## Electoral Systems



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6 February 2023

- How electoral systems (ES) work.
- Working definition: "The set of rules that structure how votes are cast at elections for a representative assembly and how these votes are converted into seats in that assembly." (Gallagher and Mitchell, 2005)
- How they matter.
- Where they come from.

The basic mechanism: ES are rules translating votes into seats.

> Politics
> $\&$ Parties $\longrightarrow$ Votes $\xrightarrow[\text { Systems }]{\text { Electoral }}$ Seats

Actors adapt strategically to the rules.

## Politics <br> $\longrightarrow$ Votes $\frac{\text { Electoral }}{\text { Systems }}$ Seats

Systemic effects of ES on party systems (and beyond).


The problem of endogeneity: ES as a product of politics.


Adapted from Shugart and Taagepera (2017), Chapter 1.

Classification and Functioning of Electoral Systems

Many dimensions of variation:

- Electoral formula
- What's the rule for assigning seats to parties or candidates?
- Districting arrangements
- how many seats per district? (district magnitude)
- how many territorial levels? (tiers)
- Ballot structure/formula
- How many votes? For parties or candidates? Ranked or categorical? How are seats assigned within parties?
- Other provisions
- legal thresholds, compensatory tiers, majority bonuses.


## Classification

The usual classification: majoritarian, proportional, mixed.


From Clark, Golder and Golder (2017), Chapter 13.

## Classification



From IDEA database (2016).

- Nominally on the basis of the electoral formula, but partly overlaps with district magnitude:
- Majoritarian $\rightarrow$ single-member districts (mostly).
- Proportional $\rightarrow$ multi-member systems (always).
- Mixed $\rightarrow$ Both, in overlaid tiers.
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- Maps onto differences in proportionality of outcomes:
- Majoritarian $\rightarrow$ boost large parties' seat share.
- $\mathrm{PR} \rightarrow$ vote-seat proportionality.
- Mixed $\rightarrow$ Something in between?
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- Mixed $\rightarrow$ Something in between?
- Claim: distinct 'visions of democracy': accountability vs representation (Powell, 2000; Lijphart, 1994).

Alternative perspective (Shugart and Taagepera, 2017): ${ }^{1}$

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- Considers only 'simple' ES, reduced to 3 components:
- Assembly size ( $S$ )
- District magnitude $(M)$, one tier: from $M=1$ to $M=S$.
- Electoral formula, higher-ranked party $\rightarrow$ more seats.

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- Assembly size ( $S$ )
- District magnitude $(M)$, one tier: from $M=1$ to $M=S$.
- Electoral formula, higher-ranked party $\rightarrow$ more seats.
- The most common majoritarian system (FPTP) and proportional system (list PR) are both simple systems. Their districts both lie on a continuum, defined by $M$.

[^2]

Jamaica, $M=1$

Portugal, $M \approx 10 \quad$ Netherlands, $M=150$

Example: $M=6$, d'Hondt divisors (1, 2, 3, 4...)

| Party | $V$ | Seats | $\%$ 昂 |
| :--- | :---: | :---: | :---: |
| Soc-Dem | 4,000 |  | $40 \%$ |
| Liberal | 2,300 |  | $23 \%$ |
| † Chr-Dem | 1,400 | $14 \%$ |  |
| Populist | 1,100 | $11 \%$ |  |
| Green | 650 | $6.5 \%$ |  |
| No-Tax | 550 | $5.5 \%$ |  |
| Total | 10,000 |  |  |

Example: $M=6$, d'Hondt divisors (1, 2, 3, 4...)

| Party | $V$ | $V / 2$ | Seats | $\%$ 昂 |
| :--- | :---: | :---: | :---: | :---: |
| Soc-Dem | $\mathbf{4 , 0 0 0}$ | 2,000 | $\mathbf{1}$ | $40 \%$ |
| Liberal | 2,300 |  |  | $23 \%$ |
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| Total | 10,000 |  | $5.5 \%$ |  |

Example: $M=6$, d'Hondt divisors (1, 2, 3, 4...)

| Party | V | V/2 | V/3 | Seats | \% ${ }^{\text {奇 }}$ | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Soc-Dem | 4,000 | 2,000 | 1,333 | 2 |  | 40\% |
| \% Liberal | 2,300 | 1,150 |  | 1 |  | $23 \%$ |
| $\dagger$ Chr-Dem | 1,400 |  |  |  |  | $14 \%$ |
| (6) Populist | 1,100 |  |  |  |  | $11 \%$ |
| \& Green | 650 |  |  |  |  | 6.5\% |
| [1] No-Tax | 550 |  |  |  |  | 5.5\% |
| Total | 10,000 |  |  |  |  |  |

Example: $M=6$, d'Hondt divisors (1, 2, 3, 4...)

