Comparing Political Systems

Electoral Systems

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Outline of this lecture

In this lecture, I will review a vast literature on electoral systems (ES) with special emphasis on three issues:

1. How electoral systems are defined and classified.

2. How electoral systems work.

3. What political consequences can be expected from using different electoral rules.

Introduction

A quick recap on why elections are important

- **Practical function of elections:**
    1. Elections select governments: We use elections to punish bad government or reward responsive and responsible rulers. Elections are instrument of political accountability.
    2. Elections reflect the preferences of a society: Voting is a mechanism to express a preference for a set of choices.
    3. Elections determine policies: Determine the composition of the legislature which will decide on policies affecting our daily lives.
- **Symbolic function of elections:**
    1. Democracies: Elections may lead to alternation in power. Political turnovers reduce the level of conflict.
    2. Autocracies: Voting in elections is the only active participation in the political process. Voting can also lead to democratization.

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A quick recap on why elections are important

- In this lecture, I will focus on the idea that elections are mechanisms that allow citizens to observe the distributions of preferences. Elections are used to select and decide on policies.
- How do these processes occur? How are votes, i.e. preferences, transformed into seats, i.e political actors?
- These questions are answered by understanding how electoral systems work.

What are electoral systems?

Institutional components of an electoral systems (I)

An electoral system (ES) is an institution, a set of agreed rules, that transform votes into seats. Every ES has the following components:

1. An Assembly of size, A.
2. A district magnitude, M_d.
3. A number of districts, D.
4. An electoral formula, F.
5. An electoral tier, T.

Assembly size, A

- It refers to the total number of seats that will be elected in the legislature (unicameral or bicameral)
- Size of assemblies ranges from 25 (Lichtenstein) to 672 (Germany)
- What explains the size of the legislature?
- An answer is provided by *Rein Taagepera (2007)* who calculated his Cube Root Law:

$$A = \sqrt[3]{Population}$$

- Example: Population in Spain is ca. 47mill and size of parliament 350 $\implies$ Taagepera would predict 360 seats.

Assembly size, A

Parliaments and populations in Europe

Size of parliament (mean) vs Population (mean)

Correlation=0.9468
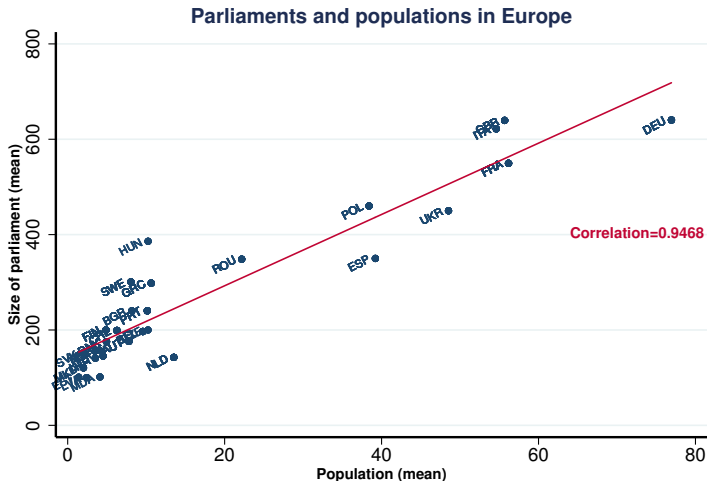
Source:Carey and Hix 2011 and Golder and Bormann 2013

Electoral Districts

- Legislative seats are distributed among districts (D).
- A district magnitude (M_d) refers to the number of seats that are allocated in a constituency (district).
- District magnitudes vary in each country.
  - In Latvia there are 5 districts that range from 13 seats (Kurzeme) to 30 seats (Riga)
  - In Portugal, there are 20 districts that range from 3 (Beja) to 49 (Lisbon) seats.

District magnitudes in Europe
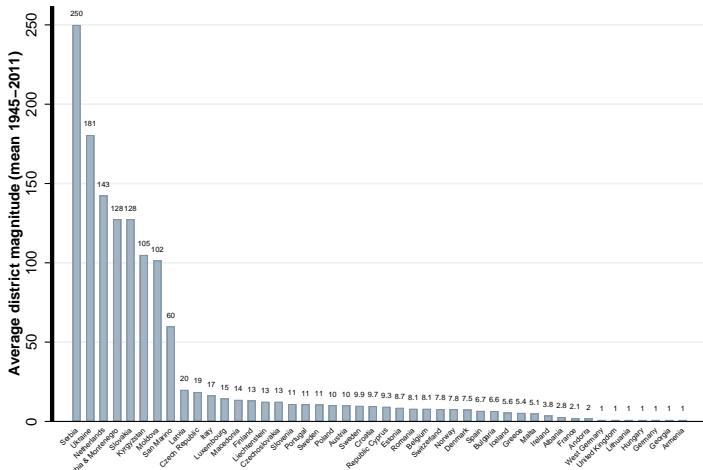
Source: Bormann and Golder 2013

Number of districts and district magnitude.

