties matter
- Institutions matter
- Identity matters
- Multidimensionality matters

Understanding both the power and limits of MVT makes us better analysts of democratic politics!

Irish Context: Party Positioning

Do Irish parties converge to the median voter?



Discussion questions:

- Why are FF and FG so close together?
- Is SF's left position consistent with MVT or challenging it?
- Is the median Irish voter shifting left?

Next Steps & Assignments

Before next week:

1. Review MVT readings (posted on Loop/GitHub)
2. Start thinking about your Irish Context presentation:
 - Week 4: Do FF/FG/SF converge toward median Irish voter?
 - How does PR-STV change MVT predictions?
 - What about Sinn Féin's rise?
3. Begin considering Project 1 paper selection

Next week's topic:

- Political Competition and Macroeconomic Performance
- Do politicians manipulate the economy before elections?
- Political business cycles

Further Reading

Foundational Works (1940s-1960s)

1. Wicksell, K. (1896). *Finanztheoretische Untersuchungen*. ["A New Principle of Just Taxation"]
2. Black, D. (1948). "On the Rationale of Group Decision-making." *Journal of Political Economy*, 56(1), 23-34.
3. Arrow, K. J. (1951). *Social Choice and Individual Values*. New York: Wiley. (Nobel Prize 1972)
4. Downs, A. (1957). *An Economic Theory of Democracy*. New York: Harper & Row.
5. Buchanan, J. M., & Tullock, G. (1962). *The Calculus of Consent*. Ann Arbor: University of Michigan Press.
6. Olson, M. (1965). *The Logic of Collective Action*. Cambridge, MA: Harvard University Press.

These are the classics that established Public Choice and the median voter framework.

Theoretical Development (1970s-1990s)

7. McKelvey, R. D. (1976). "Intransitivities in Multidimensional Voting Models." *Econometrica*, 44(3), 472-487.
8. Schofield, N. (1978). "Instability of Simple Dynamic Games." *Review of Economic Studies*, 45(3), 575-594.
9. Meltzer, A. H., & Richard, S. F. (1981). "A Rational Theory of the Size of Government." *Journal of Political Economy*, 89(5), 914-927.
10. Wittman, D. (1983). "Candidate Motivation: A Synthesis of Alternative Theories." *American Political Science Review*, 77(1), 142-157.
11. Poole, K. T., & Daniels, R. S. (1985). "Ideology, Party, and Voting in the US Congress." *American Political Science Review*, 79(2), 373-399.
12. Poole, K. T., & Rosenthal, H. (1996). *Congress: A Political-Economic History of Roll Call Voting*. Oxford University Press.

Empirical Studies: Supporting Evidence

13. Levitt, S. D., & Snyder, J. M. (1997). "The Impact of Federal Spending on House Election Outcomes." *Journal of Political Economy*, 105(1), 30-53.
14. Dutt, P., & Mitra, D. (2002). "Endogenous Trade Policy Through Majority Voting." *Journal of International Economics*, 58(1), 107-133.
15. Miller, G. (2008). "Women's Suffrage, Political Responsiveness, and Child Survival." *Quarterly Journal of Economics*, 123(3), 1287-1327.
16. Corcoran, S. P., & Evans, W. N. (2010). "Income Inequality, the Median Voter, and Local School Expenditure." *Journal of Urban Economics*, 68(2), 221-236.
17. Kose, E., Kuka, E., & Shenhav, N. (2021). "Women's Suffrage and Children's Education." *American Economic Journal: Economic Policy*, 13(3), 374–405.

Empirical Studies: Challenging Evidence

18. Chattopadhyay, R., & Duflo, E. (2004). "Women as Policy Makers: Evidence from a Randomized Policy Experiment in India." *Econometrica*, 72(5), 1409-1443.
19. Lee, D. S., Moretti, E., & Butler, M. J. (2004). "Do Voters Affect or Elect Policies?" *Quarterly Journal of Economics*, 119(3), 807-859.
20. Bertrand, M., & Mullainathan, S. (2001). "Are CEOs Rewarded for Luck?" *QJE*, 116(3), 901-932. [Cited for comparison]
21. Besley, T., & Case, A. (1995). "Does Electoral Accountability Affect Economic Policy Choices?" *QJE*, 110(3), 769-798.

Political Selection & Contemporary Challenges

22. Dal Bó, E., Finan, F., Folke, O., Persson, T., & Rickne, J. (2017). "Who Becomes a Politician?" *Quarterly Journal of Economics*, 132(4), 1877-1914.
23. Fiorina, M. P. (2017). *Unstable Majorities: Polarization, Party Sorting, and Political Stalemate*. Hoover Institution Press.
24. McCarty, N., Poole, K. T., & Rosenthal, H. (2016). *Polarized America: The Dance of Ideology and Unequal Riches* (2nd ed.). MIT Press.
25. Levendusky, M. (2009). *The Partisan Sort: How Liberals Became Democrats and Conservatives Became Republicans*. University of Chicago Press.

