

Microeconomic analysis of the Public Sector ECO2110A Spring 2019

7. Public Choice

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Hot topic...

“Majority of Ontarians oppose province's cuts to public health, new poll suggests”

Poll by Environics Research suggests 8 out of 10 Ontarians and over 50% of PC voters oppose cuts

- Source: <https://www.cbc.ca/news/canada/toronto/poll-ontarians-oppose-provincial-public-health-cuts-1.5142867>

Outline

- Public Choice:
 - Direct Democracy:
 - Unanimity Rule
 - Majority Voting Rule
 - Representative Democracy:
 - Elected politicians
 - Public Employees
 - Other actors
- Government Growth

Public Choice

- The field that applies economic principles to the analysis of political decision-making
- How well do various decision-making procedures translate the preferences of their citizens into collective action?
 - Direct Democracy
 - Representative Democracy

7.1 Direct Democracy

Example

- Swiss case:
 - all citizens take part in decision-making and there's a strong respect for minorities
 - Referendums: mandatory, popular initiative and optional
- Examples:
 - In 2013: Executives unable to earn more in a month than their lowest-paid workers in a year. The so-called 1:12 initiative. Votes against 65.3% and 34.7% in favour
 - In 2016: a popular initiative to give everyone in the country a basic income made it to the referendum stage. It was rejected by 76.9% of voters

Example

- Canadian referendums (Referendums Act):
- Examples:
 - Quebec (1980) the proposal to pursue secession: No 59.56%, Yes 40.44%
 - Charlottetown Accord Referendum (1992): Do you agree that the Constitution of Canada should be renewed on the basis of the agreement reached on August 28, 1992? Yes: 45.03%, No: 54.97%.

Direct Democracy

- Voting procedures to decide what quantities of public goods are provided:
 - Unanimity rule
 - Majority voting rule

7.1.1 Unanimity rule

Direct Democracy: Unanimity Rules

- Assumption: if people vote whether or not to provide a public good in an efficient quantity, they would vote unanimously yes (given a suitable tax system to finance it)
- **Lindahl's procedure**: procedure designed to elicit unanimous agreement
- At **Lindahl prices** (or tax shares) each individual votes for the same quantity of public good