| Party | $V$ | $V / 2$ | $V / 3$ | $V / 4$ | Seats | $\%$ 昂 | $\%$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Soc-Dem | $\mathbf{4 , 0 0 0}$ | $\mathbf{2 , 0 0 0}$ | $\mathbf{1 , 3 3 3}$ | 1000 | $\mathbf{3}$ | $\mathbf{5 0 \%}$ | $40 \%$ |
| Liberal | $\mathbf{2 , 3 0 0}$ | $\mathbf{1 , 1 5 0}$ | 767 |  | $\mathbf{2}$ | $\mathbf{3 3 \%}$ | $23 \%$ |
| † Chr-Dem | $\mathbf{1 , 4 0 0}$ | 700 |  |  | $\mathbf{1}$ | $\mathbf{1 7 \%}$ | $14 \%$ |
| Populist | 1,100 |  |  |  |  |  | $11 \%$ |
| Green | 650 |  |  |  |  |  | $6.5 \%$ |
| No-Tax | 550 |  |  |  |  |  | $5.5 \%$ |
| Total | 10,000 |  |  |  |  |  |  |

Example: $M=\mathbf{1}$, d'Hondt divisors (1, 2, 3, 4...)

| Party | $V$ | $V / 2$ | Seats | $\%$ 而 | $\%$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Soc-Dem | $\mathbf{4 , 0 0 0}$ | 2,000 | $\mathbf{1}$ | $\mathbf{1 0 0 \%}$ | $40 \%$ |
| Liberal | 2,300 |  |  |  | $23 \%$ |
| † Chr-Dem | 1,400 |  |  |  | $14 \%$ |
| \& Populist | 1,100 |  |  |  | $11 \%$ |
| \% Green | 650 |  |  |  | $7 \%$ |
| © No-Tax | 550 |  |  | $5 \%$ |  |

For $M=1, \mathrm{PR}$ collapses into 'first past the post' (FPTP).

Example: $M=\mathbf{2 0}$, d'Hondt divisors (1, 2, 3, 4...)

| Party | V | V/2 | V/3... | V/5... | V/8 | Seats | \% 暏 | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \% | 4,000 | 2,000 | 1,333 | 800 | 500 | 8 | 40\% | 40\% |
| (\%) | 2,300 | 1,150 | 767 | 460 |  | 5 | 25\% | 23\% |
| $\dagger$ | 1,400 | 700 | 467 |  |  | 3 | 15\% | 14\% |
| * | 1,100 | 550 |  |  |  | 2 | 10\% | 11\% |
| \% | 650 |  |  |  |  | 1 | 5\% | 6.5\% |
| 18 | 550 |  |  |  |  | 1 | 5\% | 5.5\% |

As the district magnitude increases, (1) seat \% become more proportional to vote $\%$, and (2) more parties gain seats.

Back to $M=6$, d'Hondt divisors (1, 2, 3, 4...)

| Party | V | V/2 | V/3 | V/4 | Seats | $\% \text { 晶 }$ | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - | 4,000 | 2,000 | 1,333 | 1,000 | 3 | 50\% | 40\% |
| \% | 2,300 | 1,150 | 767 |  | 2 | 33\% | 23\% |
| $\pm$ | 1,400 | 700 |  |  | 1 | 17\% | 14\% |
| 2. | 1,100 |  |  |  |  |  | 11\% |
| \% | 650 |  |  |  |  |  | 6.5\% |
| [1] | 550 |  |  |  |  |  | 5.5\% |

$M=6$, Sainte-Laguë divisors ( $1,3,5,7 \ldots$ )

| Party | V | V/3 | V/5 | V/7 | Seats | \% 暏 | $\%$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \% | 4,000 | 1,333 | 800 | 571 | 3 | 50\% | 40\% |
| \% | 2,300 | 767 |  |  | 1 | 17\% | 23\% |
| $\dagger$ | 1,400 | 467 |  |  | 1 | 17\% | 14\% |
| \% | 1,100 | 367 |  |  | 1 | 17\% | 11\% |
| \% | 650 |  |  |  |  |  | 6.5\% |
| 8 | 550 |  |  |  |  |  | 5.5\% |

'Micromega' rule: small parties like large $M$ and large divisors, and vice versa: large parties like small $M$ and divisors
$M=6$, Droop quota, largest remainder method.
Droop quota: $\frac{V}{M+1}$ rounded up. So, $q=\frac{10,000}{6+1}=1429$

| Party | $V$ | $V / q$ | Quotas | Remainders | Surplus | Seats | $\%$ 昂 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4,000 | 2.80 | 2 |  |  |  |  |
| $\dagger$ | 2,300 | 1.61 | 1 |  |  |  |  |
| $\dagger$ | 1,400 | 0.98 | 0 |  |  |  |  |
| Total | 1,100 | 0.77 | 0 |  |  |  |  |
| T | 650 | 0.46 | 0 |  |  |  |  |
| Tota0 | 10,000 | 0.39 | 0 |  |  |  |  |

$M=6$, Droop quota, largest remainder method.
Droop quota: $\frac{V}{M+1}$ rounded up. So, $q=\frac{10,000}{6+1}=1429$

| Party | V | $V / q$ | Quotas | Remainders | Surplus | Seats | \% 暏 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - | 4,000 | 2.80 | 2 | 0.80 | +1 | 3 | 50\% |
| \% | 2,300 | 1.61 | 1 | 0.61 | - | 1 | 17\% |
| $\dagger$ | 1,400 | 0.98 | 0 | 0.98 | +1 | 1 | 17\% |
| , | 1,100 | 0.77 | 0 | 0.77 | +1 | 1 | 17\% |
| \% | 650 | 0.46 | 0 | 0.46 | - |  |  |
| 8 | 550 | 0.39 | 0 | 0.39 | - |  |  |

Total 10,000

Micromega rule applies: larger $q$, like Hare $\left(\frac{V}{M}\right)$, favour small parties; smaller $q$, like Imperiali $\left(\frac{V}{M+2}\right)$, favour large parties.

