

**Spatial Voting Models  
under Imperfect Measurement  
of Ideological Preferences:  
Evidence from Scandinavia**

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# Research Idea

- To write a paper for the courses I attended in Michigan
- To do something in mainstream political science / rational choice framework
- To apply newly learned method (mixed logistic regression) and software (BIOGEME)
- To follow own interests, namely studying behavior and radicalism / immigration

# Research Question

- Spatial voting in multiparty systems seems an obvious choice
- There's substantial gap in studies of dimensionality in European politics
- Chosen dimensions: traditional left-right and immigration
- “Imperfect measurement” popped up in process

# Theoretical Basis

- Anthony Downs, “An Economic Theory of Democracy”
- All voters and candidates have their policy preferences
- Policy preferences can be ordered on a fixed number of dimensions
- Individual votes for the party which is closest to one’s policy preferences

# Analytical Model

$$u_{ij} = \beta_{0j} + \beta_1 \times lrdist_{ij}^q + \beta_2 \times imdist_{ij}^q + \beta_3 \times lrdist_{ij} \times imdist_{ij} + \varepsilon_{ij}$$

$u_{ij}$  - respondent's  $i$  utility from voting for party  $j$

$lrdist_{ij}$  - distance between respondent  $i$  and party  $j$  on the left-right scale

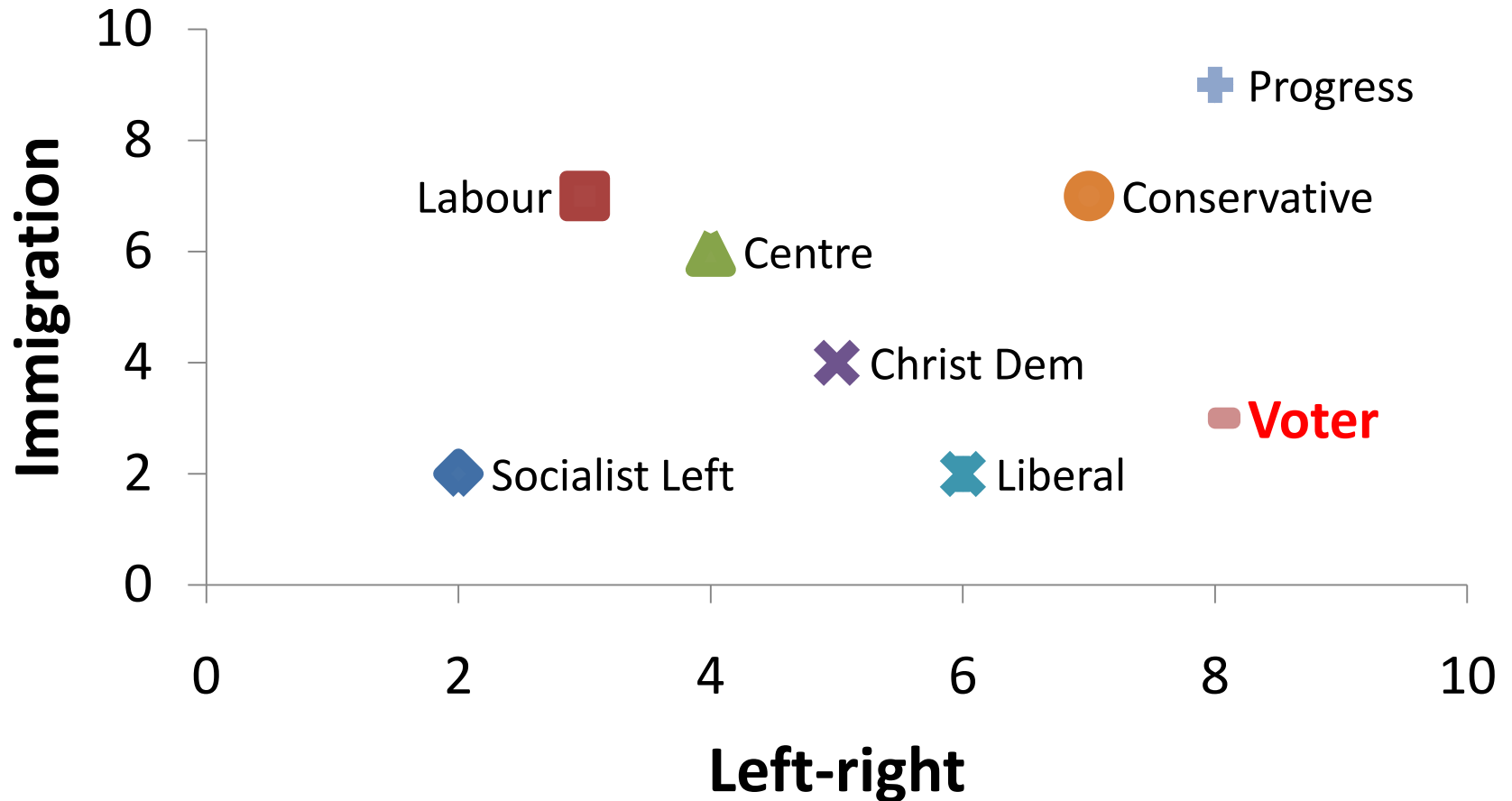
$imdist_{ij}$  - distance between respondent  $i$  and party  $j$  on the immigration scale