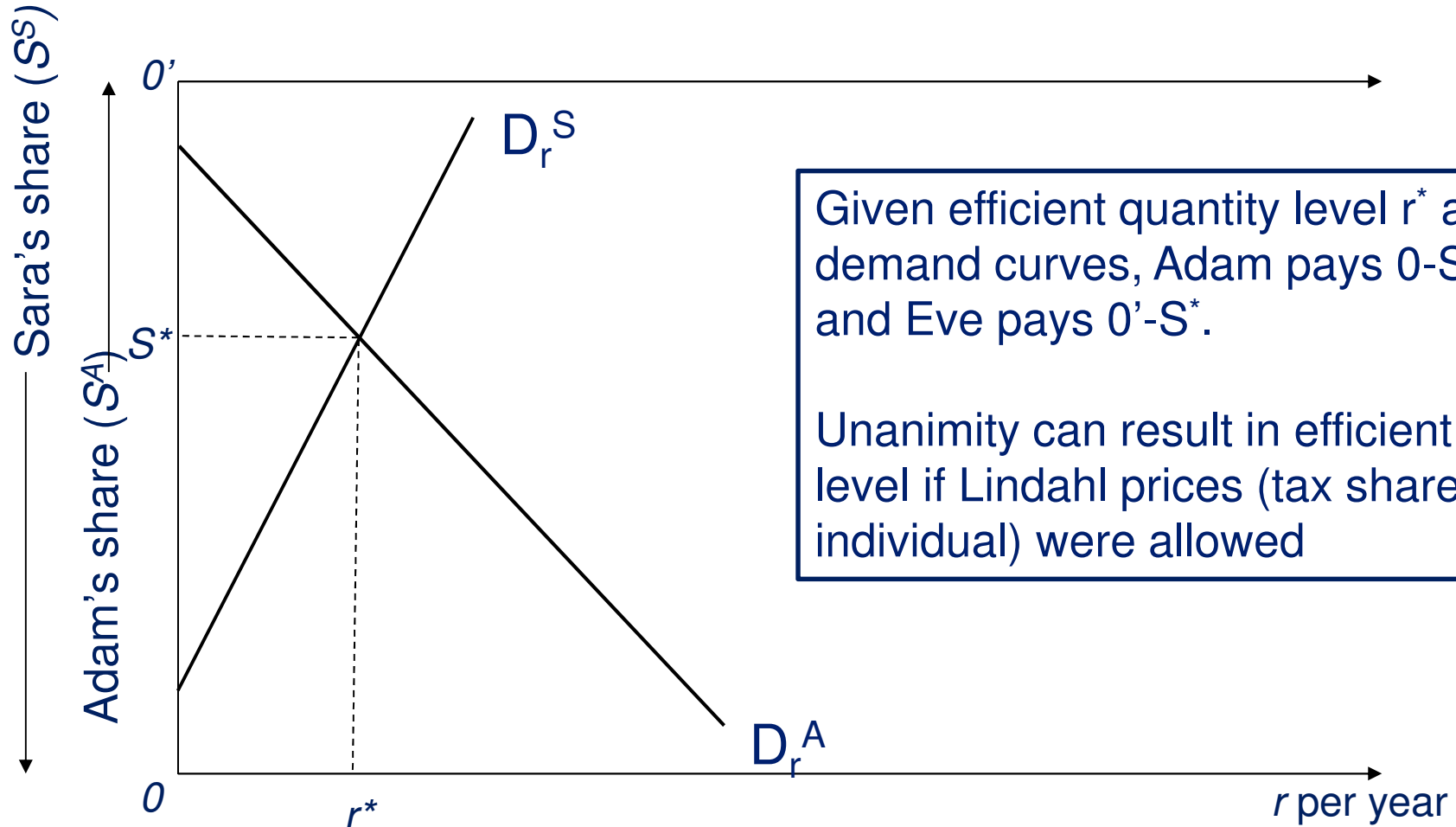
Direct Democracy: Unanimity Rules

- Example: 2 citizens and 1 public good
- Sara and Adam are paying a share of the cost of the rocket provision, S_S and S_A

$$S_S + S_A = 1$$

- If this tax share increases, they demand less rockets

Direct Democracy: Unanimity Rules



Given efficient quantity level r^* and demand curves, Adam pays $0-S^*$ and Eve pays $0'-S^*$.

Unanimity can result in efficient level if Lindahl prices (tax share per individual) were allowed

Lindahl's Model

Direct Democracy: Feasibility of Unanimity Rules

- Practical problems:
 - Strategic behaviour: do people vote sincerely or under report value to escape tax liability?
 - Time to reach equilibrium given many parties

7.1.2 Majority voting rule

Direct Democracy: Majority Voting Rules

- **Majority voting rule:** mechanism used to aggregate individual votes into a social decision. One more than half of the voters must favor a measure for it to be approved
 - Consistent decision: given the voter preferences to the right, “B” always wins against opponents (all preferences are single-peaked)