Multiple preferences in single-member districts:

- Alternative Vote (Australia, Fiji), aka 'Instant Runoff'
- Losing candidates' second-, third-, and lower preferences are redistributed until someone gets $50 \%$ of the vote.
- In practice, most similar to 'simple' FPTP.
- Two-Round Systems (France, Mali)
- Common in Presidential, rare in legislative elections.
- Opportunities for alliances between rounds sustain fluid multi-party systems. Highly disproportional outcomes.

Candidate, not party, vote in multi-member districts:

- Single Non-Transferable Vote, SNTV (formerly, Japan)
- Single candidate preference, top $M$ candidates win.
- Single Transferable Vote, STV (Ireland, Malta)
- Roughly equivalent to AV in multi-member districts.

Rare, but interesting because of the highly personalised, candidate-centred (vs party-centred) nature.

Corrections to simple systems:

- Legal thresholds
- Aims to reduce number of parties.
- From marginal ( $2 \%$, Denmark) to decisive ( $10 \%$, Turkey).
- Compensatory upper tiers (South Africa, Austria, Sweden)
- Aims to improve proportionality (mostly).
- Disproportionality from district outcomes compensated at higher territorial level with 'levelling seats'.

Often tractable within the framework of simple systems.

Defined by two overlapping sets of districts: a single-member district tier (almost always FPTP) and a multi-member district tier (almost always list PR). (Shugart and Wattenberg, 2001)


74 FPTP districts


26 PR districts

In fact, two different beasts:

- Mixed-Member Proportional (MMP)
- List PR tier 'compensates' for FPTP disproportionality.
- Effectively, functions like two-tier PR, where the lower tier has $M=1$, and the upper tier attributes levelling seats.

In fact, two different beasts:

- Mixed-Member Proportional (MMP)
- List PR tier 'compensates' for FPTP disproportionality.
- Effectively, functions like two-tier PR, where the lower tier has $M=1$, and the upper tier attributes levelling seats.
- Mixed-Member Majoritarian (MMM)
- No connection in the distribution of seats across tiers: two 'parallel elections' taking place simultaneously.
- Larger difference in disproportionality within mixed systems than between either MMM and majoritarian or MMP and PR systems.
- Measured with Gallagher's Disproportionality Index:

$$
L S I=\sqrt{\frac{1}{2} \sum\left(\% v_{i}-\% s_{i}\right)^{2}}
$$

from Raabe and Linhart (2018)


Two approaches:

- Controlled Comparison (Moser and Scheiner, 2004, 2012):
- MM tiers approximate distinct ES $\rightarrow$ we can study ES effects within the same country.
- e.g. more constituency service in FPTP tier, as in pure FPTP (Breunig et al., 2022).
- Contamination Effects (Ferrara and Herron, 2005):
- Interaction of systems $\rightarrow$ unique institutional environment.
- e.g. single-member district elections do not 'collapse' into two-party races as in pure FPTP (Cox and Schoppa, 2002).


# Consequences <br> of Electoral Systems 

Duverger's Law (1954): 'The simple majority, single ballot system [FPTP] favours the two-party system'. ${ }^{2}$

- Applied primarily to the district, but by implication extended to the party system in the legislature.

[^3]Duverger's Law (1954): 'The simple majority, single ballot system [FPTP] favours the two-party system'. ${ }^{2}$

- Applied primarily to the district, but by implication extended to the party system in the legislature.

Two reasons:

- Mechanical effects: votes for parties other than the top 2 are 'wasted' disproportionately (as in our example).
- Psychological effects: voters abandon third parties (strategic voting); parties and politicians desist from running or join existing viable parties (strategic exit). (Cox, 1997; Ziegfeld, 2021)

[^4]
## Consequences for Party Systems

How to measure party system size? What parties 'count'?

|  | Parliamentary seats |  |
| :--- | :---: | ---: |
| Conservative |  |  |
| Labour |  | $56.2 \%$ |
| Scottish National |  |  |
| Liberal Democrat |  | $31.1 \%$ |
| Democratic Unionist |  | $7.4 \%$ |
| Sinn Féin |  | $1.7 \%$ |
| Plaid Cymru |  | $1.2 \%$ |
| SDLP |  | $1.1 \%$ |
| Green |  | $0.6 \%$ |
| Alliance |  | $0.3 \%$ |
| Speaker |  | $0.2 \%$ |

'Effective Number of Parties’ (Laakso and Taagepera, 1979)

$$
N_{S}=\frac{1}{\sum\left(p_{i}\right)^{2}}
$$



Case 1
$\begin{array}{ccccc}\% & & \dagger & & \% \\ 2 \% & 50 \% & 5 \% & 41 \% & 2 \%\end{array}$