- The number of districts (D) and district magnitudes (M_d) range from 1 to A.
- Relation between M_d, D and A:
    - If M_d =1, then D=A (U.K.)
    - If M_d =A, then D=1 (Netherlands)
- How can you summarize the relationship between A and D? $\implies$ Average district magnitude

$$\hat{M} = \frac{A}{D}$$

Electoral formulae

- Electoral formulae are mathematical algorithms that convert votes into seats.
- Two big families of electoral formulae
  - **Non-proportional electoral formulae**: Plurality/Majority electoral formulae
  - **Proportional representation electoral formulae**: Quota-base and divisors-based electoral formula
  - **Some special cases**: STV (Ireland and Malta)

Institutional components of an electoral systems (II)

Electoral systems also decide who gets elected. The type of ballot deals with this question.

1. **Categorical ballots**
   - 1.1 Voters do not have the capacity to alter the ballot.
   - 1.2 Example – Closed-lists (Spain, Portugal).
2. **Ordinal ballots**
   - 2.1 Voters can order their preferences and rank order them in the ballots.
   - 2.2 Ordinal ballots can be party or candidate-oriented.
   - 2.3 Example - Party-oriented (Finland); Candidate-oriented (Ireland).

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Classification of electoral systems depending on institutional components

1. Depending on the district magnitude and electoral formula:
   1.1 SMD $\implies$ Plurality vs. Majority. (USA vs. France)
   1.2 MMD $\implies$ PR-Divisors vs. PR-Quota. (Denmark vs Peru)

2. Depending on district magnitude and ballot:
   2.1 SMD $\implies$ Alternative Voting (Preferential voting) vs. FPTP (Australia vs. India).
   2.2 MMD $\implies$ Single Transferable Vote (STV) vs. Closed-lists (Ireland vs. Portugal).

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   3.1 Single tier ES vs. Multiple tier ES (UK vs. Germany)

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# Type of electoral systems in Europe

Electoral systems in Europe
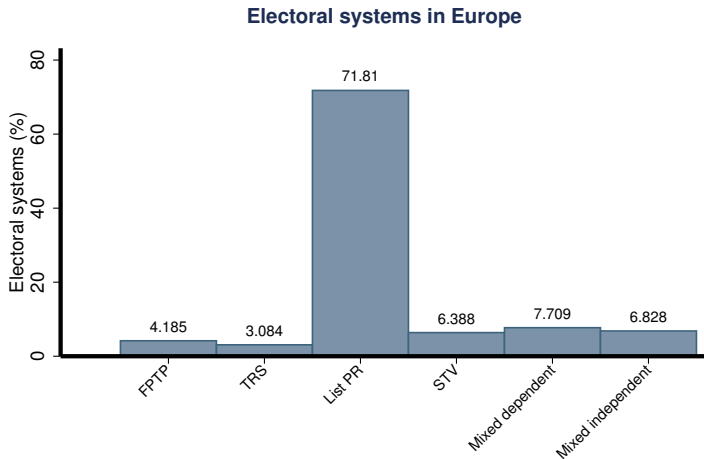
Source: Golder Bormann 2013