$q$  – power of the loss function

# Research Design

- **Method:** mixed logistic regression
- **Software:** BIOGEME
- **Countries:** Denmark, Norway, Sweden
- **Data:** European Social Survey, 2002-2010
  - Voting choice
  - Individual positions
- **Data:** Expert judgments, 2000-2010
  - Party positions

# Spatial Model Assumed



# Results (Norway)

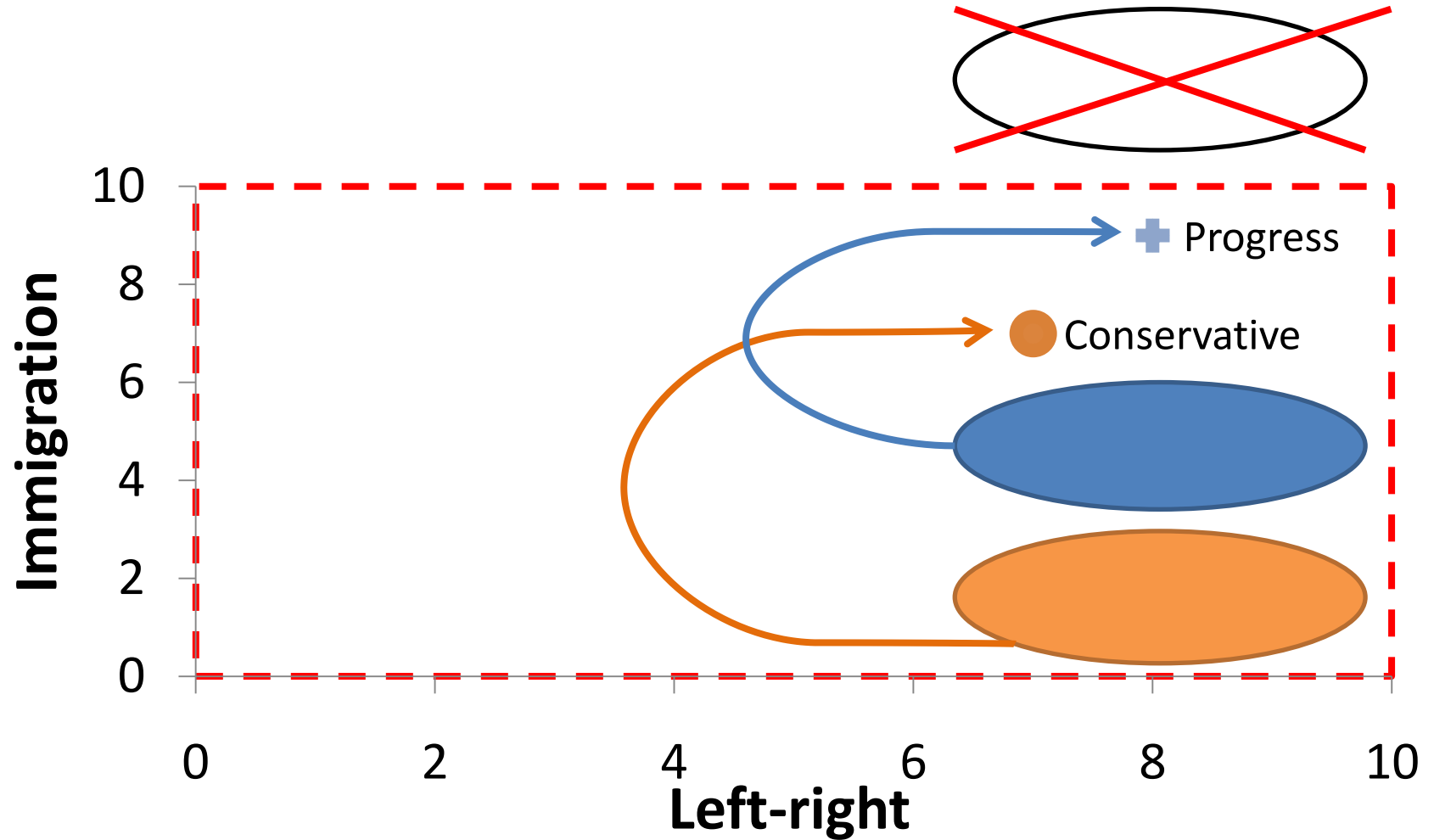
Party	Left-right	Immigration
All	-0.325***	-0.110***
Socialist Left Party	-0.424***	-0.199***
Labour Party	-0.319***	0.009
Centre Party	-0.389***	-0.071*
Christian Democratic Party	-0.288***	-0.015
Liberal Party	-0.311***	-0.260***
Conservative Party	-0.283***	<b>0.108***</b>
Progress Party	-0.126***	-0.137***



# The Problem

- **Red number means:** farther a respondent is from the Conservatives on immigration, more likely one is to vote for them
- Clear contradiction to the spatial voting axiom
- **Technically,** people who vote Progress are below the party on anti-immigration score...
- Whereas people who vote Conservative are **WAY** below the party on anti-immigration score

# Spatial Model Observed



# Possible Explanations

- **Empirical reality:** spatial voting model does not work for this particular case
- **Imperfect measurement**
  - Different questions
  - Differences between voters and experts
  - Dimensions are truncated (0 to 10)
- More empirical work needed to understand real cause of my finding

# Future Steps

- Take one country with good national electoral study
- Obtain different estimates of party positions
  - Voter's placement
  - Average voters' placement
  - Expert surveys
  - Manifesto project
- Problems persist → empirical reality
- Problems disappear → imperfect measurement