CASE 2



$$
\begin{aligned}
& \text { Case } 1 \\
& \begin{array}{ccccc}
\% & & \text { † } & \% & \text { \% } \\
2 \% & 50 \% & 5 \% & 41 \% & 2 \%
\end{array} \\
& \text { Case } 2 \\
& \begin{array}{ccccc}
\% & \text { \% } & \text { † } & \text { ® } & \text { ® } \\
16 \% & 30 \% & 18 \% & 24 \% & 12 \%
\end{array} \\
& \text { CASE } 1 \quad N_{S}=\frac{1}{(0.02)^{2}+(0.50)^{2}+(0.05)^{2}+(0.41)^{2}+(0.02)^{2}} \approx 2.37
\end{aligned}
$$



Case 1
$\begin{array}{ccccc}\% & + & \ddots & \%\end{array}$

CASE $1 \quad N_{S}=\frac{1}{(0.02)^{2}+(0.50)^{2}+(0.05)^{2}+(0.41)^{2}+(0.02)^{2}} \approx 2.37$

CASE $2 \quad N_{S}=\frac{1}{(0.16)^{2}+(0.30)^{2}+(0.18)^{2}+(0.24)^{2}+(0.12)^{2}} \approx 4.54$

The Seat Product Model quantifies ES $\rightarrow$ party system relationship, generalising Duverger's Law. ${ }^{3}$

In simple systems:
Effective No. of Parties

$$
N_{S}=\left(\begin{array}{ll}
M & S
\end{array}\right)^{\frac{1}{6}}
$$

Mean District Magnitude $\uparrow$ Assembly Size

[^5]The Seat Product Model quantifies ES $\rightarrow$ party system relationship, generalising Duverger's Law. ${ }^{3}$

In simple systems:

## Effective No. of Parties

$$
N_{S}=\left(\begin{array}{ll}
M & S
\end{array}\right)^{\frac{1}{6}}
$$

## Mean District Magnitude Assembly Size

- Barbados $N_{S}=(1 \times 30)^{\frac{1}{6}}=1.76$. Actual avg.: 1.5.
- Britain $N_{S}=(1 \times 650)^{\frac{1}{6}}=2.9$. Actual avg.: 2.3.
- Spain $N_{S}=(6.7 \times 350)^{\frac{1}{6}}=3.6$. Actual avg.: 3.1.
- Israel $N_{S}=(120 \times 120)^{\frac{1}{6}}=4.9$. Actual avg.: 5.3.

[^6]

- Parliamentary
$\Delta$ Non-parliamentary
Shaded symbols are FPTP


## Consequences for Party Systems



## Consequences for Party Systems



from Raabe and Linhart (2018)

- Issue Dimensions: multipartyism increases the number of axes of competition. (Lijphart et al., 1999; Stoll, 2011)
- Polarisation: permissive ES yield higher ideological dispersion. (Cox, 1990; Dow, 2011; Hanretty, 2022)
- Elite-public congruence: Proportionality leads to more ideologically representative legislatures. (But perhaps not governments: Powell, 2006; Golder and Stramski, 2010.)
- Government accountability: Single-party majorities allow greater clarity of responsibility. (Also debatable, and debated: Fisher and Hobolt, 2010; Kam et al., 2020.)

Across and within countries, proportionality clearly boosts turnout but turnout marginally declines as number of parties increases $\left(N_{S}>3\right)$ :



Figure 3. Turnout versus effective number of parties: observed turnout and predicted turnout from the nonlinear multilevel model of turnout versus district magnitude, Swiss National Council Elections, 1919-2011.

Explaining proportionality $\rightarrow$ turnout positive relationship:

- Efficacy: under majoritarianism, voting for small parties (Karp and Banducci, 2008) or in non-competitive districts (Selb, 2009) is perceived as making no difference.
- short- and long-term effects (Vowles et al., 2017)
- Voter-Party Proximity: broader, more diverse ideological spectrum under PR rules (Chen, 2011).
- Mobilisation: when only marginal seats matter, parties target a narrow set of pivotal voters; when seats can be won everywhere (large- $M \mathrm{PR}$ ), bigger and broader mobilisational efforts are needed (Cox et al., 2016).

Explaining number of parties $\rightarrow$ turnout negative relationship:

- Oversized Coalitions (Brockington, 2004)
- Retrospectively, reduce clarity of responsibility.
- Prospectively, reduce control over government composition and policy.
- Complexity: as parties and candidates increase, information acquisition becomes more cognitively demanding (Zagórski, 2022; Muraoka and Barceló, 2019).

Proportionality $\rightarrow$ more left-wing governments


Proportionality $\rightarrow$ higher welfare spending


Proportionality $\rightarrow$ more income redistribution

PR Countries


Pre-Tax Gini $\quad---$ Post-Tax Gini

Non-PR Countries


Pre-Tax Gini $\quad---$ Post-Tax Gini

Zuazu (2022)

Assume for now it's causal. Some explanations:

- Class Coalitions: faced with a two-party choice, the middle class fears taxation and sides with capital; multipartyism is needed for redistributive coalitions of poor and middle-income voters (Iversen and Soskice, 2006).
- Broad-based policies: larger electoral and government coalitions under PR require broader social programmes; harder to target spending (Persson and Tabellini, 2006).
- Geography: small-district bias against urban (left, working class) vote, as it's very clustered (Rodden, 2019).