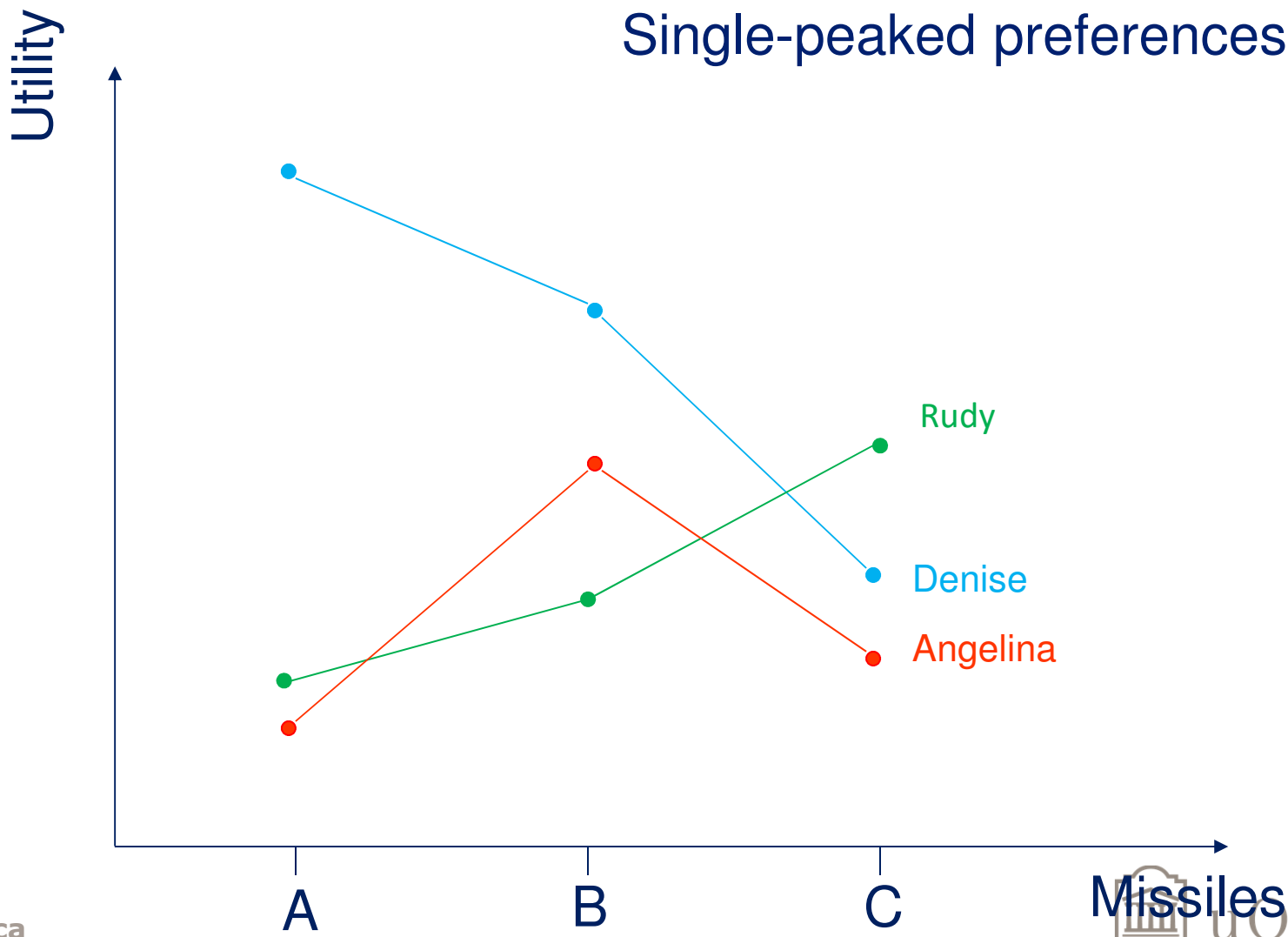
	Voter		
Choice	Denise	Rudy	Angelina
First	A	C	B
Second	B	B	C
Third	C	A	A

Direct Democracy: Majority Voting Rules

- **Single-peaked preferences:** as an individual moves away from her most preferred outcome in any and all directions her utility consistently falls
- **Double-peaked preferences:** as an individual moves away from his most preferred outcome, utility goes down, but then goes up again:
 - Example: public park vs. private country club
Car and insurance