# The performance of electoral systems

The proportionality of ES

- The process of transforming votes into seats may generate different outcomes. Proportionality is relevant to understand this question.
- An electoral system is perfectly proportional if and only if a given share of the total vote is transformed into the same share of total seats.
- An electoral system generate disproportional results when a party receives a seat share that is different from the vote share obtained in the elections.
- Disproportional electoral systems generate a seat/vote bias.
  - Positive bias if share of seats > share of votes
  - Negative bias if share of seats < share of votes
  - Positive bias typical for large parties while negative bias is normally observed in small parties.
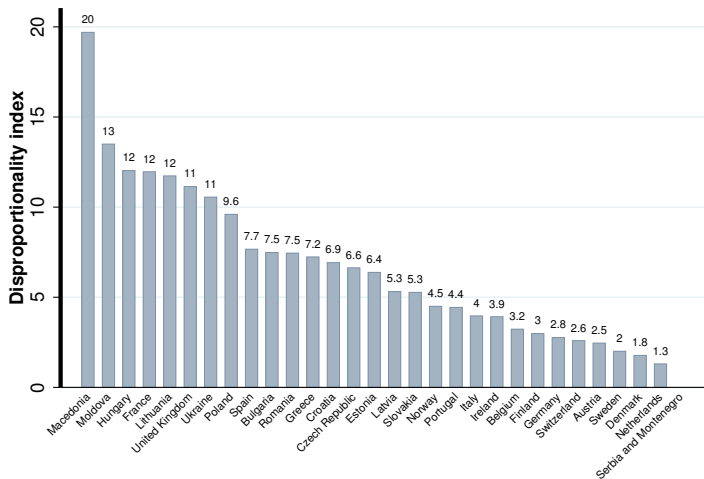
The ideal of perfect proportionality
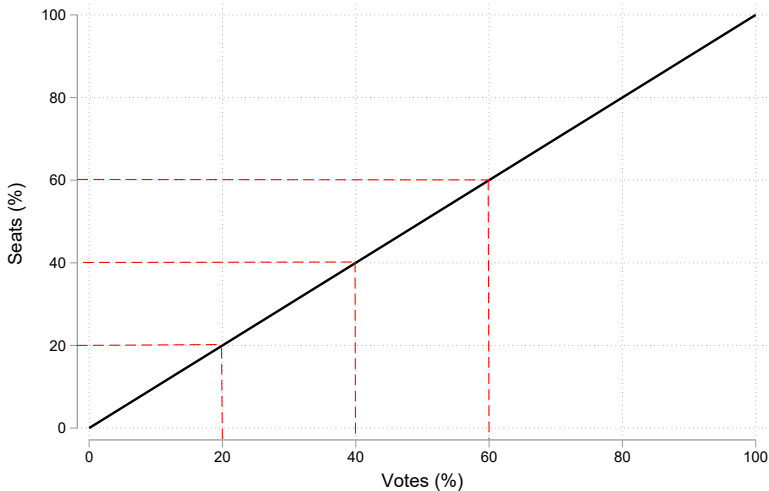
Proportionality vs Disproportionality
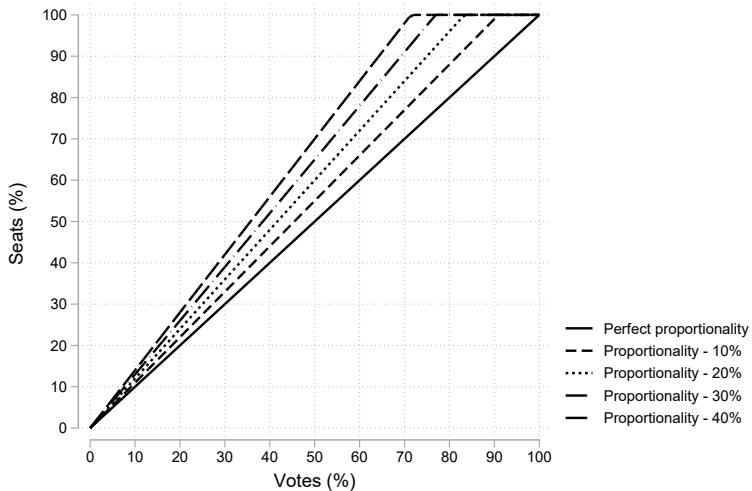
Levels of proportionality in comparative perspective

Source: Carey and Hix 2011

Types of electoral systems

Characteristics of FPTP

- Geographical dispersion.
- 3 distinguishing institutional features:
    - District Magnitude is 1 (M=1).
    - Number of districts equals to assembly size (A=D).
    - Plurality electoral formula.
- 3 alleged properties:
    - Extremely easy to understand.
    - Generates stable governments.
    - Facilitates political accountability as representation is based on constituency.

FPTP - Political Consequences

- Given the plurality electoral formula, a candidate can won a seat with a minority of votes (V<50%).
- Look at the results from the 1992 parliamentary elections in the constituency of Inverness, Nair and Lochaber.