Two ways to spin PR's political economy equilibrium:

- Inefficiency: PR's coalitions multiply the number of 'special interests' to cater to, leading to producer power, higher prices for consumers, uncompetitive structures. (Rogowski and Kayser, 2002; Bawn and Rosenbluth, 2006)
- Investment: broad-interest policies like mass education and subsidised worker training lead to high employment in skilled sectors, competitive exports, and growth (Iversen and Soskice, 2010; Knutsen, 2011).
- So far we have looked at 'inter-party effects': outcomes that depend on how ES allocate seats between parties.
- But ES also affect how seats are allocated to candidates within parties. Consequences produced via this type of mechanism are known as 'intra-party effects'.
- To study intra-party effects on e.g. individual politicians' behaviour, we should consider another dimension of ES variation: ballot formula.

Simplifying a lot, we can sort ballot formulae on a continuum:


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Real-world ballot formulae are bewilderingly complex: 'flexible' lists, panachage, rankings, multiple/negative preferences etc.

Carey and Shugart (1995): incentives for 'personal vote-seeking' behaviour increase in $M$ under candidate-centred systems, and decrease in $M$ under party-centred systems:

Figure 1. District Size, Ballot Structure and Candidate Incentives


Source: Adapted from Carey and Shugart (1995) and Shugart (2005).

Implication: FPTP is more candidate-centred than CLPR, but less so than OLPR. Grofman (2005) disagrees.

Evidence from mixed-member systems (FPTP vs CLPR):

- FPTP MPs more likely to respond to constituents, to sit in committees that distribute targetable goods ('pork barrel') (Breunig et al., 2022; Gschwend and Zittel, 2018).

Evidence from PARTIREP survey:

- Most constituency service and personal campaigns in STV, OLPR, FPTP (Deschouwer and Depauw, 2014).

Evidence from the European Parliament:

- MEPs subject to different rules: for Hix (2004), those elected in candidate-centred ES are less beholden to parties.

Too much of a good thing? Corruption, accountability and the personal vote.


Fig. 3. Estimated effects of district magnitude on corruption under alternative electoral regimes, without outliers
From Chang and Golden (2007).

# Electoral Systems <br> Origins and Change 

"In most cases it makes little sense to treat electoral systems as independent variables and party systems as dependent. The party strategists will generally have decisive influence on electoral legislation and opt for the systems of aggregation most likely to consolidate their position." (Rokkan, 1968)
"Institutions are no more than rules and rules are themselves the product of social decisions [...] institutions are probably best seen as congealed tastes." (Riker, 1980)

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Empirically, we observe two phases of profound reform, framing a period of overall stability:

- Spread of PR coinciding with franchise expansion: Belgium (1899), Finland (1907), Sweden (1909), Denmark (1915), Germany, Switzerland (1918), Norway, Italy (1919), Ireland (1921), Chile (1925).

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- Spread of PR coinciding with franchise expansion: Belgium (1899), Finland (1907), Sweden (1909), Denmark (1915), Germany, Switzerland (1918), Norway, Italy (1919), Ireland (1921), Chile (1925).
- Around the 1990s: institutional (re-)engineering in third-wave democracies, and diffusion of mixed-member systems (Mexico, Russia, Venezuela, Bolivia, but also: Italy, New Zealand, Japan).

But also: all the time (on a smaller scale).

- Diffusion of 'correctives' to PR: thresholds and smaller district magnitudes (Bol, Pilet and Riera, 2015)
- Spread of 'personal vote' (Renwick and Pilet, 2016).
- Gender quotas/placement mandates (Hughes et al., 2019).

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- Diffusion of 'correctives' to PR: thresholds and smaller district magnitudes (Bol, Pilet and Riera, 2015)
- Spread of 'personal vote' (Renwick and Pilet, 2016).
- Gender quotas/placement mandates (Hughes et al., 2019).

And sometimes not even that small:

- ES reform 'cycles': Italy (1993, 2005, 2015, 2017), Romania (1992, 2000, 2008, 2015), Greece (1982, 1989, 2004, 2020).
- ES reform within democratic backsliding: Russia (2005), Venezuela (2009), Hungary (2011), Hong Kong (2021).
'Rational choice' perspective:
- ES result from the collective choice of parties. The equilibrium is a system where no coalition with the power to enforce electoral change gains politically from it.
- ES change results from shifts in the parties-in-power's perceived future benefits from current rules, due e.g. to changes in popularity or electorate composition.
- ES reflect constellation of actors at one point in time: multi-partyism occurs before, not after, the adoption of PR.
(Benoit, 2004; Colomer, 2005; Calvo, 2009)

Notable application to early reforms by Boix (1999):

- PR introduced after franchise expansion to prevent the threat of socialist parties winning majorities over (divided) pre-democratic elites.

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Some qualifications from (massive, complex) ensuing debate:

- Parties act on threat only if the socialist party is radical (Ahmed, 2013; Gjerløw and Rasmussen, 2022)
- A result of class compromise wanted by socialists too. (Cusack et al., 2007, Alesina and Glaeser, 2004)
- Response to emergent multi-partyism in general, not just socialists. (Calvo, 2009; Leemann and Mares, 2014)


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- If PR exists because of the political strength of the working class, then the economic 'effects' of ES are spurious: those countries would have had left-wing policies anyway.
- If permissive systems are the consequence of multi-party coalitions, then Duverger's Law is an illusion.
- More broadly: polities self-select into ES on the basis of cultural traits and history, which also shape preferences.