Graphing Preferences

Single-peaked preferences

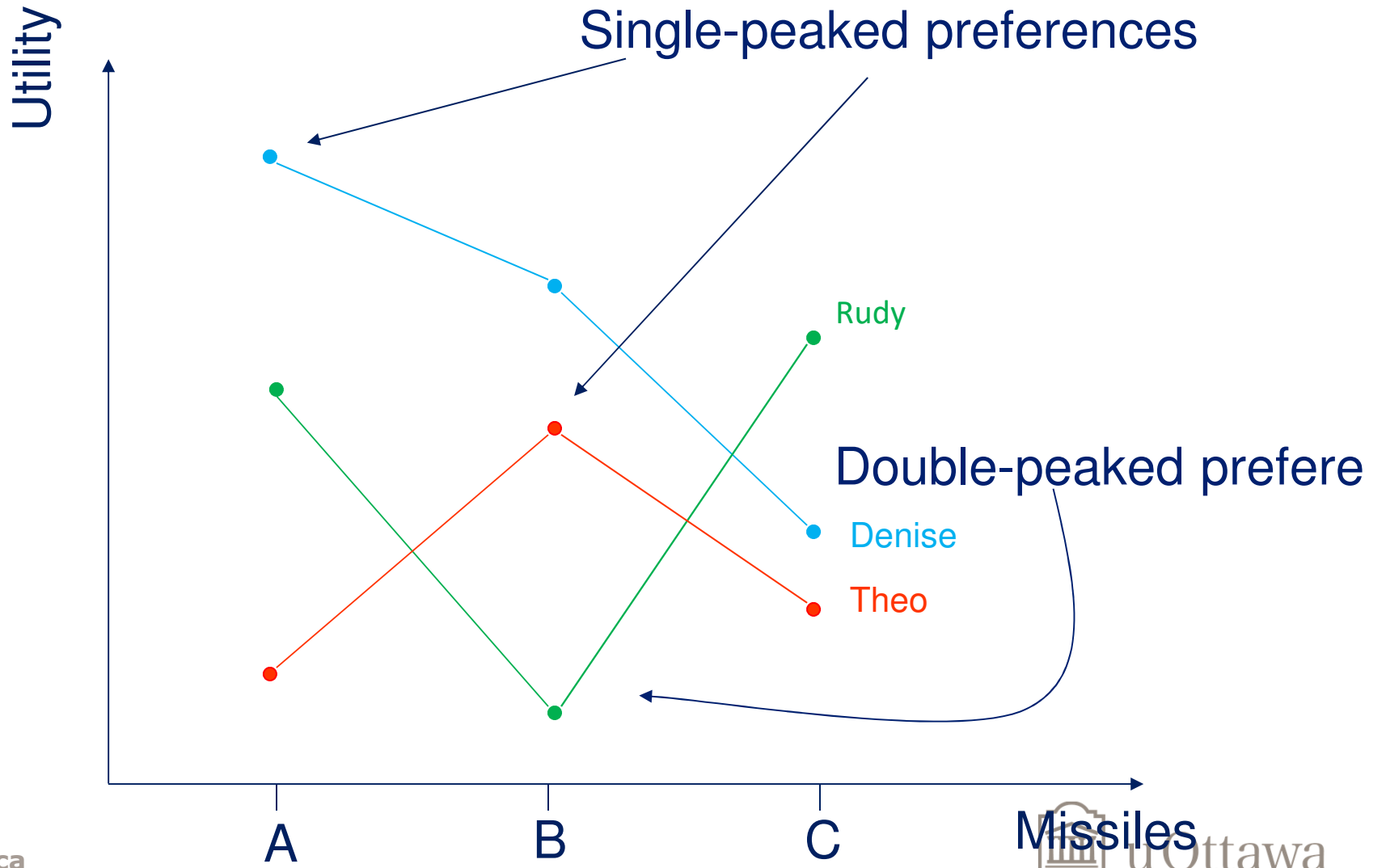


Direct Democracy: Majority Voting Rules

- However, majority voting does not always yield clear-cut results

Voter			
Choice	Denise	Rudy	Theo
First	A	C	B
Second	B	A	C
Third	C	B	A

Graphing Preferences



Direct Democracy: Majority Voting Rules

- **Voting Paradox:** community preferences can be inconsistent even though individual's preferences are consistent
 - Given new preferences to the right:
 - A vs. B \rightarrow A wins
 - B vs. C \rightarrow B wins
 - A vs. C \rightarrow C wins
- **Agenda Manipulation:** Process of organizing order of votes to ensure a favorable outcome
- **Cycling:** when paired voting on more than two possibilities goes on indefinitely without a conclusion ever being reached