Candidates	% Vote
Johnston, Sir Russell (Liberal Democrat)	**26**
Stewart, D. (Labour)	**25.1**
Scott, J. (Conservative)	24.7
Martin, J. (Green)	22.6
Others	1.5

FPTP - Political Consequences

- Manufactured majorities occur when a party wins more seats nationwide when obtaining less votes than the most voted party.
- Look at this hypothetical distribution of votes:

	1	2	3	4	5	6	7	8	9	10
A	**400**	100	**500**	**500**	300	200	300	**500**	300	**500**
B	300	**500**	300	400	**500**	**500**	**500**	300	200	400
C	300	400	200	100	200	300	200	200	**500**	100

- Party B gets 39% of the vote and 4 seats but party A gets 36% of the vote and 5 seats.

FPTP – Political Consequences

- FPTP bonuses large parties with concentrated geographical support.
- For that reason, levels of disproportionality are typically high in FPTP systems.

	CONSERVATIVE			LABOUR			Lib-Dem		
Year	Votes	Seats	Dif (%)	Votes	Seats	Dif (%)	Votes	Seats	Dif (%)
1970	46,4	52,4	6	43,1	45,7	2,6	7,5	1	-6,5
Feb.1974	37,9	46,8	8,9	37,2	47,4	10,2	19,3	2,2	-17,1
Oct.1974	35,8	43,6	7,8	39,3	50,2	10,9	18,3	2	-16,3
1979	43,9	53,4	9,5	36,9	42,4	5,5	13,8	1,7	-12,1
1983	42,4	61,1	18,7	27,6	32,2	4,6	25,4	3,5	-21,9
1987	42,3	57,8	15,5	30,8	35,2	4,4	22,6	3,4	-19,2
1992	41,9	51,6	9,7	34,4	41,6	7,2	17,8	3,1	-14,7
1997	30,7	25	-5,7	43,2	63,4	20,2	16,8	7	-9,8
2001	31,7	25,18	-6,52	40,7	62,51	21,81	18,3	7,89	-10,41
2005	32,33	30,65	-1,68	35,22	54,95	19,73	22,05	9,59	-12,46
Average	38,5	48,9	**8,8**	36,8	44,7	**8,2**	18,1	2,9	**-14,7**

Characteristics of PR electoral systems.

- One tier of seat allocation.
- Multi-member districts (Note that $1 \leq D < A$).
- Legal electoral thresholds.
- Closed-lists for voters.
- Proportional electoral formulae (Quota vs Divisors).

Properties of PR electoral systems.

- Reduce the costs of winning a seat for minor parties.
- Increases levels of representativeness.
- But it also presents some important trade-offs:
    1. Representation vs. Governability.
    2. Representation vs. Accountability.

How do quota-based ES work?

- Quota-based formulae distribute seats according to a fixed "price", i.e. a quota.
- A quota (Q) is obtained dividing the total number of casted votes (V) by the district magnitude (M) plus a modifier (n).
- The value of n is typically 0 (Hare or simple quota) or 1 (Droop quota).
- To calculate how many seats each party wins, you need to follow these 4 steps:
  1. Calculate the quota.
  2. Divide the vote of each party by the quota.
  3. Whole quotas amount to seats.
  4. If the number of whole quotas is smaller than district magnitude, then parties whose quotas have the largest fraction will be honoured (Largest Remainder method).

How do divisor-based ES work?

- A set of divisors consists of a series of natural rational numbers.
- Typical divisors:

Name	jth divisor	Sequence (first 5)
D´Hondt	j	1,2,3,4,5
Sainte-Laguë	2j-1	1,3,5,7,9
Mod. Sainte-Laguë		1.4,3,5,7,9

- To calculate the seats that each party win:
  1. Divide the votes obtained by each party using the sequence of divisors.
  2. This creates a series of quotients for each party.
  3. Choose the largest quotients until the number of seats elected in the district is reached.

Some political outcomes of ES

Proportionality and party systems - Duverger's law revisited

1. Electoral systems generate two type of effects:
    1.1 **Mechanical effect:** This is the effect that results after the ES transform votes into seats. For example, in FPTP it means that the largest parties win all seats.
    1.2 **Psychological effect**: This is the effect that the mechanical effect produce on party elites and voters. It means that both parties and voters adapt their preferences to vote for winning options.
2. These effects explain the famous Duverger's laws.
    2.1 FPTP produce a bipartisan system with large and independent parties,
    2.2 PR produce a multi-party system with rigid, stable and independent political parties.
    2.3 TRS produce a multi-party system with flexible, dependent and relatively stable political parties. that alternate in power.

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Proportionality and party systems - Rae (1967)

1. Douglas W. Rae reached similar conclusions to Duverger's. Rae concluded that all ES are biased against small parties, regardless of the electoral formula. More concretely:

    1.1 All electoral systems produce disproportionate electoral results.

    1.2 All electoral systems reduce the number of parties that actually win representation compared to those that compete.

    1.3 All electoral systems can generate manufactured majorities. That is, a party may win more seats in parliament despite not winning the elections.