Good summary in Rodden (2009)

- In their basic traits, ES are so 'sticky' they are basically exogenous: short-term intentions overshadowed by uncertainty, randomness, time. (Shvetsova, 2003)
- Little evidence electoral reformers know what they are doing anyway. (Andrews and Jackman, 2005)
- In their basic traits, ES are so 'sticky' they are basically exogenous: short-term intentions overshadowed by uncertainty, randomness, time. (Shvetsova, 2003)
- Little evidence electoral reformers know what they are doing anyway. (Andrews and Jackman, 2005)
- ES change not just a product of party strategies: public, normative beliefs, procedural constraints matter. (Shugart, 2008, Nunez and Jacobs, 2016, Blais et al., 2005)
- 'Grand theories' on origin of PR fall apart on closer historical scrutiny (Kreuzer, 2010). Alternative explanations are available (Schröder and Manow, 2020).


## Contemporary Approaches to the Study of ES

Should we give up on trying to identify ES effects?

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No.
Recent work tries to tackle the issue of endogeneity by focussing on within-country quasi-experimental settings:

- Diff-in-diff designs: isolate outcomes of plausibly exogenous rule changes that only apply to some cases.
- Regression discontinuities: comparing cases just above or just below a threshold where electoral rules change.


## Effects of District Magnitude: Lucardi (2019)



## Strategic Voting: Fujiwara (2011)



- Vote Share - Third and Lower Placed Candidates


## Political Economy: Paulsen (2022)



## O = Not Affected by Reform

O Affected by Reform


See also Kantorowicz (2017).


Figure 3. The effect of crossing the 3,500 population threshold on 2001 and 2008 municipal turnout.


Figure 4. The effect of crossing the 3,500 population threshold on 2008 municipal turnout for most and least competitive municipalities.

- Different ways of thinking about ES variation:
- Majoritarian/proportional 'families'.
- Continuum of district magnitudes.
- Party vs Candidate-Centred.
- ES correlate with many key political outcomes, mostly (but not only) through their relationship to party systems.
- But to make causal claims we need to think hard about mechanisms, reverse causality, endogeneity.


# Thank you for your kind attention 

- Short videos explaining the seat-product model and its building blocks, by Chris Hanretty.
- Video lecture on electoral systems, by Liesbet Hooghe and Gary Marks ('Keys to European Politics').
- Fruits and Votes, Matthew Shugart's long-running (2005-) blog on electoral systems around the world.
- Short videos explaining FPTP, AV, MMP and STV (Politics In The Animal Kingdom).
- Podcast with Jack Santucci and Lee Drutman on history and prospects of electoral reform in the US.
- An explanation of MMP as a cheesy 1980s pop song, courtesy of the New Zealand Electoral Commission.

Ahmed, Amel. 2013. Democracy and the politics of electoral system choice: engineering electoral dominance. Cambridge University Press.
Alesina, Alberto and Edward Glaeser. 2004. Fighting poverty in the US and Europe: A world of difference. Oxford University Press.
Andrews, Josephine T and Robert W Jackman. 2005. "Strategic fools: electoral rule choice under extreme uncertainty." Electoral studies 24(1):65-84.

Bawn, Kathleen and Frances Rosenbluth. 2006. "Short versus long coalitions: electoral accountability and the size of the public sector." American Journal of Political Science 50(2):251-265.
Benoit, Kenneth. 2004. "Models of electoral system change." Electoral studies 23(3):363-389.
Blais, André, Agnieska Dobrzynska and Indridi H Indridason. 2005. "To adopt or not to adopt proportional representation: The politics of institutional choice." British journal of political science 35(1):182-190.
Boix, Carles. 1999. "Setting the rules of the game: the choice of electoral systems in advanced democracies." American political science review 93(3):609-624.
Bol, Damien, Jean-Benoit Pilet and Pedro Riera. 2015. "The international diffusion of electoral systems: The spread of mechanisms tempering proportional representation across E urope." European Journal of Political Research 54(2):384-410.

Breunig, Christian, Emiliano Grossman and Miriam Hänni. 2022. "Responsiveness and Democratic Accountability: Observational Evidence from an Experiment in a Mixed-Member Proportional System." Legislative Studies Quarterly 47(1):79-94.
Brockington, David. 2004. "The paradox of proportional representation: The effect of party systems and coalitions on individuals' electoral participation." Political Studies 52(3):469-490.
Calvo, Ernesto. 2009. "The competitive road to proportional representation: partisan biases and electoral regime change under increasing party competition." World Politics 61(2):254-295.
Carey, John M and Matthew Soberg Shugart. 1995. "Incentives to cultivate a personal vote: A rank ordering of electoral formulas." Electoral studies 14(4):417-439.
Chang, Eric CC and Miriam A Golden. 2007. "Electoral systems, district magnitude and corruption." British journal of political science 37(1):115-137.
Chen, Tse-hsin. 2011. "Uncovering the micro-foundations of turnout and electoral systems." Electoral studies 30(2):295-308.
Clark, William Roberts, Matt Golder and Sona Nadenichek Golder. 2017.
Principles of comparative politics. CQ Press.