Recent Applications & Extensions

26. Persson, T., & Tabellini, G. (2002). *Political Economics: Explaining Economic Policy*. MIT Press.
27. Acemoglu, D., & Robinson, J. A. (2006). *Economic Origins of Dictatorship and Democracy*. Cambridge University Press.
28. Caplan, B. (2007). *The Myth of the Rational Voter: Why Democracies Choose Bad Policies*. Princeton University Press.
29. Alesina, A., & Giuliano, P. (2011). "Preferences for Redistribution." In *Handbook of Social Economics*.
30. Autor, D., Dorn, D., Hanson, G., & Majlesi, K. (2020). "Importing Political Polarization? The Electoral Consequences of Rising Trade Exposure." *American Economic Review*, 110(10), 3139-3183.

Textbooks & Surveys

31. Mueller, D. C. (2003). *Public Choice III*. Cambridge University Press. [Chapter 11]
32. Persson, T., & Tabellini, G. (2000). *Political Economics: Explaining Economic Policy*. MIT Press.
33. Drazen, A. (2000). *Political Economy in Macroeconomics*. Princeton University Press.
34. Congleton, R. D., Hillman, A. L., & Konrad, K. A. (Eds.). (2008). *40 Years of Research on Rent Seeking* (Vols. 1-2). Springer.
35. Ashworth, S. (2012). "Electoral Accountability: Recent Theoretical and Empirical Work." *Annual Review of Political Science*, 15, 183-201.

Encyclopedias:

- Entry on "Median Voter Theorem" in *Encyclopedia of Public Choice* (Shughart & Razzolini, 2001)
- Entry on "Downs, Anthony" in *The New Palgrave Dictionary of Economics*

Online Resources & Lectures

MIT OpenCourseWare:

- Benjamin Olken. 14.75 Political Economy and Economic Development. Fall 2012. <https://ocw.mit.edu>
- Emmanuel Saez lecture notes:
http://eml.berkeley.edu/~saez/course131/political_ch09_new.pdf

Journalism & Commentary:

- Cowen, T. (2010). "In Politics, Sometimes the Middle Way Really Is the Best." *New York Times*.
<http://www.nytimes.com/2010/02/07/business/economy/07view.html>
- Coyle, D. (2015). "Has the median voter lost her power?" *Financial Times*.
<https://www.ft.com/content/7ab73ad8-21ec-39f3-ab8d-a559a110d210>

Data Resources:

- Voteview.com (DW-NOMINATE scores for US Congress)
- ANES (American National Election Studies)
- European Social Survey

Cultural Resources

Films & TV Series

Political Competition & Electoral Strategy:

- **The West Wing** (Season 3, Episodes on polling and positioning)
- **The War Room** (1993 documentary) - Clinton campaign strategists
- **Veep** - Satirical take on campaign positioning
- **Parks and Recreation** - Local government and median voter
- **Borgen** (Danish series) - Coalition politics in PR system

Polarization & Contemporary Politics:

- **The Social Dilemma** (Netflix) - Social media and polarization
- **Get Me Roger Stone** (Netflix) - Partisan strategy
- **Brexit: The Uncivil War** (2019) - Campaign strategy

Books for General Audience

Directly relevant to MVT:

- Bryan Caplan - *The Myth of the Rational Voter* (2007)
- Morris Fiorina - *Culture War? The Myth of a Polarized America* (3rd ed., 2010)
- Ezra Klein - *Why We're Polarized* (2020)

On electoral systems:

- Arend Lijphart - *Patterns of Democracy* (1999)
- David Farrell - *Electoral Systems: A Comparative Introduction* (2011)

Irish politics:

- Michael Gallagher et al. - *Politics in the Republic of Ireland* (6th ed., 2018)
- Eoin O'Malley - *Contemporary Ireland* (2011)

Podcasts & Online Media i

Political Economy Podcasts:

- **EconTalk** (Russ Roberts)
 - Morris Fiorina on polarization
 - Bryan Caplan on rational voting
 - Multiple episodes on public choice
- **The Ezra Klein Show** - Episodes on polarization and electoral systems
- **Planet Money** - “The Median Voter” episode

Podcasts & Online Media ii

Data Journalism:

- **FiveThirtyEight Politics** - Electoral analysis and polling
- **The Economist Asks** - Episodes on democracy and voting
- **More or Less** (BBC Radio 4) - Statistical thinking in politics

Irish Context:

- **The Irish Politics Podcast**
- **Oireachtas TV** - Dáil debates
- **RTÉ Archives** - Historical election coverage

How to Engage with These Resources i

Suggested approach for deeper learning:

1. Pick resources that interest you

- Don't feel obligated to consume everything
- Follow your curiosity

2. Watch/read/listen with MVT in mind:

- Are politicians trying to appeal to median voter?
- What prevents convergence?
- Which assumptions are violated?

How to Engage with These Resources ii

3. Connect to Irish context:

- How would this apply in Ireland?
- Does PR-STV change the analysis?
- Use in your presentations!

4. Discuss with peers:

- Presentations are opportunities for debate
- Bring in examples from these resources
- Challenge the theories

Remember: Cultural resources complement academic reading but don't replace it!

Final Thought

“Democracy is the worst form of government – except for all the others that have been tried.”
- Winston Churchill

The median voter theorem helps us understand *why* democracy works as well as it does...

...and why it sometimes doesn't work as well as we'd hope.

Understanding the mechanism is the first step to improving it.