Direct Democracy: Majority Voting Rules

- **Median Voter Theorem:** As long as preferences are single-peaked, the outcome of majority voting reflects the median voter preferences
- **Median voter:** whose preferences lie in the middle of the set of all voter's preferences
- When the requirement for the median voter rule is satisfied, the most preferred option satisfies the efficiency condition of public goods

Direct Democracy: The Median Voter Theorem

- Huey's preference of \$150 spending would prevail in majority voting

Voter	Expenditure
Donald	\$5
Daisy	100
Huey	150
Dewey	160
Louie	700

Example

- Vote on how much funding for daycare using property taxes: high (H), medium (M), low (L) or nothing (N)
- There are three types of voters in a town, with equal numbers in each group:
 - *Parents*
 - *Elders*
 - *Young couples without children*

	Young couples	Parents	Elders
First Option	N	H	L
Second Option	H	M	M
Third Option	M	L	H
Fourth Option	L	N	N

- How are the preferences, single-peaked or double peaked?
- Is there a stable outcome using a pairwise majority rule election?
- Can we say something about the median voter rule?

Direct Democracy: Arrow's Impossibility Theorem

- In a democratic society, a collective decision-making rule should satisfy the following criteria:
 1. It can produce a decision whatever the configuration of voters' preferences
 2. It must be able to rank all possible outcomes
 3. It must be responsive to individuals' preferences
 4. It must be consistent
 5. Independence of irrelevant alternatives
 6. Dictatorship ruled out
- Society's choice mechanism should be logical and respect individuals' preferences

Direct Democracy: Arrow's Impossibility Theorem

- Unfortunately, all conceivable voting schemes have some potential for being unfair or producing a paradoxical result
- The meaning of theorem is that a fair, consistent rule is not necessarily impossible to find, but it is not guaranteed a society will find one
- Despite being inconsistent, majority rule has other benefits
- Arrow's theorem implies social welfare functions are useless, but most economists believe they provide valuable insights