Colomer, Josep M. 2005. "It's parties that choose electoral systems (or, Duverger's laws upside down)." Political studies 53(1):1-21.
Cox, Gary W. 1990. "Centripetal and centrifugal incentives in electoral systems." American Journal of Political Science pp. 903-935.
Cox, Gary W. 1997. Making Votes Count: Strategic Coordination in the World's Electoral Systems. Cambridge University Press.
Cox, Gary W, Jon H Fiva and Daniel M Smith. 2016. "The contraction effect: How proportional representation affects mobilization and turnout." The Journal of Politics 78(4):1249-1263.

Cox, Karen E and Leonard J Schoppa. 2002. "Interaction effects in mixed-member electoral systems: theory and evidence from Germany, Japan, and Italy." Comparative Political Studies 35(9):1027-1053.
Cusack, Thomas R, Torben Iversen and David Soskice. 2007. "Economic interests and the origins of electoral systems." American Political Science Review 101(3):373-391.
Deschouwer, Kris and Sam Depauw. 2014. Representing the people: a survey among members of statewide and substate parliaments. OUP Oxford.

Döring, Holger and Philip Manow. 2017. "Is proportional representation more favourable to the left? Electoral rules and their impact on elections, parliaments and the formation of cabinets." British Journal of Political Science 47(1):149-164.
Dow, Jay K. 2011. "Party-system extremism in majoritarian and proportional electoral systems." British Journal of Political Science 41(2):341-361.
Droop, Henry Richmond. 1881. "On methods of electing representatives." Journal of the Statistical Society of London 44(2):141-202.
Duverger, Maurice. 1954. Political parties: Their organization and activity in the modern state. Wiley and Sons.
Eggers, Andrew C. 2015. "Proportionality and turnout: Evidence from French municipalities." Comparative Political Studies 48(2):135-167.
Ferrara, Federico and Erik S Herron. 2005. "Going it alone? Strategic entry under mixed electoral rules." American Journal of Political Science 49(1):16-31.
Fisher, Stephen D and Sara B Hobolt. 2010. "Coalition government and electoral accountability." Electoral studies 29(3):358-369.
Fujiwara, Thomas. 2011. "A regression discontinuity test of strategic voting and Duverger's Law." Quarterly Journal of Political Science 6(3-4):197-233.
Gallagher, Michael and Paul Mitchell. 2005. The politics of electoral systems. OUP Oxford.

Gjerløw, Haakon and Magnus B Rasmussen. 2022. "Revolution, elite fear, and electoral institutions." Comparative Politics 54(4):595-619.

Golder, Matt and Jacek Stramski. 2010. "Ideological congruence and electoral institutions." American Journal of Political Science 54(1):90-106.

Grofman, Bernard. 2005. "Comparisons among electoral systems: distinguishing between localism and candidate-centered politics." electoral Studies 24(4):735-740.
Gschwend, Thomas and Thomas Zittel. 2018. "Who brings home the pork? Parties and the role of localness in committee assignments in mixed-member proportional systems." Party Politics 24(5):488-500.
Hanretty, Chris. 2022. "Party system polarization and the effective number of parties." Electoral Studies 76:102459.
Helgason, Agnar Freyr. 2016. "Income-based voting and polarization over redistribution under alternative electoral systems." Electoral Studies 42:22-32.

Hix, Simon. 2004. "Electoral institutions and legislative behavior: Explaining voting defection in the European Parliament." World politics 56(2):194-223.

Hughes, Melanie M, Pamela Paxton, Amanda B Clayton and Pär Zetterberg. 2019. "Global gender quota adoption, implementation, and reform." Comparative Politics 51(2):219-238.

Iversen, Torben and David Soskice. 2006. "Electoral institutions and the politics of coalitions: Why some democracies redistribute more than others." American political science review 100(2):165-181.

Iversen, Torben and David Soskice. 2010. "Real exchange rates and competitiveness: The political economy of skill formation, wage compression, and electoral systems." American Political Science Review 104(3):601-623.
Kam, Christopher, Anthony M Bertelli and Alexander Held. 2020. "The electoral system, the party system and accountability in parliamentary government." American Political Science Review 114(3):744-760.

Kantorowicz, Jarosław. 2017. "Electoral systems and fiscal policy outcomes: Evidence from Poland." European Journal of Political Economy 47:36-60.
Karp, Jeffrey A and Susan A Banducci. 2008. "Political efficacy and participation in twenty-seven democracies: How electoral systems shape political behaviour." British journal of political science 38(2):311-334.
Knutsen, Carl Henrik. 2011. "Which democracies prosper? Electoral rules, form of government and economic growth." Electoral Studies 30(1):83-90.
Kreuzer, Marcus. 2010. "Historical knowledge and quantitative analysis: The case of the origins of proportional representation." American Political Science Review 104(2):369-392.