2. But, all these results are more likely to be observed in majoritarian/plurality electoral systems than in PR ones.

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Political representation and democracy

- Democracy is a political system in which incumbents may lose power$\implies$ Democracy generates winners and losers.
- In transforming votes into seats, electoral systems reflect that idea in various ways:
    - If majoritarian/plurality ES are used $\implies$ Absolute winners and losers are more likely to emerge.
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Political representation and democracy

1. **Government stability**
   1.1 Greater in ES with relatively small district magnitudes (*Blais, 1991*).

2. **Accountability**
   2.1 Greater in ES with relatively small district magnitudes (*Carey and Hix, 2011*).

3. **Responsiveness**
   3.1 Greater levels of political representation in PR than in ES using SMD (*Carey and Hix, 2011*).

4. **Partisan politics**
   4.1 Conservative governments more likely in SMD and progressive governments more likely in MMD (*Iversen & Soskice, 2006*).

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Trade-off between representation and accountability.

- ES cannot simultaneously guarantee higher levels of political representation and higher levels of political accountability.
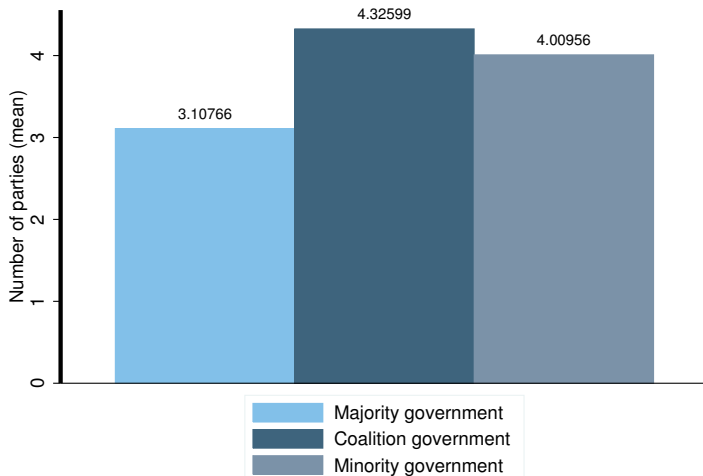- Higher levels of representation typically implies lower levels of accountability and vice versa.
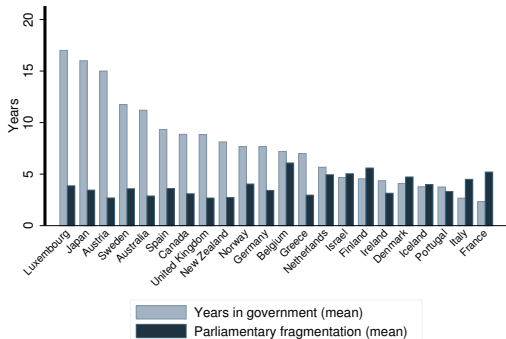
Source: Maravall 2013

Fragmentation of the parliament

Parliamentary fragmentation in Europe

Correlation=0.3467
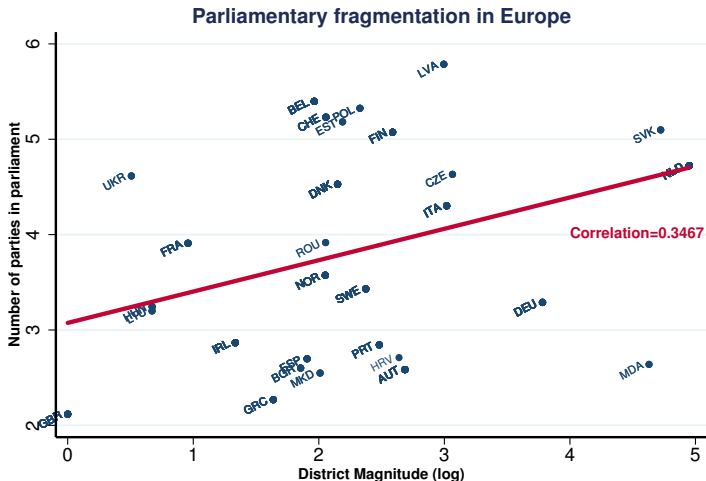
Source:Carey and Hix 2011

Party fragmentation and type of government

Source: Maravall 2013