7.2 Representative Democracy

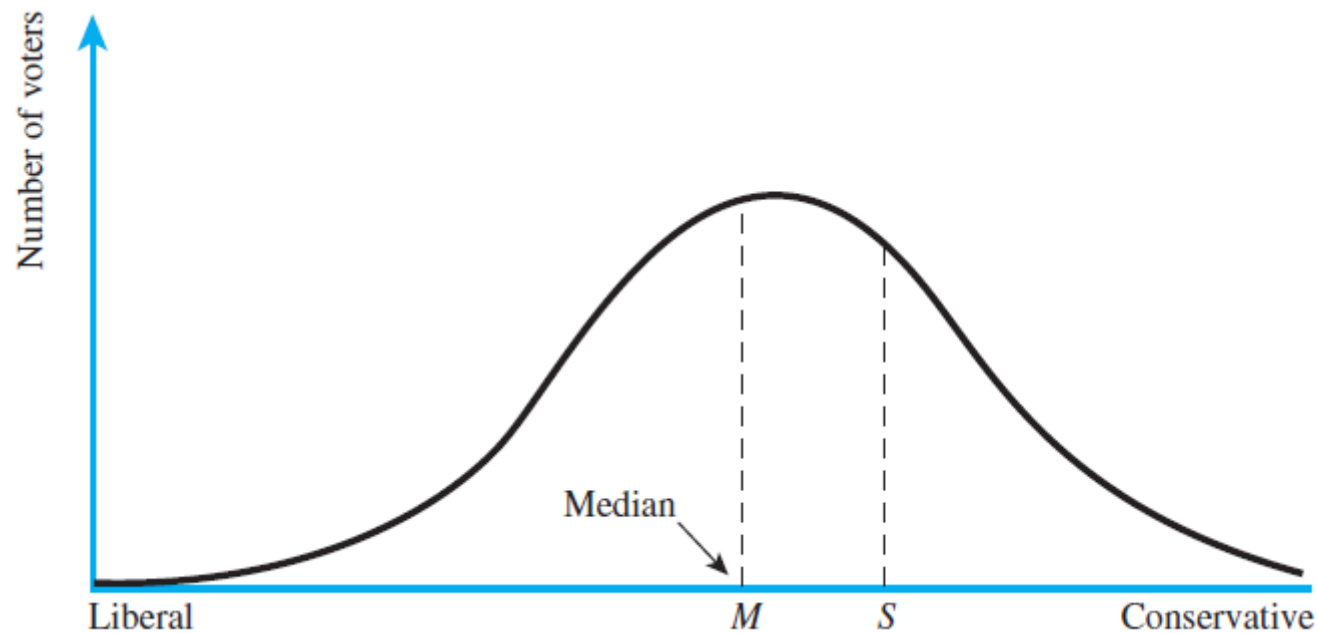
Representative Democracy

- Public choice is done by government
- Government choices depend on the interaction of elected politicians, public employees and special interest groups

7.2.1 Elected Politicians

Representative Democracy: Median Voter Theorem for Elections

- A vote-maximizing politician adopts the preferred program of the median voter



Representative Democracy: Elected Politicians

- The candidate who adopts the median position (M) will defeat the candidate who adopts the position away from the median (S)
- Two-party systems tend to be stable because they stake out positions near center
- Replacement of direct referenda by representative system has no effect on outcomes

Representative Democracy: Other Factors Influencing Voting

- Single-dimensional rankings
- Two-party system
- Ideology
- Personality
- Leadership
- Decision to vote

7.2.2 Public Employees

Representative Democracy: Public Employees

- Function of bureaucrats:
 - Implement policy
 - Provide technical expertise in the design and execution of programs and policies
 - Provide “institutional memory”
 - Provide accurate documentation to ensure
 - Equal treatment for eligible citizens
 - Prevent corruption
- Goals of bureaucrats
 - Fulfill wishes of electorate and representatives
 - Perhaps increasing power and their own status
 - Size of bureaucrat’s budget

Representative Democracy: Special Interests

- Establishment of Special Interest Groups (individuals with a common interest able to exercise disproportionate power by acting together):
 - Source of Income: Capital or Labor
 - Size of Income
 - Source of Income: Industry of Employment
 - Region
 - Demographic and Personal Characteristics
 - Rent-seeking

7.2.3 Other Actors

Representative Democracy: Other Actors

- Government decisions can be affected by:
 - The judiciary
 - Journalists
 - Experts

7.3 Government Growth

Explaining Government Growth

- Citizen Preferences: $G = f(P, I)$
G = Median voter's demand of public sector goods and services

P = Price of public sector goods and services
I = Income
- Marxist View
 - The public sector must expand to absorb private excess production.
- Chance Events
 - Wars, recessions
- Income Redistribution

Explaining Government Growth: Controlling Government Growth

- Commitments made by governments in the past
 - Uncontrollable expenditures
 - Entitlement programs
- Tendency: impose strict budgetary rules

Summary

- Political Economy applies economic principles to analysis of political decision-making
- Economists have studied several methods for choosing levels of public goods in a direct democracy:
 - Lindahl pricing results in a unanimous decision to provide an efficient quantity of public goods, but relies on honest revelation of preferences.
 - Majority voting may lead to inconsistent decisions regarding public goods if some people's preferences are not single peaked.
- Arrow's Impossibility Theorem states that, in general, it is impossible to find a decision-making rule that simultaneously satisfies a number of apparently reasonable criteria. The implication is that democracies are inherently prone to inconsistency regarding public goods and other decisions.

Summary

- Explanations of government behaviour require studying the interaction of elected officials, public employees, and special interest groups.
- Under restrictive assumptions, the actions of elected officials mimic the wishes of the median voter.
- Public employees have an important impact on the development and implementation of economic policy. One theory predicts that bureaucrats attempt to maximize the size of their agencies' budgets, resulting in oversupply of the service.
- Rent-seeking private citizens form groups to influence government activity. Special interests can form on the basis of income source, income size, industry, region, or personal characteristics.
- The growth of government has been rapid by any measure.
- Proposals to control the growth in government focus on the imposition of strict budgetary rules.

References

- Harvey S. Rosen, et al., (2016). Public Finance in Canada, Chapter 7. 5th ed., McGraw-Hill.