Laakso, Markku and Rein Taagepera. 1979. ""Effective" number of parties: a measure with application to West Europe." Comparative political studies 12(1):3-27.
Leemann, Lucas and Isabela Mares. 2014. "The adoption of proportional representation." The Journal of Politics 76(2):461-478.
Lijphart, Arend. 1994. "Electoral systems and party systems: A study of twenty-seven democracies, 1945-1990.".
Lijphart, Arend, Peter J Bowman and Reuven Y Hazan. 1999. "Party systems and issue dimensions: Israel and thirty-five other old and new democracies compared." Israel affairs 6(2):29-51.
Lucardi, Adrián. 2019. "The effect of district magnitude on electoral outcomes: evidence from two natural experiments in Argentina." British Journal of Political Science 49(2):557-577.

Moser, Robert G and Ethan Scheiner. 2004. "Mixed electoral systems and electoral system effects: controlled comparison and cross-national analysis." Electoral studies 23(4):575-599.
Moser, Robert G and Ethan Scheiner. 2012. Electoral systems and political context: How the effects of rules vary across new and established democracies. Cambridge University Press.

Muraoka, Taishi and Joan Barceló. 2019. "The effect of district magnitude on turnout: Quasi-experimental evidence from nonpartisan elections under SNTV." Party Politics 25(4):632-639.
Nunez, Lidia and Kristof TE Jacobs. 2016. "Catalysts and barriers: Explaining electoral reform in Western Europe." European Journal of Political Research 55(3):454-473.
Paulsen, Tine. 2022. "Does proportional representation increase redistribution? Evidence from early 20th century Norwegian municipalities." Electoral Studies 78:102494.
Persson, Torsten and Guido Tabellini. 2006. Electoral Systems and Economic Policy. In The Oxford Handbook of Political Economy. Oxford University Press.
Powell, G Bingham. 2000. Elections as instruments of democracy: Majoritarian and proportional visions. Yale University Press.
Powell, G Bingham. 2006. "Election laws and representative governments: Beyond votes and seats." British Journal of Political Science 36(2):291-315.
Raabe, Johannes and Eric Linhart. 2018. "Which electoral systems succeed at providing proportionality and concentration? Promising designs and risky tools." European Political Science Review 10(2):167-190.

Renwick, Alan and Jean-Benoit Pilet. 2016. Faces on the ballot: The personalization of electoral systems in Europe. Oxford University Press.

Riker, William H. 1980. "Implications from the Disequilibrium of Majority Rule for the Study of Institutions." American political science review 74(2):432-446.
Rodden, Jonathan. 2009. "Endogenous Institutions and Comparative Politics." Comparative politics: Rationality, culture, and structure 333.
Rodden, Jonathan A. 2019. Why cities lose: The deep roots of the urban-rural political divide. Basic Books.
Rogowski, Ronald and Mark Andreas Kayser. 2002. "Majoritarian electoral systems and consumer power: price-level evidence from the OECD countries." American Journal of Political Science pp. 526-539.
Rokkan, Stein. 1968. Electoral Systems. In International Encyclopedia of the Social Sciences. MacMillan and Free Press.
Schröder, Valentin and Philip Manow. 2020. "An intra-party account of electoral system choice." Political Science Research and Methods 8(2):251-267.
Selb, Peter. 2009. "A deeper look at the proportionality-turnout nexus." Comparative Political Studies 42(4):527-548.
Shugart, Matthew and Martin P Wattenberg. 2001. Mixed-member Electoral Systems: The Best of Both Worlds? OUP Oxford.
Shugart, Matthew S. 2008. "Inherent and contingent factors in reform initiation in plurality systems." To keep or to change first past the post pp. 7-60.

Shugart, Matthew S and Rein Taagepera. 2017. Votes from Seats: Logical Models of Electoral Systems. Cambridge University Press.
Shvetsova, Olga. 2003. "Endogenous selection of institutions and their exogenous effects." Constitutional Political Economy 14:191-212.

Stoll, Heather. 2011. "Dimensionality and the number of parties in legislative elections." Party Politics 17(3):405-429.
Taagepera, Rein. 2007. Predicting party sizes: The logic of simple electoral systems. OUP Oxford.
Vowles, Jack, Gabriel Katz and Daniel Stevens. 2017. "Electoral competitiveness and turnout in British elections, 1964-2010." Political Science Research and Methods 5(4):775-794.
Zagórski, Piotr. 2022. "Too much to choose from? The long-term effects of political fragmentation on electoral turnout." Politics 42(3):358-375.
Ziegfeld, Adam. 2021. "What accounts for Duverger's law? The behavioral mechanisms underpinning two-party convergence in India." Electoral Studies 73:102382.
Zuazu, Izaskun. 2022. "Electoral systems and income inequality: a tale of political equality." Empirical Economics 63(2):793-819.


[^0]:    ${ }^{1}$ originally developed in Taagepera (2007).

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[^2]:    ${ }^{1}$ originally developed in Taagepera (2007).

[^3]:    ${ }^{2}$ Already pointed out by Droop (1881).

[^4]:    ${ }^{2}$ Already pointed out by Droop (1881).

[^5]:    ${ }^{3}$ Shugart and Taagepera (2017), Chapter 7. Taagepera (2007).

[^6]:    ${ }^{3}$ Shugart and Taagepera (2017), Chapter 7. Taagepera (2007).

